World Health Organization

Global report on hypertension

The race against a silent killer

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Global report on hypertension: the race against a silent killer

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Foreword

High blood pressure kills. In fact, cardiovascular diseases are the world's leading cause of death. Globally, an estimated 1.3 billion adults were affected by hypertension in 2019. I know the dangers of hypertension from personal experience, because it is a condition I live with. I am fortunate that I was diagnosed, have access to good medical care and medicines, and that I understand my condition and can make sure it is controlled. Unfortunately, the same is not true for the majority of those with hypertension, a disease that is often dubbed the "silent killer".

This report compiles data for the first time on the far-reaching consequences of uncontrolled hypertension, including heart attacks, strokes and premature death, along with substantial economic losses for communities and countries. It also contains information on the global, regional and country-level burden of hypertension and progress of control efforts.

Perhaps most importantly, the report shows a way forward, by highlighting key aspects of guidance from the World Health Organization's *HEARTS: technical package for cardiovascular disease management in primary health care* and the *Guideline for the pharmacological treatment of hypertension in adults*. These tools were developed to provide guidance for countries in establishing early detection, management, control and monitoring of hypertension as part of primary health care services.

In fact, hypertension can be controlled effectively with simple, low-cost medication regimens, and yet only about one in five people with hypertension has controlled it. Hypertension control programmes remain neglected, under-prioritized and vastly underfunded. Strengthening hypertension control must be part of every country's journey towards universal health coverage, based on well-functioning, equitable and resilient health systems, built on a foundation of primary health care.

There are many challenges to tackling hypertension but, as this report shows, there are also many reasons for hope. By implementing programmes we can improve hypertension control rates and prevent millions of deaths from heart attack and stroke.

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Director-General
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Acknowledgements

Acronyms and abbreviations

BP   blood pressure

BPMD   blood pressure monitoring device

CKD   chronic kidney disease

CVD   cardiovascular disease

DALYs   disability-adjusted life years

DBP   diastolic blood pressure

IHCI   India Hypertension Control Initiative

LMICs   low- and middle-income countries

PAHO   Pan American Health Organization

PHC   primary health care

$PM_{2.5}$ particulate matter of a diameter ≤2.5 μm

SBP   systolic blood pressure

SDG   Sustainable Development Goal

SMASH Shandong Ministry of Health Action on Salt and Hypertension

NCD   noncommunicable disease

WHO   World Health Organization

Executive summary

High blood pressure is one of the world's leading risk factors for death and disability. The number of people living with hypertension (blood pressure of ≥140 mmHg systolic or ≥90 mmHg diastolic or on medication) doubled between 1990 and 2019, from 650 million to 1.3 billion *(1)*.

This common, deadly condition is an important public health problem that leads to stroke, heart attack, heart failure, kidney damage and many other health problems *(2, 3)*. A study of 87 behavioural, environmental, occupational and metabolic risk factors found that high systolic blood pressure (≥110–115 mmHg) was the single most important risk factor for early death worldwide, leading to an estimated 10.8 million avoidable deaths every year, and a burden of 235 million years of life lost or lived with a disability (disability-adjusted life years, DALYs) annually *(3)*. High blood pressure causes more deaths than other leading risk factors, including tobacco use and high blood sugar.

Hypertension and its associated complications also have enormous economic costs – for patients and their families, health systems and national economies. People living with the condition incur direct medical costs and lose wages, often in their prime working years, which can be impoverishing for entire families. Hospital and outpatient care for heart attacks and strokes caused by uncontrolled hypertension are expensive for health systems. National economies lose tax income, have decreased productivity, increased health care costs, and increased societal needs for the support of adults surviving heart attack and stroke, and of children whose parents have died or become disabled. By one estimate, the economic benefits of improved hypertension treatment programmes outweigh the costs by about 18 to one.

> "Hypertension and its associated complications have enormous economic costs for patients and their families, health systems and national economies."

Addressing risk factors and managing hypertension

The good news is that hypertension and its associated complications can be addressed. Risk-factor strategies include ensuring that people eat a healthy diet low in sodium, maintain a healthy weight, avoid alcohol and tobacco and take regular physical activity (all of which also contribute to good health more generally). Policies and practices to support these strategies are most effective when implemented across entire populations or within specific settings, such as in schools and at workplaces.

For people who have hypertension, there are ways to minimize its impact on health and wellbeing. The starting point for living well with hypertension and preventing complications is early diagnosis and early, effective treatment – the longer a person lives with undiagnosed and inadequately treated hypertension, the worse their health outcomes are likely to be. Currently, among adults aged 30–79 years with hypertension, only 54% have been diagnosed with the condition, 42% are being treated for their hypertension, and 21% are considered to have their hypertension controlled *(4)*.

In some countries and health care systems, large-scale hypertension control programmes have achieved hypertension control for many patients, giving them longer, healthier lives. The World Health Organization (WHO) HEARTS technical package provides cost-effective strategies that can be implemented at the primary health care level to control blood pressure and prevent heart attack, stroke and other complications. Components of the package include the use of a standardized drug- and dose-specific treatment protocol, uninterrupted access to quality-assured medications, team-based care, patient-centred services, and a robust monitoring system to track patient progress and health system performance. Follow-up and referral systems are also important to improve treatment outcomes. Implementation of the HEARTS package and the system improvements this requires in terms of integrated health care services, demonstrates that many of its components support, and can also be applied to, other health problems requiring consistent, long-term care, including diabetes, chronic kidney disease and HIV/AIDs.

Although hypertension can be prevented and treated, few countries currently do so effectively. Better hypertension management will save lives. Increasing the percentage of people whose hypertension is under control globally to 50% would prevent 76 million deaths between 2023 and 2050. Treating hypertension is one of the most important interventions to meet the Sustainable Development Goal (SDG) target 3.4 of a one third reduction in premature mortality from the leading noncommunicable diseases.

Conclusions and key messages

Improving the prevention and treatment of hypertension is feasible, low-cost, safe and necessary to achieve global and national targets, including those of the SDGs. Effective hypertension management will bring health, wellbeing, and economic benefits. It will reduce burdens on acute-care services, increase integration of health care systems and, most importantly, reduce the deaths, suffering and costs arising from complications such as heart attack, stroke and kidney failure.

To improve the prevention and treatment of hypertension, countries should:

- Provide national leadership accountable for steady progress in preventing heart attack and stroke, especially through improved control of hypertension by:

  o establishing national mechanisms such as a national steering committee, coordinated by strategic leadership from the ministry of health, to monitor and improve resource allocation and implementation of an integrated response to noncommunicable diseases, with specific attention to hypertension control rates;

  o ensuring representation on such a steering committee comes from inside and outside government and includes clinicians committed to improving the management and control of hypertension through primary health care services;

  o setting and monitoring, at least annually and ideally quarterly, national targets and indicators to foster accountability, which should include the number of patients with hypertension whose treatment has brought their blood pressure to the target level of control selected by the country, and this number as a proportion of the estimated total number of people living with hypertension in the country;

  o ensuring that national policies and plans addressing hypertension are fully costed, funded and implemented.

- Develop comprehensive programmes that address risk factors for hypertension and other noncommunicable diseases (e.g. encouraging healthy diets low in sodium, reducing tobacco and alcohol use, and making regular physical activity a normal part of daily life).

- Implement the WHO HEARTS package by:

  o selecting a drug- and dose-specific treatment protocol at the national, subnational or health system level;

  o ensuring an uninterrupted supply of quality-assured drugs and of externally validated automated digital blood pressure monitors;

  o establishing team-based care for patients with hypertension and other chronic conditions, with nurses, pharmacists, outreach workers and others collaborating with clinicians to support patient care;

  o making health care services patient-friendly, reducing barriers to care through improved patient education and treatment at convenient times and locations close to the patient's home or work. Care should include medications that are free of cost to the patient and, for stable patients, multi-month (e.g. 3- and 6-month) refills, reducing the effort needed for patients to continue to take medications and the burden on health care systems as treatment coverage increases;

  o establishing an accurate and practical information system that supports

" Better hypertension management will save lives. "

frontline health care workers and enables longitudinal tracking of the WHO data indicators for hypertension care, with particular attention to facility-based control rate and estimated community-wide control rates.

- Address broader factors to enable health care systems to support patient care by:

  o ensuring there are enough trained and supported health care staff at all levels;

  o including hypertension management in essential benefit packages as part of universal health coverage;

  o providing sustainable finance for the delivery of health care programmes so that treatment is not interrupted in times of financial or other difficulties;

  o improving information systems to empower providers, programme managers and patients;

  o progressively adding services, as permitted by human and financial resources, to provide integrated, comprehensive primary care to all people; and

  o strengthening the national capacity to collect, analyse and use representative data on the burden and trends of hypertension in order to continuously improve and optimize the programme.

Hypertension and the global public health agenda

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Cardiovascular diseases (CVDs) are the leading cause of death worldwide, and many of these deaths can be prevented by treating hypertension.

The United Nations General Assembly political declaration of 2011 on the prevention and control of noncommunicable diseases (NCDs) *(5)* recognized that the incidence and impacts of CVDs and other NCDs can be largely prevented or reduced with an approach that incorporates evidence-based, affordable, cost-effective, population-wide and multisectoral interventions. To catalyse national action, the World Health Assembly adopted a comprehensive Global Monitoring Framework in 2013, comprised of nine voluntary global targets to be reached by 2025 (Fig. 1), which included a "25% relative reduction in the prevalence of raised blood pressure".

These targets were included in Appendix 2 of the *Global action plan for the prevention and control of noncommunicable diseases 2013–2020 (6)*, which provides a roadmap and policy options to attain the nine voluntary global targets. More recently, the Seventy-sixth World Health Assembly in 2023 *(7)* approved an updated Appendix 3 Menu of policy options and cost-effective interventions. This reflects the most recent scientific evidence, and includes, as a recommended intervention to address cardiovascular diseases, the pharmacological treatment of hypertension in adults in line with the 2021 *Guideline for the pharmacological treatment of hypertension in adults (8)*.

Commitments to reducing hypertension were deepened in 2015 following the United Nations General Assembly's adoption of the 2030 Agenda for Sustainable Development and, specifically, Sustainable Development Goal (SDG) target 3.4: reduce by one third premature mortality from noncommunicable diseases through prevention and treatment *(9)*. Actions to control the burden of hypertension – including population-level interventions to prevent hypertension and scale up treatment – are key steps to achieving this, and also make a contribution to other SDG targets, including those relating to universal health coverage and access to affordable essential medicines.

At present, approximately four out of every five people with hypertension are not adequately treated *(4)*. At the same time, high systolic blood pressure – a silent killer – is responsible for more than 10 million deaths every year – more deaths than from any other risk to health. Many of these deaths are

> **High blood pressure – the silent killer – is responsible for more than 10 million deaths every year.**

preventable through policies that reduce the risk of hypertension, including a healthy diet with less sodium and healthy levels of potassium, and improved treatment. Improving treatment of hypertension can save millions of lives and also strengthen primary health care systems.

Effective management of hypertension in primary health care requires accurate diagnosis, with screening of every adult patient, immediate treatment initiation for patients with confirmed very high (>160/100) blood pressure and prompt rechecking of all other patients with elevated blood pressure within one to four weeks, accessible standardized treatment free to the patient, and rigorous monitoring of progress at each facility, each sub-national area and nationally.

Every national health leader should regularly assess progress towards improving control of blood pressure to meet their country's targets.

Fig. 1. Voluntary global targets for prevention and control of noncommunicable diseases (as of August 2023)

1. A one third relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases by 2030[a]

2. A 20% relative reduction in the harmful use of alcohol by 2030[b]

3. A 15% relative reduction in prevalence of insufficient physical activity by 2030[a]

4. A 30% relative reduction in mean population intake of salt/sodium[c]

5. A 30% relative reduction in prevalence of current tobacco use[c]

6. A 25% relative reduction in the prevalence of raised blood pressure or to contain the prevalence of raised blood pressure[c]

7. Halt the rise in diabetes and obesity[c]

8. At least 50% of eligible people (aged 40 years and older with a 10-year cardiovascular risk ≥20%) including those with CVD to receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes[c]

9. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities[c]

Note: The target date for targets 4–9 is 2025.

Source: a. WHO NCD Accountability Framework, including Global Monitoring Framework for NCD prevention and control (2021 update) in alignment with the extension of the NCD Global Action Plan to 2030 *(10)*; b. Decision WHA75(11). 2022 *(11)*; c. *Global action plan for the prevention and control of noncommunicable diseases 2013–2020*, Appendix 2 *(6)*

1.1 Purpose of the report

This report advances global work to address noncommunicable diseases. It aims to draw focused attention to the priority noncommunicable diseases targeted by world leaders, in particular the public health challenge of hypertension, and to generate momentum for national, regional and global action. The world has made substantial progress by focusing on specific communicable diseases such as HIV, tuberculosis, malaria, vaccine-preventable diseases and childhood infections. Progress in reducing today's leading causes of death, of which hypertension is the most deadly, will similarly require focused attention along with coordination to strengthen primary health care.

Section 1 has introduced hypertension as a global health issue and has outlined the goals of this report.

Section 2 presents an overview of the global prevalence, treatment and control of, and risk factors for, hypertension, the burden of mortality related to high systolic blood pressure, and the progress of countries towards the voluntary global target to reduce raised blood pressure by 25% *(6)*. It discusses the importance of strong health information systems to enable the collection, analysis, interpretation and dissemination of data, and for robust systems for monitoring and recording blood pressure.

Section 3 focuses on the health and cost impacts of hypertension, and provides scenarios for how we can save lives by scaling up hypertension treatment.

Section 4 presents some of the risk factors for hypertension: unhealthy diet containing excess sodium, use of tobacco and alcohol, physical inactivity and air pollution.

Section 5, which includes case studies from the WHO regions, discusses diagnosis and early detection of hypertension, and models of care, including those for co-morbidities, and describes the HEARTS approach to managing hypertension.

Section 6 presents a short conclusion.

Annex 1 discusses the methodology used in the analysis of the impact and cost of the treatment of hypertension.

Annex 2 provides country-by-country profiles of the status of hypertension.

> " Every national health leader should regularly assess progress toward their targets for control of blood pressure. "

The global burden of hypertension

Hypertension is a serious, chronic medical condition that increases mortality from cardiovascular and kidney disease. It occurs when the pressure in blood vessels is too high *(12)*. Blood pressure is created by the force of blood pushing against the walls of blood vessels (arteries) as it is pumped by the heart. The higher the pressure, the harder the heart must pump and the more damage this excess pressure causes to many parts of the body, especially the brain, heart and kidneys *(13)*.

Consideration of the burden of high blood pressure, including hypertension, involves looking at it from different angles, using different types of data and statistical methods. Table 1 lists key terms and their definitions used in this section to build up as complete a picture as possible. There is further discussion of the source of the data used in this section, and suggestions for ways in which Member States can improve data collection on hypertension, in Section 2.7.

Table 1. Key terms and their definitions used for monitoring blood pressure and hypertension in populations

Hypertension prevalence	
Numerator: systolic blood pressure (SBP) ≥140 mmHg or diastolic blood pressure (DBP) ≥90 mmHg or taking medication for hypertension	*Denominator:* adults aged 30–79 years
Uncontrolled hypertension prevalence	
Numerator: SBP ≥140 mmHg or DBP ≥90 mmHg	*Denominator:* adults aged 30–79 years
Diagnosis coverage	
Numerator: has hypertension and has received previous hypertension diagnosis	*Denominator:* adults aged 30–79 with hypertension, as defined above
Treatment coverage	
Numerator: has hypertension and is taking medication for hypertension	*Denominator:* adults aged 30–79 with hypertension, as defined above
Effective treatment coverage	
Numerator: has controlled hypertension: taking medication for hypertension and SBP <140 mmHg and DBP <90 mmHg	*Denominator:* adults aged 30–79 with hypertension, as defined above
High systolic blood pressure	The concept of high SBP is used for comparative risk assessment *(3)*. It refers to any SBP above the theoretical minimum risk level, estimated to be at 110–115 mmHg.

2.1 The global prevalence of hypertension

For the purpose of monitoring population health, hypertension is defined as having systolic blood pressure (SPB) ≥140 mmHg or diastolic blood pressure (DPB) ≥90 mmHg or taking medication for hypertension (Table 1). Hypertension is estimated to affect 33% of adults aged 30–79 worldwide (age-standardized estimate) *(4)*.[1, 2]

Fig. 2. Prevalence of hypertension, by control status, among adults aged 30–79, by country, in 2019
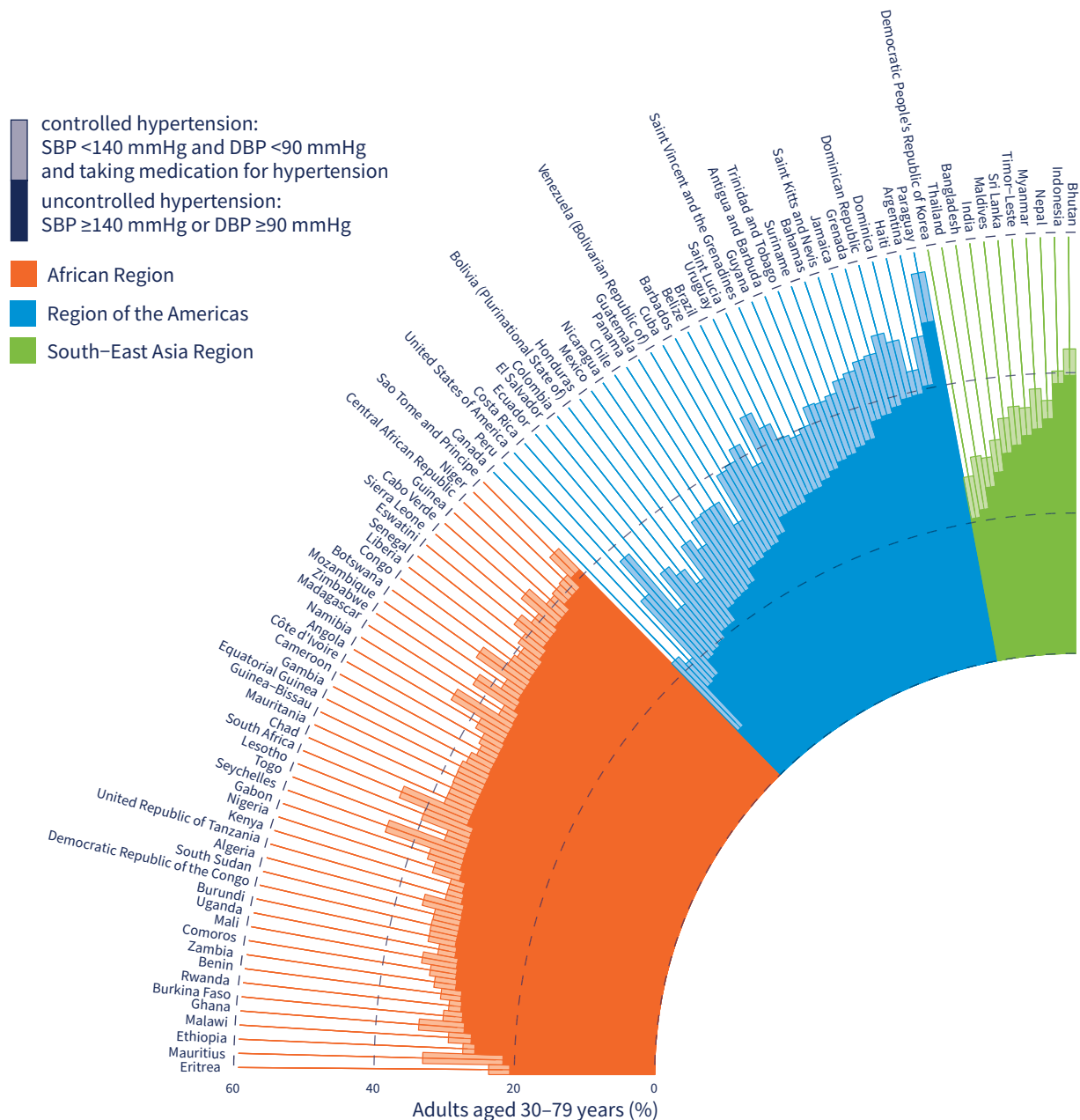
[1] Blood pressure and hypertension prevalence increase with age. In this report, prevalence estimates are age-standardized to ensure that comparisons between populations with different proportions of younger and older adults are not affected by their respective age structures.

[2] All hypertension, hypertension coverage and uncontrolled hypertension estimates in this section are from, or are calculated from, the estimates produced by the NCD Risk Factor Collaboration (NCD-RisC) *(1)*, which are also available from the Global Health Observatory (GHO) *(4)*.

Prevalence of hypertension is similar across groups of countries defined by income level *(14)*, with only a slight difference from 32% of adults aged 30–79 years in high-income countries to 34% in low-income countries. Regional and country variability is more notable. Regional variation ranges from 28% in the WHO Western Pacific Region to 38% in the WHO Eastern Mediterranean Region (Table 2). At the country level, 29 countries (out of 192 with data) distributed across all WHO regions and country income groups have a prevalence below 30%, and 27 countries in all income groups and all WHO regions except the WHO South-East Asia Region have a prevalence above 45% (Fig. 2).

controlled hypertension:
SBP <140 mmHg and DBP <90 mmHg
and taking medication for hypertension

uncontrolled hypertension:
SBP ≥140 mmHg or DBP ≥90 mmHg

European Region

Eastern Mediterranean Region

Western Pacific Region

Adults aged 30–79 years (%)
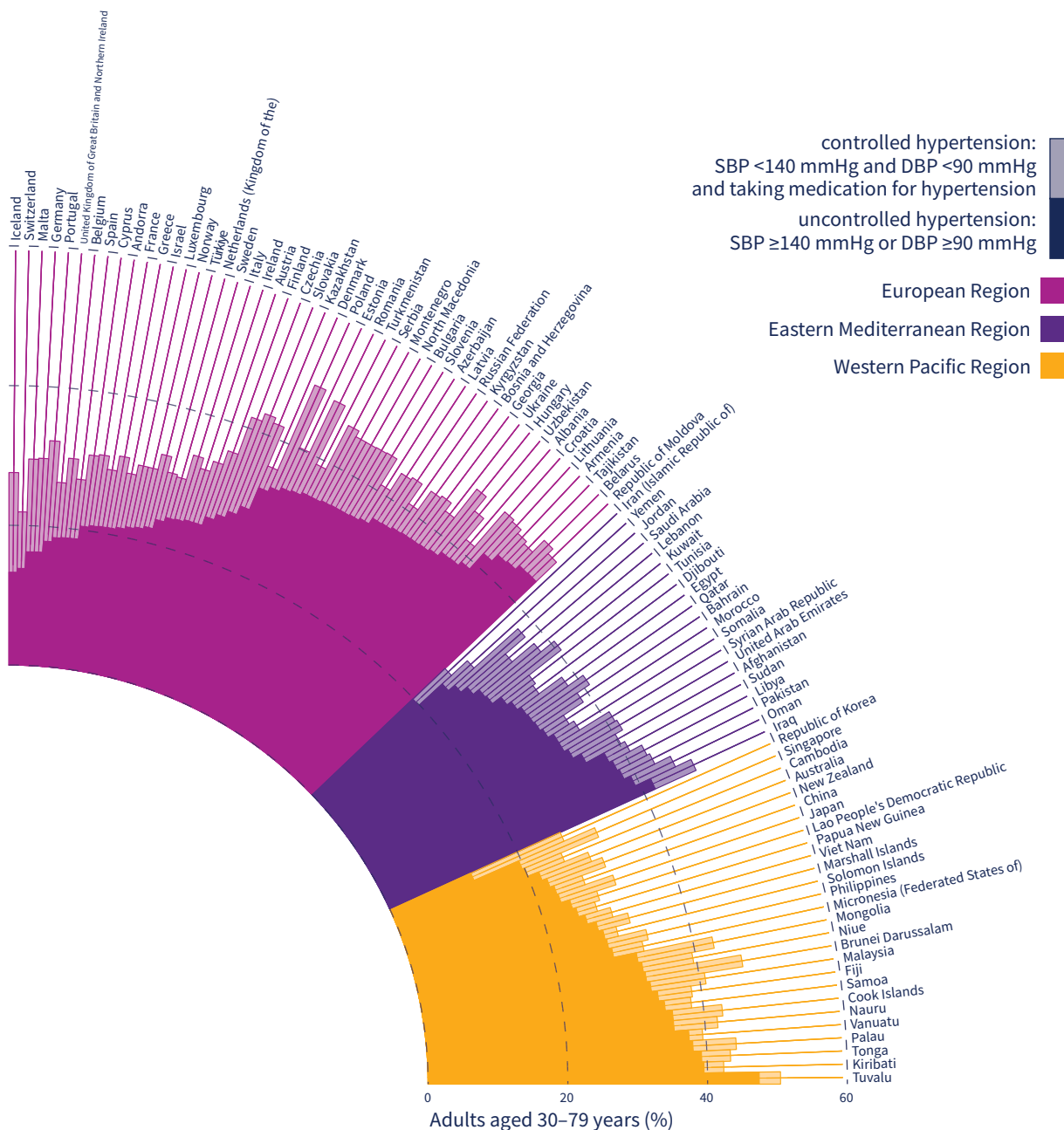
Note: for further explanation of controlled and uncontrolled hypertension see Table 1. The sum of controlled hypertension and uncontrolled hypertension is hypertension.

Source: Global Health Observatory (GHO). Noncommunicable diseases: risk factors [online database] *(4)*.

Globally, the prevalence of hypertension is slightly higher among males (34%) than females (32%). This female advantage is age-related: the global age-standardized prevalence of hypertension among people aged 30–49 years is 19% for women versus 24% for men. This pattern of lower hypertension prevalence among women aged under 50 years holds in most countries worldwide *(15)*. However, for people aged 50–79 years, both men and women globally are estimated to have equivalent hypertension prevalence of 49%.

Globally, the estimated age-standardized prevalence of hypertension changed little from 1990 to 2019, increasing from 32% to 33%. Hypertension prevalence declined in high-income countries (from 38% in 1990 to 32% in 2019) and in the WHO European Region (from 45% in 1990 to 37% in 2019). These declines were offset by slight to moderate increases in other regions, including the WHO Western Pacific Region (24% to 28%) and the WHO South-East Asia Region (29% to 32%).

However, the total number of adults in the world is increasing as a result of population growth and because the age structure of the population is shifting, with older groups accounting for a larger proportion of the total population. Since the rate of hypertension increases with age, these two trends are increasing the number of adults aged 30–79 years with hypertension. The number of adults with hypertension doubled from 650 million in 1990 to 1.3 billion in 2019 (Fig. 3).

About 78% of adults with hypertension live in low- and middle-income countries (LMICs). The greatest number of people with hypertension live in the most populous WHO regions: Western Pacific Region and South-East Asia Region.

> " The number of adults with hypertension doubled from 650 million in 1990 to 1.3 billion in 2019. "

Table 2. Age-standardized prevalence of hypertension among adults aged 30–79 years, and among those with hypertension, diagnosis, treatment and effective treatment coverage in 2019, by WHO region

Region	Hypertension (%)	Diagnosis coverage (%)	Treatment coverage (%)	Effective treatment coverage[a] (%)
African	36 (38, 33)	43 (46, 39)	27 (30, 24)	12 (14, 9)
The Americas	35 (38, 33)	70 (73, 67)	60 (64, 57)	36 (41, 32)
South-East Asia	32 (36, 29)	39 (44, 34)	30 (34, 25)	14 (18, 10)
European	37 (39, 35)	66 (69, 63)	53 (56, 50)	26 (29, 23)
Eastern Mediterranean	38 (41, 35)	49 (53, 45)	39 (43, 34)	15 (19, 13)
Western Pacific	28 (32, 25)	54 (59, 48)	41 (47, 35)	18 (23, 14)
Global	33 (35, 32)	54 (56, 51)	42 (45, 40)	21 (23, 19)

a. Controlled hypertension among all hypertension. Controlled hypertension is defined as blood pressure <140 mmHg systolic and <90 mmHg diastolic and taking medication for hypertension.

Note: Data in parentheses are 95% uncertainty intervals.

Source: Global Health Observatory (GHO). Noncommunicable diseases: risk factors [online database] *(4)*.

2.2 Risk factors for age-related increase in blood pressure

Many factors contribute to the age-related increase in blood pressure that is common in most countries, although the exact causes remain unknown. Genetics undoubtedly play a role, but their specific contribution remains unclear. Several general environmental exposures can also contribute to increases in blood pressure, including pollution *(16, 17)*, very cold temperatures and extreme elevations in altitude *(18)*. However, the main contributors seem to be personal environmental exposures such as poor-quality diet high in sodium and low in potassium, overweight and obesity, consumption of alcohol, use of tobacco and physical inactivity *(19)*.

> More than three-quarters of adults with hypertension live in LMICs.

Fig. 3. Number of adults aged 30–79 years with hypertension, by region and year, 1990 and 2019

1990

- 144m Western Pacific Region
- 37m Eastern Mediterranean Region
- 45m African Region
- 96m Region of the Americas
- 206m European Region
- 118m South-East Asia Region

2019

- 346m Western Pacific Region
- 99m Eastern Mediterranean Region
- 106m African Region
- 197m Region of the Americas
- 230m European Region
- 294m South-East Asia Region
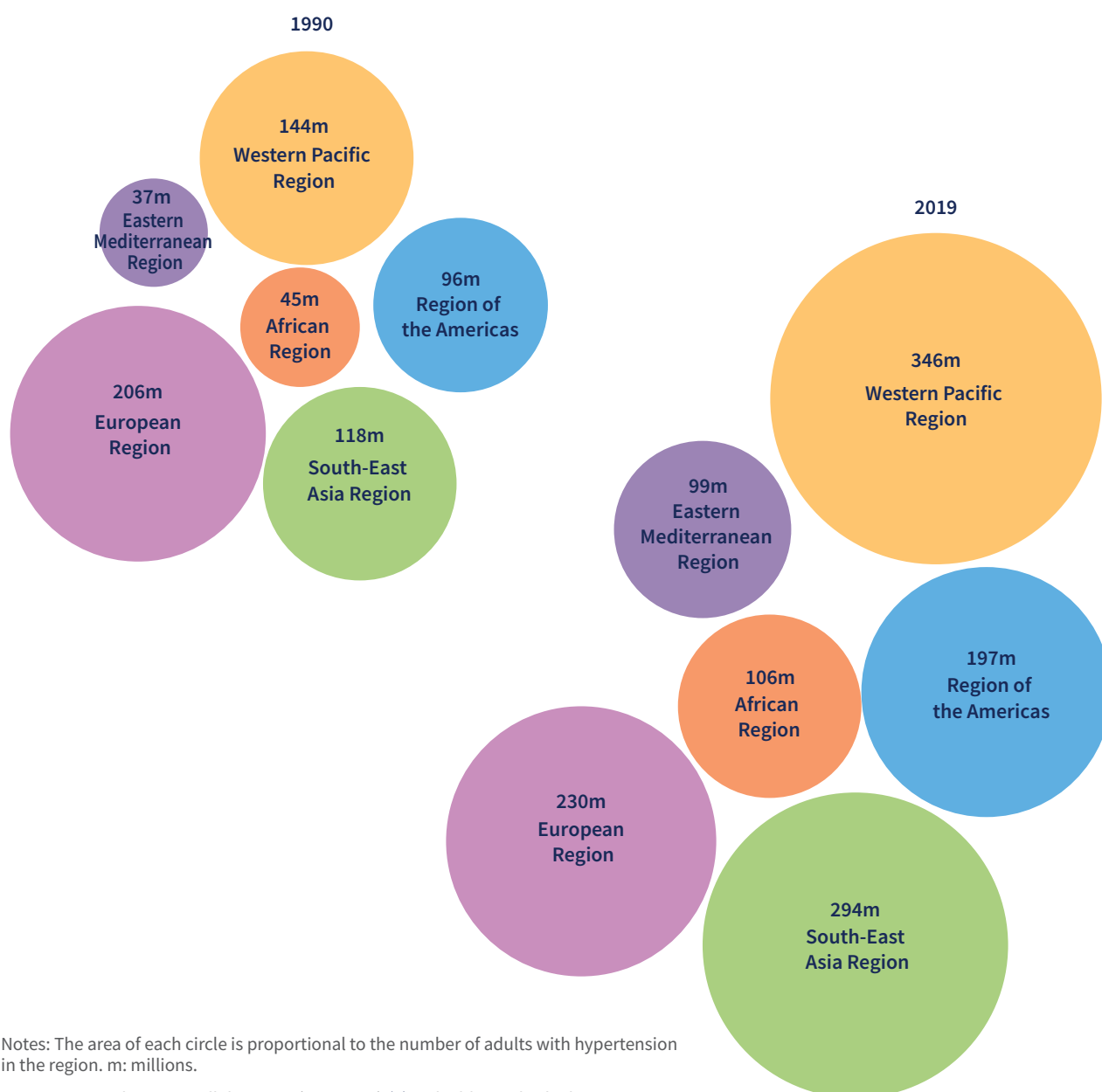
Notes: The area of each circle is proportional to the number of adults with hypertension in the region. m: millions.

Source: NCD Risk Factor Collaboration (NCD-RisC) *(1)* and additional calculations.

2.3 Status of hypertension care

Among adults aged 30–79 years with hypertension, an estimated 54% have been diagnosed with hypertension, 42% are being treated for their hypertension, and 21% have had their hypertension controlled (see Table 2 for confidence intervals). Diagnosis, treatment, and effective treatment coverage varies by sex, region and country income level. In every region and in all but four countries, women with hypertension were more likely to be treated than men (Fig. 4). Globally, the percentage of women with hypertension who are currently being treated is estimated to be 47%, compared with only 38% of men. The same gender pattern holds for the likelihood of being diagnosed and the likelihood of having controlled hypertension.

Treatment coverage varies by WHO region and country income level. Treatment coverage is highest in the Region of the Americas (60%) and lowest in the African Region (27%). Treatment coverage tends to be higher in wealthier countries. In low-income countries, only 26% of adults with hypertension were receiving treatment vs 58% in high-income countries. Nevertheless, some middle-income countries have achieved treatment coverage as high as the best-performing high-income countries (Fig.5).

Fig. 4. Hypertension treatment cascade in 2019, for adults 30–79 years of age globally, by sex. Age-standardized rates
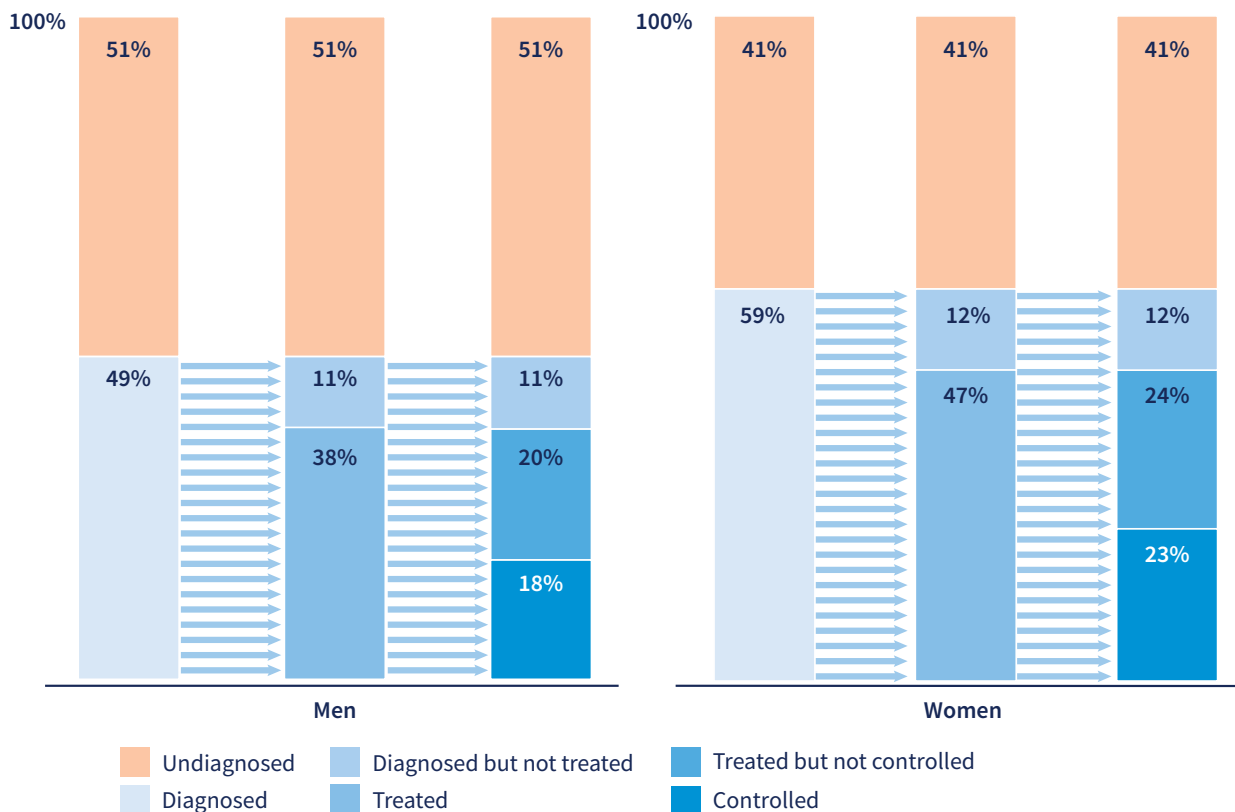
Source: NCD Risk Factor Collaboration (NCD-RisC) *(1)*.

The rate of effective treatment coverage, or hypertension control (out of those with hypertension), follows similar patterns to treatment coverage: rates are highest in high-income countries (36%) and the Region of the Americas (36%) and lowest in low-income countries (11%) and the African Region (12%).

Among those with uncontrolled hypertension who had not previously been diagnosed, globally nearly 30% have systolic blood pressure measurements ≥160 mmHg or diastolic blood pressure measurements ≥100 mmHg. This is significantly higher than the threshold for hypertension (SPB ≥140 mmHg, DPB ≥90 mmHg), and indicates an urgent need for treatment.

Fig. 5. Percentage of adults aged 30–79 years currently being treated (taking medication) for their hypertension in 2019, out of those with hypertension, by country, sex, and country income group

Source: NCD Risk Factor Collaboration (NCD-RisC) (1).

2.4 Uncontrolled hypertension and progress toward the 2025 target

The voluntary global target on blood pressure, endorsed by the Sixty-sixth World Health Assembly in 2013, envisages a 25% reduction in raised blood pressure (uncontrolled hypertension) by 2025 against a 2010 baseline *(20)*. Uncontrolled hypertension is defined as systolic blood pressure ≥140 mmHg or diastolic blood pressure ≥90 mmHg. It includes individuals who have not been diagnosed with hypertension and those who have been diagnosed but are not on treatment or whose blood pressure is not controlled despite treatment (Fig. 6).

Globally, the prevalence of uncontrolled hypertension declined slightly from 29% in 2010 to 26% in 2019, but this rate of decline is insufficient to achieve the voluntary global target of 21% (a 25% relative decline 2010–2025).[1] Improving systems in order to provide effective treatment to about half of the adults who have already been diagnosed with hypertension would be sufficient to meet the target. Although no WHO region or country income group is on track to meet the target, a handful of countries are on track.[2]

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[1] Target prevalence was computed on unrounded prevalence estimates, and then rounded.

[2] WHO/NCD-RisC estimates *(1, 4)* were projected to 2025 as described in WHO NCD Accountability Framework, including Global Monitoring Framework for NCD prevention and control (2021 update), in alignment with the extension of the NCD Global Action Plan to 2030.

Fig. 6.   Global prevalence of uncontrolled hypertension, by category among adults aged 30–79 years of age, and the voluntary global target for uncontrolled hypertension (raised blood pressure) for 2025
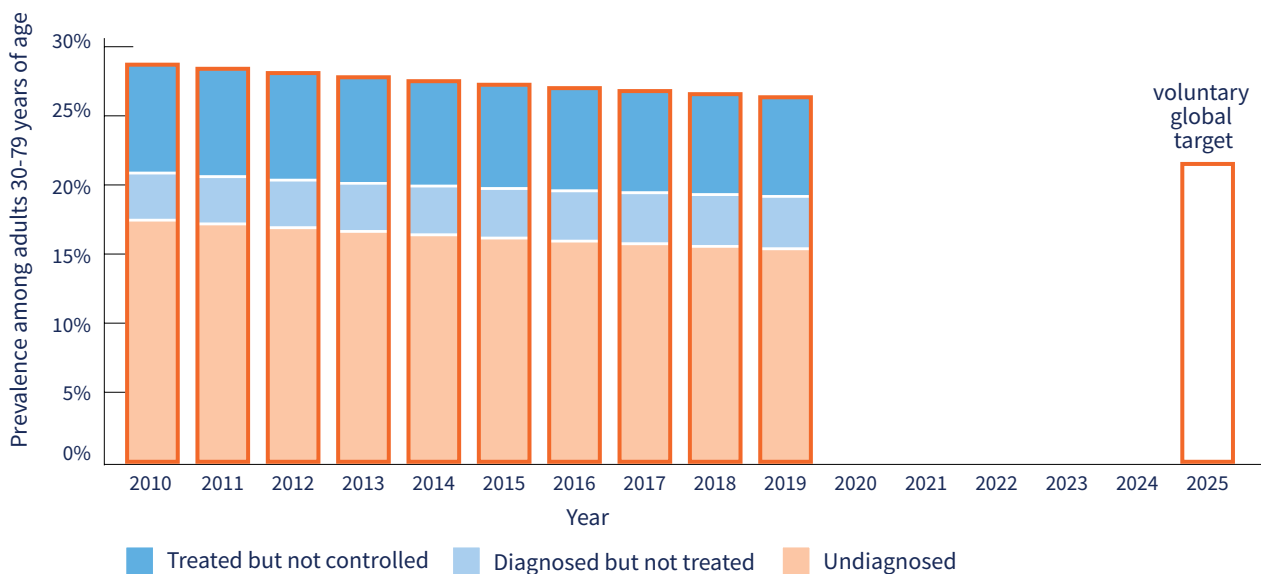
Note: The 2025 voluntary global target is to reduce prevalence of raised blood pressure (uncontrolled hypertension) from 2010 levels by 25% by 2025. Estimates are age-standardized values for adults aged 30–79 years.

Source: NCD Risk Factor Collaboration (NCD-RisC) *(1)* and additional calculations.

2.5 Trends in hypertension care

As described above, global hypertension prevalence changed little from 1990 to 2019. Although declines in the prevalence of hypertension were observed in high-income countries and in the WHO European Region, these were offset by small increases in other regions. Nevertheless, detection, treatment and control of hypertension improved globally in all WHO regions and country income levels between 1990 and 2019 (Fig. 7).

Globally, treatment coverage – the percentage of adults aged 30–70 years with hypertension who were taking medication for their hypertension – increased from 22% in 1990 to 42% in 2019 (age-standardized estimates). Effective treatment coverage is estimated to have quadrupled from 5% to 21% in three decades.

A pharmacist preparing medicine at a hospital in Ethiopia.

Fig. 7.   Trends in age-standardized prevalence of hypertension, 1999–2019, disaggregated by control, treatment, and diagnosis status

Men

| Undiagnosed | Diagnosed but not treated | Treated but not controlled | Controlled |

Women
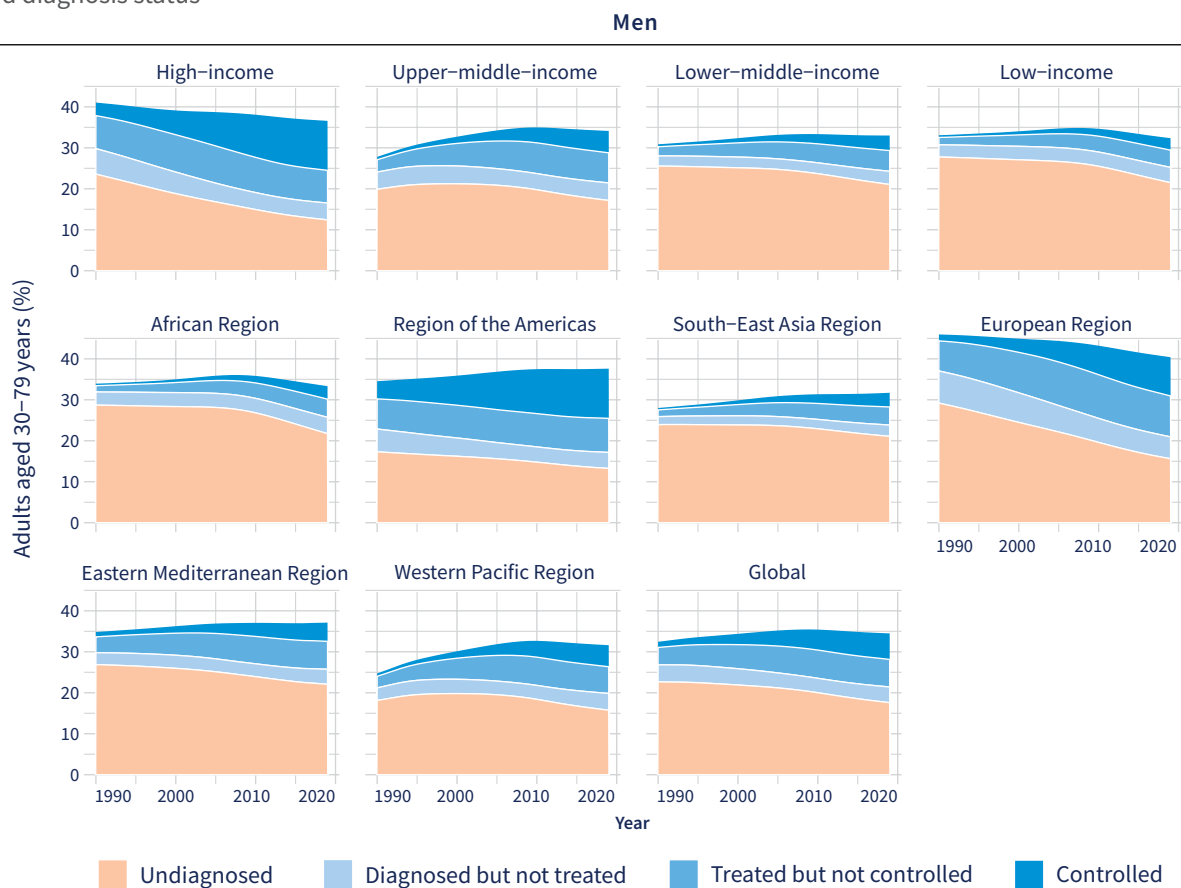
Source: NCD Risk Factor Collaboration (NCD-RisC) *(1)* and additional calculations.

2.6 Deaths due to high systolic blood pressure

Hypertension increases mortality from cardiovascular diseases and kidney disease. In fact, high blood pressure increases risk of death even when systolic blood pressure is in the 115 to 130 mmHg range, which is below the threshold for treatment of hypertension in most guidelines *(21, 22, 23)*. Calculating additional mortality due to high blood pressure compared to a theoretical level which results in the lowest mortality risk – called the "theoretical minimum risk level" – can give an idea of the impact of high blood pressure on population mortality *(24)*. While the theoretical minimum risk level may not be achievable given current interventions, comparing multiple risk factors to their theoretical minimum risk levels allows a comparison of how these risks affect populations.

When considered in this framework, high systolic blood pressure (i.e. ≥110–115 mmHg) is the world's leading risk factor for mortality, causing more deaths than any other behavioural, metabolic or environmental risk factor assessed *(3)*. If all adults in the world had a theoretical minimum risk-level systolic blood pressure in 2019 (estimated as 110–115 mmHg), about 19% of all deaths worldwide (10.8 million) would have been averted in that year (Fig. 8, Fig. 9).

> " If all adults had 110–115 mmHg SBP in 2019, about 19% of deaths would have been averted in that year. "

> " High systolic blood pressure is responsible for one in every five deaths. "

Fig. 8. Percentage of global deaths attributable to high systolic blood pressure (1990 and 2019), by cause of death
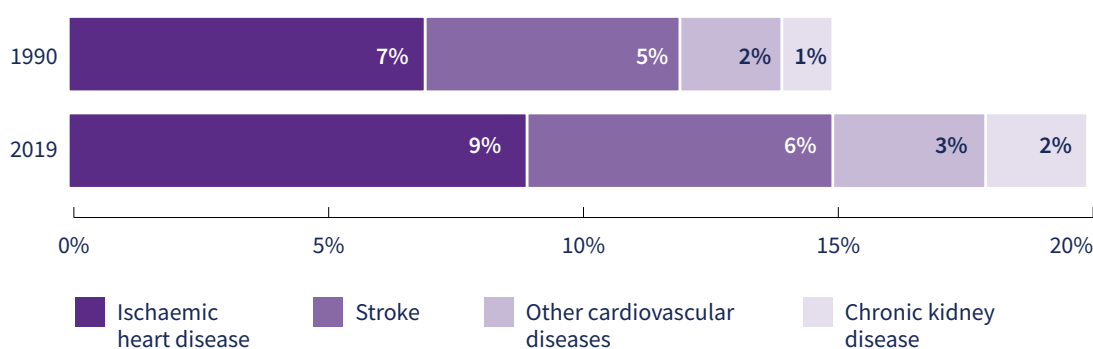
Source: Global Burden of Disease Collaborative Network *(25)* and additional calculations.

Fig. 9. Deaths attributable to high systolic blood pressure (1990 and 2019), by WHO region
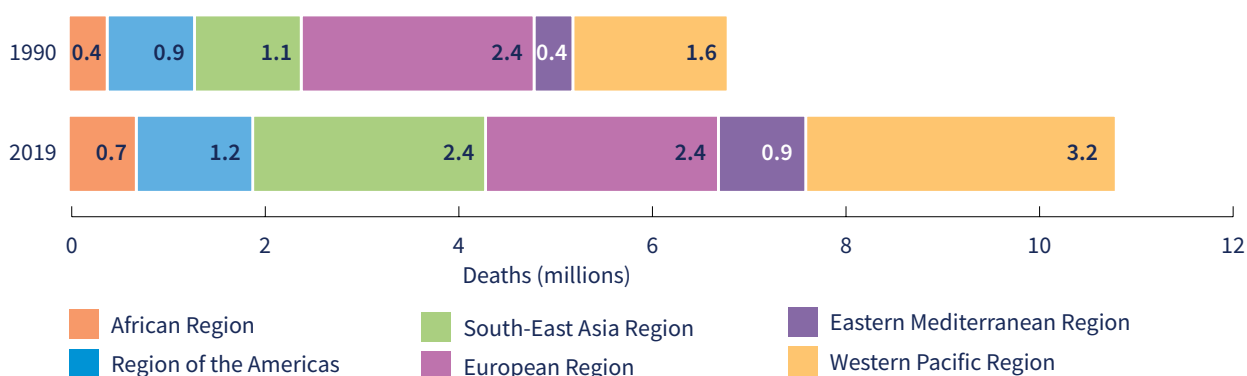
Source: Global Burden of Disease Collaborative Network *(25)* and additional calculations.

Globally, in 2019, more than half of all cardiovascular deaths were attributable to high systolic blood pressure – including all deaths from hypertensive heart disease, 53% of ischaemic heart disease deaths, and 53% of stroke deaths *(25)*. In addition, 62% of deaths from chronic kidney disease are attributed to high systolic blood pressure. Together, these deaths from high systolic blood pressure comprise 18% of male deaths and 20% of female deaths. Although 62% of deaths attributed to high systolic blood pressure occur among adults aged 70 and over, 38% – 4 million deaths – occur in adults under the age of 70 years. This proportion is even higher in LMICs, in which 42% of deaths attributable to high blood pressure are among people younger than age 70.

High systolic blood pressure affects people in all geographic regions and at all country income levels. Even in low-income countries, 11% of deaths are caused by higher-than-ideal systolic blood pressure. This increases to 24% of deaths in upper-middle-income countries. Altogether, more than 80% of deaths attributed to high systolic blood pressure occur in low- and middle-income countries *(14)*.

High systolic blood pressure is also a leading risk factor for disease burden when considering years of life lived in ill health and age at time of death, causing 9% of disability-adjusted life years (DALYs; 235 million) *(25)*.

2.7 Data used to monitor hypertension and hypertension treatment

Strong health information systems that enable the continuous and systematic collection of data on hypertension – and the analysis, interpretation and dissemination of that data – are crucial in the race against hypertension. Only with such comprehensive information on the burden of hypertension – including its underlying determinants and risk factors – can health ministries devise effective prevention and treatment strategies and monitor their progress. And only with such information can an accurate assessment be made of the problem presented by hypertension at the regional and global level.

Effective surveillance of hypertension relies on multiple sources of data: death registration data that include cause of death, population-based surveys, and health-facility data.

Recording the cause of every death is the most fundamental source of information for tracking the health of populations. Calculating the burden of mortality due to hypertension requires information on deaths from cardiovascular diseases and kidney diseases, together with health examination survey data on the distribution of blood pressure levels in the population.

Although hypertension is diagnosed at a primary health care facility, in most cases, health facility data cannot be used for determining hypertension

coverage and control in the total population. Instead, data on hypertension prevalence, diagnosis, treatment and control needs to be captured in population-based surveys.

Systematic population surveys of blood pressure status, previous diagnosis and treatment is essential if Member States are to address the prevalence and distribution of hypertension, and design targeted and effective prevention and control strategies to mitigate the impact of hypertension on individuals and communities. In these surveys, such as the WHO STEPwise approach surveys (STEPS) *(26)*, blood pressure is measured, and diagnosis and treatment are reported by individuals. Respondents are considered to be receiving treatment if they report taking medication for hypertension, and to have their blood pressure controlled if, in addition, their systolic blood pressure is <140 mmHg and diastolic is <90 mmHg.

However, survey data are not available for every Member State, or for every year. A median of only one nationally representative data source per Member State (since 2010) was identified for the estimates presented in this report. To make country estimates, national data were used together with subnational data. These data were then combined in a statistical model that borrows strength from other time periods and countries to make estimates for every country and year.

Survey data are limited, as hypertension diagnosis is typically confirmed between one and three weeks after an initial measurement; identification of undiagnosed hypertension within a survey carried out in one day may misclassify some individuals.

Hypertension monitoring systems in primary health care are vital, as these take place during the patient's first point of contact with integrated, comprehensive and continuous care. Tracking data in these services, ideally electronic, can play a pivotal role in monitoring and guiding improvements in service quality and coverage, patient outcomes and overall public health. WHO has strengthened guidance on facility-based patient monitoring through the *Noncommunicable disease facility-based monitoring guidance*, which includes a comprehensive framework and list of indicators, including the indicators for hypertension *(27)*.

Regular monitoring of the health governance and infrastructure within a Member State is also of paramount importance in ensuring a strong and efficient response to hypertension in that it allows policy-makers and stakeholders to assess the capacity of the system to address hypertension.

Monitoring the health infrastructure ensures that facilities are adequately equipped, maintained, and staffed to meet the hypertension-related needs of the population. This process also assists in addressing disparities in access to

> "Strong health information systems that enable the continuous and systematic collection, analysis, interpretation and dissemination of data on hypertension are crucial in the race against hypertension."

health care and in strengthening health care systems' resilience during emergencies. Ultimately, continuous monitoring of health governance and infrastructure plays a vital role in fostering a robust health care system, capable of providing optimal health outcomes and well-being for the entire population.

2.8 Summary

- High systolic blood pressure is the world's leading risk factor for mortality.

- Hypertension affects one in three adults and presents with no symptoms – the "silent killer". Almost half of people with hypertension are unaware of their condition.

- Over the past three decades, the number of adults aged 30–79 years living with hypertension has doubled to an estimated 1.3 billion. More than three-quarters of adults with hypertension live in LMICs.

- Only about one in five people with hypertension have controlled their hypertension.

- The world is not on track to meet the voluntary global target of a 25% reduction in the prevalence of raised blood pressure (uncontrolled hypertension) by 2025.

- Comprehensive data, including population-based surveys and death registration data, are essential to monitor hypertension in countries.

- Monitoring the performance of health governance and infrastructure assists in the creation of a robust health care system, capable of addressing pervasive health problems such as hypertension.

Benefits of hypertension interventions

3

Pharmacological treatment of hypertension is not new; drugs that treat hypertension have been around since the 1950s *(28)*, and improved population blood pressure has been responsible for at least 20% of the decline in cardiovascular disease mortality in high-income countries over the past four decades *(29)*.

Section 5 will demonstrate that hypertension management is a core element of primary health care, and that a practical, simple hypertension treatment approach quickly leads to improved hypertension control. Unfortunately, most health systems in LMICs were designed to provide episodic care for acute problems or routine services such as immunization, and not to provide care for lifelong, chronic conditions such as hypertension *(30)*. As a result, effective coverage of hypertension care globally is low, with four out of five people with hypertension not having controlled blood pressure *(1)*.

Providing drugs to adults with asymptomatic elevation in blood pressure rarely captures hearts and minds in the same way as some health problems do, but ignoring a public health problem as enormous as hypertension can cause huge strains on health systems over the long term because of costly downstream cardiovascular care demands that could have been avoided with preventive care. Section 5 highlights the WHO HEARTS technical package *(31)*, which provides specific tools for planners and providers, including simple protocols for screening and treatment. We now have evidence that implementation of HEARTS in several demonstration sites across Latin America and the Caribbean, South and East Asia, Europe and sub-Saharan Africa raises hypertension control substantially, and that programmes can be scaled up relatively quickly if there is political and financial commitment. However, hypertension programme coverage and blood pressure control are only steps along the way to the ultimate goal of saving lives by preventing and treating hypertension. This section of the report makes the case for investing in hypertension control by exploring the potential health and economic benefits of implementing HEARTS recommendations worldwide.

> " Ignoring hypertension as a public health programme can cause huge strains on health systems over the long term. "

3.1 Health benefits of hypertension prevention and control programmes

Decades of robust clinical trials have established the efficacy and safety of hypertension treatment. Numerous systematic reviews have summarized this evidence in guidelines *(32)*. This section focuses on the impact of hypertension treatment on preventing future incident cardiovascular disease. A 2016 meta-analysis looked at this issue, and the evidence for risk reduction at different levels of blood pressure elevation (i.e. stages of hypertension). Overall, cardiovascular risk declines by 20% for every 10-mmHg reduction in systolic blood pressure, though the reduction is somewhat larger for stroke and hypertensive heart failure as compared to ischaemic heart disease, and there is a trend towards greater reductions among those with more severe hypertension. Table 3 summarizes the pooled effect sizes for these subgroups *(33)*.

Using this evidence and recent experience with the HEARTS country demonstration programmes, a modelling study in 2022 assessed the potential impact of scaling up hypertension treatment coverage *(34)*. For this section of the report the findings of that study were updated in several important ways:

- Cardiovascular mortality inputs were updated using the 2019 Global Health Estimates *(35)*.

Table 3. Impact of a 10-mmHg reduction in blood pressure on risk of different cardiovascular outcomes and by level of blood pressure elevation

Outcome	Relative risk per 10 mmHg reduction in blood pressure (95% confidence interval)
By type of cardiovascular outcome	
Ischaemic heart disease	0.83 (0.78 - 0.88)
Stroke	0.73 (0.68 - 0.77)
Heart failure	0.72 (0.67 - 0.78)
By level of blood pressure elevation for the composite outcome of major cardiovascular events[a]	
130–139mmHg	0.87 (0.82 - 0.92)
140–149mmHg	0.79 (0.72 - 0.87)
150–159mmHg	0.80 (0.71 - 0.91)
160mmHg	0.74 (0.69 - 0.79)

a. Fatal and non-fatal myocardial infarction, sudden cardiac death, revascularization, fatal and non-fatal stroke, and fatal and non-fatal heart failure

Note: data are from a meta-analysis by Ettehad and colleagues of large-scale blood-pressure-lowering trials *(33)*

- The nonfatal outcomes of myocardial infarction, stroke, and heart failure were added.

- Population health impact was summarized in disability-adjusted life years (DALYs).

- The cost of hypertension treatment, and the economic impact of hypertension treatment, were added.

In quantifying the health and economic gains from hypertension control, this report follows the assumptions of three different scenarios: the "business as usual", "progress" and "aspirational" scenarios *(34),* (for details see Annex 1).

- **Business as usual:** The hypertension cascade of care (including trends in treatment and control) continues to improve gradually into the future, according to rates of change observed in the recent past *(1)*. This scenario shows what would happen if Member States continued to scale up hypertension treatment at their current rates with no additional effort to scale up interventions, and it serves as a comparator for the progress and aspirational scenarios.

- **Progress:** The hypertension cascade of care improves at rates observed historically in high-performing countries (e.g. South Korea, Canada, and

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Fig. 10. Required improvements in hypertension cascade of care to achieve 50% (progress scenario) or 75% (aspirational scenario) blood pressure control by 2050
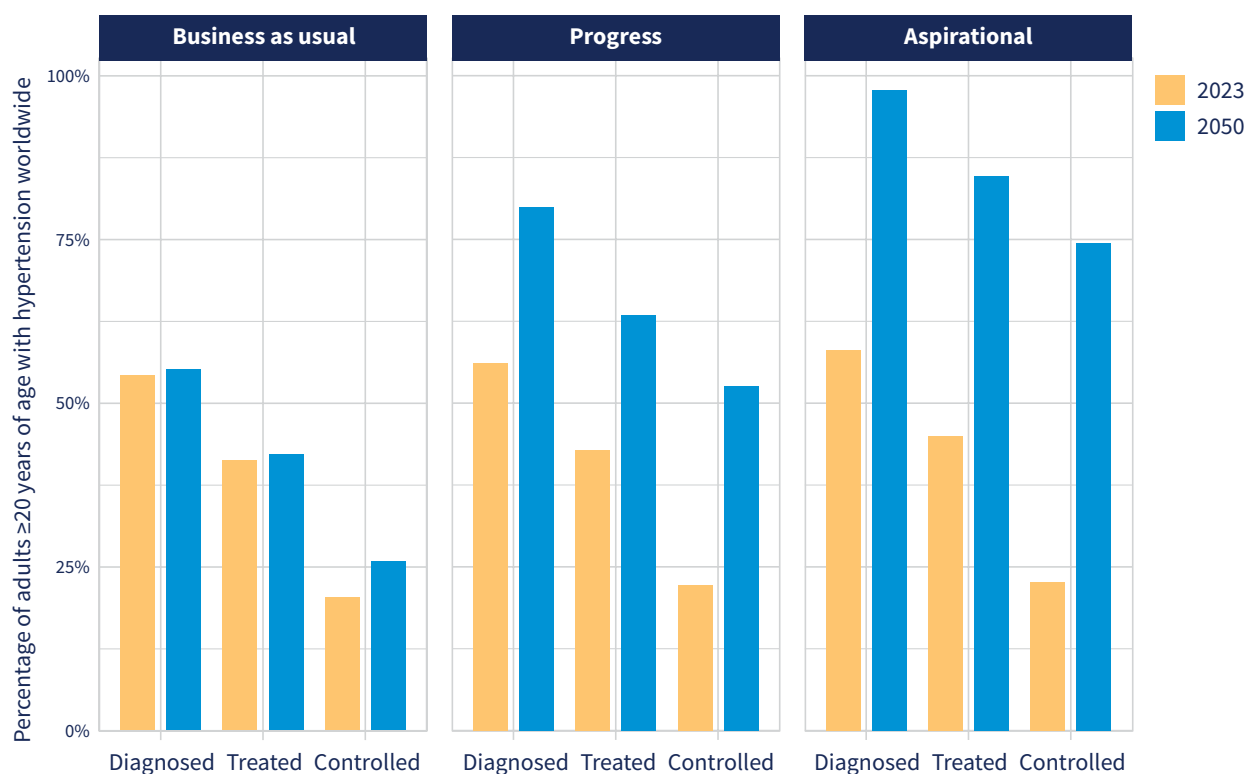
Note: Business-as-usual scenario data are based on NCD Risk Factor Collaboration (NCD-RisC) estimates *(1)*. Given uncertainty about scale-up during the COVID-19 pandemic, the values for 2023 are assumed to be the same as for the NCD-RisC estimates for 2019. Improvements in the cascade by 2050 are extrapolated from annual rates of change in hypertension treatment and control, by country, over 2010–2019.

> Improved global blood pressure control to ≥50% would avert 76 million cardiovascular deaths, 120 million strokes, 79 million myocardial infarctions, and 17 million cases of heart failure between 2023 and 2050.

others) *(34)*. This scenario implies an acceleration of trends in improved access to quality hypertension care.

- **Aspirational:** Hypertension control accelerates to rates of improvement that are faster than observed historically in high-performing countries (for example, about 4% per year at intermediate levels of intervention coverage) but slower than the most successful global health programme: anti-retroviral drug therapy for HIV (about 5% per year).

The difference in projected health outcomes between the two "intervention scenarios" as compared to business as usual gives the deaths and nonfatal events averted. Fig. 10 illustrates how the cascade of care would evolve between 2023 and 2050 in the average Member State included in this analysis.

These improvements translate into a leftward shift in the population blood pressure distribution for the average Member State, illustrated in Fig. 11, so that most individuals with hypertension would have systolic blood pressure levels below 140 mmHg.

The consequences of these shifts on projected cardiovascular disease outcomes are shown in Table 4. The estimates are aggregated from 182 Member States that cover 98% of the world population. The figures are cumulative, beginning in 2023, when accelerations in hypertension care are assumed to start, and ending in 2050, the year in which nearly all Member States could feasibly achieve the targets specified in the progress and aspirational scenarios by replicating the successes of high-performing countries *(34)*. Improved blood pressure

Fig. 11. Implications of improved hypertension care for global blood pressure distribution
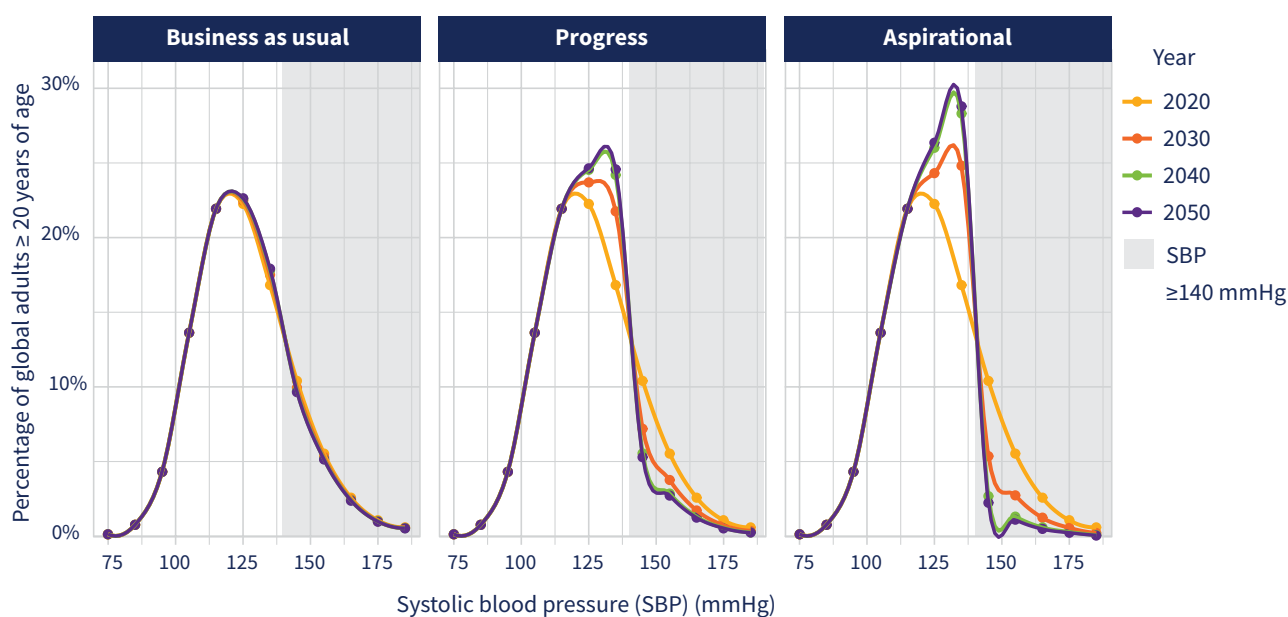
Note: See notes for Fig. 10. In the progress scenario, improvements in hypertension treatment and control lead to a leftward shift in the population blood pressure distribution over time, which results in fewer incident and fatal cases of CVD. It was conservatively estimated that individuals whose blood pressure is newly controlled would have an SPB of 130–139 mmHg; some individuals will achieve greater reductions, so future population blood pressure levels will probably be more normally distributed.

control would avert 76 million cardiovascular deaths, 120 million strokes, 79 million myocardial infarctions, and 17 million cases of heart failure between 2023 and 2050.

Better hypertension care would not only improve cardiovascular outcomes in the aggregate, but would also improve the distribution of these outcomes across Member States. Fig. 12 illustrates how the largest absolute reductions in cardiovascular mortality would be achieved in the least-developed countries, where mortality rates are the highest because of low access to care *(36)*.

Table 4. Cumulative health gains (2023–2050) from improved population blood pressure control

Outcome	Projected number (progress scenario)	Projected number (aspirational scenario)
Nonfatal myocardial infarctions averted	79 million	140 million
Nonfatal strokes averted	120 million	200 million
Nonfatal cases of heart failure averted	17 million	31 million
Cardiovascular deaths averted	76 million	130 million

Note: Projections represent the difference in outcomes between the progress and aspirational scenarios as compared to the business-as-usual scenario, with results presented as the aggregate of 182 Member States. See Pickersgill et al. *(34)* for list of Member States included in the analysis.

Fig. 12. Reductions in cardiovascular mortality inequalities resulting from improved blood pressure control
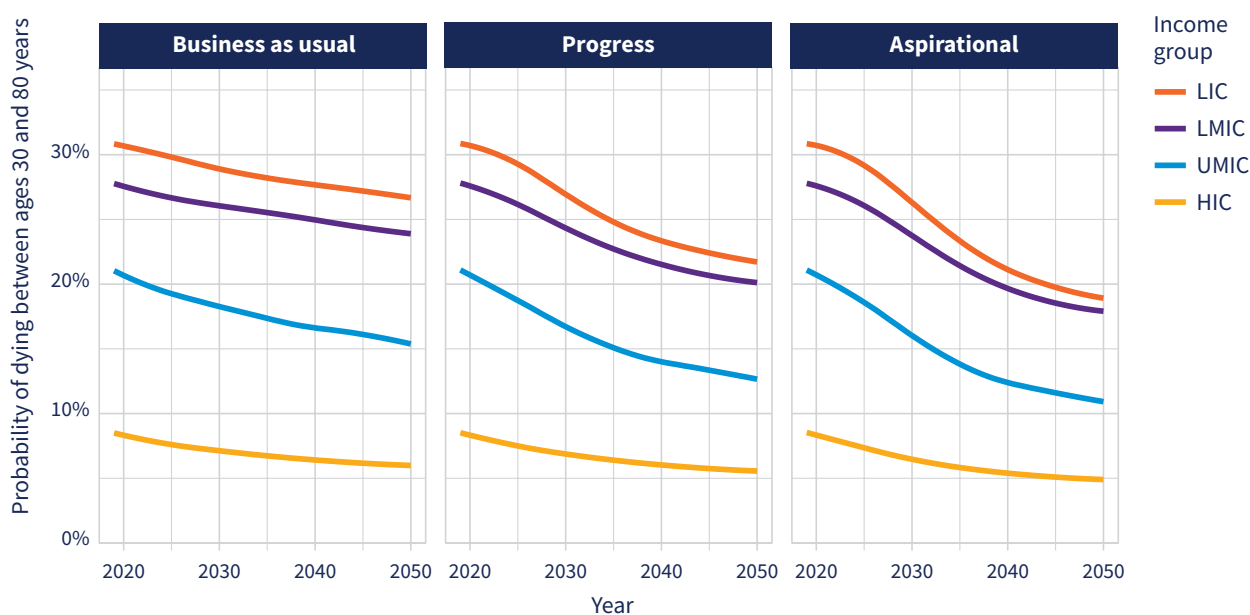
Note: The plots show the changes in probability of death from cardiovascular disease between ages 30 and 80 (i.e. CVD-specific 50q30), a modification of the Sustainable Development Goal 3.4 indicator *(37)* in the business-as-usual and two intervention scenarios, disaggregated into the four World Bank income groups. LIC: low-income countries; LMIC: lower-middle-income countries; UMIC: upper-middle-income countries; HIC: high-income countries.

3.2 Costs and benefits of hypertension prevention and control interventions

Better access to hypertension care can provide obvious health benefits. It is also important to consider the costs and economic benefits of accelerated progress towards prevention and control of hypertension.

A recent systematic review summarized the findings of 71 studies on the cost and/or cost-effectiveness of hypertension treatment *(38)*. While these studies employed a range of designs (including trials, cross-sectional analyses and modelling), together they provide a reasonably clear picture of the overall value for money in hypertension care.

There are large variations in the cost of hypertension treatment across countries. Differences in costing methods explain some of this variation, but a lot of the variation is due to different medication costs *(38)*. The largest variations in prices among countries appear to be for ACE inhibitors and angiotensin II receptor blockers, especially in studies that looked at monotherapy with these agents.

A systematic review *(38)* identified 42 cost-effectiveness analyses conducted in 15 countries. Again, the studies reveal considerable variation in cost-effectiveness ratios, but most studies found that hypertension treatment cost less than US$ 1000 per DALY averted. In studies that stratified cost-effectiveness ratios by individual patients' baseline cardiovascular risk, there was a trend towards better value for money in treating higher-risk subgroups. While this concept is not new *(39)*, selectively treating high-risk hypertension might be impractical in real-world settings and raises important ethical problems in not giving treatment to patients with a life-threatening condition.

The incremental cost of scaling up hypertension care according to the assumptions of the progress scenario reported in Section 3.1 can be estimated using a range of studies. The cost of scaling up hypertension care would include the health system costs of implementing hypertension control programmes, including outpatient visit costs, costs of drugs and, the costs of delivering drugs. First, the cost of the drugs comes from the updated Appendix 3 of the Global action plan for the prevention and control of noncommunicable diseases *(40, 41)*, specifically the intervention "Pharmacological treatment of hypertension in adults using either of the following: thiazide and thiazide-like agents; angiotensin-converting enzyme inhibitors (ACE-Is)/angiotensin-receptor blocker (ARBs); calcium channel blockers (CCBs)". Including health care delivery costs, the average unit cost of hypertension care (drugs and delivery costs) across all 62 countries included in the analysis is Int$ 43 per person-year. With increased volumes and more efficient procurement, drug costs may be able to be reduced substantially.

The additional costs required to do population-based hypertension screening were calculated using default data on typical screening programme costs from the HEARTS costing tool *(42)*. However, implementing a hypertension programme involves more than just the costs incurred at primary health care facilities. Health systems also need to be strengthened to provide screening and care. Estimates by a 2009 WHO task force were used to generate programme costs such as health management information systems, administration and financing *(43)*. CHOICE estimates of the cost of strengthening supply chains were used to generate a markup for logistics *(44)*. In total, the health system strengthening costs add 26% to the direct costs of service delivery.

The economic benefits from the progress scenario compared to the business-as-usual scenario were estimated by calculating the difference in the number of healthy life years remaining, based on estimates of fatal and nonfatal events averted, age-specific remaining life expectancy, and disability weights from the Global Burden of Disease Study. Following the human capital approach, the difference in DALYs averted were valued at the world average gross domestic product per capita, expressed in International Dollars.

Table 5 shows the results of the economic analysis. Achieving 50% population blood pressure control by 2050 (compared with the business-as-usual scenario) would cost about Int$ 660 per DALY averted, on average, which is comparable to some of the best investments in global health – including interventions for the "unfinished agenda" of communicable, perinatal and nutritional diseases *(45)*. Overall, the economic benefits of hypertension control could outweigh these costs by nearly 18 to one.

> " The economic benefits of hypertension control could outweigh the costs by nearly 18 to one. "

Table 5. Total incremental costs and cumulative economic gains (2023–2050) from scenarios involving improved population blood pressure control compared to business-as-usual scenario

Outcome	Projected number (progress scenario)	Projected number (aspirational scenario)
Incremental costs (compared to current level of blood pressure control globally)	Int$ 300 billion	Int$ 630 billion
DALYs averted	450 million	720 million
Cost per DALY averted	Int$ 660	Int$ 870
Economic benefits	Int$ 5.3 trillion	Int$ 8.5 trillion
Benefit–cost ratio	18	14

Source: DALYs are calculated from World Population Prospects 2022 life tables *(46)* and average disability weights for different cardiovascular outcomes as reported in the Global Burden of Disease 2019 Study *(47)*. Costs are taken from the Draft updated Appendix 3 to the Global action plan for the prevention and control of noncommunicable diseases *(40)*, and are expressed in 2020 International Dollars. A DALY averted is valued at average global GDP per capita, also in International Dollars. The International Dollar is a hypothetical unit of currency that has the same purchasing power parity that the US dollar had in the United States of America at a given point in time. Costs and economic benefits are discounted at 3%.

The additional resources required to achieve these two scenarios would be considerable. The progress scenario would require an average of US$ 6.7 billion annually worldwide.[1] The aspirational scenario would require an average of US$ 14 billion annually worldwide. Achieving the greater population health benefits of the aspirational scenario would cost more, but could generate significant returns (14 to one).

3.3 Summary

- If countries mobilize to achieve the goal of 50% population hypertension control by the year 2050, 76 million cardiovascular deaths and 450 million DALYs would be avoided.

- Though the costs of achieving 50% blood pressure control are substantial, the economic benefits generated are estimated to be 18 times greater than business as usual.

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[1] These costs are presented in US dollars rather than International Dollars since they represent the value of the monetary transactions that would be required to finance hypertension programmes worldwide. They are different from the incremental cost estimates in International Dollars in Table 6, which are discounted at 3% to construct cost-effectiveness and benefit–cost ratios.

Man reading leaflet promoting healthy diet at celebration of 2013 World Health Day in Timor-Leste.

Risk factors for hypertension

<div style="text-align:right">4</div>

4.1 Population-based hypertension risk factors

The WHO *Guideline for the pharmacological treatment of hypertension in adults* notes the importance of addressing noncommunicable disease risk factors, such as a diet high in sodium and low in potassium, the consumption of alcohol and physical inactivity, in both the treatment and the prevention of hypertension *(8)*.

This section presents some risk factors for hypertension, with the limitation that systematic reviews may not have been conducted for all of the approaches presented below.

4.1.1 Dietary sodium

Consuming a healthy diet throughout the life-course helps to prevent and control hypertension. The exact make-up of a diversified, balanced and healthy diet will vary, depending on individual characteristics, cultural context, locally available foods and dietary customs. However, the basic principles of what constitutes a healthy diet remain the same *(48)*.

For hypertension specifically, reducing sodium and eating a diet that includes lots of fibre, such as wholegrain rice, bread and pasta, and plenty of fruit and vegetables high in potassium and nitrates also helps lower blood pressure *(49)*.

Excess sodium intake increases blood pressure. Of all the deaths from cardiovascular causes that occurred in 2019, almost 2 million were attributed to sodium consumption that results in 24-hour urinary sodium excretion above the reference level of 1 to 5 grams per day *(3)*. This is a larger number than from any other dietary factor *(50)*.

Fortunately, blood pressure is reduced when dietary sodium intake is reduced and when potassium intake is increased. Reducing sodium intake is one of the most cost-effective ways to improve health, as it can avert many cardiovascular events and deaths at very low total programme costs *(51)*.

In 2011, the United Nations General Assembly adopted a political declaration that committed Member States to the prevention and control of noncommunicable diseases. A reduction in sodium intake was noted as one of the top priority actions, and a 30% reduction in sodium intake by 2025, with an eventual target of <2000 mg/day worldwide, was adopted in 2013.

> " Of all the deaths from cardiovascular causes that occurred in 2019, almost 2 million were attributed to daily sodium consumption above optimal levels. "

> " Reducing sodium intake is one of the most cost-effective ways to improve health. "

The global average sodium intake is estimated to be 4310 mg/day (10.78 g of salt per day)*(50)*, which far exceeds the physiological requirement and is more than double the WHO recommendation of <2000 mg/day of sodium (equivalent to <5 g of salt) in adults. WHO regional sodium estimates range from 2687 mg/day (6.7 g/day salt) in the WHO African Region to 6247 mg/day (15.6 g/day salt) in the WHO Western Pacific Region. In many high-income countries, and increasingly in LMICs, a significant proportion of sodium in the diet comes from processed foods such as bread, cereal and grains, processed meats and dairy products *(50)*.

Sodium reduction policies and other measures

WHO provides several sodium-related best-buy policies as practical actions that should be undertaken immediately, to prevent cardiovascular disease and its associated costs *(40)*.

These include:

• lowering sodium content in food products;
• implementing front-of-pack labelling to help consumers select food products with lower sodium content;
• conducting mass-media campaigns to alter consumer behaviour around sodium; and
• implementing public food procurement and service policies to reduce sodium content in food served or sold.

Box 1: Population sodium reduction programme

Shandong Province, China

The Shandong Ministry of Health Action on Salt and Hypertension (SMASH) programme was a government-led initiative aimed at curbing salt intake and reducing the prevalence of hypertension among adults. The programme employed various strategies, including a media campaign, distribution of scaled salt spoons and public education activities.

The results of the programme were remarkable, with a significant 24.8% reduction in sodium intake observed over a five-year period. This decrease was measured through 24-hour urine sodium excretion, which dropped from 5338 mg/day to 4013 mg/day. Additionally, potassium excretion increased by 15.1%, and the sodium to potassium ratio decreased by 37.7%, indicating positive dietary changes. Beyond decreased sodium consumption, the SMASH programme demonstrated downstream improvement in blood pressure levels. The adjusted mean SBP decreased by 1.8 mmHg, and the adjusted mean DBP decreased by 3.1 mmHg, most likely due to decreased sodium intake.

Alongside these physiological changes, the programme positively impacted systematically assessed knowledge, attitudes and behaviours related to sodium reduction and hypertension.

Participants showed increased awareness of the recommended salt intake, paid more attention to the labelling on processed foods, and took action to reduce sodium in their diets.

A moderate reduction in sodium intake and increase in potassium intake causes a significant reduction in blood pressure and can prevent millions of premature deaths. Potassium-enriched salt substitutes is an affordable strategy to reduce sodium and increase potassium intake simultaneously, with proven benefit to reduce blood pressure and prevent cardiovascular events *(52)*.

WHO monitors country progress in making national commitments and taking a multifaceted approach to implementing policies to reduce sodium intake. The result is published as the Sodium Country Score Card *(51)*. In 2023, just over a quarter (27.6%) of the world's population lived in countries with any mandatory measures towards sodium reduction.

4.1.2 Alcohol consumption

Alcohol consumption ranked eighth among the mortality risks worldwide in 2019 *(25, 3)*. The risks associated with alcohol use manifest in various ways, including injuries, liver toxicity and an increased risk of cancer.

The relationship between alcohol consumption and the incidence of coronary heart disease in different racial groups *(53)*, along with other pieces of evidence, implies that the reduced risk observed among moderate drinkers of wine or other beverages could be attributed to a health cohort effect *(54)*.

> " Chronic alcohol consumption, even at low levels, is linked to a high incidence of hypertension. "

Although alcohol acutely lowers blood pressure, this is followed by a rebound increase a few hours after ingestion *(55, 56)*. Furthermore, chronic alcohol consumption is linked to a high incidence of hypertension *(57)*, even when consumed at low to moderate levels *(58)*.

Due to the absence of clinical trials demonstrating alcohol's beneficial impact on major cardiovascular events, and considering the risks of hypertension and other diseases, alcohol intake to promote cardiovascular disease prevention is not supported.

WHO introduced the SAFER initiative in 2018, in collaboration with partners. "SAFER" *(59)* is an acronym for the five most cost-effective interventions to reduce alcohol-related harm, and stands for the following interventions:

- **S**trengthen restrictions on alcohol availability
- **A**dvance and enforce drink driving counter measures
- **F**acilitate access to screening, brief interventions and treatment
- **E**nforce bans or comprehensive restrictions on alcohol advertising, sponsorship, and promotion
- **R**aise prices on alcohol through excise taxes and pricing policies.

4.1.3 Tobacco use

Tobacco caused 8.7 million deaths globally in 2019, including 3.2 million deaths from cardiovascular diseases *(60)*. The relationship between tobacco uses and blood pressure is complex. While scientific evidence on the impact of tobacco use on chronic high blood pressure levels is inconclusive *(61)*, tobacco smoking and exposure to secondhand smoke acutely exert a hypertensive effect, mainly through the stimulation of the sympathetic nervous system *(62, 63, 64)*. Similarly, research has shown that smokeless tobacco use may acutely elevate blood pressure *(65, 66, 67, 68)*. These and other effects of tobacco use not only reduce life expectancy amongst those who consume tobacco and are exposed to tobacco smoke but also adversely affect quality of life.

Cessation of tobacco use is the most effective lifestyle measure for the prevention of many cardiovascular diseases and may have significant benefits for hypertensive patients *(8)*. The WHO Framework Convention on Tobacco Control (FCTC) *(69)* is an evidence-based treaty that reaffirms the right of all people to the highest standard of health. Based on a review of the evidence, the MPOWER package was introduced in 2008 by WHO as a technical package to help countries implement the cost-effective demand-reduction measures of the WHO FCTC. The MPOWER technical package is made up of the following measures.

- **M**onitoring tobacco use and prevention policies
- **P**rotecting people from secondhand smoke
- **O**ffering people help to quit
- **W**arning about the dangers of tobacco
- **E**nforcing tobacco advertising, promotion and sponsorship bans
- **R**aising taxes.

All MPOWER measures are part of the NCD "best-buy" interventions. The WHO best-buys are considered affordable, cost-effective and evidence-based interventions that can help tackle the global burden caused by noncommunicable diseases.

4.1.4 Physical inactivity

Physical activity promotes many physiological responses that result in lowered risk of hypertension due to beneficial short- and long-term autonomic and haemodynamic adaptations. There is strong evidence of an inverse relationship between physical activity and incidence of hypertension among adults with normal blood pressure, and that physical activity reduces blood pressure among adults with prehypertension and normal blood pressure *(70)*.

Physical activity is associated with hypertension based on evidence that increased physical activity improves physical function and reduces

Campaigners in Indonesia raising awareness of the harmful effects of tobacco use and exposure to secondhand smoke.

A "health ball" in Guarulhos, Brazil, arranged by the city council's physical exercise team.

cardiovascular disease progression and mortality in people living with hypertension *(71)*. For example, compared with control groups of people who do not exercise, people with hypertension who are physically active can reduce systolic blood pressure by approximately 12 mmHg and diastolic blood pressure by approximately 6mmHg *(72)*.

In addition, emerging evidence shows that people with hypertension who are physically active can significantly improve their health-related quality of life compared with those who are inactive *(73)*. For adults living with hypertension, evidence supports aerobic activity, muscle-strengthening activity, and combinations of the two for improving cardiovascular disease progression *(74)*.

Sedentary behaviour, on the other hand, and particularly for extended periods of time, is associated with higher all-cause mortality, cardiovascular mortality and cardiovascular disease incidence *(74)*.

If the current prevalence of physical inactivity does not change, almost 240 million new, preventable cases of hypertension will occur globally from 2020 to 2030, which will place a burden of more than Int$ 115 billion on the public health care system *(75)*.

The WHO toolkit ACTIVE, which was launched in 2019, proposes policy options that can be adapted and tailored to local cultures and contexts to help increase levels of physical activity globally *(76)*. These include:

• the development and implementation of national guidelines for physical activity for all age groups;

- establishing national coordinating mechanisms involving all relevant government departments and key non-government stakeholders to develop and implement coherent and sustainable policy and actions plans;

- implementing community-wide communication campaigns to raise awareness and knowledge of the multiple health, economic and social benefits of being physically active;

- investing in new technologies, innovation and research to develop cost-effective approaches to increasing physical activity, particularly in low-resource contexts;

- ensuring regular surveillance and monitoring of physical activity and policy implementation.

Further WHO publications offering guidance for policy-makers and programme managers include:

- the *Global action plan on physical activity (GAPPA) 2018–2030 (77)*, which sets out multiple policy actions to support people in being regularly active as part of work, transport (walking and cycling), recreation or play; and

- *Promoting physical activity through primary health care: a toolkit*, which promotes physical activity through brief counselling interventions in primary health care *(78)*.

Many other interventions support and encourage physical activity, whether through promotion of walking and cycling, provision of public open space, or affordable and accessible digital programmes such as *Be he@lthy, be mobile: a handbook on how to implement mobile health for physical activity (79)*.

4.1.5 Air pollution

Air pollution is one of the major risk factors for noncommunicable diseases *(80)*; it accounts for an estimated 6.7 million deaths every year worldwide *(81)*. Around the globe, 99% of the population is exposed to air quality that does not meet the levels recommended in the WHO global air quality guidelines *(81)* and 2.3 billion people globally relied primarily on polluting fuels and devices for cooking in 2021, which exposed them to dangerous levels of air pollutants, especially in LMICs where access to clean energy is still challenging *(80, 82)*. The best indicator for estimating the health impacts of air pollution, fine particulate matter ($PM_{2.5}$), ranked fourth among mortality risks worldwide in 2019 *(25)*. Cardiovascular diseases such as ischaemic heart disease and stroke are among the main diseases attributable to air pollution exposure *(83)*. These are health outcomes for which hypertension is a well-known etiological factor. In addition, consolidated evidence shows an increased risk of high blood pressure in adults with each 10-µg/m³ increase in long-term exposure to $PM_{2.5}$ *(84, 85)*, while the evidence is limited and inconsistent for short-term exposure *(86)*. Pre-existing conditions such as cardiovascular and respiratory diseases,

obesity, and low socioeconomic status increase the risk of experiencing the negative health effects of air pollution, particularly those related to $PM_{2.5}$.

While struggling to find consideration in most clinical guidelines, the burden of disease that can be attributed to air pollution should not be neglected by the public health community and it needs to be incorporated in guideline development, among other interlinked environmental and planetary health risk factors *(87)*.

Improving air quality would constitute an opportunity for primary prevention of hypertension as well as other noncommunicable diseases. WHO has provided guidance on personal interventions and risk communication on air pollution *(88)*, and training opportunities for the education of health professionals *(89)*. Yet the major efforts needed to improve air quality remain to be addressed by countries and regions in reducing emissions of health-damaging air pollutants. WHO promotes interventions and initiatives for healthy sectoral policies (including energy, transport, housing, urban development and electrification of health care facilities), addressing key risks to health from air pollution indoors and outdoors, and contributing to achieving health co-benefits from climate change mitigation policies *(90)*.

> " The burden of disease that can be attributed to air pollution should not be neglected. "

4.2 Summary

- About one-third of the world's adults live with hypertension and are at risk of heart disease, stroke, or death.

- WHO supports the reduction of dietary sodium (and increase in potassium), the reduction of alcohol consumption, the control of tobacco use, the promotion of physical activity, and a reduction in air pollution to prevent hypertension.

- The most effective ways to control these hypertension risk factors is via large-scale, population-level public health programmes.

Diagnosing and managing hypertension

<div style="text-align:right">5</div>

5.1 Clinical presentation of high blood pressure and hypertension

Because it is usually asymptomatic, hypertension has appropriately been labelled the "silent killer"; unless their blood pressure is measured, most people will be unaware of their condition until they have a clinical complication such as a heart attack, stroke or kidney failure.

Cohort studies and reports using electronic record linkage have both documented a strong, continuous and progressive association between systolic blood pressure and the risk of CVD *(91, 92, 93)*. The association has been documented at all ages for both systolic blood pressure (SBP) and diastolic blood pressure (DBP), for all major forms of CVD, and throughout the entire range of blood pressure (from SBP as low as 115 mmHg) *(94)*. Classic cohort studies have shown that, starting at a blood pressure of 115/75 mmHg, the risk of death from a heart attack or stroke at ages 35–69 doubles with every 20-point increase in systolic blood pressure *(95)*. For most patients, lower blood pressure is better, down to the 115–120 mmHg range, although for clinical practice considerations, a target of <140/90 mmHg is most common.

The significance of high blood pressure as a risk factor for CVD is modified by the presence or absence of other CVD risk factors *(96)*. As a result, the absolute risk associated with elevated blood pressure is much higher at an older age, when it is common to find high blood pressure accompanied by several other CVD risk factors. However, high blood pressure at younger ages is also harmful, since long-term studies show that damage to blood vessels accumulates over a lifetime *(97)*. In addition to CVD, high blood pressure is associated with many other adverse outcomes, including kidney disease, cognitive impairment and dementia *(94)*.

> " Starting at a blood pressure of 115/75 mmHg, the risk of death from a heart attack or stroke at ages 35–69 doubles with every 20-point increase in systolic blood pressure. "

5.2 Diagnosis and early detection

The starting point for living well with hypertension is early diagnosis. The longer a person lives with undiagnosed and inadequately treated hypertension, the worse the health outcomes are likely to be. Easy and sustained access to basic validated automated blood pressure measuring devices in primary health care

facilities is therefore essential, and diagnosis should be available in primary health care settings. Blood pressure measurements should be conducted by a trained staff member in a standardized way, with an appropriate cuff and the patient comfortably seated with their back supported, an empty bladder and legs uncrossed. It is efficient and acceptable to conduct two blood pressure readings at first and use results of the second reading to guide decisions about the need to schedule a follow-up visit to complete the diagnostic work-up.

If blood pressure is confirmed to be either ≥160 mmHg systolic or ≥100 mmHg diastolic on two readings on a single day, medications to reduce blood pressure should begin on that day. If blood pressure is in the 140–159 mmHg/90–99 mmHg range, the diagnosis of hypertension should be confirmed at an additional patient follow-up visit, usually 1 to 4 weeks after the first set of measurements.

In general, hypertension is diagnosed if, on the two visits:

- systolic blood pressure on both days is ≥140 mmHg and/or
- diastolic blood pressure on both days is ≥90 mmHg *(98)*.

Counselling to improve diet, physical activity and other risk factors should be provided, but should not delay initiation of pharmacological treatment. Note that for people a pre-existing CVD and those without CVD but living with co-morbid diabetes, chronic kidney disease, or considered at high cardiovascular risk, the WHO *Guideline for the pharmacological treatment of hypertension in adults (8)* recommends also considering blood-pressure-lowering treatment if SBP is ≥130–139 mmHg. It is now clear that reducing blood pressure to lower levels provides additional benefits to essentially all patients.

5.2.1 Early detection of hypertension

Evidence supports the benefits of early diagnosis and effective treatment of hypertension, both because vascular disease results from cumulative exposure to high blood pressure, and because earlier screening reduces the lead time between diagnosis and treatment *(99)*. The asymptomatic nature of high blood pressure also means that active clinical screening in the health care system is essential if the necessary treatment for hypertension is to be provided.

Screening for hypertension is only useful when it is closely linked to follow up at a health care facility able to measure blood pressure accurately and treat high blood pressure effectively. Many individuals with high blood pressure in a population screening setting do not meet the criteria for hypertension when they are more carefully evaluated on follow up. Also, many individuals are lost to follow up; in population screening programmes in countries around the world, effective follow up of patients with abnormal blood pressure is the exception rather than the norm, which is why detection in health care facilities is the priority to improve hypertension control.

Population screening programmes increase the number of clinically diagnosed cases of hypertension and, as such, will increase the workload in the health care system, not only in terms of the process of early detection but, more importantly, in dealing with the increased number of clinically diagnosed cases who will be identified and will require long-term, usually life-long, care *(100)*. With prevalence rates close to a quarter of the adult population globally *(1)*, no population screening system should be established without consideration of whether local health care resources are sufficient to cope with delivering standard hypertension treatment services to the large number of extra patients identified. Simply adding new cases to a health care system without expanding the capacity for treatment will, in the absence of compensating efficiencies, result in low-quality care unlikely to result consistently in adequate control of blood pressure *(101)*.

It is recommended that blood pressure measurements be done "opportunistically": that is, on adults during routine visits to primary health care facilities, including all adults at first presentation to the facility, and, if normal, periodically thereafter (e.g. annually). Every patient with elevated blood pressure readings requires immediate follow up for treatment. Population-based screening is not recommended as the primary method for detection and early diagnosis of hypertension *(102)*.

> "In population screening programmes, effective follow up of patients with abnormal blood pressure is the exception, which is why detection in health care facilities is the priority to improve hypertension control."

5.3 Management of hypertension

5.3.1 Guideline for the pharmacological treatment of hypertension

In 2021, the World Health Organization launched its *Guideline for the pharmacological treatment of hypertension in adults*, which provides recommendations on the threshold for the initiation of pharmacological treatment for hypertension, recommendations for the basis on which to decide whether to initiate treatment with monotherapy, dual therapy or single-pill combinations, as well as guidance for countries selecting medicines and algorithms for hypertension control for their national guideline for hypertension management.

The guideline provides implementation targets, including those on intervals for follow up, target blood pressure to be achieved for control, and the cadre of health care workers who may initiate treatment. Lastly, the guideline provides examples of a drug- and dose-specific protocol for managing hypertension which can be adapted based on country context *(8)*. A summary of the 2021 WHO guideline recommendations is provided in Table 6.

5.4 HEARTS for hypertension control

WHO and the United States Centers for Disease Control (CDC) launched the Global Hearts Initiative in 2016 *(103),* including the *HEARTS: technical package for cardiovascular disease management in primary health care (104)* to support

Table 6. WHO guideline recommendations on the pharmacological treatment of hypertension in adults

1. Recommendation on blood pressure threshold for initiation of pharmacological treatment

WHO recommends initiation of pharmacological antihypertensive treatment of individuals with a confirmed diagnosis of hypertension and systolic blood pressure of ≥140 mmHg or diastolic blood pressure of ≥90 mmHg.

WHO recommends pharmacological antihypertensive treatment of individuals with existing cardiovascular disease and systolic blood pressure of 130–139 mmHg.

WHO suggests pharmacological antihypertensive treatment of individuals without cardiovascular disease but with high cardiovascular risk, diabetes mellitus, or chronic kidney disease, and systolic blood pressure of 130–139 mmHg.

2. Recommendation on laboratory testing

When starting pharmacological therapy for hypertension, WHO suggests obtaining tests to screen for comorbidities and secondary hypertension, but only when testing does not delay or impede starting treatment.

3. Recommendation on cardiovascular disease risk assessment

WHO suggests cardiovascular disease risk assessment at or after the initiation of pharmacological treatment for hypertension, but only where this is feasible and does not delay treatment.

4. Recommendation on drug classes to be used as first-line agents

For adults with hypertension requiring pharmacological treatment, WHO recommends the use of drugs from any of the following three classes of pharmacological antihypertensive medications as an initial treatment:
1. thiazide and thiazide-like agents
2. angiotensin converting-enzyme inhibitors (ACEis)/angiotensin receptor blockers (ARBs)
3. long-acting dihydropyridine calcium channel blockers (CCBs).

5. Recommendation on combination therapy

For adults with hypertension requiring pharmacological treatment, WHO suggests combination therapy, preferably with a single-pill combination (to improve adherence and persistence), as an initial treatment. Antihypertensive medications used in combination therapy should be chosen from the following three drug classes: diuretics (thiazide or thiazide-like), angiotensin-converting enzyme inhibitors (ACEis)/angiotensin-receptor blockers (ARBs), and long-acting dihydropyridine calcium channel blockers (CCBs).

6. Recommendations on target blood pressure

WHO recommends a target blood pressure treatment goal of <140/90 mmHg in all patients with hypertension without comorbidities.

WHO recommends a target systolic blood pressure treatment goal of <130 mmHg in patients with hypertension and known cardiovascular disease (CVD).

WHO suggests a target systolic blood pressure treatment goal of <130 mmHg in high-risk patients with hypertension (those with high CVD risk, diabetes mellitus, chronic kidney disease).

7. Recommendations on frequency of assessment

WHO suggests a monthly follow up after initiation or a change in antihypertensive medications until patients reach target.

WHO suggests a follow up every 3–6 months for patients whose blood pressure is under control.

8. Recommendation on treatment by nonphysician professionals

WHO suggests that pharmacological treatment of hypertension can be provided by nonphysician professionals such as pharmacists and nurses, as long as the following conditions are met: proper training, prescribing authority, specific management protocols and physician oversight.

governments to strengthen the prevention and control of CVD and to facilitate achievements of the UN health-related SDG goals. The package is endorsed by 11 partner organizations: American Heart Association (AHA), Centre for Chronic Disease Control (CCDC), International Society of Hypertension (ISH), International Society of Nephrology (ISN), Pan American Health Organization, Resolve to Save Lives (RTSL), US CDC, World Heart Federation (WHF), World Hypertension League (WHL), WHO and World Stroke Organization (WSO). Hypertension control is a pathfinder for improved primary health care and universal health coverage.

The HEARTS technical package was launched in 2018 as the core technical package of the Global Hearts Initiative. The package is the public health approach to managing hypertension and other CVD risk factors, such as dyslipidaemia, at the primary health care level, with the aim of incorporating it into universal health coverage benefit packages. Six modules and an implementation guide make up the package: *Healthy-lifestyle counselling, Evidence-based treatment protocols, Access to essential medicines and technology, Risk-based CVD management, Team-based care* and *Systems for monitoring (31)*.

The sections below will expand on each of these modules, highlighting relevant and country examples of contextualization and implementation.

5.5 Healthy lifestyle counselling

The WHO *Guideline for the pharmacological treatment of hypertension in adults* emphasises that non-pharmacological treatment is an important component of hypertension management. Smoking cessation, limiting use of alcohol, healthy diet and sufficient physical activity are advised for all newly diagnosed patients. An evidence-based diet to lower blood pressure in populations includes a lower-sodium diet and potassium-enriched foods. Recent evidence from China demonstrates that low-sodium, potassium-enriched cooking salts lower blood pressure and prevent stroke in people living with hypertension *(52)*. However, the impact of diet and lifestyle changes is modest, as evidenced by primary-care-based trials that have demonstrated only a modest blood pressure-lowering effect (overall 1.3 mmHg lower systolic and 0.5 mmHg lower diastolic blood pressure) *(105)*. Thus, nearly all people diagnosed with hypertension will continue to have uncontrolled blood pressure, despite making diet and exercise changes to lower blood pressure, and will have to take medications to keep their blood pressure controlled whilst still maintaining healthy lifestyles *(106)*. Lifestyle changes may be considered as adjunctive therapy to antihypertensive medications, which will be essential in the care of nearly all patients diagnosed with hypertension.

> " Lifestyle changes may be considered as adjunctive therapy to antihypertensive medications, which will be essential in the care of nearly all patients diagnosed with hypertension. "

Self-care may include making lifestyle changes, such as adopting a healthy diet and engaging in regular physical activity, as well as ensuring proper medication adherence and monitoring blood pressure.

Box 2: Implementation of HEARTS

The roll-out of HEARTS across the world

The HEARTS technical package is being implemented in nearly 40 Member States. Approximately 35 000 facilities are implementing HEARTS. Regional programmes facilitate dissemination of best practices across countries within the region. Additionally, three regional programmes, HEARTS in the Americas (Pan American Health Organization/WHO), SEA-HEARTS (WHO South-East Asia Region) initiative and the Signature Initiative (WHO European Region), demonstrate the accelerated commitments and movements to scaling up HEARTS.

Over 17.4 million patients are now enrolled in a contextualized HEARTS hypertension management programme and are being treated according to standardized treatment.

5.5.1 Evidence-based protocols

> A simple evidence-based treatment protocol for hypertension clarifies the treatment steps for both patient and clinician, and helps reduce therapeutic inertia.
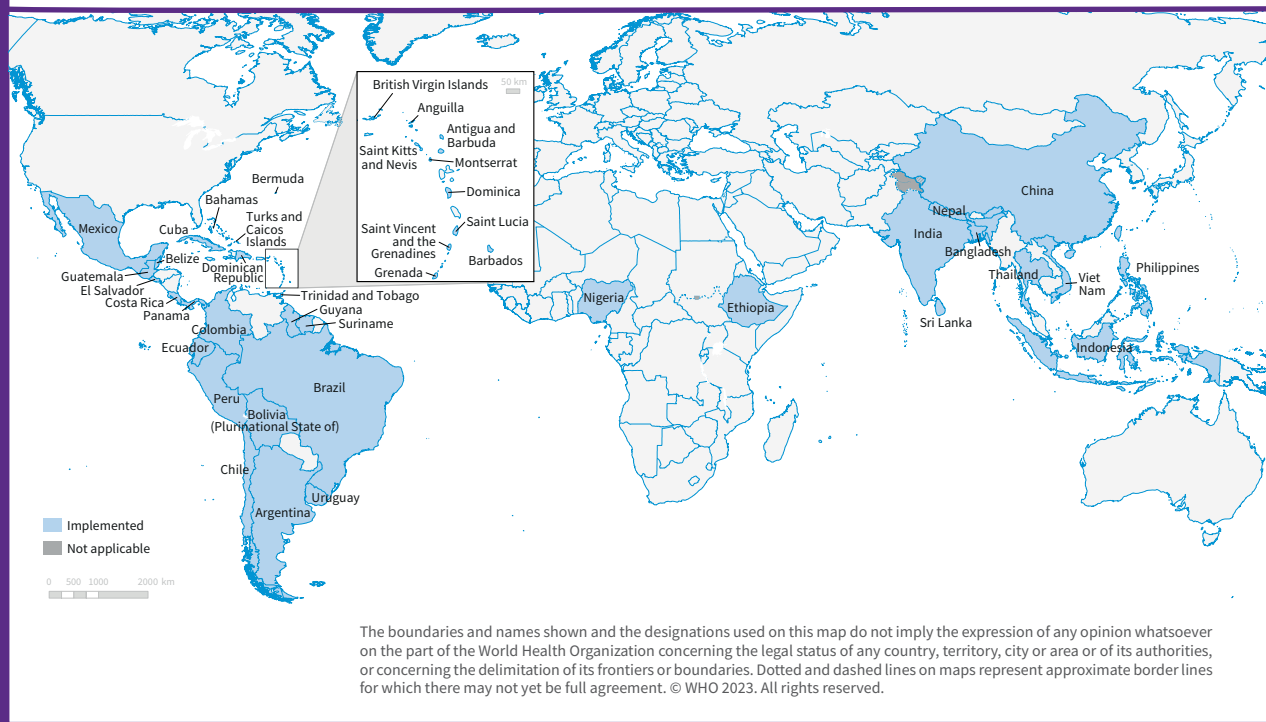
Simple evidence-based treatment protocols for the treatment of individuals with hypertension increase treatment effectiveness and efficiency *(107, 108)*. Recent guidelines *(8)* and successful hypertension control programmes *(109)* improved on early, complicated treatment guidelines, and advise treatment using a simple evidence-based protocol with a linear progression of treatment intensification steps and specific medicines and doses. Medications recommended in protocols are selected based on value (low cost and high efficacy), availability, infrequent adverse event rates, reduced need for laboratory monitoring, and once-daily dosing. An additional benefit of a simple protocol is that it also delineates the return visit time (usually four weeks or less) to allow for rapid up-titration of doses and medications until hypertension control is achieved. It is becoming increasingly clear that, in addition to the overarching goal of improved hypertension control rate within a population, goals such as

reduced time to control and longer time kept under control also result in prevented events related to CVDs. A simple evidence-based treatment protocol for hypertension clarifies the treatment steps for patient and clinician, and helps reduce therapeutic inertia (a tendency not to act to intensify treatment despite blood pressure remaining uncontrolled).

Developing and adopting a standardized and evidence-based simple treatment protocol has additional programme implementation benefits. Training activities will be more efficient and simplified, as treatment becomes more standardized using a shared protocol. Because protocols identify a short-list of between two and three preferred medicines, medicine procurement,

Box 3: Incorporating WHO guideline into simple treatment protocol

Sri Lanka's adaptation of the WHO guideline

In Sri Lanka, 35.6% of adults have hypertension and 15.5% of them have their blood pressure under control *(110)*. To tackle this burden, the Sri Lanka Ministry of Health began implementing the WHO HEARTS technical package for hypertension control in 2021. Along with key stakeholders, it developed a simple hypertension treatment protocol based on recommendations from the 2021 WHO *Guideline for the pharmacological treatment of hypertension in adults*. This was adapted to the Sri Lankan context with the introduction of a two-part protocol: for all adults aged 18–79 years old the five-step protocol follows the WHO recommendation to initiate therapy with a dual drug combination (Fig. 13), whereas for patients over 80 years old, the seven-step protocol recommends initiating treatment with an initial amlodipine monotherapy to avoid potential side-effects in elderly patients.

By 2023 the treatment protocol covered a population of 96 900 adults in Kalutara district and had registered 8600 patients in the programme; the cross-sectional facility-based blood pressure control rate was 57%.

The programme has a high retention rate – 86% of adults in the programme are returning for care every three months, which contributes in part to the high programme control. Lessons learned from the demonstration project include the ease of training on, and implementation of, a simple treatment protocol, the feasibility of treating hypertension at

primary care level, success with referring to higher levels of care when needed, and the straightforward monitoring of patient progress to blood pressure control due to clear blood pressure control goals.

Due to the success of the demonstration project, the programme will be expanded to a new district and then scaled up nationally.

Fig. 13. Simple hypertension treatment protocol, Sri Lanka, 2021–present

inventory, forecasting, and supply chain can all be simplified. Because most patients should receive similar, standardized care for hypertension, attention to known health disparities can be assessed and addressed.

The process of generating wide consensus to develop, select or adapt a hypertension treatment protocol can catalyse launching, or recommitting to, hypertension control in the community adopting the protocol. Participants often include clinical leaders and multidisciplinary teams, consisting of academic leaders, medical system administrators, pharmacy and equipment procurement experts, clinicians (such as primary care clinicians, family physicians, cardiologists, internal medicine physicians and nephrologists), ministers of health or government representatives and other key stakeholders. In addition, selecting just two or three medications can result in substantial reductions in the unit cost of each, which can facilitate extending treatment and improving adherence as more patients are initiated into, and continue in, care.

5.5.2 Access to essential medicines and health technologies

Improving access to medicines and health technologies for the diagnosis, management and treatment of hypertension is essential for ensuring universal access to quality health care. Ensuring an adequate supply of good-quality medicines and health technologies requires a robust health system, which includes good leadership and governance, adequate financing, access to information and evidence, quality service delivery, a strong health workforce, and equitable access to essential medicines and health products of assured quality, safety, efficacy and cost-effectiveness. When hypertension control programmes are expanding, good procurement practices play a key role in securing quality products at affordable prices and ensuring adequate and timely supply, while good supply-chain management ensures that quality products are available at all levels of the health system to meet the growing needs for medicines and health technologies *(111)*.

Although about 80% of hypertensive patients reside in LMICs *(112)*, the demand in LMICs for antihypertensive medicines is undermined by significant under-diagnosis, weak quantification, and under-developed treatment and follow-up programmes, along with at times weak procurement and supply-chain systems. Furthermore, in most LMICs, social security systems, when they exist, tend not to cover all citizens and/or not to reimburse all essential medicines and medical devices for noncommunicable diseases, including those for treating hypertension. As a result, in many countries, most of the costs of treatment, including medications, end up being paid out-of-pocket by people living with hypertension, who additionally may not recognize the need for lifetime medication when the disease is asymptomatic *(113, 114)*.

There is no component of a hypertension control programme more important than the adequate supply of good-quality, essential antihypertensive medicines. Currently, prices for the same essential antihypertensive medicines vary

Box 4: Strengthening access to medicines

The India Hypertension Control Initiative (IHCI)

The IHCI is a collaborative initiative of the Ministry of Health and Family Welfare, Government of India, state governments, Indian Council of Medical Research (ICMR), WHO-India and Resolve to Save Lives as a technical partner. The IHCI was started in 2018 to improve hypertension control in the community using the WHO HEARTS strategy of evidence-based treatment protocol, uninterrupted drug supply, patient-centred care, task sharing and digital information system. IHCI launched in selected districts of five states and, as of June 2023, had scaled up to 155 districts of 27 states with enrolment of 5.8 million hypertension patients.

Although protocol-based treatment and minimum 30 days' prescription were key agreed and accepted strategies, availability of medicines emerged as the biggest challenge soon after initiation of the programme. This situation initially discouraged a patient from returning to facilities for follow-up visits in some areas. The programme was at risk of losing credibility.

In addition to the challenges of public procurement experienced in most countries, the conventional method of forecasting and procurement – adding a percentage to the prior year's use – was not adequate to meet the medication requirements of a rapidly scaled-up hypertension control programme. Also, there was no mechanism to facilitate linking patient load to drug stock in order to ensure a continuous supply at health facilities. The WHO-recruited consultants, in conjunction with the Ministry of Health and Family Welfare and partners, provided technical and training support on strengthening the medicine supply chain, including facilitating development of state-specific hypertension treatment protocols, inclusion of protocol drugs in states' list

of essential medicines, forecasting requirements of drugs, support for budgeting, facilitating last-mile distribution and developing a ready-reckoner tool linking drug requirements to the patient load (Fig. 14. Supply-chain strengthening interventions). These proved helpful in ensuring adequate stock and equitable distribution to all service delivery points. With an adequate and uninterrupted availability of drugs, it was possible to decentralize the programme to 18 000+ Ayushman Bharat Health and Wellness Centres for improved access to care.

Fig. 14. Supply-chain strengthening interventions

Source: The Indian Hypertension Control Initiative

Together, these efforts resulted in increased procurement of protocol medicines by the participating states (Fig. 15. Increment in procurement of amlodipine over four years in four states of India).

By 2020, the IHCI had ensured that more than 70% of health care facilities had ensured one month's stock of the protocol medicines, and fewer than 10% had experienced stock-outs.

Fig. 15. Increment in procurement of amlodipine over four years in four states of India
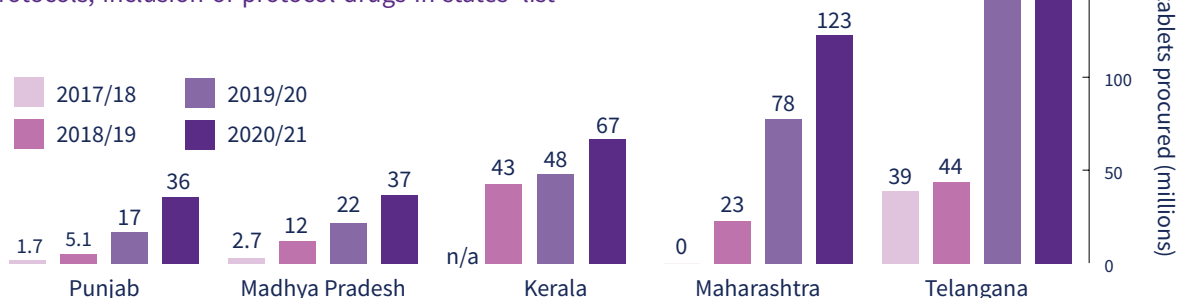
2017/18   2019/20
2018/19   2020/21

Number of tablets procured (millions)

State	2017/18	2018/19	2019/20	2020/21
Punjab	1.7	5.1	17	36
Madhya Pradesh	2.7	12	22	37
Kerala	n/a	43	48	67
Maharashtra	0	23	78	123
Telangana	39	44	174	209

by more than ten-fold between countries, and many country governments and hypertension patients are paying prices that are higher than necessary *(115)*. Medicines for hypertension are too often not reliably available in primary health care facility pharmacies. A lack of standardized national protocols and treatment algorithms for hypertension that name preferred, evidence-based medicines incentivize a market fragmented into a vast number of formulations prescribed and sold within the same therapeutic classes, especially in the private sector. This leads to poor visibility of market opportunities for manufacturers, potentially resulting in irregular or no supply. Other potential factors include challenges to timely registration of medications in all countries (particularly in the case of single-pill combinations) or establishing a reliable supply chain and distribution in-country.

Components of the medicine supply chain system, including forecasting, procurement, storage, stock-management and distribution, need to be strengthened and maintained to avoid stock-outs and disruption of treatment. Additionally, there needs to be a robust monitoring system in place to ensure timely reporting, and so that these challenges can be identified early and mitigated promptly. Lastly, medication must be dispensed correctly and used rationally by the health care provider and patient alike *(116)*.

Although there are differences in countries and regions, two of the basic antihypertensive medications, amlodipine and hydrochlorothiazide, are generally available at a price of US$ 0.01 per tablet, or less. Losartan, telmisartan and enalapril, the other commonly used class of medications, can cost only slightly more. Therefore, a full year of treatment with quality-assured, state-of-the-art medications in most countries need not cost more than between US$ 5 and US$ 10 *(114)*.

Finally, in markets where there are multiple manufacturers of varying quality, manufacturers of high-quality products may find it challenging to offer competitive prices, particularly where patients are purchasing medicines out-of-pocket. Quality health products are imperative and such sustainable production comes at a cost *(117)*. At the same time, some quality products that are sold by the manufacturer at affordable prices may be subsequently rendered unaffordable by multiple markups in the supply chain *(118)*. In the absence of consolidated procurement, manufacturers sell to distributors, who sell to wholesalers, who sell to dispensing points, often with substantial markups along the way. For example, one study in Kenya found highly variable pricing throughout the public and private health sector, with markups exceeding 340% on amlodipine and 280% on hydrochlorothiazide *(119)*.

Box 5: HEARTS in the Americas

Using clinically validated automated devices in primary health care settings

HEARTS in the Americas is an initiative being implemented in 32 countries of the Region of the Americas with technical cooperation by PAHO. It includes approximately 3000 health centres and covers approximately 30 million adults *(120)*. The goal is to improve population hypertension control and promote the secondary prevention of CVDs, with the emphasis on primary health care settings. Measurement of blood pressure is an important component of continuous quality improvement of the initiative, which includes clinical training, use of a protocol and clinically validated devices.

When the initiative was first launched, a small study showed that not only did countries not have the regulations necessary to ensure that only validated blood pressure monitoring devices (BPMDs) were registered to be sold, but ministries of health and other health authorities had no record of the types of devices, brands and models that were being used in primary health care facilities *(121)*. As in other parts of the world *(122)*, the market in Latin America is dominated by non-validated BPMDs.

To address that issue, HEARTS started working with both health authorities and national regulatory authorities, and this work evolved into a two-fold approach:

- efforts to introduce regulation of marketing authorization; and
- measures to regulate purchases of BPMDs using public funds

A guidance document was published by PAHO to be used as a tool in this process *(123)* and the manifold strategy to improve the regulatory environment has been described elsewhere *(124)*.

The initiative promoted the use of validated BPMDs by increasing awareness of the importance of validation and accuracy, knowledge of what validation is, and mechanisms to verify whether a device has been validated or not.

While working towards implementation of regulatory measures, health authorities of several countries began procuring validated BPMDs with technical support from PAHO. Ministries of health that are not able to regulate purchasing of BPMDs at the national level have issued recommendations for local health authorities to purchase validated BPMDs exclusively.

Because of the increase in demand and the observed market limitations, the PAHO Strategic Fund has included selected validated BPMDs in its list of products, and countries in the Region of the Americas can use its pooled procurement and financing mechanisms.

HEARTS is advocating for government transparency, which could be achieved by the creation or improvement of publicly available databases documenting brands and models granted marketing authorization and bought with public funds.

The challenges have been numerous, and include lack of knowledge and political will, market limitations, resistance by the medical profession, budgetary constraints, and the complexity of institutional and legislative environment, among others.

Results have been promising, as many countries are in the process of developing regulatory measures, while others have already changed their purchase profile, or are promoting validation through social media and training health personnel *(125)*.

The importance of having exclusive use of clinically validated BPMDs in primary health care has become part of the public health debate in the Region of the Americas.

5.5.3 Blood pressure monitoring devices

Although a deceptively simple aspect, major barriers in obtaining quality blood pressure measurements have been reported across low- and high-resource settings. These barriers refer to the type of devices used, the accuracy of the devices and a lack of knowledge in purchasing preferred devices.

Regarding the type of devices used, WHO published, in 2020 *(126)*, clear technical guidance on the specifications of blood pressure measuring devices to use. Due to environmental concerns about mercury, key issues with poor calibration of aneroid devices, and improper manual blood pressure measurement techniques, manual blood pressure measurement devices need to be replaced by independently validated electronic automated devices.

Across many recent guideline documents *(32, 127)*, the consensus is that due to these limitations of manual devices, automated upper-arm cuff monitors are strongly recommended, as they eliminate human error (e.g. caused by hearing impairment and digit preference) and require less training. In recent years, numerous new types of cuffless devices have entered the global market, including popular wrist-band devices. Despite the considerable potential of these devices to take many readings day and night without any user awareness, the use of these devices is not currently recommended for the management of hypertension due to remaining questions regarding their accuracy, performance and ability to track changes in blood pressure *(128)*.

While there are many benefits of automated cuff-based electronic monitors, the most significant drawback is that only one in five of the available automated upper-arm and wrist-based cuff devices has evidence of validation testing for accuracy *(122)* and, in general, validated devices are more costly than those without validation. New technologies may make blood pressure measurement easier, but as of 2023 there is no alternative to upper-arm validated blood pressure cuffs that has sufficient consistency and accuracy to be recommended for diagnosis and management of hypertension in health care facilities.

The response to the challenge of access to medicine and technology requires a multi-faceted approach. Bulk procurement resulting from a protocol specifying the medicines required can drive down costs, even within a country, especially as most health care systems tend to become decentralized to state, district or local levels of government.

5.5.4 Risk-based management

The WHO *Guideline for the pharmacological treatment of hypertension in adults* strongly recommends that all hypertension patients should have blood pressure controlled to <140 mmHg systolic and <90 mmHg diastolic. The guideline also recommends further treatment to <130 mmHg systolic in patients with hypertension complicated by existing CVD, diabetes, chronic kidney disease, or

at high risk of developing CVD *(8)*. Complete assessment of CVD risk in patients without a CVD diagnosis requires laboratory testing, which many low-resource settings do not have ready access to, therefore there is a potential to delay or miss the opportunity for treatment. The guideline therefore recommends initiating immediate treatment for hypertension on the day of hypertension diagnosis, based on raised blood pressure alone, followed by a CVD risk assessment *(8)*. This new guidance is clear in that the approach to initiating treatment for hypertension does not have to be limited by a CVD risk approach and that dose- and drug-specific protocols with clear thresholds should be used for implementation in countries.

Box 6:   Scaling up hypertension care in India

The role of specialist health consultants

The scale-up of the India Hypertension Control Initiative (IHCI) (see Box 4) was implemented at state and district level by government officials and staff, with technical support from specially trained consultants, recruited by WHO.

WHO consultants supported more than 20 states in the implementation of the IHCI and, as of June 2023, 27 states or union territories in India had developed a standard treatment protocol for hypertension, based on the WHO HEARTS technical package. In addition, a few states were also working on adding fixed-dose combinations to the protocol in order to improve patient adherence. WHO and other partners support states in calculating the annual drug demand for antihypertensives so that they can plan effectively for the implementation of the treatment protocols. Regular feedback given by WHO consultants on drug availability at facility and district level helps districts to maintain optimum drugs at every level.

The technical support provided by these consultants has played a pivotal role in training more than 8000 medical officers, 4500 pharmacists, 9000 staff nurses and more than 20 000 other health care workers on IHCI strategies, blood pressure measurement, use of standard protocol, follow-up care, drug stock management, team-based care, patient-centred care and counselling on lifestyle management.

WHO is assisting states to implement a national NCD portal, a uniform digital information system for noncommunicable diseases such as hypertension, diabetes and three common cancers. Feedback about the NCD Portal, and expertise in this domain, is helping to improve uptake. As of June 2023, there were 5.8 million hypertension patients under treatment in IHCI implementation districts in 27 states.

WHO assisted states to plan decentralization of hypertension follow-up care to Ayushman Bharat Health and Wellness Centres – primary health care health units under national health mission. Drug refills to ensure continuity of care at these centres helped more than 38% of patients in the first wave of the COVID-19 pandemic *(129)*. These centres are providing follow-up care to hypertension patients near to their village.

WHO consultants and government staff monitor the quality of programme implementation by supportive supervision to identify gaps and share good practices. Regular data analysis and feedback is crucial in data-driven policy level decisions.

With special focus on hypertension and diabetes care, the Ministry of Health and Family Welfare, Government of India has decided to put 75 million patients with hypertension or diabetes on standard care by 2025.

Consultants from WHO and the Government of India, as well as state and district governments, will play important role in achieving this ambitious target.

The HEARTS module on risk-based management of CVD was launched in 2020 after updated risk-prediction charts were developed for 21 global regions. The charts are divided into non-laboratory-based and laboratory-based charts. The threshold for the level of CVD risk when treatment is required remains something for countries to decide upon using the laboratory-based charts *(130)*.

Application of the total CVD risk approach will be better informed through country-level implementation research. Many areas, including the level of the facility at which CVD risk can be assessed (primary, secondary or tertiary), screening factors, thresholds for treatment, adaptation of protocols, follow-up intervals and other logistics are best defined in the local context *(130)*.

5.5.5 Team-based care

The world is facing a substantial and ongoing shortage of trained health workers. WHO projects a global shortfall of 10 million health workers by 2030, mostly in LMICs *(131)*. In order to provide patient-centred continuous care more effectively, primary care systems can include team-based care strategies in their clinic workflows and protocols.

Team-based care uses multidisciplinary teams (which may involve new staff or the shifting of tasks among existing staff). Teams can include patients themselves, primary care physicians, and other allied health professionals such as nurses, pharmacists, counsellors, social workers, nutritionists, community health workers and others. Teams reduce the burden on physicians by utilizing the skills of trained health workers. Strong evidence shows that team-based care is effective in improving hypertension control among patients in a cost-effective way. A degree of task shifting/team-based care is already taking place in many settings; WHO provides further guidance on how to maximize this approach for greater impact *(132)*.

The context in which teams operate varies significantly between and within countries, as does the task allocation. Recommendation 8 in the *Guideline for the pharmacological treatment of hypertension in adults* encourages team-based care: "that pharmacological treatment of hypertension can be provided by nonphysician professionals such as pharmacists and nurses, as long as the following conditions are met: proper training, prescribing authority, specific management protocols and physician oversight *(8)*. However, local implementation factors are fundamental when designing team-based care for hypertension management:

- Community health care workers may assist in tasks such as education, delivery of medications, blood pressure measurement and monitoring through an established collaborative care model. The scope of hypertension care practised by community health care workers depends on local regulations and currently varies by country.

- Telemonitoring, community- or home-based blood pressure monitoring, and health care worker support are encouraged to enhance hypertension

Box 7: Team-based care by local health workers

The barangay health workers' role in hypertension control in the Philippines

The Republic of the Philippines, a country composed of more than 42 000 barangays or villages, has long been implementing the delivery of team-based health care services, cascaded by the Department of Health. At the community level, barangay health workers serve as the first point of contact between the community and the health care system under the primary health care framework. They are community volunteers who provide primary health care services and cover at least 20 households at the minimum. They report to the barangay health station under the supervision of a nurse or a midwife. After complying with training requirements and being accredited by the local health board in their village, barangay health workers become official members of the health service delivery team.

Barangay health workers have significant roles in realizing universal health coverage in the country, where health services are provided to all, especially the poor and disadvantaged. The Republic Act 7883, otherwise known as the Barangay Health Workers' Benefits and Incentives Act of 1995, outlines their critical role in providing a voluntary health service in the community, where they are considered community organizers, educators, and frontline providers of primary health care at the grassroots level.

Cognizant of the roles of the barangay health workers in the community, the Philippines Healthy Hearts Programme (HHP) leveraged their support toward reaching its initial objectives – implementing the standard WHO HEARTS package in selected facilities within Iloilo Province, thereby improving population hypertension control in the catchment area. They were engaged as part of the health care team

implementing the following community-level interventions across the hypertension care cascade:

- Measuring and recording blood pressure during risk assessment of patients at the barangay health station or at home during house visits, after which blood pressure readings are reported to the nurse or midwife supervisor for collation and submission to the rural health unit or urban health centre;
- Providing education on the prevention and control of noncommunicable diseases, particularly hypertension, during patient visits;
- Informing the community on the availability of hypertension care services and medicines;
- Delivering medications to far-flung rural areas and to households where patients are unable to visit to regularly visit the health facility; and
- Tracking patients who have missed their quarterly clinic visits for hypertension treatment follow up.

With the expansion of the Healthy Hearts programme, the barangay health workers remain a driving force in reaching out to patients in the community.

A barangay health worker with patient.

management as part of an integrated chronic disease management system, if community-based care is deemed appropriate by the treating medical team and found feasible and affordable by patients.

- Physician oversight can be done through innovative methods such as tele-monitoring of patients and coordination with team members to ensure access to treatment is not delayed.

- When team-based hypertension care is delivered in the community, this allows hypertension patients with stable, controlled blood pressure to visit the clinic less frequently. Corresponding changes must be made to ensure access to essential antihypertensive medicines, namely multi-month refills (ideally, 90-days) and community or home delivery of medication refills.

5.5.6 Systems for monitoring

Effective hypertension control programmes require a robust information system to enable the monitoring of blood pressure control at the individual patient level and to assess progress on improving outcomes at the facility and health system levels *(133)*. In many LMIC primary health care facilities, staff record and report data on inefficient paper-based systems. The creation of a secure, accurate, non-duplicated longitudinal patient record, readily available during clinical visits, is essential for the care of patients with hypertension, diabetes and other conditions requiring long-term care. In many LMIC primary care contexts, patient encounters last less than five minutes; digital information systems therefore need to be simple and quick to use by front-line health care workers.

User-centred, simple digital information systems facilitate rapid capture of essential patient-level data, reduce health care worker data entry burden, and support rapid scale-up. An optimal system replaces paper, so that health care workers only need to record the information once, reducing the risk of loss of data and of inaccurate data. One example of a user-friendly mobile application for hypertension management is the DHIS-2 Hypertension Tracker app used to monitor patients and programme performance *(134)*.

Whether digital or paper-based, strong information systems provide rapid data feedback loops on key indicators to enable supportive supervision and continuous quality improvement. Focus on a list of core HEARTS indicators directs attention to the most important outcomes:

- number of hypertension patients enrolled from the catchment area (to estimate programme coverage);

- proportion of enrolled patients with controlled blood pressure (<140/90 mmHg in the past three months);

- proportion of patients not retained in care (with no visit in the past three and twelve months); and

- availability of core hypertension medications and blood pressure monitoring devices *(135)*.

When programme managers receive monthly data on this limited set of core indicators, they can identify lagging facilities and implement programme improvements. HEARTS global and country leaders have identified that improving hypertension control requires formalized quality improvement teams, including supervisory staff and facility managers, who set annual outcome goals and plan interventions to address root causes and improve outcomes. The quality improvement strategy relies upon accurate, timely, actionable data to address core areas of hypertension quality gaps: a reliable supply of antihypertensive medications, retention in care, decentralization and therapeutic inertia.

Improved hypertension control demands retaining patients in care and maintaining them on effective treatment. Digital information systems can be leveraged as a powerful mechanism to support retention in care and facilitate team-based care. Loss to follow up is a leading barrier to hypertension control, often occurring in 50% or more of patients in low-resource settings *(136)*. Digital tools can generate lists of patients overdue for care, send automated SMS text and telephone reminders, and prompt community outreach, thereby reducing loss to follow up. Evidence shows that digital interventions can also contribute to improving patients' adherence to medication and their engagement with their treatment, can provide background information and increase patients' adherence to their health provider's guidelines, thereby increasing blood pressure control *(137, 138)*.

The primary goal of a robust information system for large-scale hypertension programmes is ultimately to support clinicians and programme managers by providing data feedback loops to improve quality of care and thereby increase the proportion of patients whose blood pressure is controlled.

5.6 National scale-up of HEARTS for hypertension

As of 2023, multiple countries have successfully implemented the WHO HEARTS package, demonstrating progressively improved population coverage, diagnosis rates, linkage to care, and blood pressure control. However, to maximize the population health impact of the HEARTS hypertension control programmes and reduce deaths and disability, it is crucial to expand these successful demonstration programmes from limited areas to full national scale. HEARTS programmes in India and Cuba (see Boxes 6 and 8) have made significant progress towards achieving national scale, and other countries are poised to reach national scale.

When is a HEARTS hypertension control programme ready for national scale-up? Determining the readiness involves assessing key scale-up factors, which can be undertaken once the programme's demonstration phase is completed.

Box 8: National scale-up of HEARTS

Cuba's hypertension control programme

HEARTS in the Region of the Americas is a regional programme involving 32 countries in Latin America and the Caribbean. Cuba joined HEARTS in the Americas as one of four founder countries in 2016. The country developed a simple hypertension treatment protocol, starting with dual drug treatment, and leveraged a strong primary health care infrastructure centred on a polyclinic facility that offers both treatment and preventative care, and from which doctor and nurse teams deploy to serve the wider local community. Unique features of the Cuba HEARTS programme include health care team home visits to patients to follow up on hypertension care, local manufacturing of the protocol medicines and the design, validation, and manufacture of the automated blood pressure monitoring device used for the programme.

In 2016 the HEARTS package technical elements were introduced at a demonstration site and, in 2018, Cuba HEARTS expanded from one to three community primary health care facilities; the programme expanded to 22 facilities by 2021. By that time, 78% of the catchment area hypertension population were enrolled in the programme, and the programme achieved 59% facility-based blood pressure control.

Inspired by the success of the first expansion phase, the Ministry of Public Health of Cuba declared 2022–2023 the "Year of Hypertension Control", and HEARTS hypertension control programme expanded nationally to implement the same standard package in all 451 primary care polyclinics in the country. A national database for hypertension was established between September 2022 and January 2023, facilitating data audits in each area and identifying individuals with uncontrolled hypertension as baseline data for the new areas. National scale-up was supported by a strong public health infrastructure, team-based care, locally manufactured medicines and blood pressure monitoring devices, and a national campaign to inform and inspire health workers and the general population about the importance of controlling hypertension in communities.

By the beginning of 2023, out of an estimated 3 million individuals with hypertension in Cuba, over 2 million were currently registered under the programme.

A patient discussing treatment for her hypertension.

WHO provides general guidance on how to systematically analyse and support necessary actions for sustainable national scale-up using a systems approach *(139, 140, 141, 142*). For hypertension control programmes, the key components of readiness-for-scale include clinical capacity, delivery of a standard service package based on HEARTS, clinical quality of care, a reliable supply of protocol medicines sufficient to meet the demand from the anticipated influx of new patients, a robust health information system for tracking patients and monitoring the programme, and government commitment in terms of political will and financing (Table 7). At the same time, pragmatism is important. When political will and commitments align, HEARTS programmes can transition to a national scale-up process with most scale-up factors addressed, and minor gaps able to be filled in along the way.

5.7 Co-morbidities and hypertension

5.7.1 Diabetes

Diabetes is not only a risk factor for CVD; people with diabetes are particularly vulnerable to health damage if they also have untreated hypertension, which is common in people with diabetes in many countries *(143)*. To support this evidence, WHO Member States have adopted global targets on diabetes including a target focusing on blood pressure: 80% of people with diagnosed diabetes have good control of blood pressure *(144)*.

Table 7. Examples of specific factors influencing HEARTS hypertension control programme readiness-to-scale domains

Scale-up domain	Scale factor 1	Scale factor 2	Scale factor 3
Clinical capacity	PHC facilities	PHC staffing	Decentralization
Service delivery	Simple protocol	90-day Rx	Team-based care
Clinical quality	Blood pressure control >50%	Missed visit rate <25%*	–
Medication supply	Protocol medicine patient-days ≥30 in 100% of pharmacies	Facility digital drug inventory of protocol medicines	Morbidity-based medicine supply forecasting
Information system	Digital information system for managing hypertension	HEARTS indicators integrated into information system	Hypertension programme outcomes synthesized in programme-wide dashboard
Political will	Hypertension services included in national universal health coverage package	Medicines free for patients or minimal out-of-pocket cost	No out-of-pocket fees for hypertension follow-up visits

*Defined as no return for scheduled clinic visit in the prior three or six months

Given the overlap of diabetes and CVD risk factors, combined management for risk of both conditions is a rational approach. The decision to systematically look for people at high risk of diabetes and CVD is a strategic one specific to each health care setting, and will depend, at least in part, on the number likely to be identified and the resources available to adequately care for them.

Uncontrolled hypertension and high cholesterol – not hyperglycaemia – are the risk factors most strongly associated with premature death and disability among people living with diabetes. Treatment for hypertension is among the best-value treatments for people living with diabetes, as the treatment is inexpensive and treatment lowers the risk of CVD, the biggest killer for people with diabetes (143). Treatment of hypertension can also reduce the risk of kidney failure, an important and common complication of diabetes. Primary health care services need to be equipped to manage people with type 2 diabetes.

5.7.2 Chronic kidney disease hypertension

The bidirectional relationship between hypertension and chronic kidney disease (CKD) is an interplay involving intricate pathophysiological mechanisms and mutual exacerbation of each condition. Hypertension is a well-established risk factor for development and progression of CKD and is responsible for the second-highest global age-standardized rates of DALYs related to CKD (145). Optimal treatment and control of hypertension with commonly available therapies are critical to reducing the risk of CKD progression.

On the other hand, the appearance of hypertension can often be the first indicator of CKD, as renal parenchymal disease is the most common cause of secondary hypertension. Therefore, people with newly diagnosed hypertension should be screened for the presence of kidney disease whenever possible. The interplay between hypertension and CKD creates a vicious cycle, with each condition exacerbating the other. This bidirectional association underscores the imperative for early CKD and hypertension detection, rigorous blood pressure control, and optimal management of CKD to prevent disease progression and thereby avoid or delay downstream cardiovascular events and renal complications. Guideline-recommended blood pressure targets are more stringent in people with CKD to optimise the preservation of kidney function over time and protect from adverse cardiovascular outcomes. For patients with heavy proteinuria and renal damage, drugs that block the renin-angiotensin system are particularly valuable in this regard (146).

5.8 HIV and hypertension

Ageing among people living with HIV, coupled with the epidemiological transition underway in many LMICs, has led to an increased burden of CVD (147, 148, 149). Hypertension is the most prevalent CVD risk factor among people living with HIV; globally, an estimated 27% of people living with HIV on antiretroviral

therapy (ART) also have hypertension *(150)*, and it is estimated that only one quarter of these individuals are receiving treatment. People living with HIV may be at higher risk of CVD than HIV-negative adults owing to the higher prevalence of traditional CVD risk factors, adverse effects of some antiretroviral therapy medications, and HIV-related chronic inflammation *(147, 151)*.

National HIV programmes, in collaboration with partners such as PEPFAR and the Global Fund, have already successfully strengthened health systems in LMICs for HIV care and treatment, and these can be leveraged to improve care for hypertension among people living with HIV via integration *(148, 149, 152)*: the coordination, location or simultaneous delivery of HIV and hypertension services to patients who need it, when they need it *(149)*. This makes sense because of the marked similarities in the care cascade for both conditions. Furthermore, integrated treatment models reduce the number of clinic appointments people living with HIV with comorbid disease must keep, promote early hypertension diagnosis and treatment, reduce service duplication which may lead to cost savings, allow providers to have a comprehensive view of their patient's history, and promote patient-centred care *(153, 154)*. HIV–hypertension integration is also highly effective for blood pressure control without negatively impacting HIV disease outcomes *(155, 156, 157, 158)*.

Once hypertension has been diagnosed, the provision of organized and evidence-based health services can ensure that people with this chronic condition receive key interventions and regular follow up necessary to minimize complications and help them live long and healthy lives.

Box 9: HIV and hypertension

The integration of HIV and hypertension care, based on the WHO HEARTS technical package, has demonstrated that high levels of HIV viral suppression can be maintained while simultaneously achieving high blood pressure control.

A HIV–hypertension integration pilot in Uganda resulted in control of 73% at 24 months, up from 5.1% at baseline, while maintaining an HIV viral load suppression rate of 98%. Ninety-six percent of the patients were also retained in care while receiving integrated multi-month dispensing for both hypertension and HIV medications within a differentiated service delivery model *(155)*.

This arose from a two-year grant awarded in 2019 by Resolve to Save Lives (RTSL) to Makerere University Joint AIDS Program (MJAP) to pilot HIV–hypertension care at Mulago ISS, the largest HIV clinic in Uganda. Uganda is home to about 1.4 million people living with HIV with an HIV prevalence of 5.1% among adults aged 15–49 years *(159; 160)*. Prior to the pilot, while more than 95% of the clinic's HIV patients were virally suppressed, of the 24.4% of patients diagnosed with hypertension, only 1% were initiated on treatment. Of those initiated on treatment, only 5.1% had achieved blood pressure control *(155; 156)*.

5.9 Summary

- When hypertension is diagnosed, simple, low-cost treatments are available to control blood pressure and prevent heart disease, stroke or death.

- The WHO-HEARTS technical package has been implemented in nearly 40 Member States and demonstrates that hypertension can be controlled in large-scale national programmes based in primary health care facilities and communities.

- Little more than five years after the HEARTS package was introduced, country governments are mobilizing the resources to grow HEARTS-based hypertension control programmes to national scale.

Conclusion

6

This first WHO *Global report on hypertension* underscores the enormous scale of the hypertension problem, which affects populations across the world, and the potential to reverse current trends. The political basis for concerted action to address hypertension is there, woven into targets and actions on cardio-vascular diseases in the Sustainable Development Goals, the 2011 Political declaration of the high-level meeting of the General Assembly on the preven-tion and control of noncommunicable diseases, the WHO *Global action plan for the prevention and control of noncommunicable diseases* and the WHO Implementation roadmap 2013–2030. Where they are built upon, these foun-dations will catalyse action by all.

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Annex 1. Methodology for analysis of impact and cost

The methods used in the analysis of hypertension treatment impact and cost have been detailed in previous publications *(1, 2)*. This annex provides a brief overview, including adaptations made for Section 3 of this report.

The hypertension outcomes model used a combination of state-transition modelling and demographic projections methods. We modelled the evolution of population demography, blood pressure distributions, and fatal and nonfatal cardiovascular disease (CVD) by age and sex. We looked at mortality from four specific CVD causes, ischaemic heart disease (IHD), hypertensive heart disease (HHD), ischaemic stroke, and haemorrhagic stroke. Additionally, we looked at nonfatal myocardial infarction (MI), stroke, and heart failure (HF). One hundred and eighty-two Member States comprising 98% of the world population were included in our analysis.

As described by Pickersgill and colleagues *(1)*, we used four state-transition (Markov) models to represent the risk of incident and fatal CVD from the four causes listed above. Each model includes four mutually exclusive states: "well", "sick", "dead from cause X" and "dead from any other cause". The transition probabilities within these models were specific to each age, sex, and location. We calculated the transition probabilities using data from the Global Burden of Disease (GBD) 2019 study *(3)*, which captures the relationship between new CVD, prevalent CVD, and fatal CVD risk over time within 5-year age cohorts. Transition probabilities were calibrated by running our model over 2010–2019 and making post hoc adjustments to the transition probabilities to maximize the fit to "observed" GBD 2019 values. Pickersgill and colleagues provide more details on the models and relevant formulae *(1)*. Nonfatal event rates were modelled as a function of fatal event rates using data from the Prospective Urban-Rural Epidemiological (PURE) Study *(4)*.

The state-transition models were then linked to a demographic projection model that tracked survival in age cohorts over time as they age. Population and all-cause mortality data were taken from the World Population Prospects (WPP) 2022 Revision, and the base-case (i.e. no additional scale-up) demographic projections in the model were calibrated to WPP medium variant projections over the period 2020–2050. We incorporated excess mortality from COVID-19 into our model as a temporary "shock" in all-cause mortality, as described by Watkins and colleagues *(2)*.

Mortality levels for each CVD cause were re-scaled from GBD 2019 values to

values reported in the Global Health Estimates 2019 *(5)*. We assumed that the age-, sex-, and location-specific incidence of each CVD cause would be constant over 2020–2050 (at 2019 levels). We assumed that case-fatality from each CVD cause, as well as background mortality, would continue to (modestly) decline over 2020–2050, following average annual rates of change observed over 2010–2019, reflecting continued advances in CVD care and in health care more generally.

To generate population blood pressure distributions by age, sex, and location, we used hypertension "cascade of care" data and mean systolic blood pressure estimates from the NCD Risk Factors Collaboration (NCD-RisC) *(6)* along with estimates of age-specific and sex-specific 5th-percentile blood pressure levels in populations free of CVD and anti-hypertensive drug use. These parameters, and an assumed Gaussian distribution, allowed us to compute the prevalence of raised blood pressure corresponding to increasing levels of risk (e.g., 130–139mmHg, 140–149mmHg, and so on). We combined these distributions with estimates of blood-pressure-specific reductions in the incidence of CVD, as described in a recent meta-analysis of hypertension treatment trials *(7)*. This allowed us to model the reduction in CVD incidence that would result from a greater proportion of the population with hypertension having controlled blood pressure. Pickersgill and colleagues provide more details on this procedure and relevant formulae *(1)*.

In addition to modelling a reduction in CVD incidence, we modelled a reduction in CVD case-fatality from greater use of antihypertensive drug therapy, i.e. secondary prevention. We assumed a 26% relative reduction in case-fatality among persons with IHD without heart failure *(8)* (70% of IHD cases) and a 20% relative reduction among persons with heart failure *(9)*. We assumed 36% and 76% relative reductions in case-fatality from ischaemic and haemorrhagic stroke respectively *(10)*. Finally, we assumed the same effect size for HHD as for IHD with heart failure.

Pickersgill and colleagues explore historical trends in the rate of improvement in the hypertension cascade of care and describe a series of assumptions around realistic scale-up patterns for hypertension care *(1)*. In brief, they looked at the rates of change in blood pressure treatment and control observed in high-performing countries (e.g. Canada) in the NCD-RisC data, as well as recent experiences implementing the HEARTS technical package in several countries. They modelled annual increases in hypertension coverage using a parabolic function, which implies that improvements in hypertension coverage occur faster at intermediate coverage levels as compared to low or high coverage levels. Practically, this approach is intended to represent the slowing of progress that countries inevitably experience as they expand health care to harder-to-reach populations, meaning that our projections are conservative.

Finally, we estimated the cost of hypertension care using our model and cost data from the Updated Appendix 3 of the Global action plan for the prevention and control of noncommunicable diseases *(11)*. Specifically, we obtained estimates of the "unit cost" of hypertension treatment per person per year; these were multiplied by hypertension prevalence counts and treatment coverage rates to compute total costs. These estimates assume all persons with hypertension would be on a calcium-channel blocker and 60% would require a second medication, assumed to be an angiotensin II receptor blocker.

The additional costs required to do hypertension screening were calculated using default data on typical screening programme costs from the HEARTS costing tool *(12)*. However, implementing a hypertension programme involves more than just the costs incurred at primary health care facilities. Health systems also need to be strengthened to provide screening and care. Estimates by a 2009 WHO task force were used to generate programme costs such as health management information systems, administration and financing. CHOICE estimates of the cost of strengthening supply chains were used to generate a markup for logistics *(13)*. In total, the health system strengthening costs add 26% to the direct costs of service delivery.

The difference in costs between scenarios (progress or aspirational vs. business as usual) gives the incremental cost of accelerated progress.

As noted in the report, incremental health gains were converted into disability adjusted life-years, which were multiplied by average gross domestic product per capita to give the incremental economic benefits and benefit–cost ratio, calculated as DALYs using established procedures for cost-effectiveness analysis, but without an age-weighting function *(14)*. (Of note, the DALYs estimated for economic evaluation are not directly comparable with the DALYs estimated for burden of disease analysis since they use different reference life-expectancy values, and disease-burden DALYs are not discounted.) We discounted both costs and benefits at 3% when computing cost-effectiveness and benefit–cost ratios.

Annex 1 references

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Annex 2. Hypertension profiles and explanatory notes

Background

Hypertension – also known as high blood pressure – is one of the world's leading risk factors for death and disability. The aim of the hypertension profiles is to highlight the current status of hypertension for each WHO Member State (194 total) curated from multiple data sources. These profiles help to establish a baseline for the country and support monitoring trends toward the prevention and control of hypertension as a public health problem.

The profiles include the following information:

- **Morbidity and mortality:** prevalence of hypertension; coverage of hypertension diagnosis, treatment and control; trends in the prevalence of uncontrolled hypertension; hypertension control rate scenarios; probability of premature mortality from NCDs; cardiovascular disease (CVD) deaths; and the percentage of CVD deaths attributable to high systolic blood pressure;

- **Risk factors:** related risk factors including dietary salt intake, tobacco use, obesity, alcohol consumption and physical inactivity prevalence; and

- **National response:** national targets for blood pressure (BP) and salt consumption; national survey on BP/hypertension and sodium intake; functioning system for mortality data; guidelines for hypertension management.

All data are rounded to the nearest whole number; additional rounding was carried out on some statistics as described in the explanatory notes.

For further details see the Explanatory notes at the end of the document.

Afghanistan

Hypertension profile

Total population (2019): 37 769 000

Total deaths (2019): 255 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **40%** ♂ **35%** ♀ **45%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.4 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	56%	46%	14%
♂	44%	35%	10%
♀	66%	54%	17%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀

projected trends ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **172 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ------   progress — — —   aspirational ·······
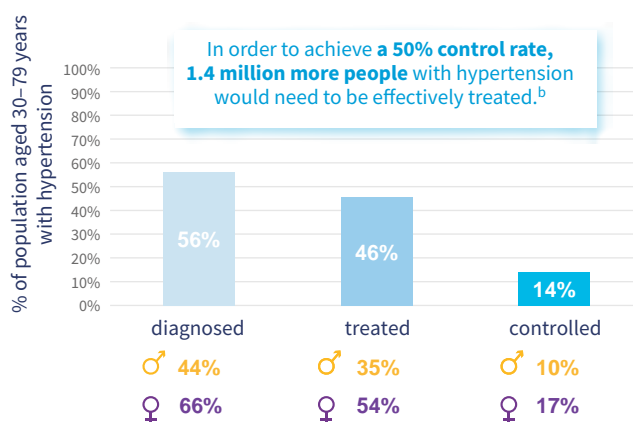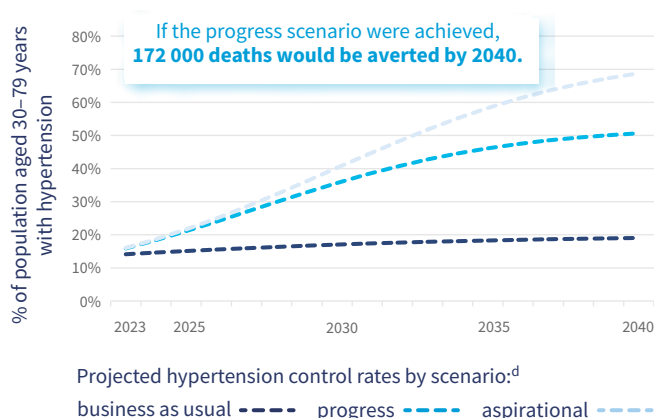
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	35	34	36	2019
Cardiovascular disease deaths	71 300	33 800	37 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	52	55	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	24	40	8	2019
Obesity, adults aged 18+ years (%)	6	3	8	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Treatment

Guidelines for management of hypertension ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Albania

Hypertension profile

Total population (2019): 2 874 000

Total deaths (2019): 31 200

| Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] | ⚥ 42% | ♂ 43% | ♀ 41% |

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **757 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 310 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	41%	32%	8%
♂	29%	19%	5%
♀	54%	44%	12%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **42 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	17	6	2019
Cardiovascular disease deaths	19 500	8300	11 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	57	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	23	40	6	2019
Obesity, adults aged 18+ years (%)	22	22	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	8	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Algeria
Hypertension profile

Total population (2019): 42 705 000
Total deaths (2019): 203 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 36%   ♂ 35%   ♀ 37%

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.3 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	50%	39%	16%
♂	40%	30%	11%
♀	60%	48%	20%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends
⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **168 000 deaths would be averted by 2040.**
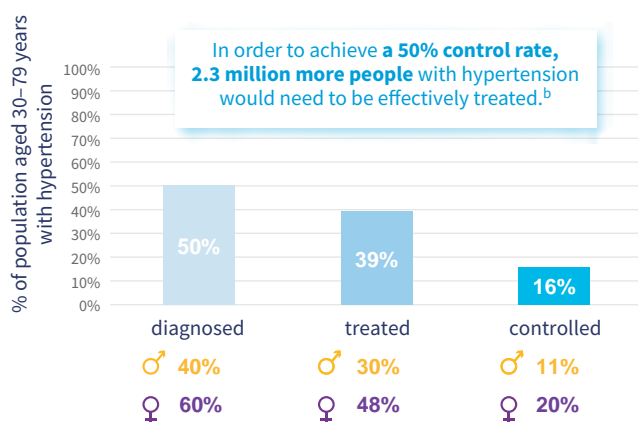
Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -
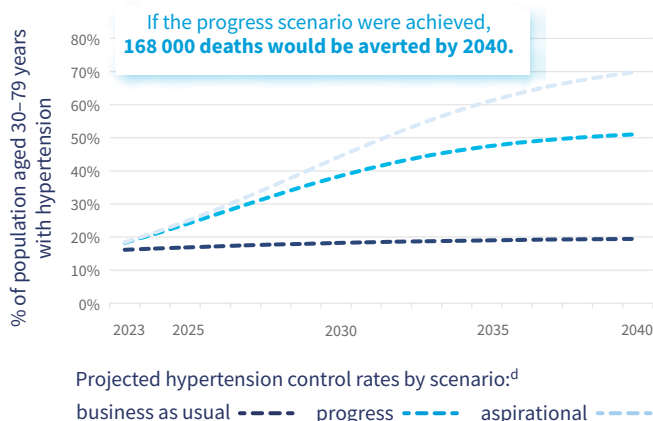
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	14	15	13	2019
Cardiovascular disease deaths	91 500	46 500	45 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	53	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	21	41	1	2019
Obesity, adults aged 18+ years (%)	27	20	35	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	1	0	2019
Physical inactivity, adults aged 18+ years (%)	34	27	40	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Andorra

Hypertension profile

Total population (2019): 76 300
Total deaths (2019): no data

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **31%** ♂ **36%** ♀ **26%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.3 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	65%	55%	33%
♂	62%	52%	30%
♀	69%	59%	38%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends - - - ○ global target

Hypertension control rate scenarios

Data not available
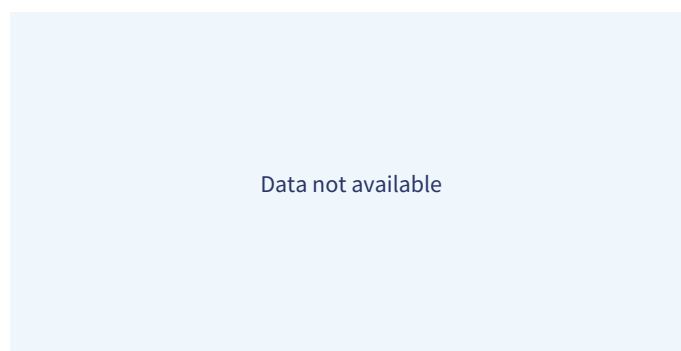
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	53	53	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	7	2019
Current tobacco use, adults aged 15+ years (%)[e]	32	36	28	2019
Obesity, adults aged 18+ years (%)	26	26	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	17	5	2019
Physical inactivity, adults aged 18+ years (%)	38	37	40	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake. e. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
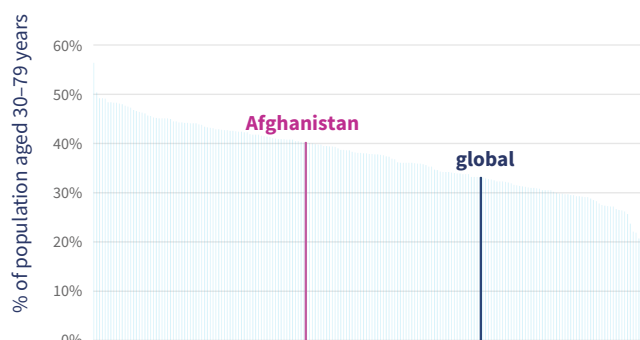
Angola

Hypertension profile

Total population (2019): 32 354 000
Total deaths (2019): 229 000

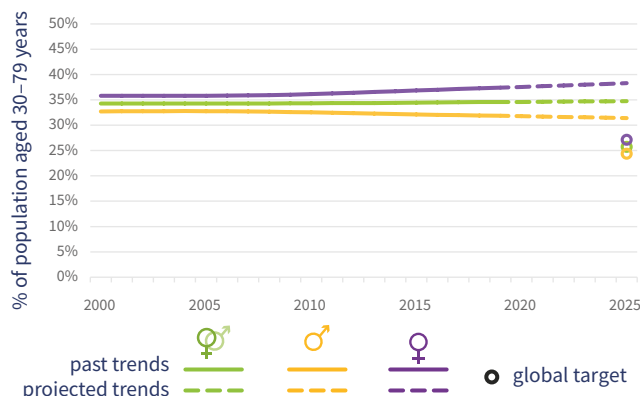**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ **39%**   ♂ **37%**   ♀ **41%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.9 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	48%	25%	12%
♂	39%	22%	9%
♀	55%	27%	13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ◎ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **79 000 deaths would be averted by 2040.**
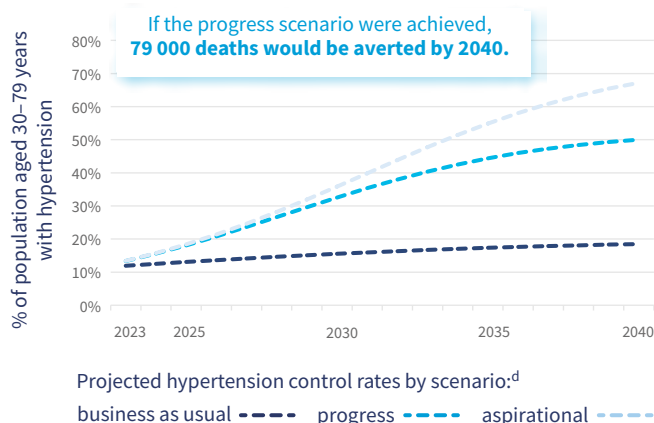
Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	25	19	2019
Cardiovascular disease deaths	27 800	14 500	13 300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	61	66	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	8	4	12	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	3	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
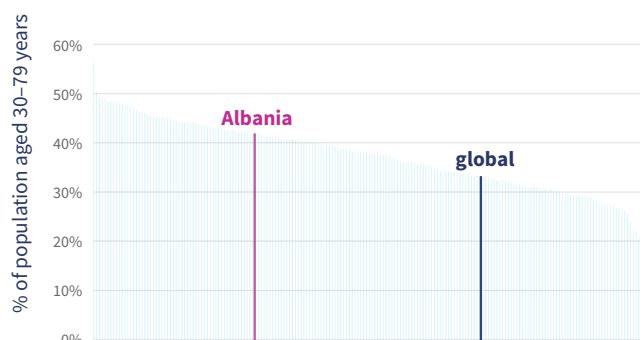
Antigua and Barbuda

Hypertension profile

Total population (2019): 92 100
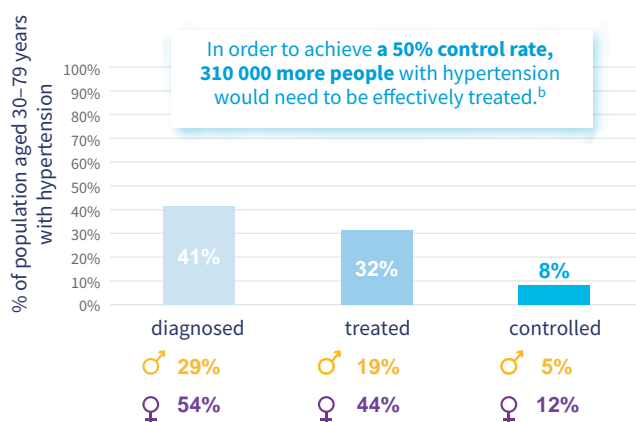**Total deaths (2019):** 650

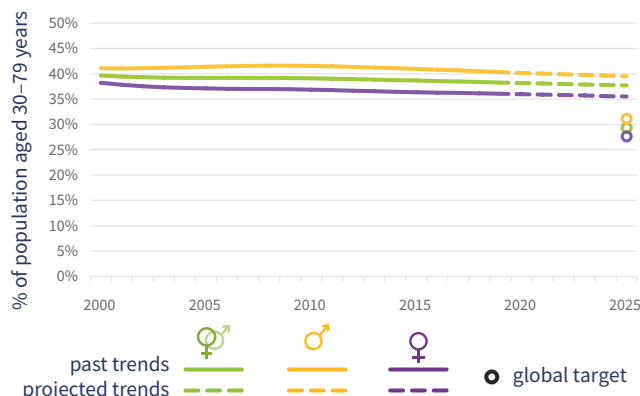Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **43%**   ♂ **42%**   ♀ **43%**
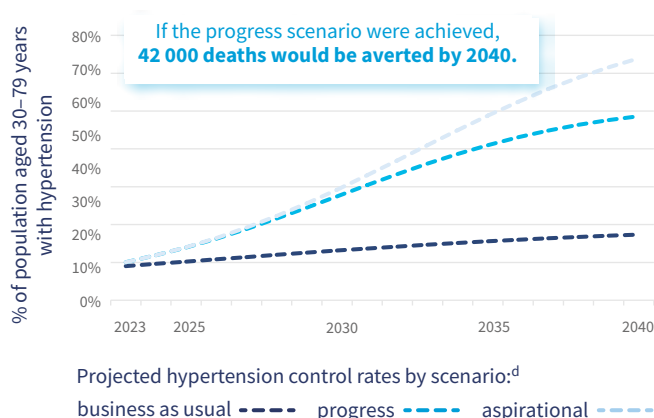
Prevalence of hypertension – global comparison (both sexes)[a]

Of the 23 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 6100 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
63%	50%	23%
♂ 53%	♂ 40%	♂ 18%
♀ 72%	♀ 58%	♀ 27%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **430 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -
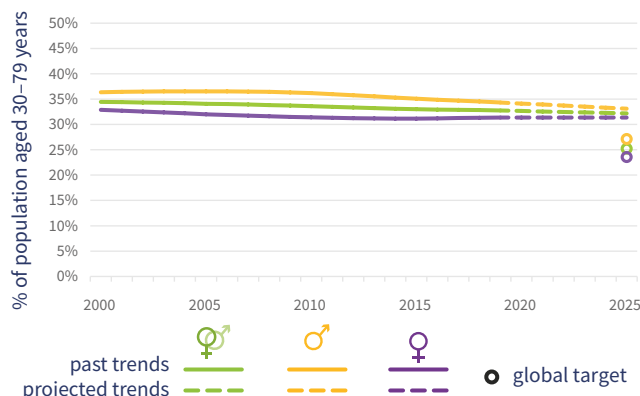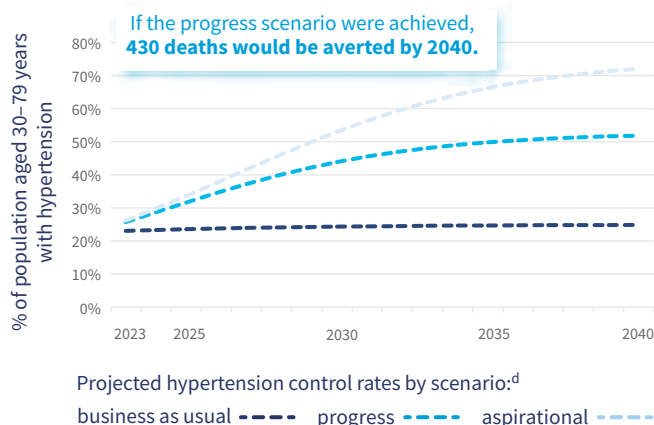
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	18	18	18	2019
Cardiovascular disease deaths	220	110	110	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	55	53	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	19	12	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	14	4	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
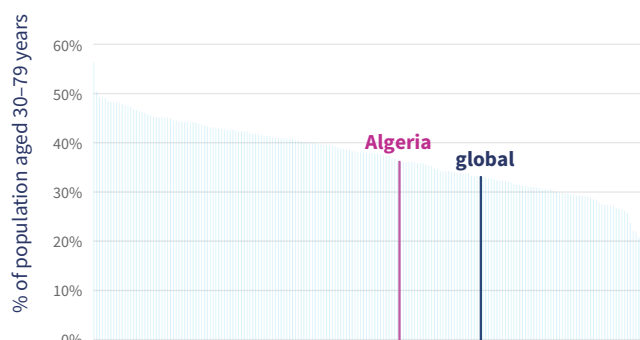
Argentina

Hypertension profile

Total population (2019): 44 746 000

Total deaths (2019): 349 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **48%**   ♂ **54%**   ♀ **41%**
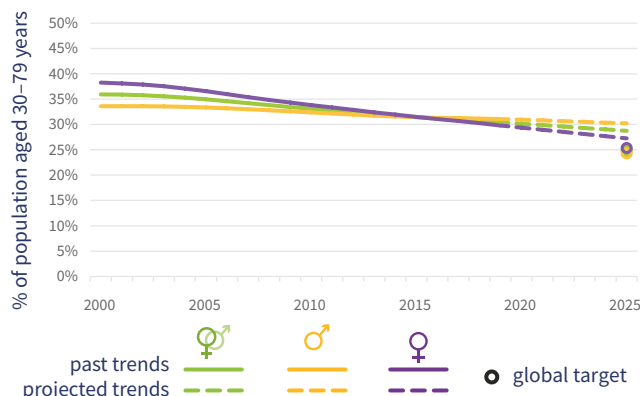
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **10.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 3.7 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
58%	41%	15%
♂ **53%**	♂ **35%**	♂ **11%**
♀ **65%**	♀ **48%**	♀ **19%**

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **148 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	20	12	2019
Cardiovascular disease deaths	98 800	49 200	49 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	48	48	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)	25	30	20	2019
Obesity, adults aged 18+ years (%)	28	27	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	4	2019
Physical inactivity, adults aged 18+ years (%)	42	38	45	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Armenia
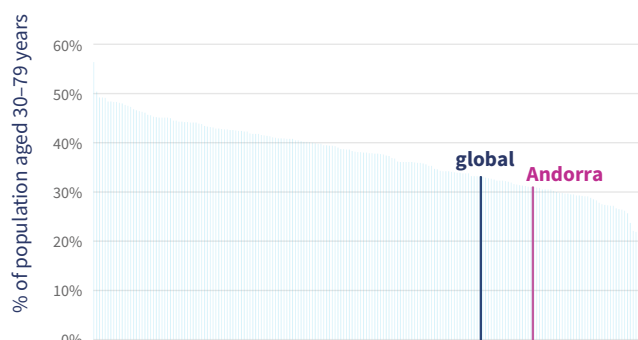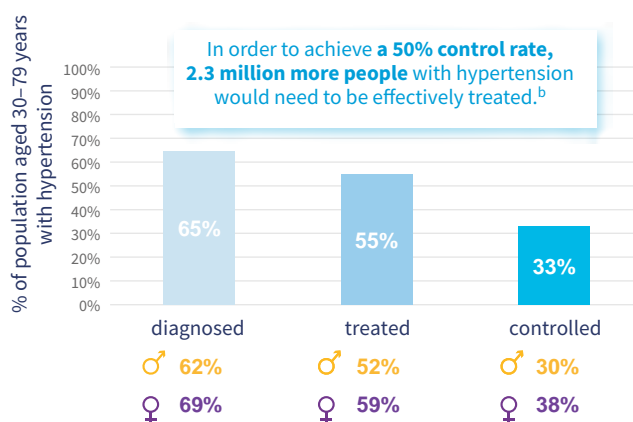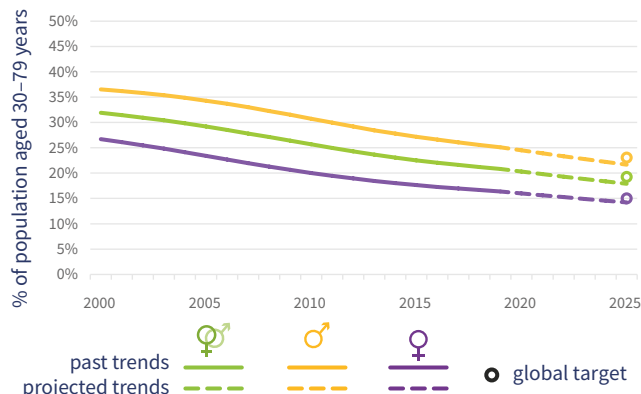
Hypertension profile

Total population (2019): 2 821 000

Total deaths (2019): 25 400

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **47%**   ♂ **49%**   ♀ **46%**

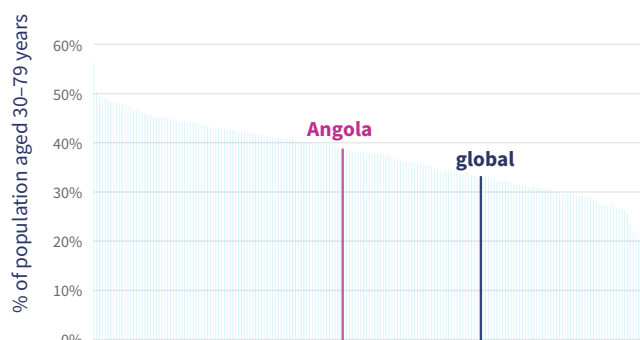### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **813 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 333 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	41%	28%	9%
♂	36%	23%	7%
♀	45%	33%	10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **14 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress – – – aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	20	28	13	2019
Cardiovascular disease deaths	13 100	6300	6800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	56	57	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	26	50	2	2019
Obesity, adults aged 18+ years (%)	20	17	23	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	9	2	2019
Physical inactivity, adults aged 18+ years (%)	23	23	22	2016

National response

Targets

National target for blood pressure	✘
National target for salt consumption	✘

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✔
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Australia

Hypertension profile

Total population (2019): 25 357 000
Total deaths (2019): 165 000

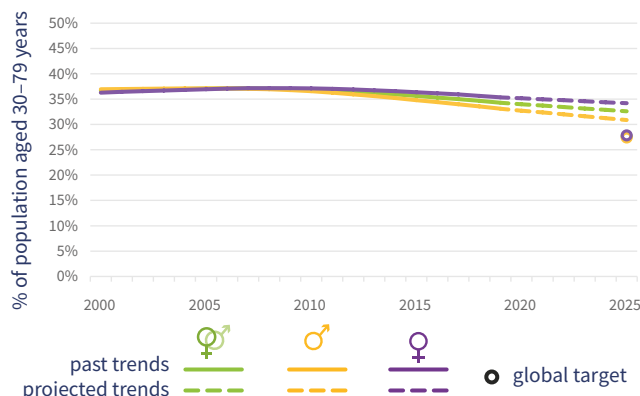**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **29%** ♂ **32%** ♀ **26%**
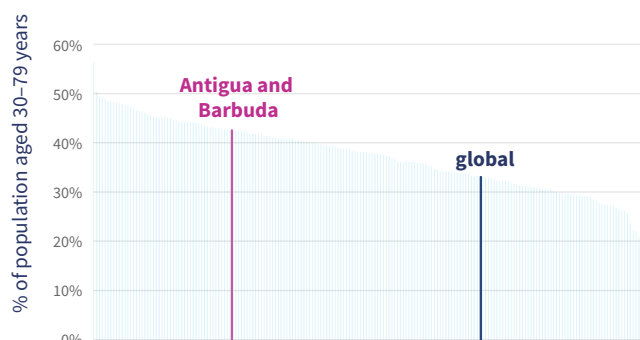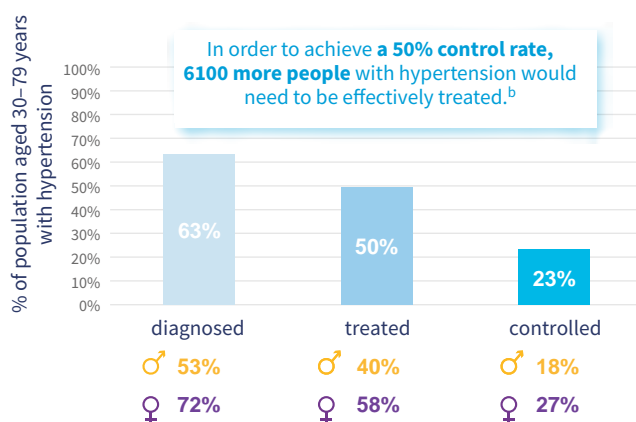
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **4.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	59%	48%	26%
♂	58%	47%	25%
♀	61%	50%	27%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **58 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	9	10	7	2019
Cardiovascular disease deaths	42 200	21 200	21 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	43	43	43	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	14	16	12	2019
Obesity, adults aged 18+ years (%)	29	30	28	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	16	5	2019
Physical inactivity, adults aged 18+ years (%)	30	27	34	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Austria

Hypertension profile

Total population (2019): 8 880 000

Total deaths (2019): 85 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **34%** ♂ **38%** ♀ **30%**

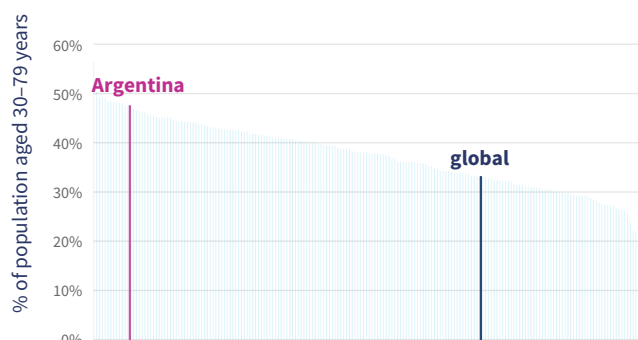### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 486 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	63%	54%	27%
♂	62%	54%	28%
♀	65%	54%	27%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends — — ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **35 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	13	8	2019
Cardiovascular disease deaths	33 100	14 800	18 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	52	53	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	8	2019
Current tobacco use, adults aged 15+ years (%)[f]	27	29	26	2019
Obesity, adults aged 18+ years (%)	20	22	18	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	19	5	2019
Physical inactivity, adults aged 18+ years (%)	30	26	34	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Azerbaijan

Hypertension profile

Total population (2019): 10 233 000
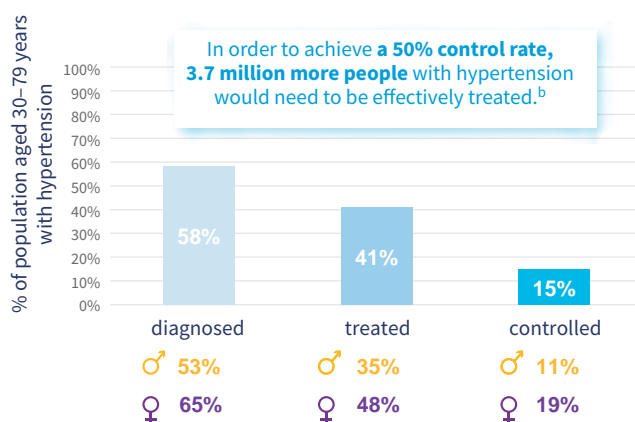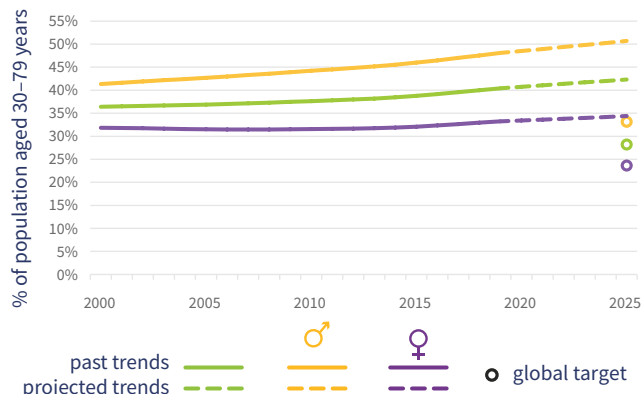**Total deaths (2019):** 82 200

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 41%   ♂ 40%   ♀ 42%

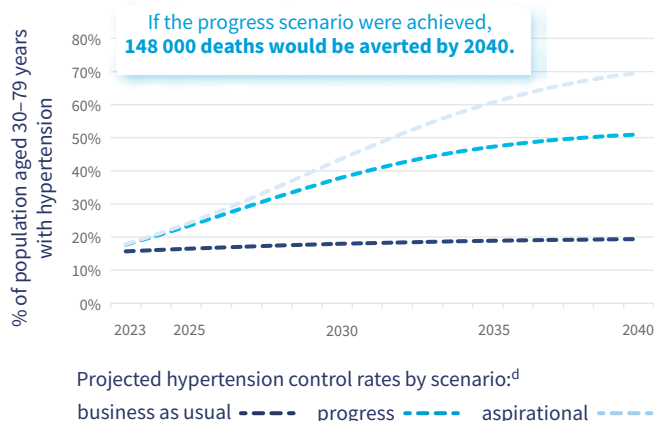### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 762 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	55%	42%	14%
♂	47%	33%	9%
♀	63%	50%	18%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **89 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ------   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	27	34	20	2019
Cardiovascular disease deaths	51 300	25 200	26 100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	56	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	24	48	0	2019
Obesity, adults aged 18+ years (%)	20	16	24	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	4	1	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure — no data
National target for salt consumption — no data

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
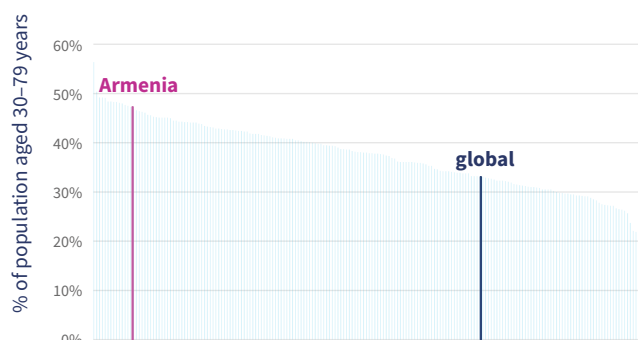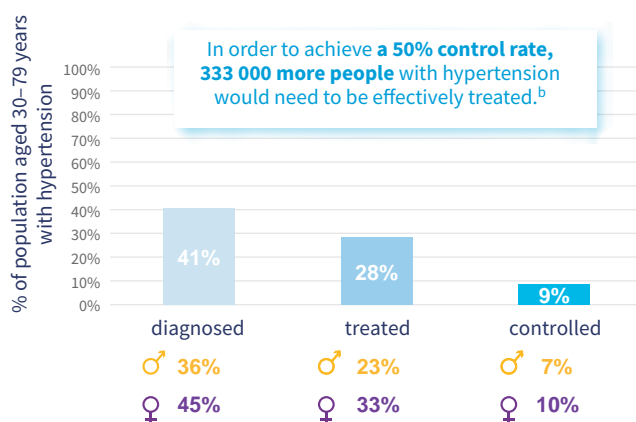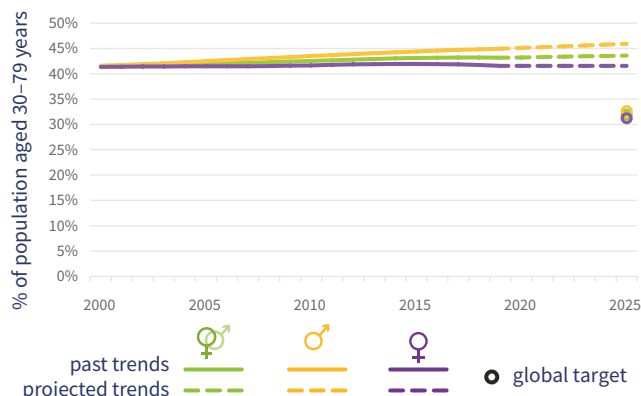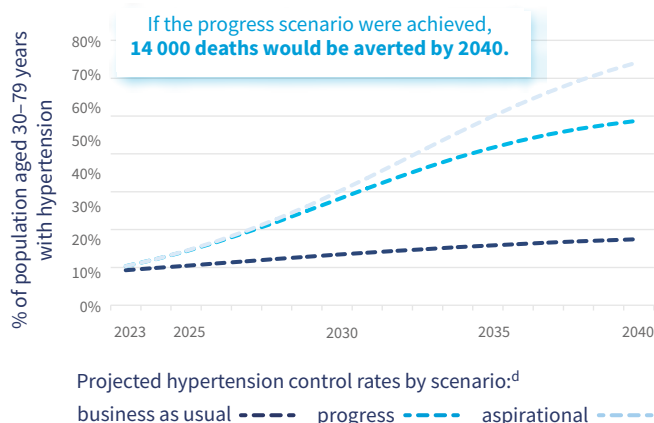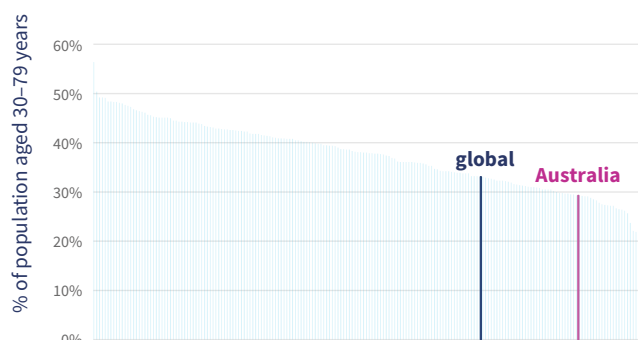
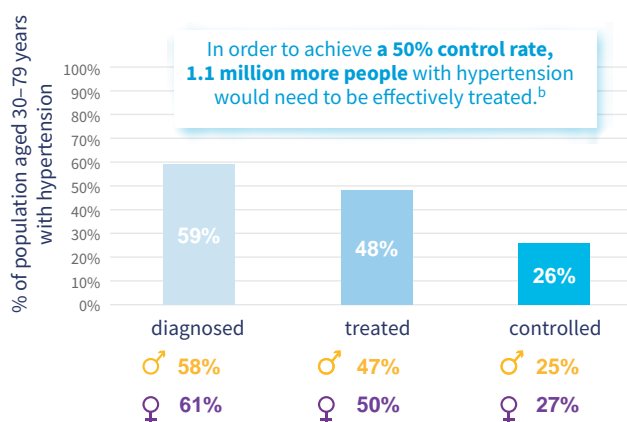# Bahamas

Hypertension profile

Total population (2019): 405 000

Total deaths (2019): 2670

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **45%** ♂ **46%** ♀ **44%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **90 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 25 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	66%	53%	22%
♂	57%	42%	17%
♀	73%	63%	28%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **1600 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual – – – progress – – – aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	20	24	17	2019
Cardiovascular disease deaths	890	490	400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	61	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	11	19	3	2019
Obesity, adults aged 18+ years (%)	32	24	38	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	2	2019
Physical inactivity, adults aged 18+ years (%)	43	30	56	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Bahrain

Hypertension profile

Total population (2019): 1 494 000

Total deaths (2019): 4620

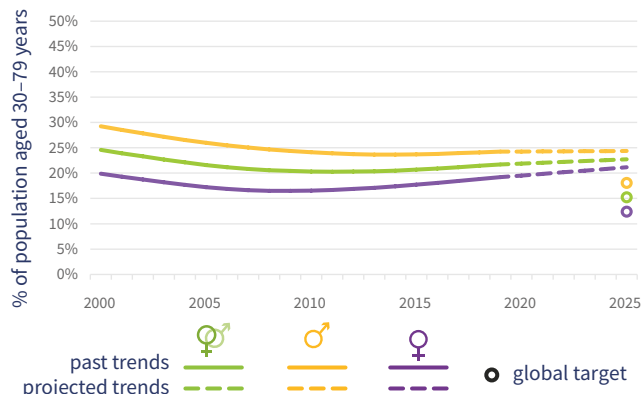Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 39% ♂ 40% ♀ 35%

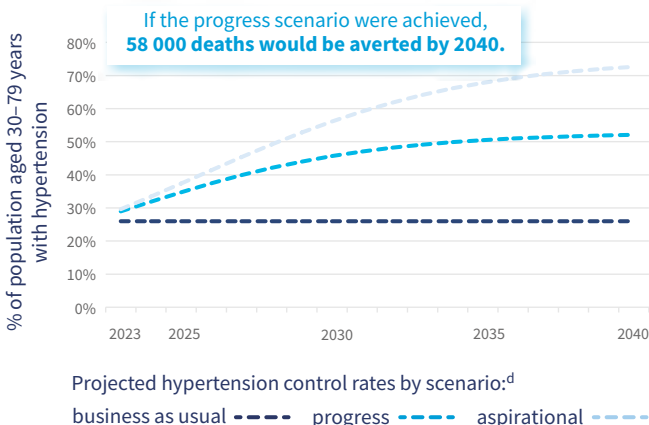### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 282 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 97 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
52%	42%	19%
♂ 47%	♂ 38%	♂ 16%
♀ 61%	♀ 51%	♀ 25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **3300 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ------ progress ------ aspirational ------

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	16	15	2019
Cardiovascular disease deaths	1400	910	540	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	56	56	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)[f]	15	26	5	2019
Obesity, adults aged 18+ years (%)	30	26	37	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	2	0	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
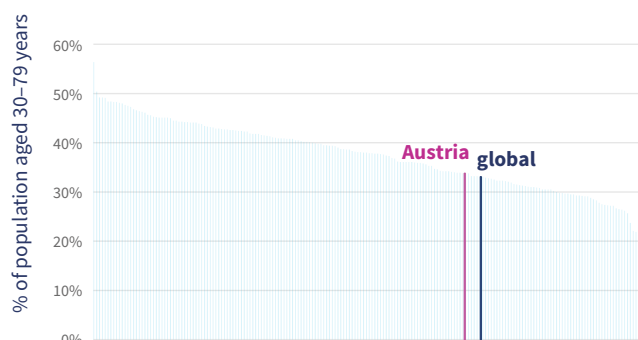
Bangladesh

Hypertension profile
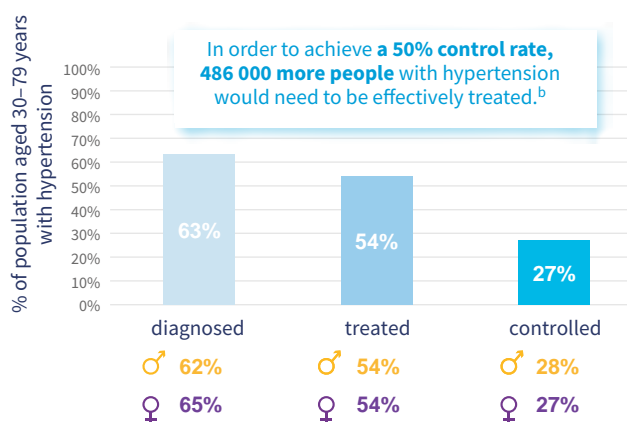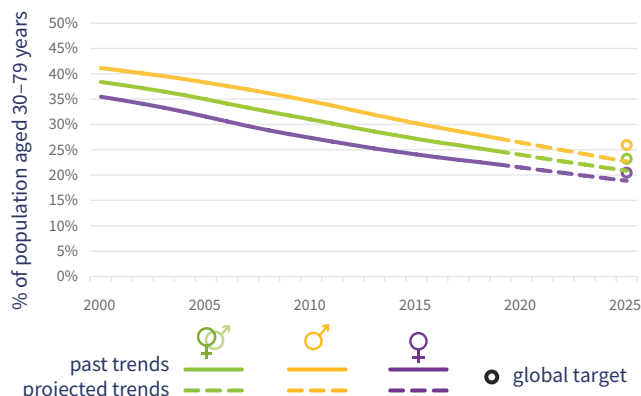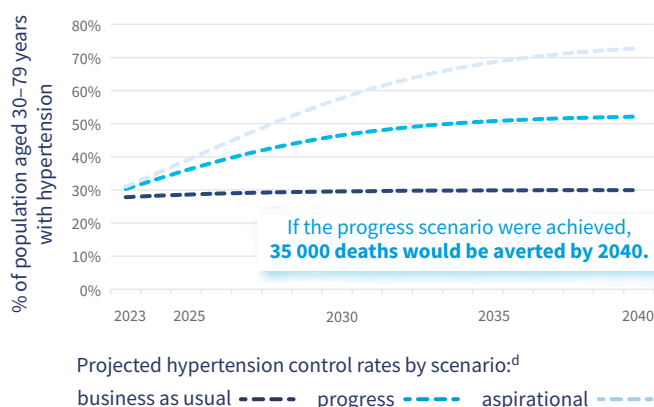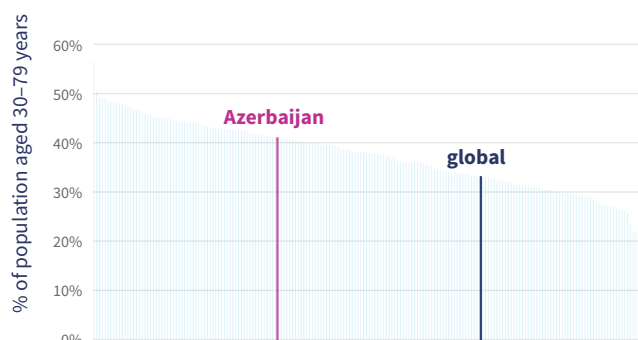
Total population (2019): 165 500 000

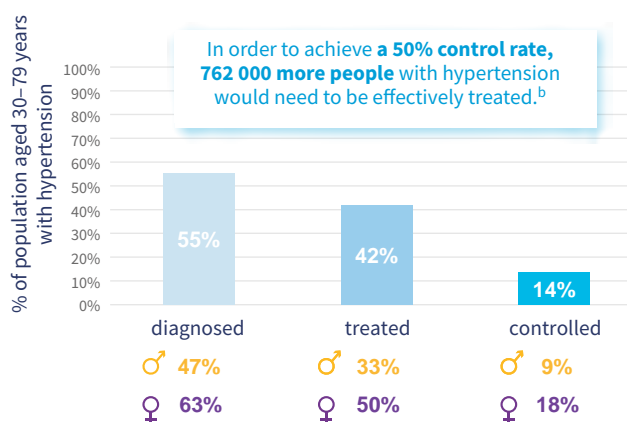**Total deaths (2019):** 793 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 29%   ♂ 24%   ♀ 34%

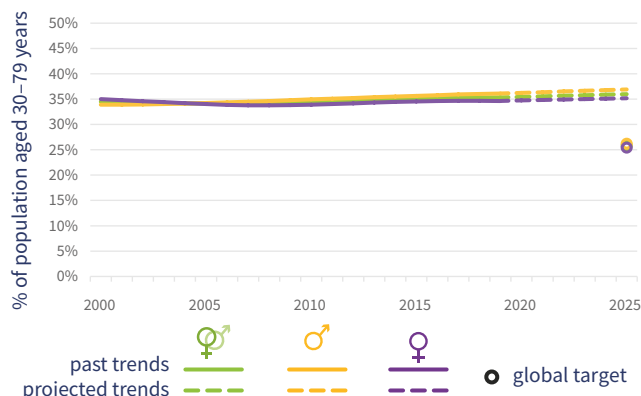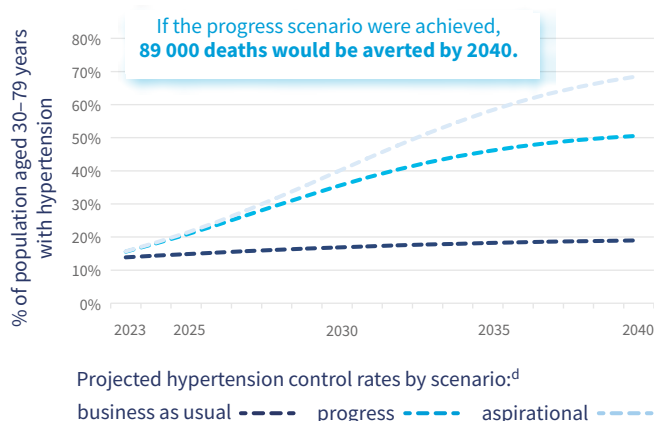## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **19.4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 6.9 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	50%	38%	15%
♂	45%	34%	14%
♀	54%	42%	15%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **479 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	21	16	2019
Cardiovascular disease deaths	273 000	144 000	129 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	51	58	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	9	8	2019
Current tobacco use, adults aged 15+ years (%)	35	53	18	2019
Obesity, adults aged 18+ years (%)	4	2	5	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	28	16	39	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Treatment

Guidelines for management of hypertension ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
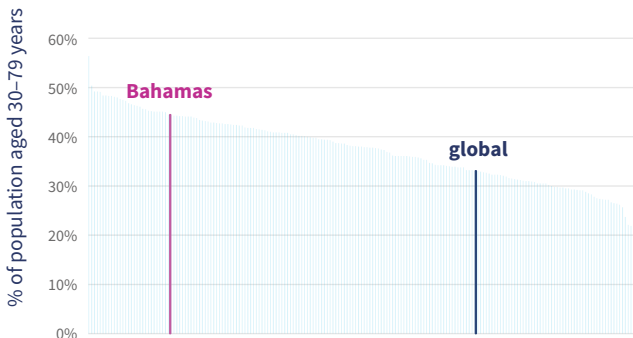
Barbados

Hypertension profile

Total population (2019): 280 000
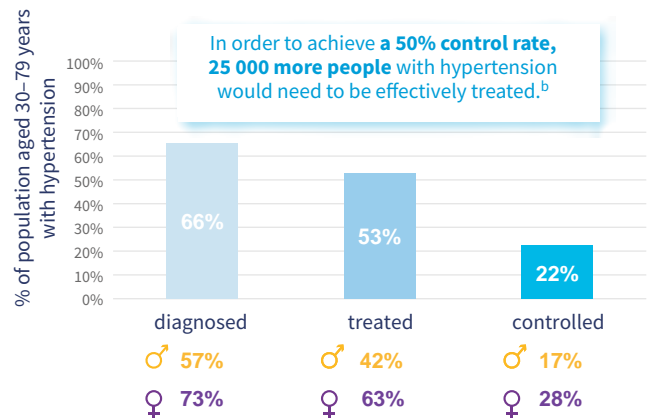**Total deaths (2019):** 3420

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 42% ♂ 40% ♀ 43%
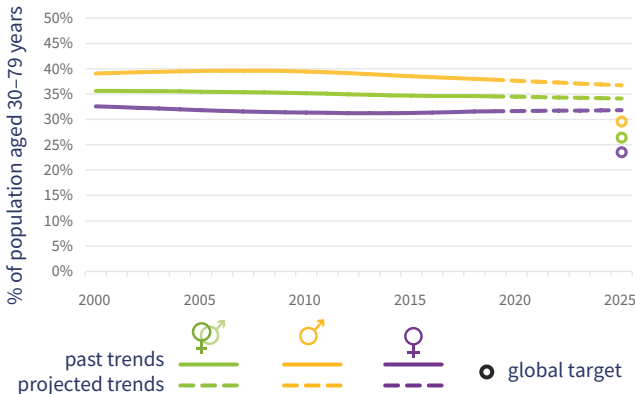
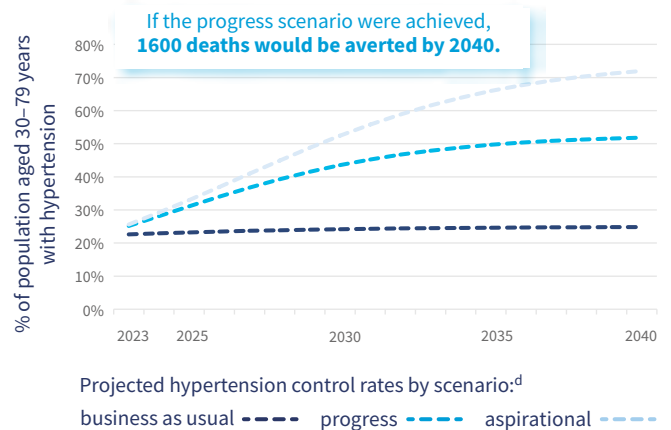### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **80 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 12 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	71%	61%	34%
♂	62%	51%	29%
♀	78%	68%	38%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **1400 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - progress - - - aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	17	15	2019
Cardiovascular disease deaths	1000	460	550	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	54	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	6	2019
Current tobacco use, adults aged 15+ years (%)	9	15	2	2019
Obesity, adults aged 18+ years (%)	23	15	31	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	16	4	2019
Physical inactivity, adults aged 18+ years (%)	43	29	55	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
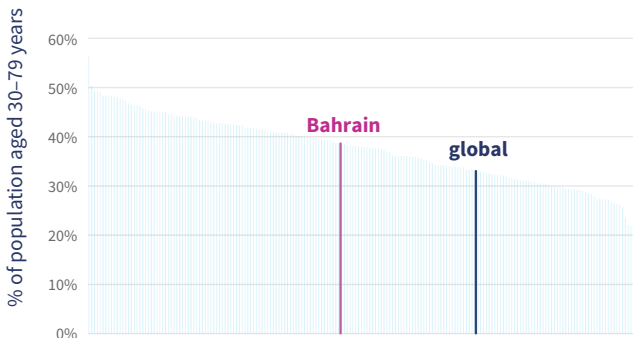
Belarus

Hypertension profile

Total population (2019): 9 674 000

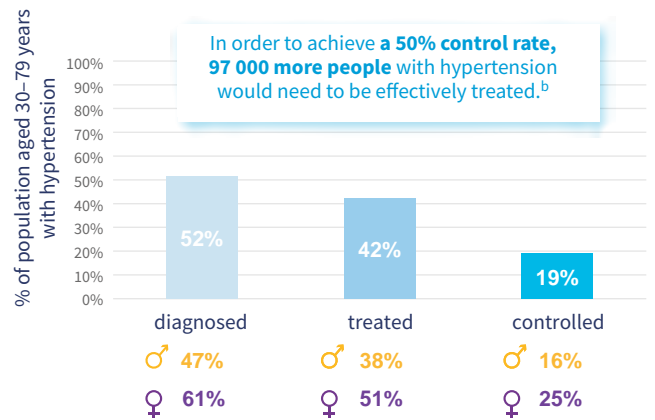**Total deaths (2019):** 116 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 49% ♂ 52% ♀ 47%
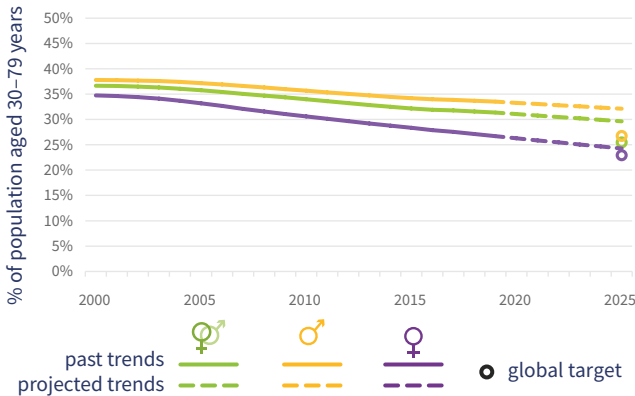
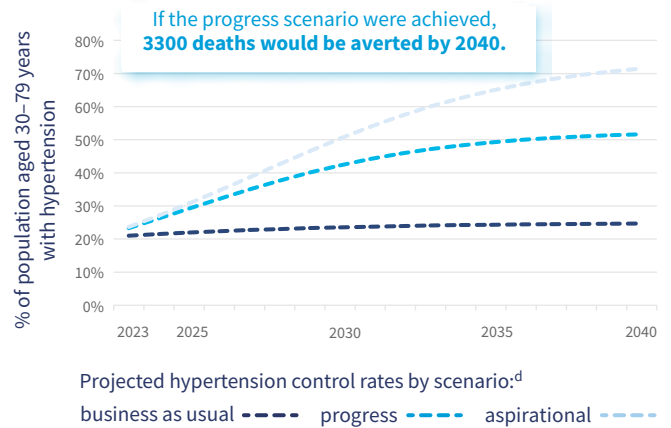### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.2 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	68%	48%	10%
♂	61%	38%	7%
♀	75%	57%	14%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **80 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ━ ━ ━   progress ━ ━ ━   aspirational ─ ─ ─

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	36	14	2019
Cardiovascular disease deaths	73 200	33 000	40 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	61	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	31	48	14	2019
Obesity, adults aged 18+ years (%)	25	22	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	18	5	2019
Physical inactivity, adults aged 18+ years (%)	14	14	14	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
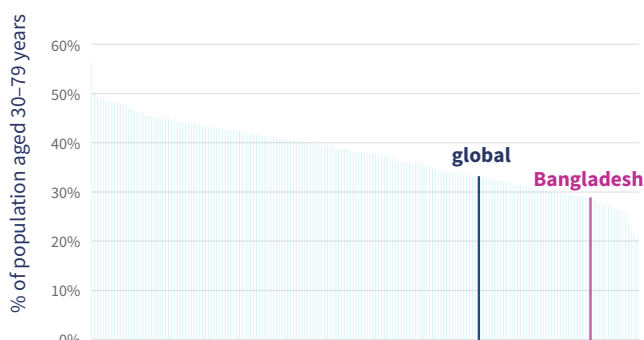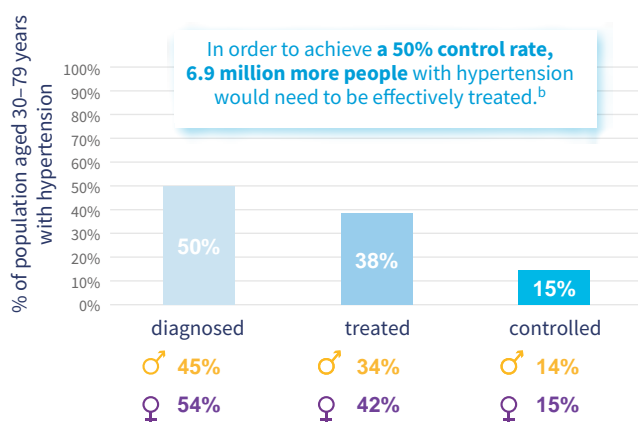
Belgium

Hypertension profile

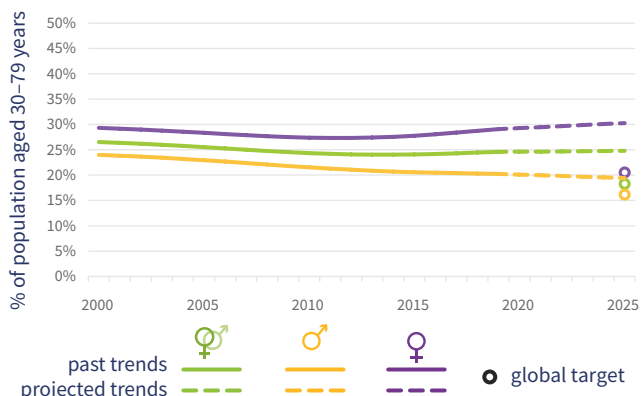**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 30% ♂ 34% ♀ 26%

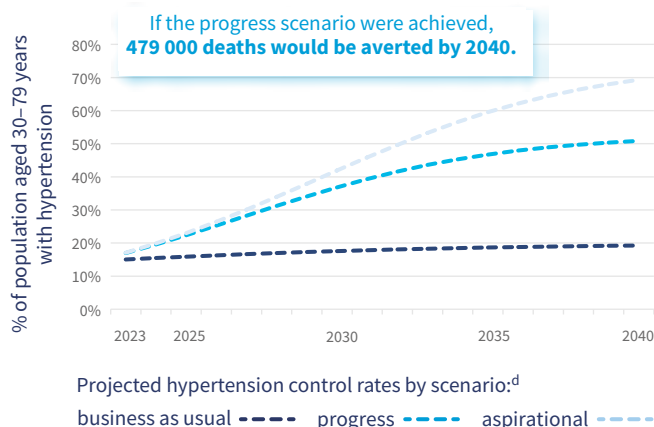### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 250 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	67%	59%	38%
♂	62%	55%	35%
♀	73%	65%	42%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **19 000 deaths would be averted by 2040.**
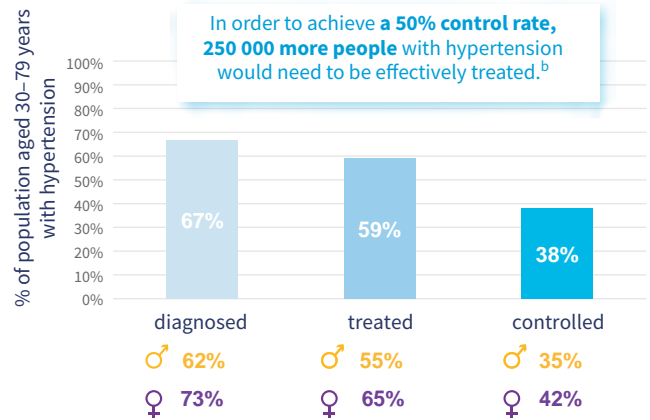
Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----
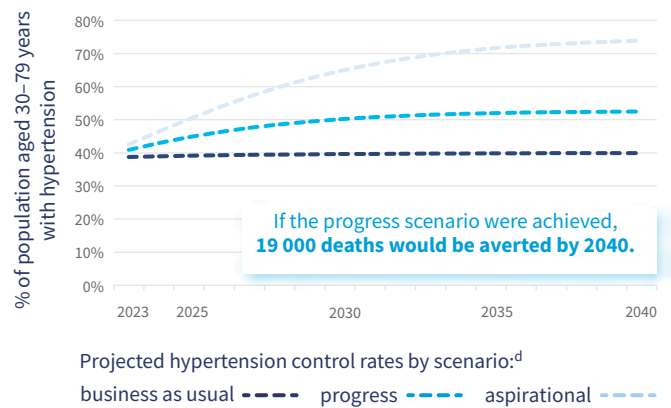
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	13	8	2019
Cardiovascular disease deaths	30 800	14 000	16 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	49	49	49	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)	24	26	21	2019
Obesity, adults aged 18+ years (%)	22	23	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	16	5	2019
Physical inactivity, adults aged 18+ years (%)	36	31	41	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
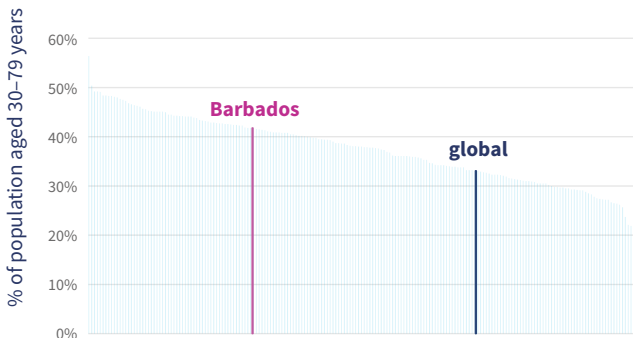
Belize

Hypertension profile

Total population (2019): 389 000
Total deaths (2019): 1880

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **38%** ♂ **38%** ♀ **38%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **55 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 16 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	60%	45%	21%
♂	47%	34%	16%
♀	72%	56%	27%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **870 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress --- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	19	14	2019
Cardiovascular disease deaths	420	240	180	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	54	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	9	16	2	2019
Obesity, adults aged 18+ years (%)	24	17	32	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	9	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Benin

Hypertension profile

Total population (2019): 12 290 000

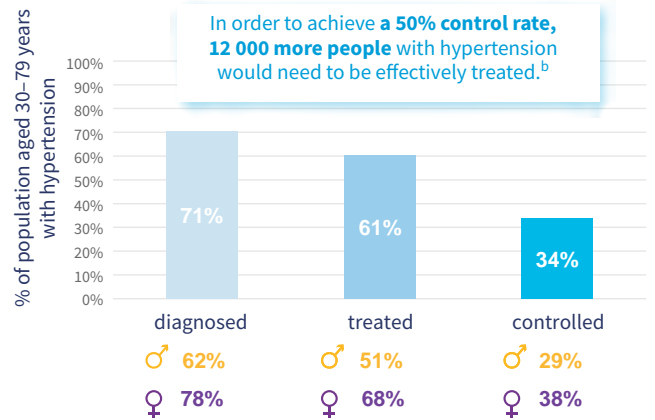Total deaths (2019): 93 400

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 31%   ♂ 29%   ♀ 33%
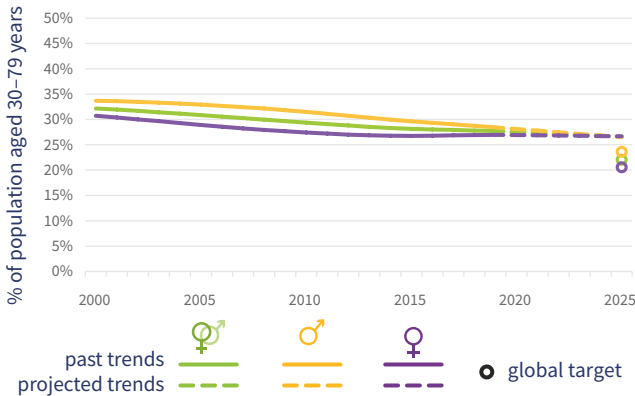
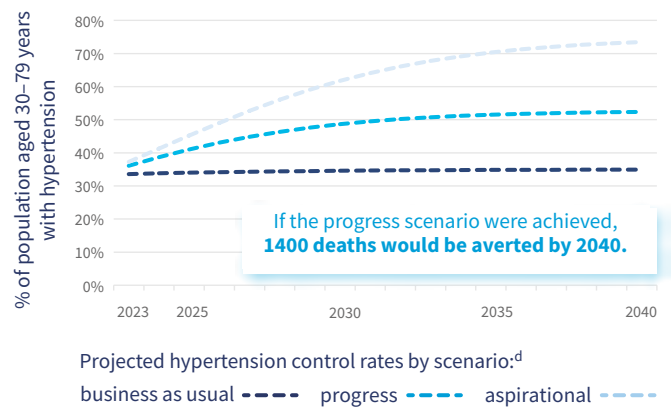### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 979 000 adults aged 30–79 years with hypertension:

In order to achieve a 50% control rate, 402 000 more people with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	39%	25%	9%
♂	28%	19%	8%
♀	47%	29%	10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends - - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, 30 000 deaths would be averted by 2040.

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	24	21	2019
Cardiovascular disease deaths	13 900	6700	7200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	56	54	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	8	2019
Current tobacco use, adults aged 15+ years (%)	7	12	2	2019
Obesity, adults aged 18+ years (%)	10	5	14	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	14	3	2019
Physical inactivity, adults aged 18+ years (%)	16	14	18	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
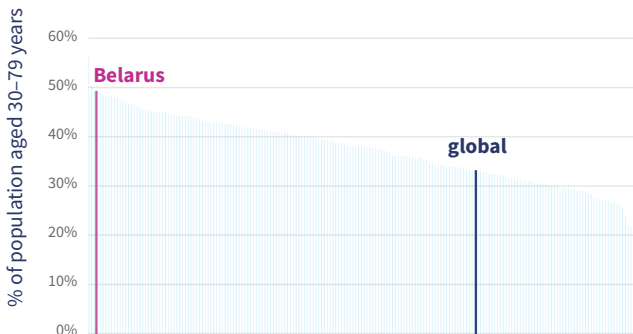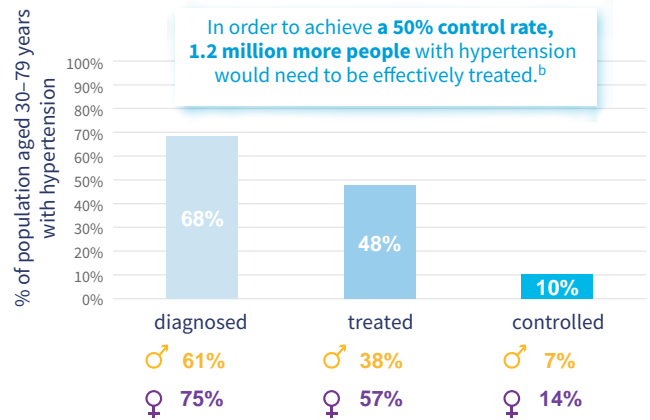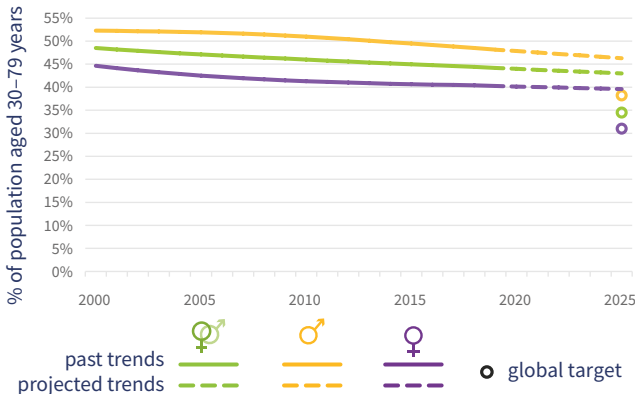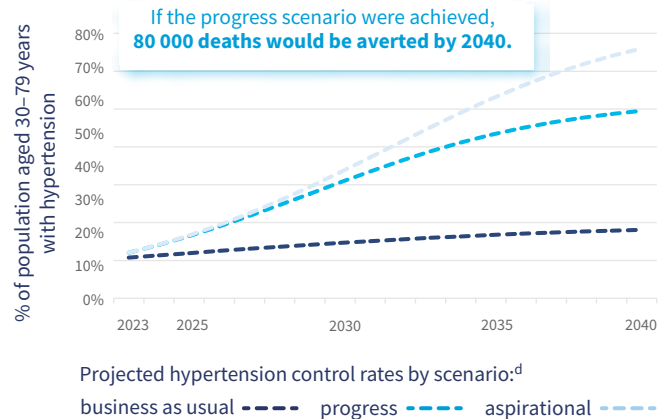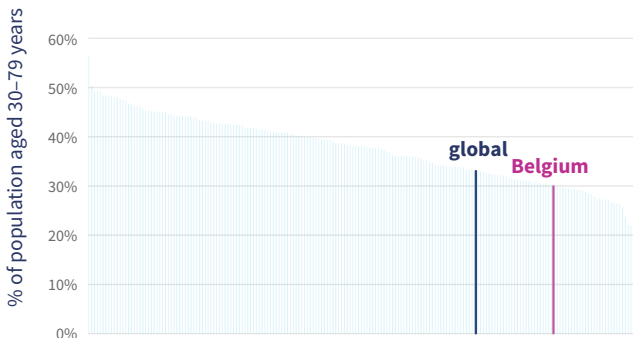
Bhutan

Hypertension profile

Total population (2019): 767 000

Total deaths (2019): 4530

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **43%** ♂ **44%** ♀ **43%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the 137 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 57 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	46%	26%	9%
♂	41%	21%	7%
♀	52%	31%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **2100 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	18	20	17	2019
Cardiovascular disease deaths	1300	750	530	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	51	51	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	9	8	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	6	5	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	23	18	29	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Bolivia (Plurinational State of)

Hypertension profile

Total population (2019): 11 777 000

Total deaths (2019): 86 400

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **28%** ♂ **29%** ♀ **27%**

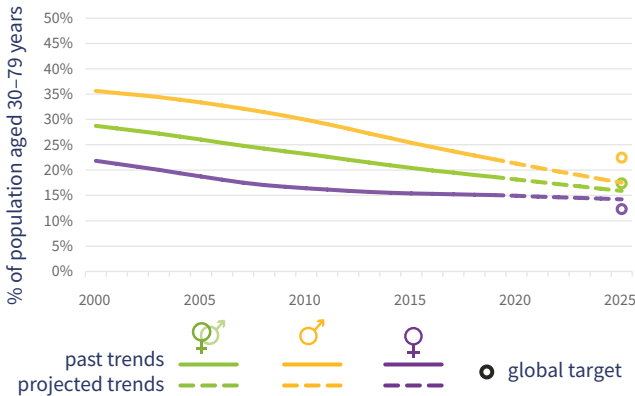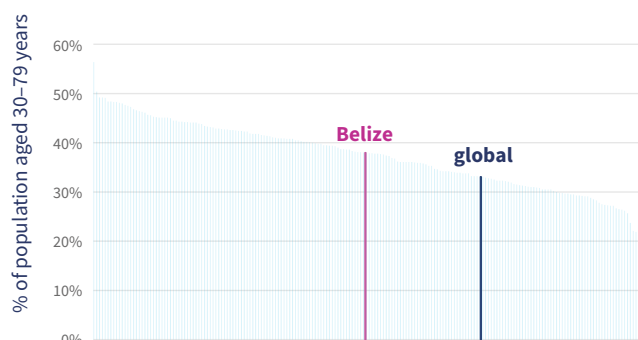## Prevalence of hypertension – global comparison (both sexes)[a]
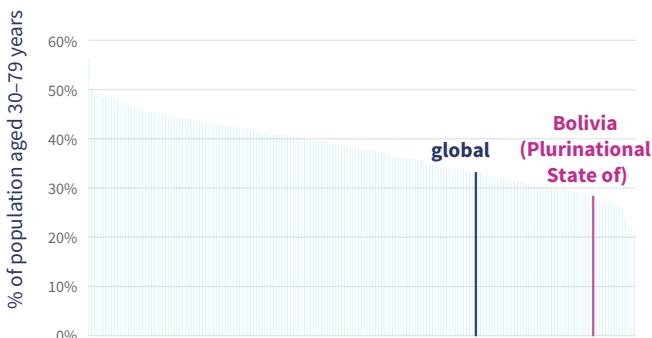
Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 306 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	61%	49%	26%
♂	51%	39%	19%
♀	71%	60%	34%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀

projected trends - - - ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **36 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	18	17	18	2019
Cardiovascular disease deaths	22 400	10 400	12 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	43	42	44	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)	13	21	5	2019
Obesity, adults aged 18+ years (%)	20	15	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	6	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Bosnia and Herzegovina

Hypertension profile

Total population (2019): 3 361 000

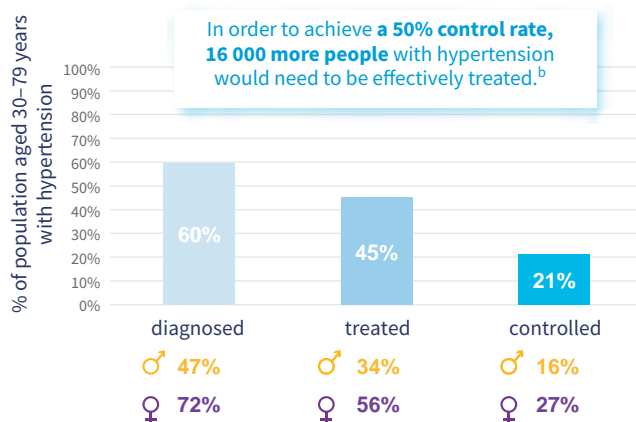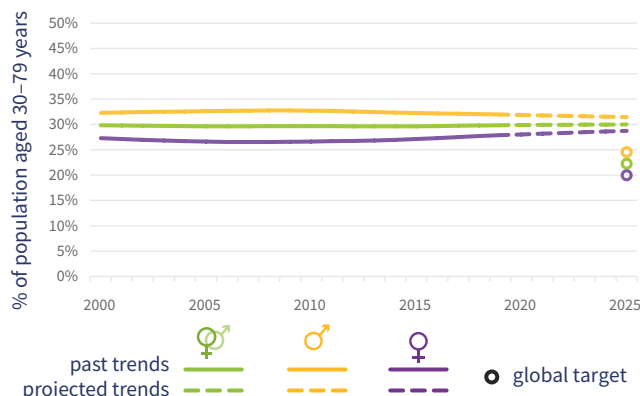**Total deaths (2019): 37 800**

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 44%   ♂ 47%   ♀ 41%

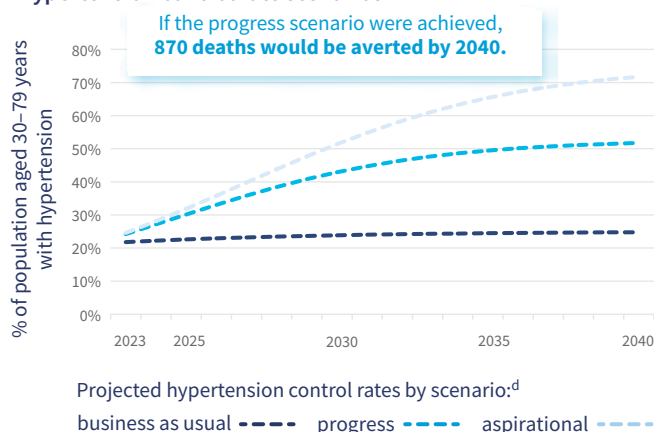### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 350 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	56%	49%	17%
♂	48%	42%	12%
♀	65%	57%	22%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends   ⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **31 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	24	14	2019
Cardiovascular disease deaths	19 700	9000	10 700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	54	55	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	36	43	28	2019
Obesity, adults aged 18+ years (%)	18	17	18	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	11	2	2019
Physical inactivity, adults aged 18+ years (%)	25	23	28	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
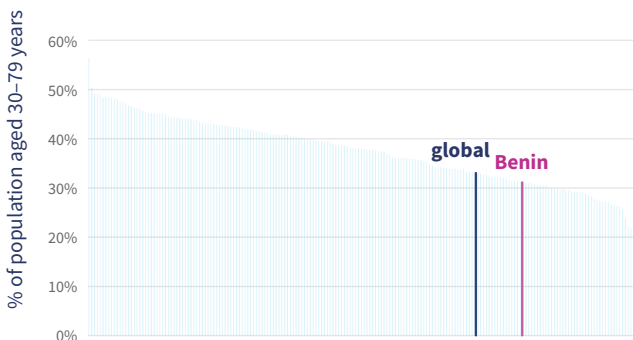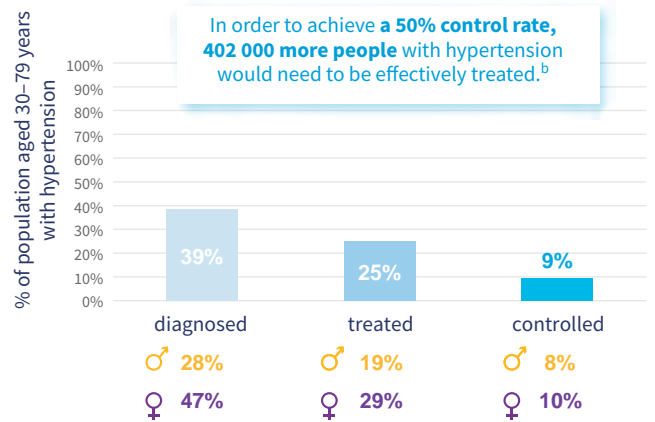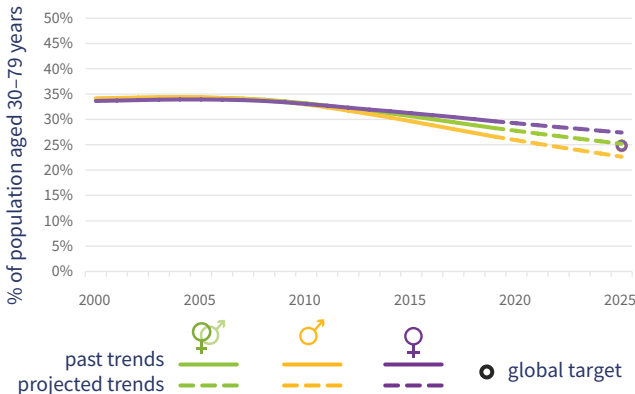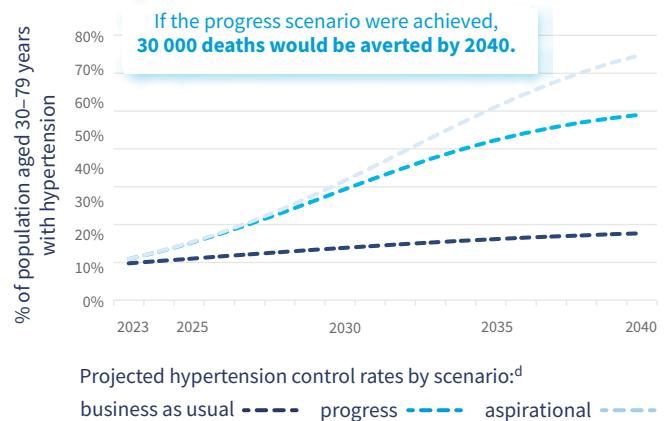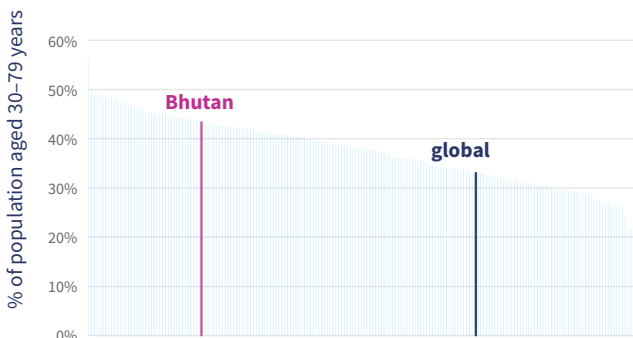
Botswana

Hypertension profile

Total population (2019): 2 500 000

Total deaths (2019): 20 700

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **44%**   ♂ **40%**   ♀ **47%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the 364 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 119 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	59%	41%	19%
♂	50%	33%	13%
♀	65%	48%	22%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

⚥ past trends   ♂   ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **9900 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	27	33	23	2019
Cardiovascular disease deaths	4100	2000	2100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	64	61	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	7	2019
Current tobacco use, adults aged 15+ years (%)	20	31	9	2019
Obesity, adults aged 18+ years (%)	19	8	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	14	3	2019
Physical inactivity, adults aged 18+ years (%)	22	17	26	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✘

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Brazil

Hypertension profile

Total population (2019): 211 800 000
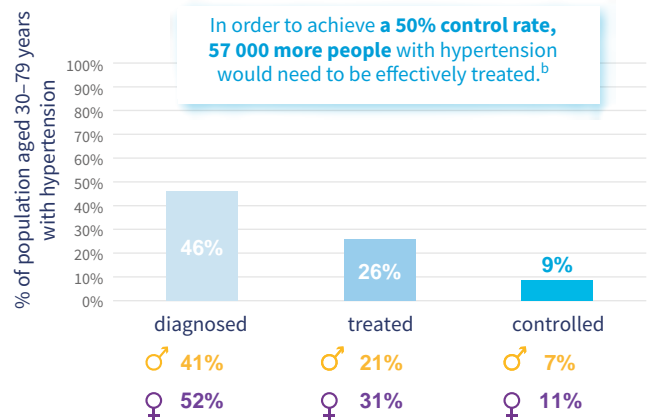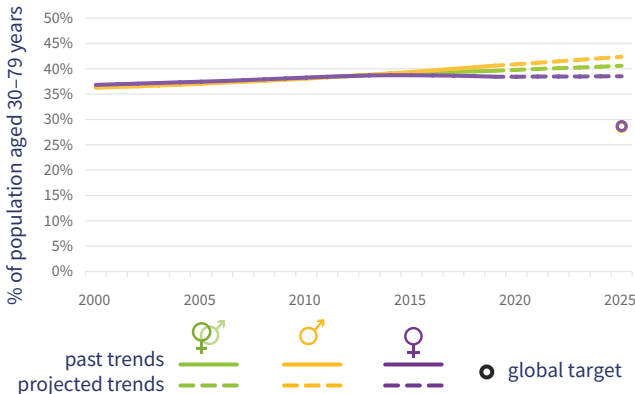
Total deaths (2019): 1 372 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 45%   ♂ 48%   ♀ 42%

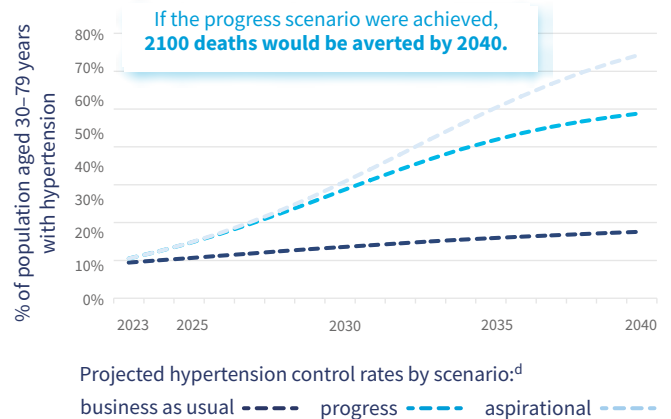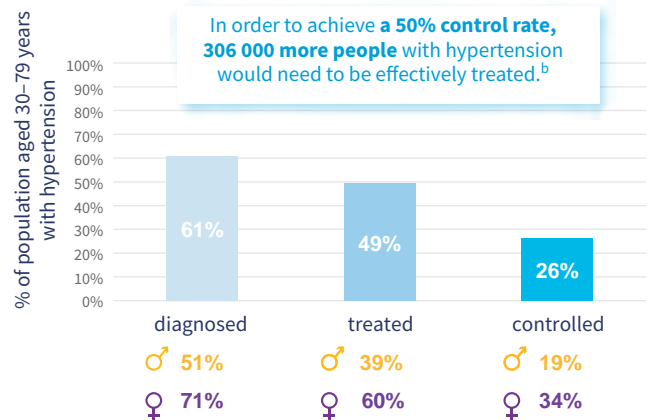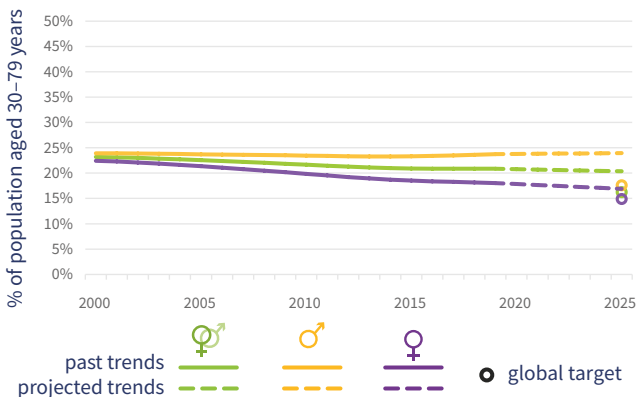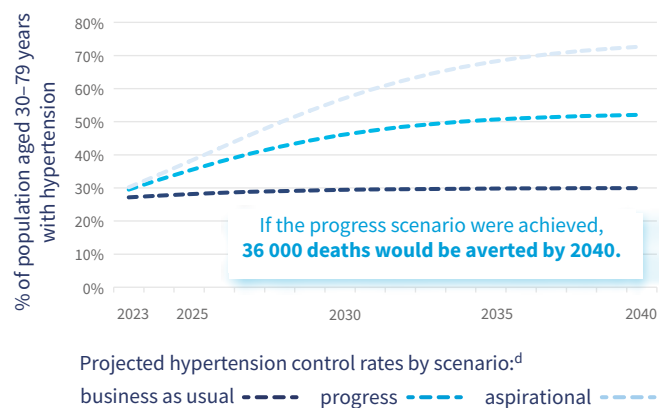### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **50.7 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 8.4 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	67%	62%	33%
♂	62%	54%	28%
♀	73%	70%	39%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ⚥ --- ♂ --- ♀ ---   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **365 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---   progress ---   aspirational ---
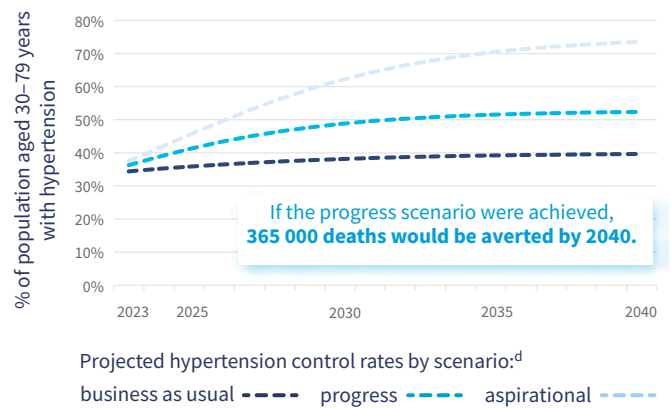
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	15	19	13	2019
Cardiovascular disease deaths	381 000	202 000	179 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	55	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)	13	17	10	2019
Obesity, adults aged 18+ years (%)	22	19	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	12	3	2019
Physical inactivity, adults aged 18+ years (%)	47	40	53	2016

National response

Targets

National target for blood pressure	✘
National target for salt consumption	✔

Treatment

Guidelines for management of hypertension	✘

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✔
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
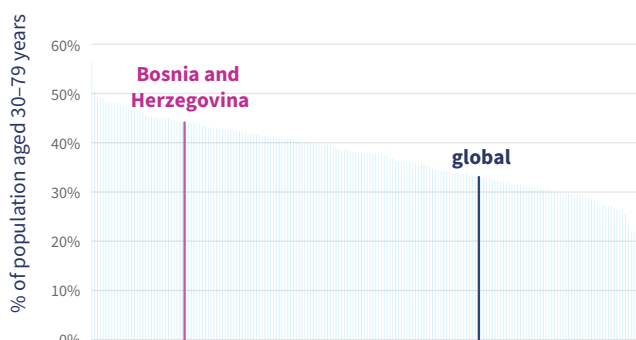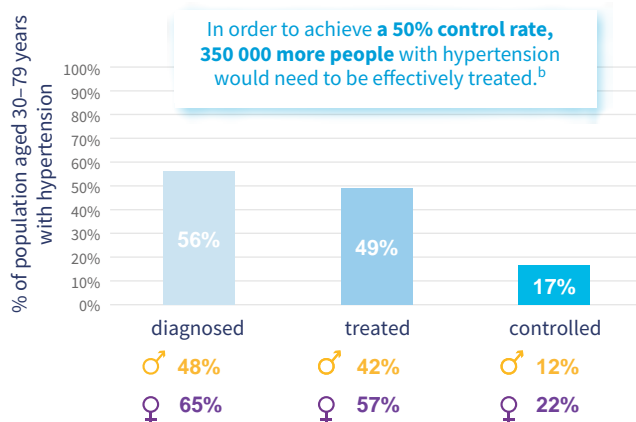
Brunei Darussalam

Hypertension profile

Total population (2019): 438 000
Total deaths (2019): 2 230

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **46%**   ♂ **47%**   ♀ **46%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the 100 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 21 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
66%	57%	30%
♂ 62%	♂ 52%	♂ 26%
♀ 70%	♀ 62%	♀ 35%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **980 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress – – –   aspirational – – –
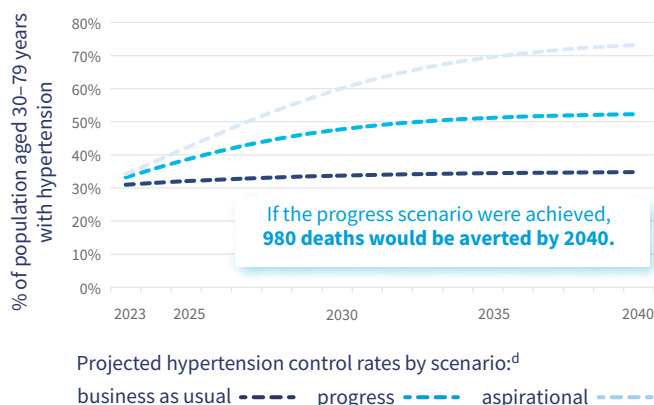
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	20	17	2019
Cardiovascular disease deaths	670	400	270	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	55	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	11	12	10	2019
Current tobacco use, adults aged 15+ years (%)[f]	16	30	2	2019
Obesity, adults aged 18+ years (%)	14	13	16	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	27	21	34	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Bulgaria

Hypertension profile

Total population (2019): 7 053 000

Total deaths (2019): 106 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 45% ♂ 49% ♀ 41%
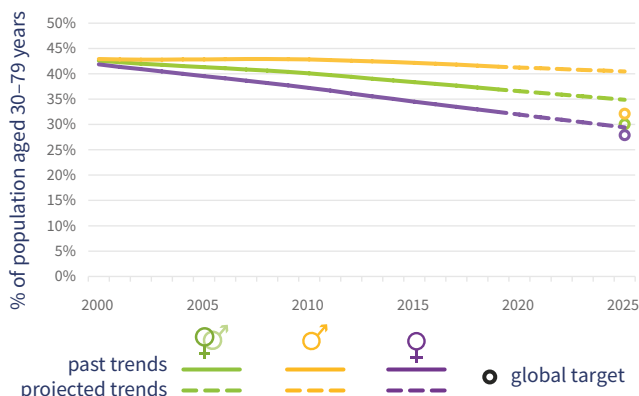
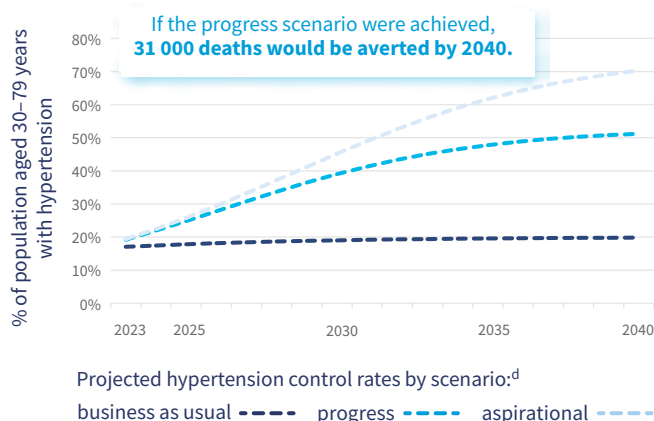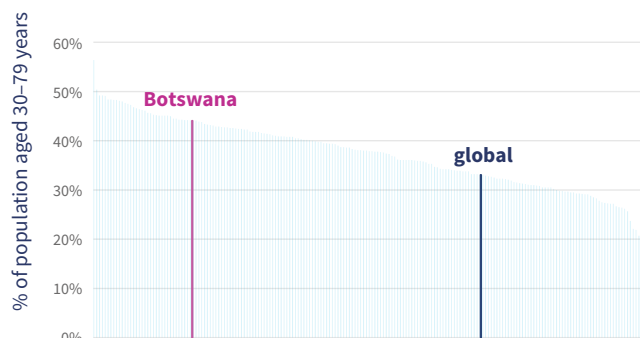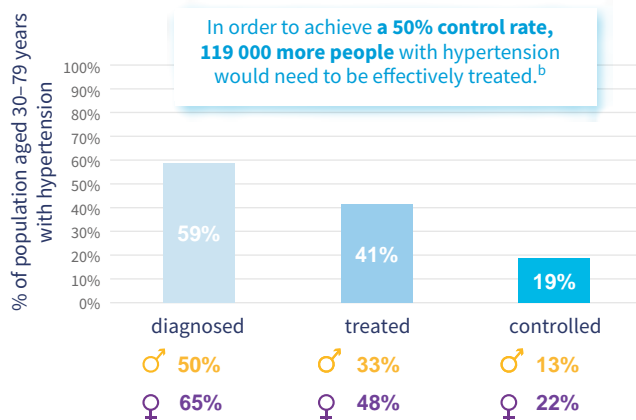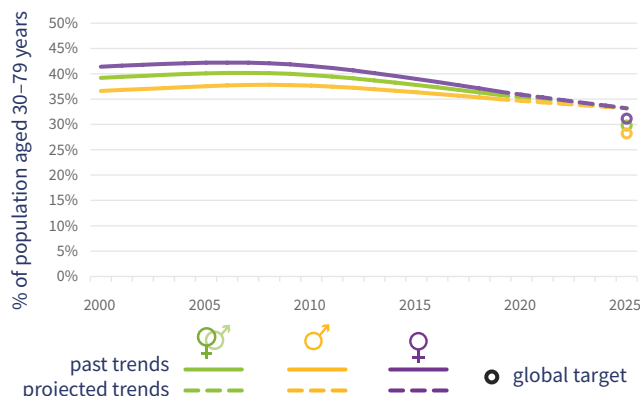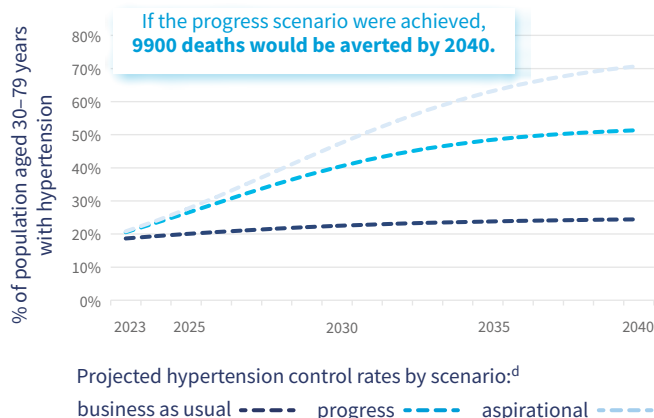### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 621 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	64%	52%	23%
♂	57%	45%	18%
♀	71%	60%	28%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **76 000 deaths would be averted by 2040.**
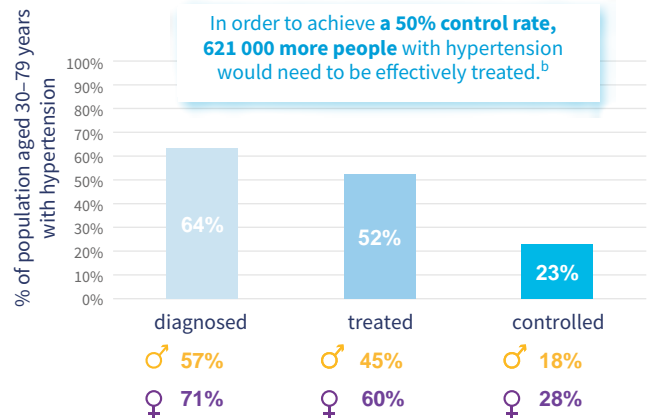
Projected hypertension control rates by scenario:[d]
business as usual ━ ━ ━   progress ━ ━   aspirational ─ ─ ─
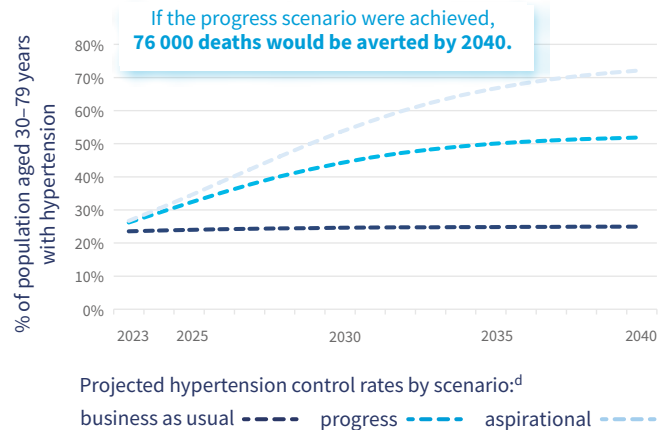
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	32	16	2019
Cardiovascular disease deaths	68 900	33 200	35 700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	61	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	39	42	37	2019
Obesity, adults aged 18+ years (%)	25	26	24	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	20	5	2019
Physical inactivity, adults aged 18+ years (%)	39	36	41	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

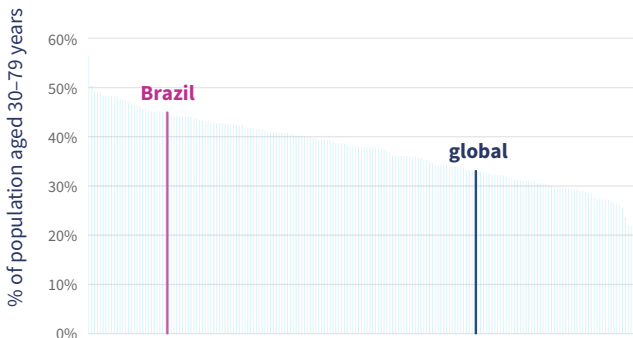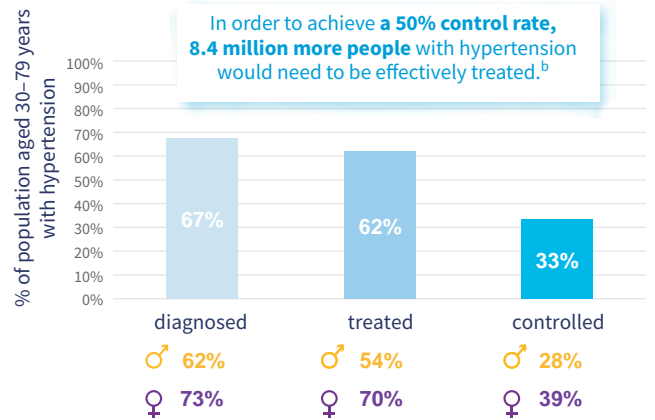# Burkina Faso

Hypertension profile

Total population (2019): 20 952 000

Total deaths (2019): 152 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **31%**   ♂ **29%**   ♀ **32%**

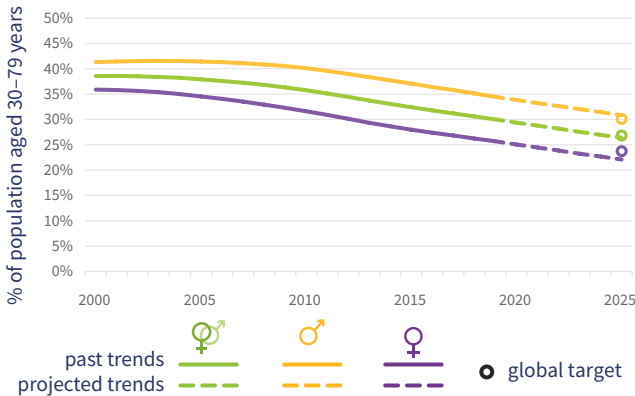## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 626 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	38%	21%	9%
♂	29%	14%	6%
♀	44%	26%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **36 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -
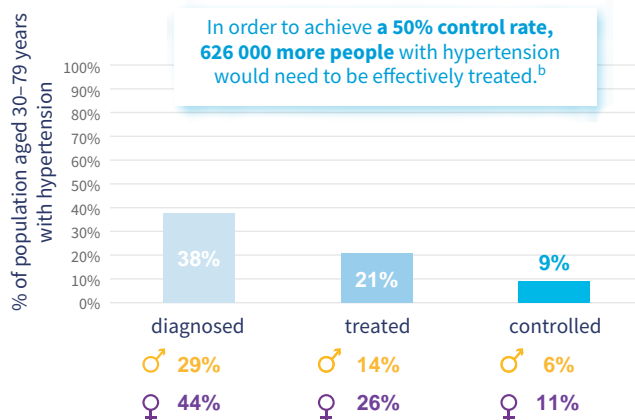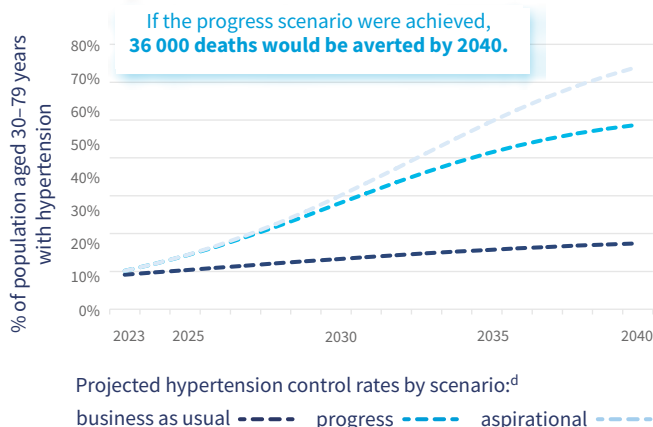
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	26	22	2019
Cardiovascular disease deaths	19 000	9500	9500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	51	55	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	15	23	7	2019
Obesity, adults aged 18+ years (%)	6	3	8	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	17	3	2019
Physical inactivity, adults aged 18+ years (%)	20	18	23	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
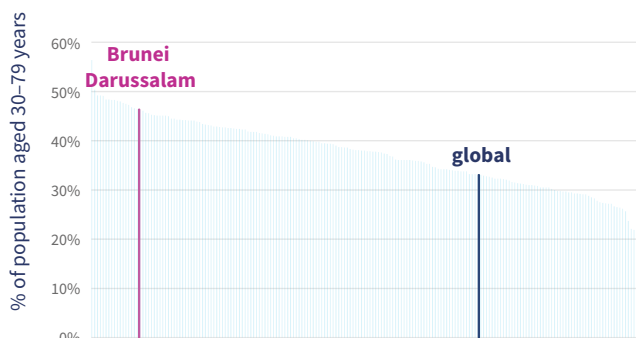
Burundi

Hypertension profile

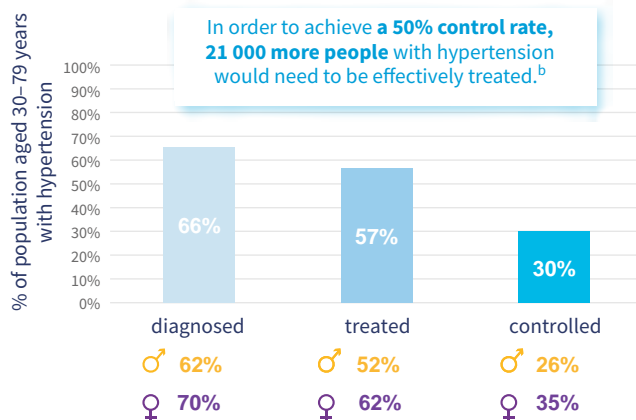**Total population (2019):** 11 875 000

Total deaths (2019): 76 800

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **34%**   ♂ **33%**   ♀ **36%**
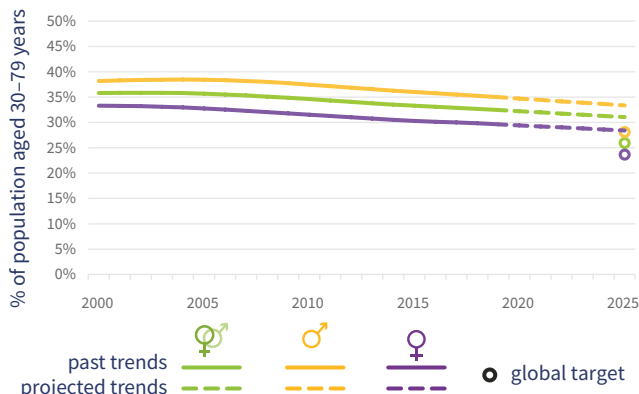
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **907 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 359 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	41%	25%	11%
♂	33%	20%	9%
♀	48%	29%	13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **26 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	27	23	2019
Cardiovascular disease deaths	10 200	5200	5000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	57	58	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	12	18	6	2019
Obesity, adults aged 18+ years (%)	5	2	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
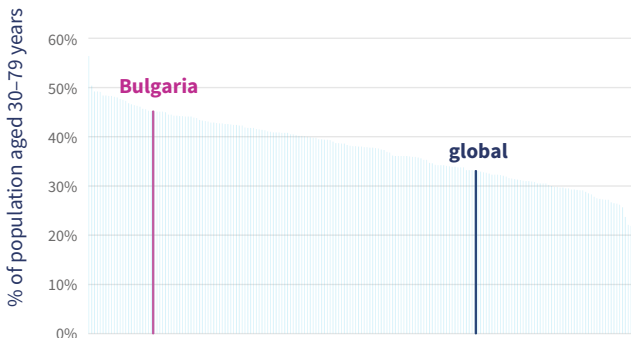
Cabo Verde

Hypertension profile

Total population (2019): 577 000

Total deaths (2019): 2850

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **44%**   ♂ **46%**   ♀ **42%**
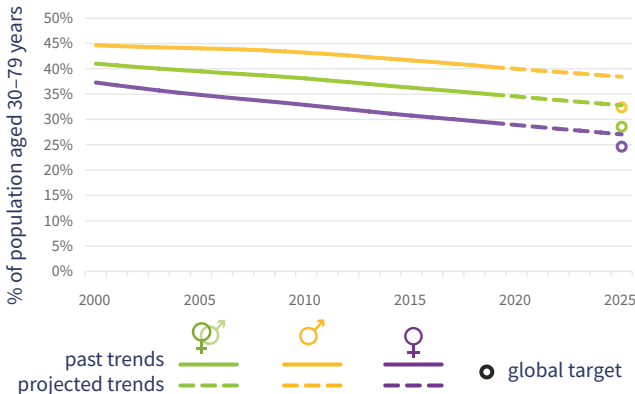

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **95 000** adults aged 30–79 years with hypertension:

> In order to achieve **a 50% control rate, 35 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	53%	36%	14%
♂	41%	25%	9%
♀	65%	47%	19%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ○ global target

Hypertension control rate scenarios

> If the progress scenario were achieved, **3100 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	23	13	2019
Cardiovascular disease deaths	870	410	450	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	60	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	12	18	6	2019
Obesity, adults aged 18+ years (%)	12	7	16	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	3	2019
Physical inactivity, adults aged 18+ years (%)	20	14	25	2016

National response

Targets

National target for blood pressure	✖	
National target for salt consumption	✖	

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✔
Functioning system for generating reliable cause-specific mortality data on a routine basis	✖

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
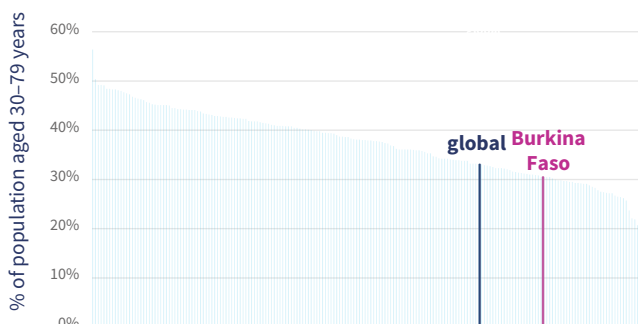
Cambodia

Hypertension profile

Total population (2019): 16 208 000

Total deaths (2019): 96 600

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **26%** ♂ **26%** ♀ **25%**

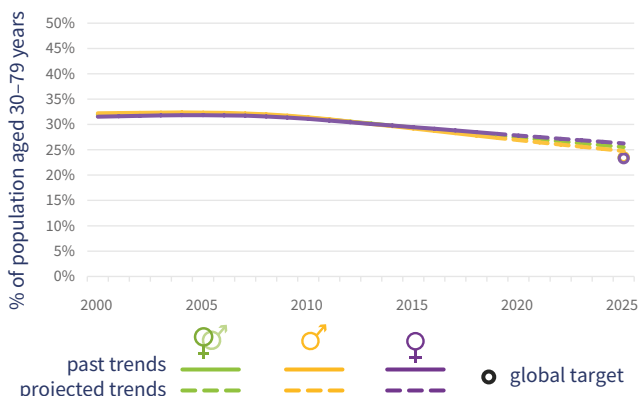## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 455 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	51%	37%	22%
♂	41%	27%	16%
♀	59%	45%	27%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **50 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	27	19	2019
Cardiovascular disease deaths	27 100	13 400	13 700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	44	45	44	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)	22	37	6	2019
Obesity, adults aged 18+ years (%)	4	3	5	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	14	3	2019
Physical inactivity, adults aged 18+ years (%)	11	10	11	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
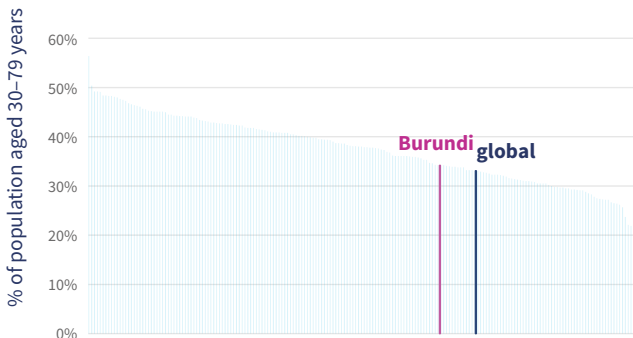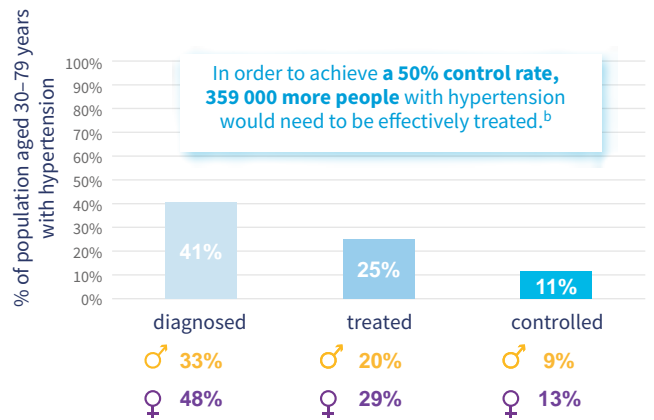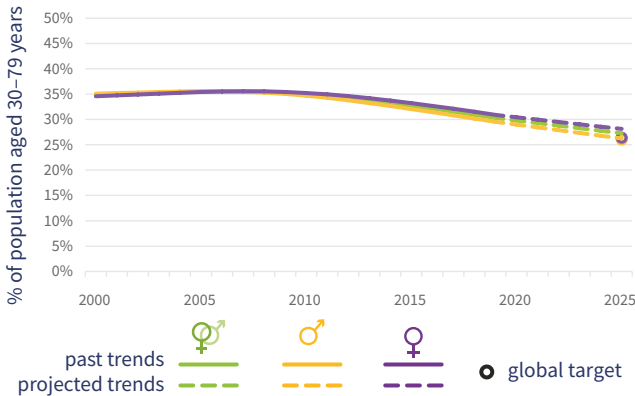
Cameroon

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 37% ♂ 35% ♀ 39%

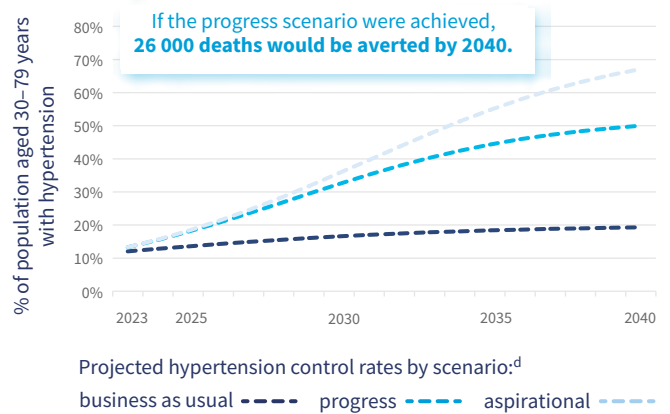## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	37%	19%	8%
♂	30%	16%	4%
♀	43%	22%	10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **53 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	26	22	2019
Cardiovascular disease deaths	27 200	14 100	13 100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	58	61	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	8	14	2	2019
Obesity, adults aged 18+ years (%)	11	6	16	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	16	4	2019
Physical inactivity, adults aged 18+ years (%)	29	22	35	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✘

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✘

Conducted recent, national survey on salt/sodium intake ✘

Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment

Guidelines for management of hypertension ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
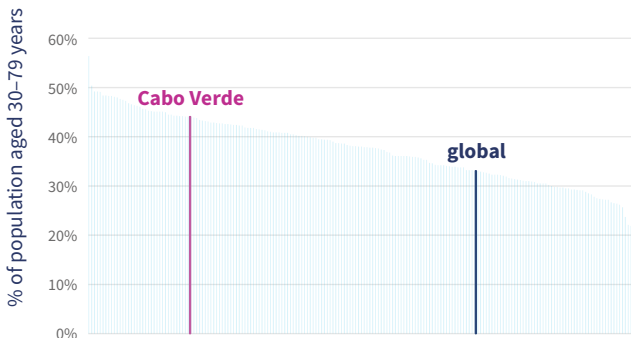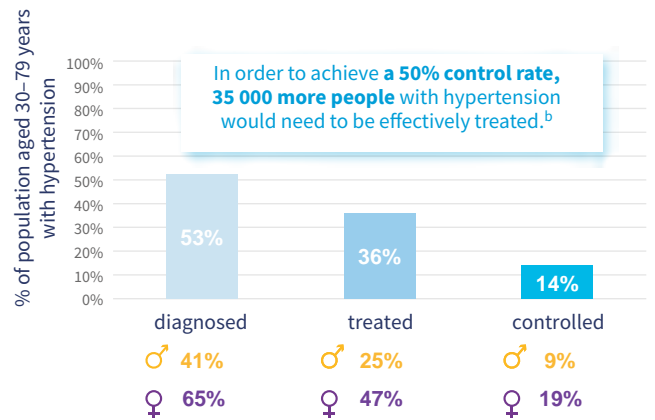
Canada

Hypertension profile

Total population (2019): 37 523 000
Total deaths (2019): 278 000

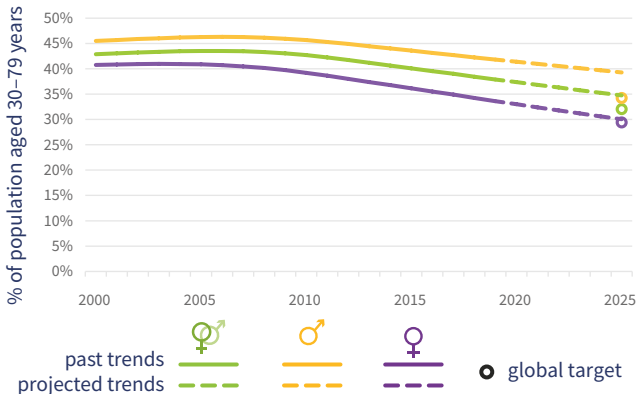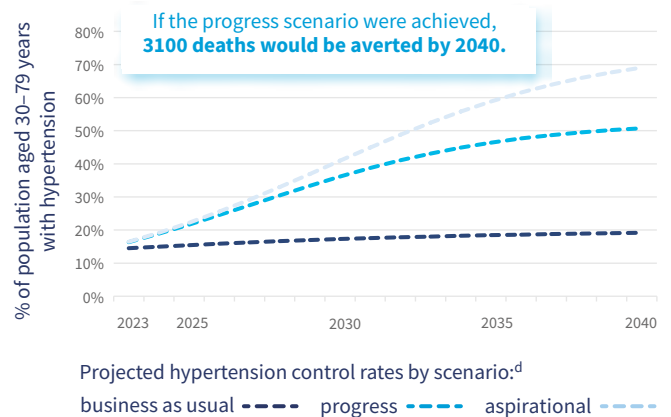**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **22%** ♂ **24%** ♀ **20%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6.3 million** adults aged 30–79 years with hypertension:

A 50% hypertension control rate has already been achieved.[b]

	diagnosed	treated	controlled
	78%	73%	61%
♂	80%	76%	64%
♀	75%	71%	57%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀ — ○ global target

Hypertension control rate scenarios

*If the aspirational scenario were achieved, **52 000 deaths would be averted by 2040.***

Projected hypertension control rates by scenario:[d]
business as usual ▪▪▪▪ progress ▬ ▬ ▬ aspirational ▬ ▬ ▬

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	11	8	2019
Cardiovascular disease deaths	70 200	36 200	34 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	44	45	43	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)	14	16	11	2019
Obesity, adults aged 18+ years (%)	29	30	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	16	4	2019
Physical inactivity, adults aged 18+ years (%)	29	26	31	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
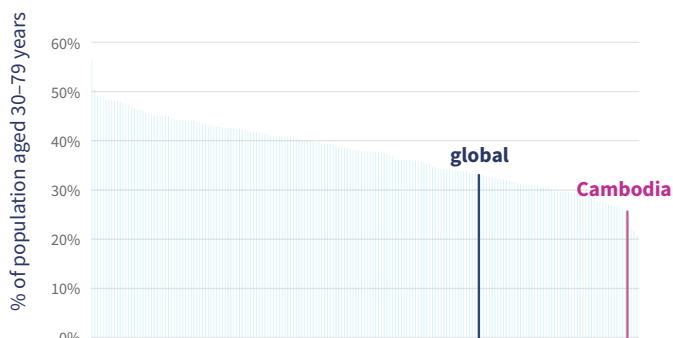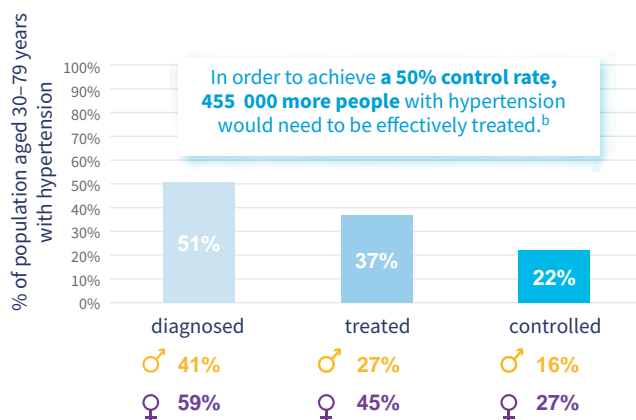
Central African Republic

Hypertension profile

Total population (2019): 5 209 000

Total deaths (2019): 56 700

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 41% ♂ 40% ♀ 43%
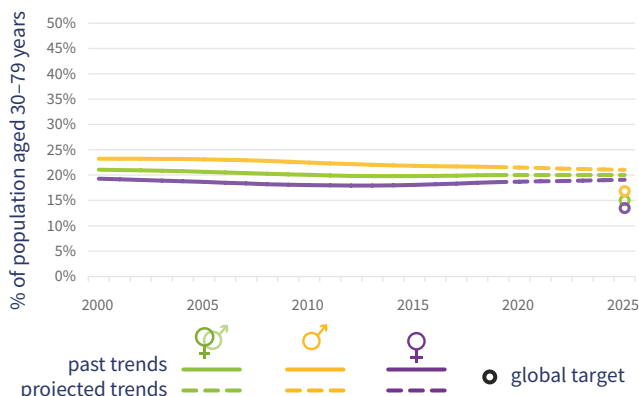
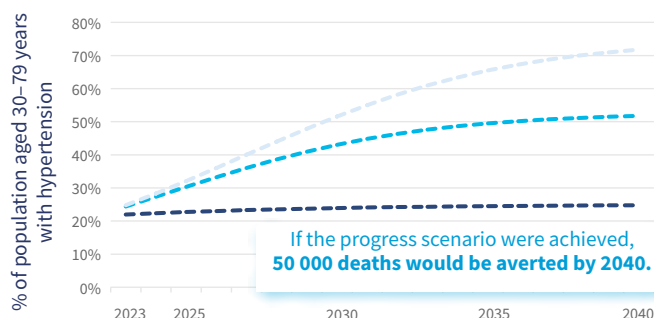## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **467 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 207 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	33%	18%	6%
♂	25%	14%	5%
♀	40%	21%	6%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends --- --- --- ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **16 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	36	41	32	2019
Cardiovascular disease deaths	8300	4000	4300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	61	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	8	4	11	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	14	13	16	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✘

Conducted recent, national survey on salt/sodium intake ✘

Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment

Guidelines for management of hypertension ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
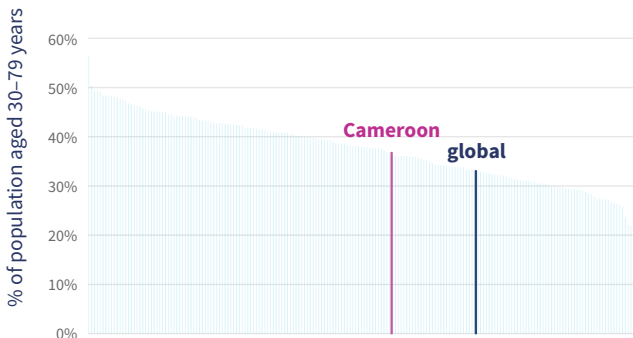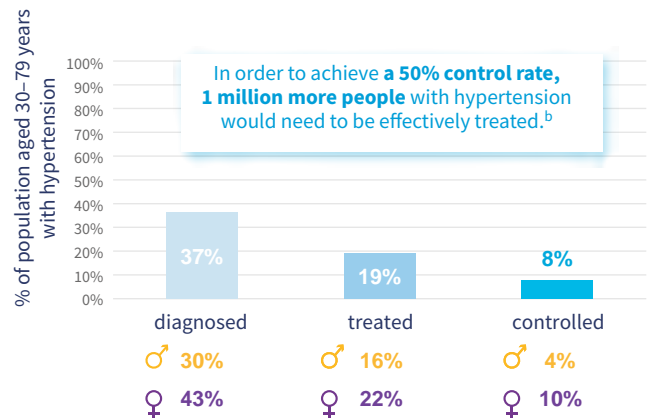
Chad

Hypertension profile

Total population (2019): 16 127 000

Total deaths (2019): 149 000

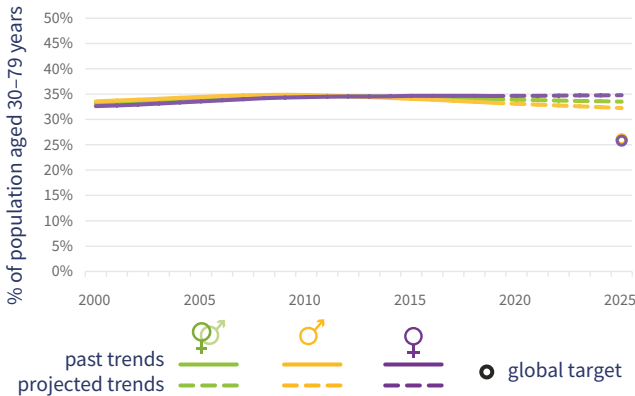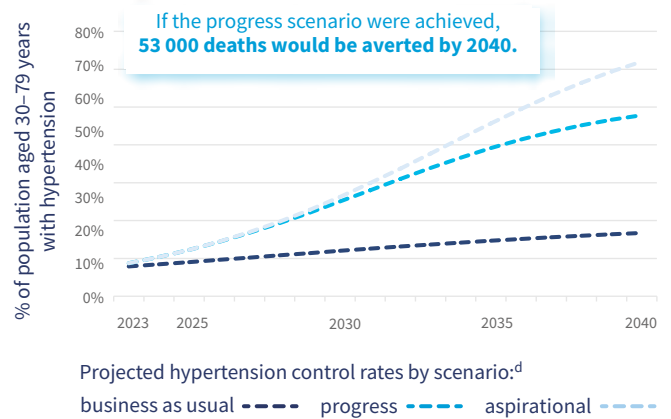Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **38%**   ♂ **35%**   ♀ **41%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 526 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	40%	25%	11%
♂	33%	20%	9%
♀	46%	28%	13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **34 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	23	23	2019
Cardiovascular disease deaths	14 700	7200	7 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	51	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	9	14	3	2019
Obesity, adults aged 18+ years (%)	6	3	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	6	1	2019
Physical inactivity, adults aged 18+ years (%)	23	20	27	2016

National response

Targets

National target for blood pressure	✔
National target for salt consumption	✔

Treatment

Guidelines for management of hypertension	✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✖
Conducted recent, national survey on salt/sodium intake	✖
Functioning system for generating reliable cause-specific mortality data on a routine basis	✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
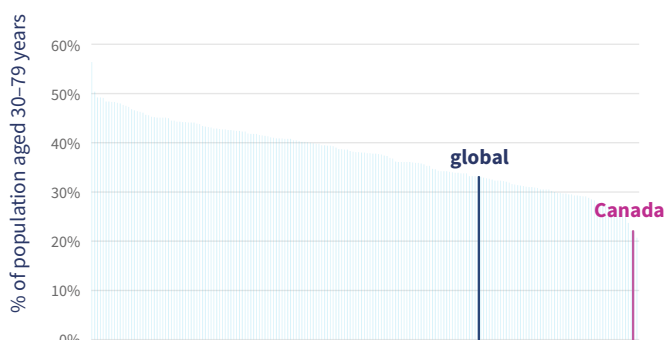
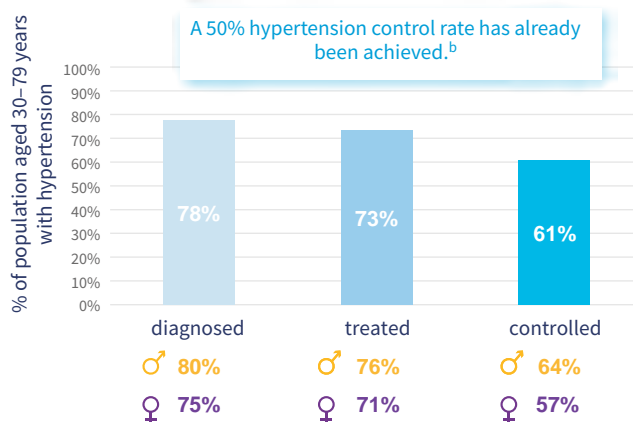# Chile

Hypertension profile

Total population (2019): 19 039 000

Total deaths (2019): 110 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 36%   ♂ 39%   ♀ 33%

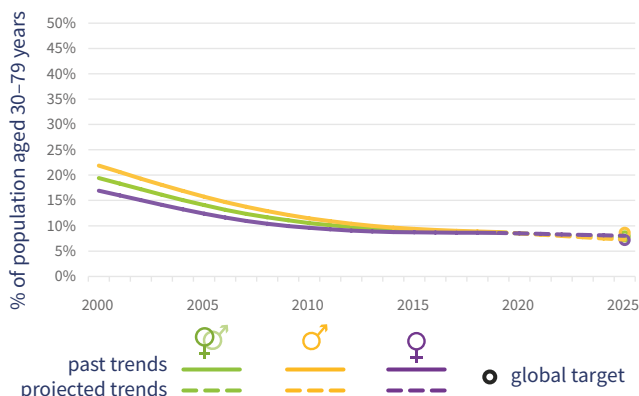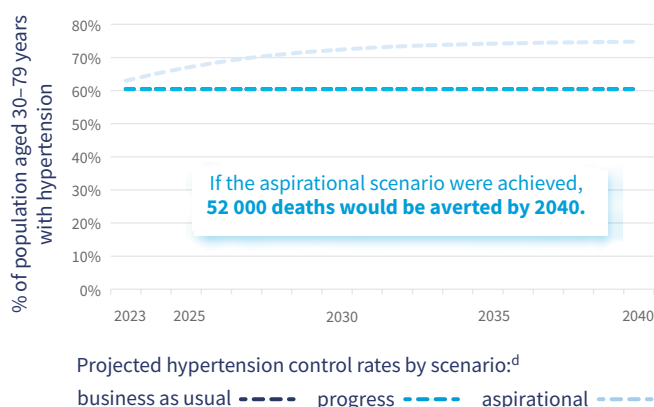### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 642 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	71%	59%	34%
♂	64%	50%	27%
♀	80%	68%	42%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **35 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----
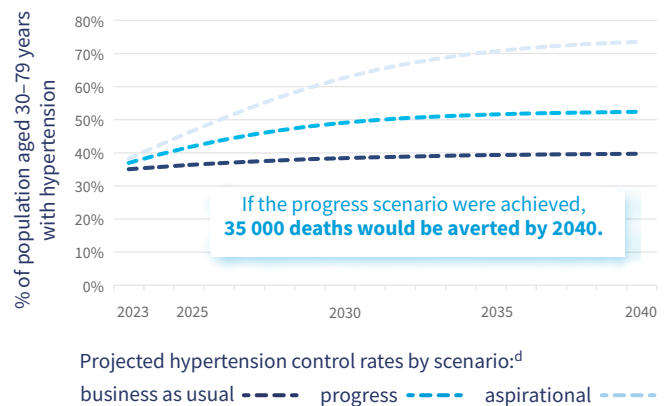
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	12	8	2019
Cardiovascular disease deaths	28 500	14 400	14 100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	61	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)[f]	30	32	28	2019
Obesity, adults aged 18+ years (%)	28	25	31	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	27	24	29	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
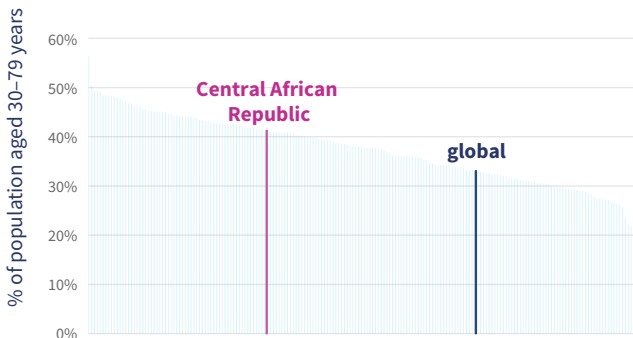
China

Hypertension profile

Total population (2019): 1 422 000 000

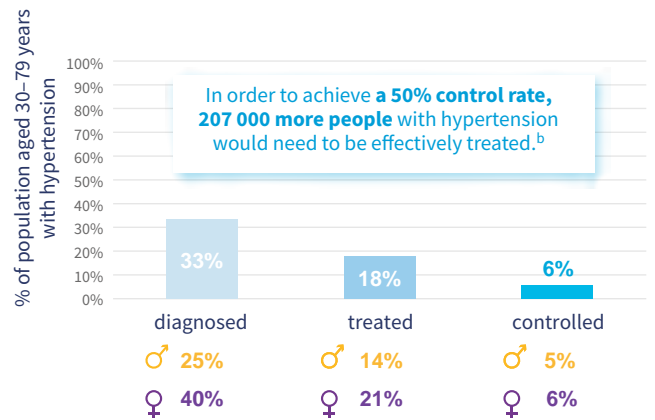**Total deaths (2019):** 10 106 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 27% ♂ 30% ♀ 24%
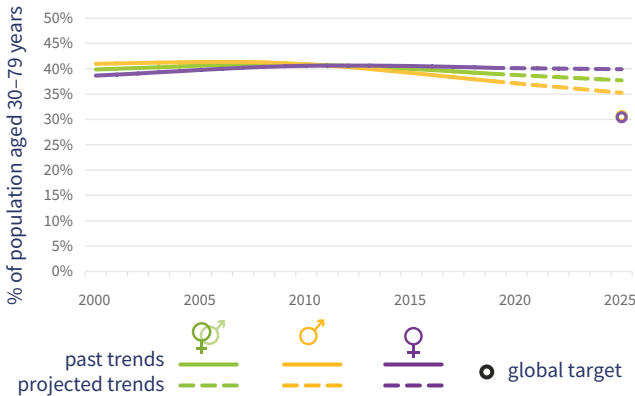
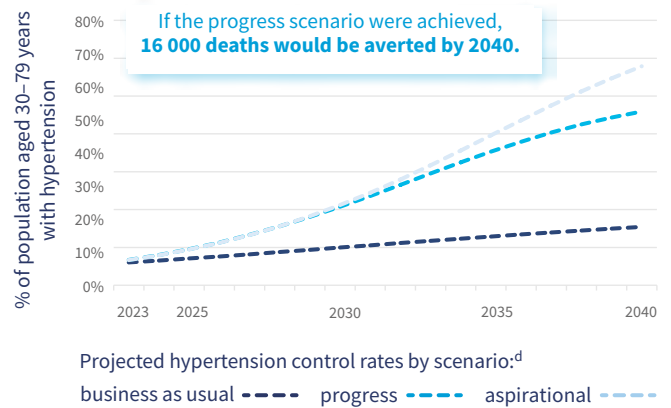### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 256.7 million adults aged 30–79 years with hypertension:
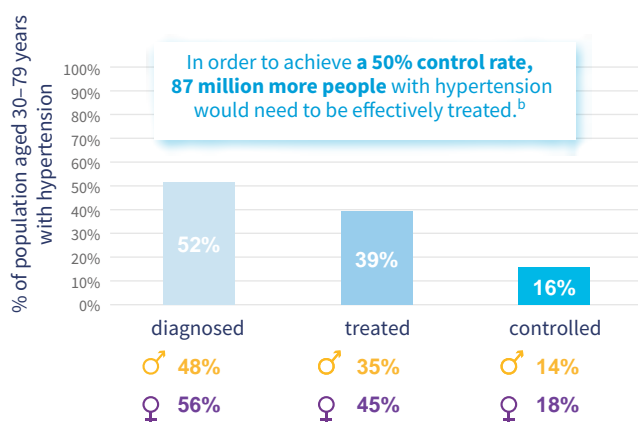
In order to achieve **a 50% control rate, 87 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	52%	39%	16%
♂	48%	35%	14%
♀	56%	45%	18%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **10.3 million deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -
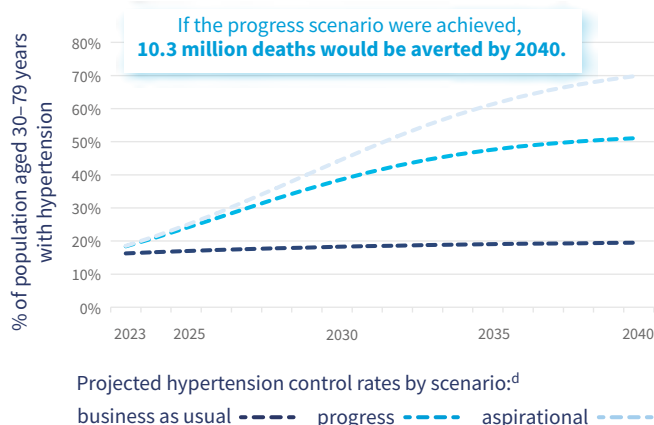
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	20	11	2019
Cardiovascular disease deaths	4 307 000	2 429 000	1 877 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	54	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	17	19	16	2019
Current tobacco use, adults aged 15+ years (%)[f]	26	50	2	2019
Obesity, adults aged 18+ years (%)	6	6	7	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	9	2	2019
Physical inactivity, adults aged 18+ years (%)	14	16	12	2016

National response

Targets

National target for blood pressure ✘

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized esti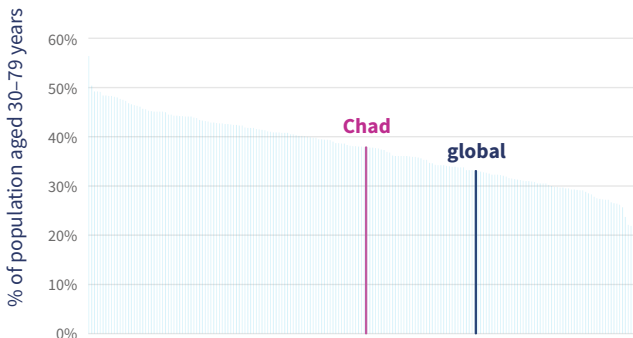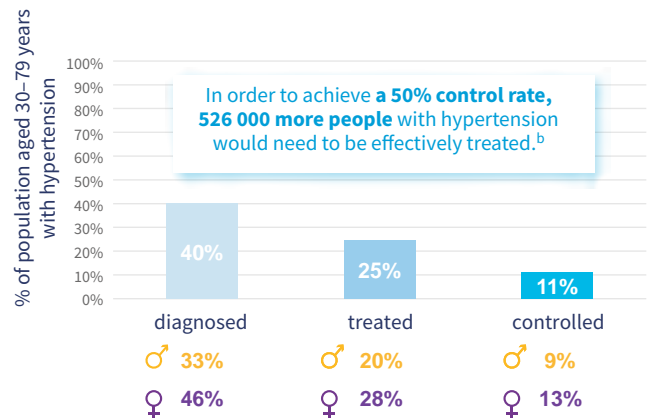mates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Colombia

Hypertension profile

Total population (2019): 50 187 000

Total deaths (2019): 239 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **31%** ♂ **31%** ♀ **31%**

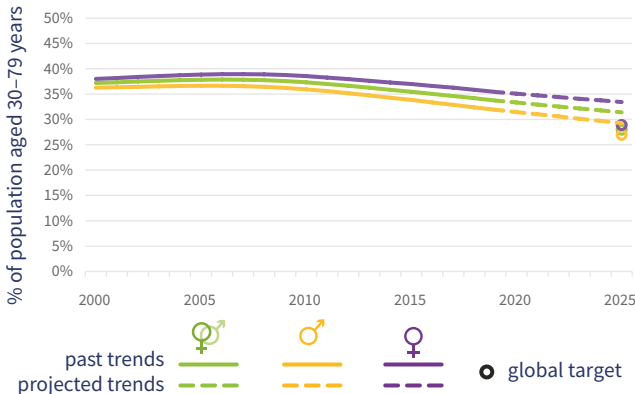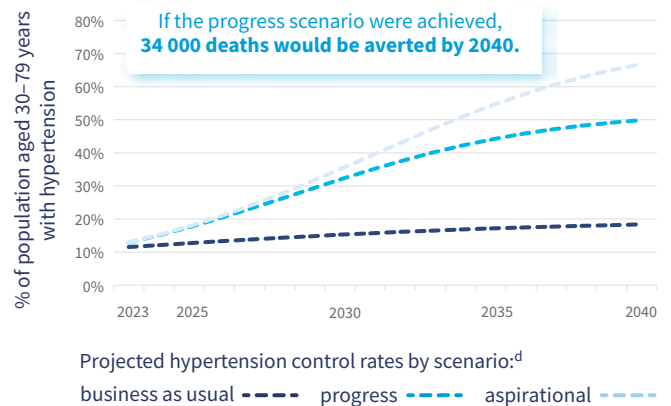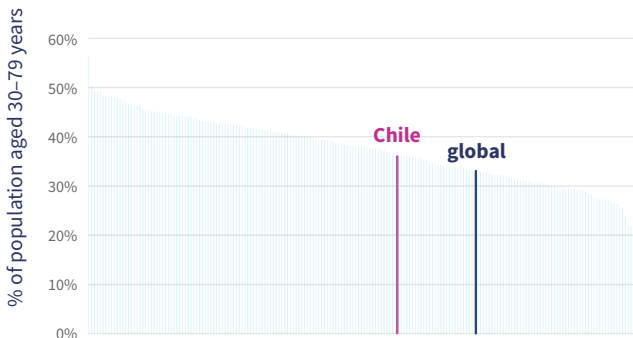### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **7.8 million** adults aged 30–79 years with hypertension:
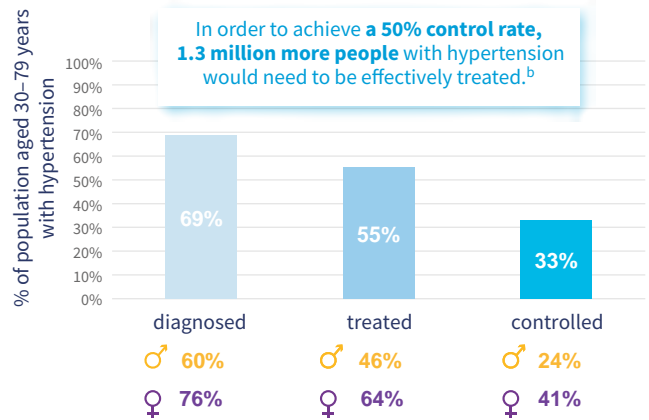
*In order to achieve **a 50% control rate, 1.3 million more people** with hypertension would need to be effectively treated.[b]*

	diagnosed	treated	controlled
	69%	**55%**	**33%**
♂	**60%**	**46%**	**24%**
♀	**76%**	**64%**	**41%**

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends ---
○ global target

Hypertension control rate scenarios

*If the progress scenario were achieved, **72 000 deaths would be averted by 2040.***

Projected hypertension control rates by scenario:[d]

business as usual **- - -** progress **- - -** aspirational **- - -**
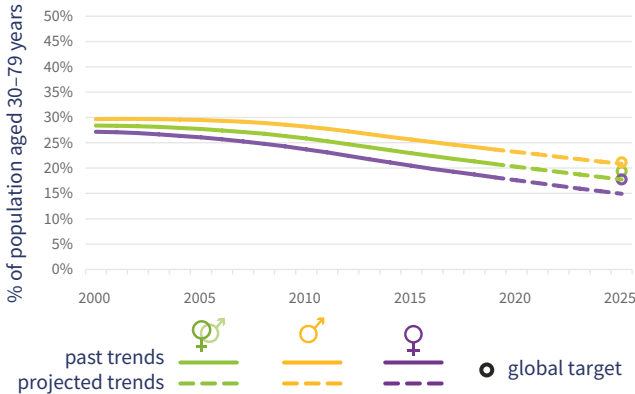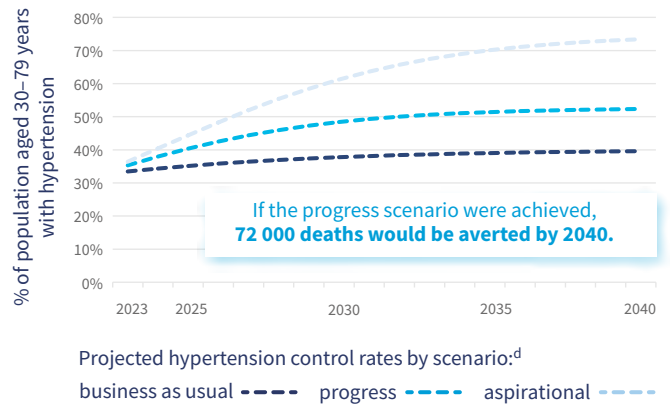
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	11	9	2019
Cardiovascular disease deaths	73 500	37 000	36 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	50	46	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	12	14	10	2019
Current tobacco use, adults aged 15+ years (%)	9	13	5	2019
Obesity, adults aged 18+ years (%)	22	18	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	8	2	2019
Physical inactivity, adults aged 18+ years (%)	44	39	49	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Comoros

Hypertension profile

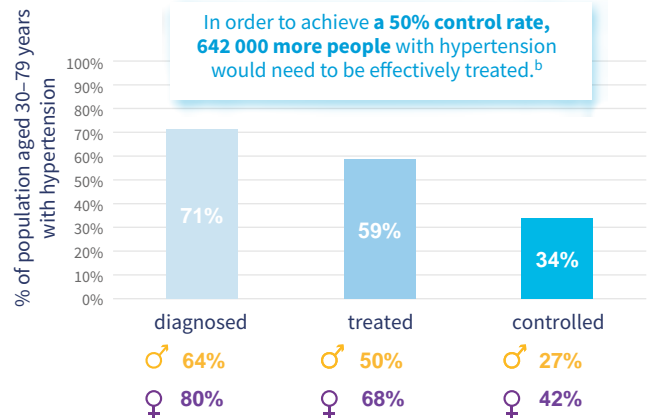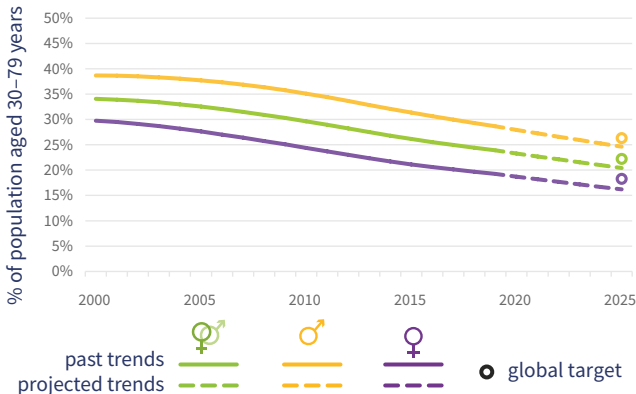**Total population (2019):** 791 000

Total deaths (2019): 5030!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **33%** ♂ **30%** ♀ **36%**

Prevalence of hypertension – global comparison (both sexes)[a]

% of population aged 30–79 years

Comoros / global

Of the 82 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 32 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	42%	25%	11%
♂	32%	19%	9%
♀	50%	30%	13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

% of population aged 30–79 years

past trends ⚥ ♂ ♀
projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **1700 deaths would be averted by 2040.**

% of population aged 30–79 years with hypertension

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	21	21	2019
Cardiovascular disease deaths	910	430	480	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	56	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	8	2019
Current tobacco use, adults aged 15+ years (%)	21	30	12	2019
Obesity, adults aged 18+ years (%)	8	3	12	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	14	10	19	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
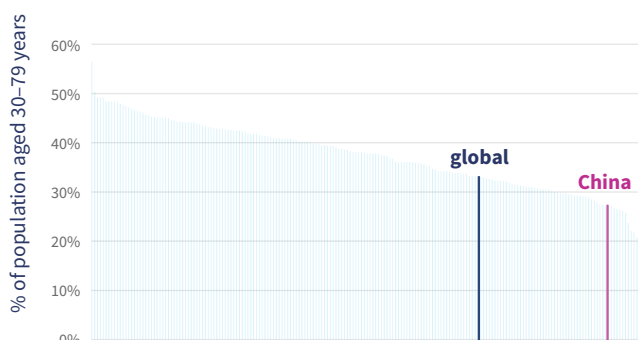
Congo

Hypertension profile

Total population (2019): 5 571 000
Total deaths (2019): 35 000

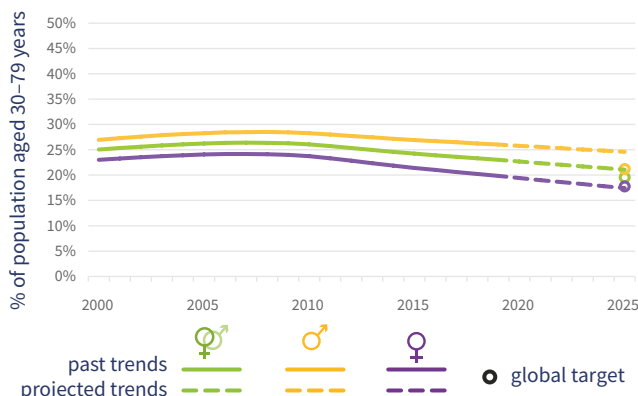**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **40%** ♂ **38%** ♀ **42%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the 617 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 252 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	39%	24%	10%
♂	31%	22%	8%
♀	45%	26%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **16 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	23	22	2019
Cardiovascular disease deaths	6300	2700	3600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	66	63	68	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	14	26	2	2019
Obesity, adults aged 18+ years (%)	10	6	14	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	3	2019
Physical inactivity, adults aged 18+ years (%)	28	25	31	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
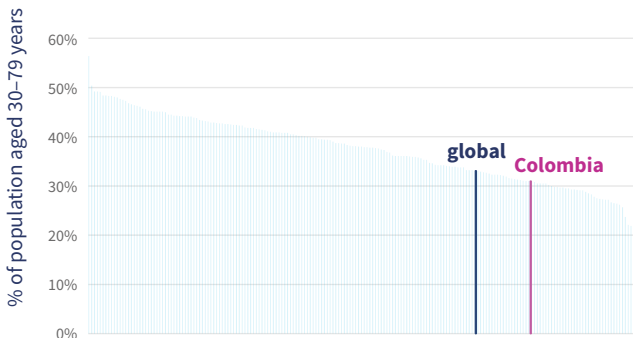
Cook Islands

Hypertension profile

Total population (2019): 17 100
Total deaths (2019): no data

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **43%**   ♂ **45%**   ♀ **41%**

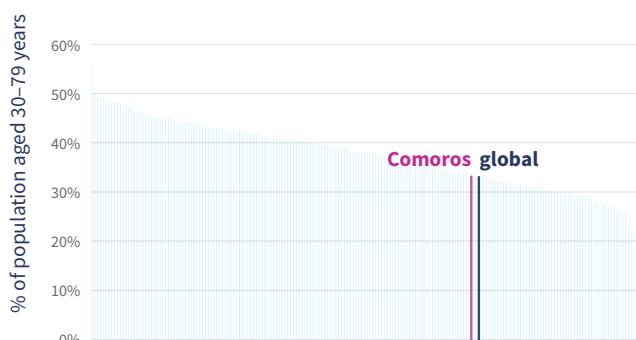### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 4500 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1400 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	57%	42%	17%
♂	54%	39%	15%
♀	59%	45%	18%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends ---
○ global target

Hypertension control rate scenarios

Data not available
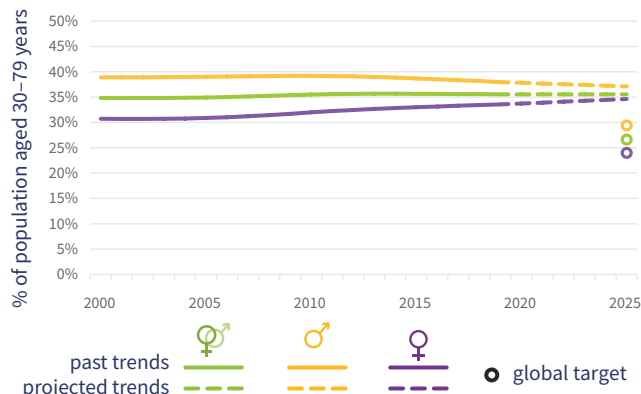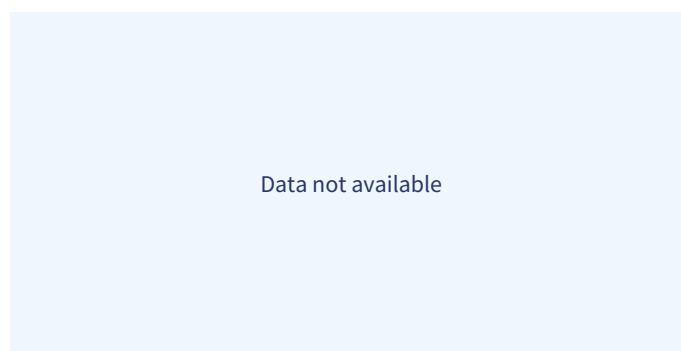
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	64	63	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	8	2019
Current tobacco use, adults aged 15+ years (%)[e]	25	28	21	2019
Obesity, adults aged 18+ years (%)	56	53	59	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	18	4	2019
Physical inactivity, adults aged 18+ years (%)	18	10	27	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake. e. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Costa Rica

Hypertension profile

Total population (2019): 5 085 000

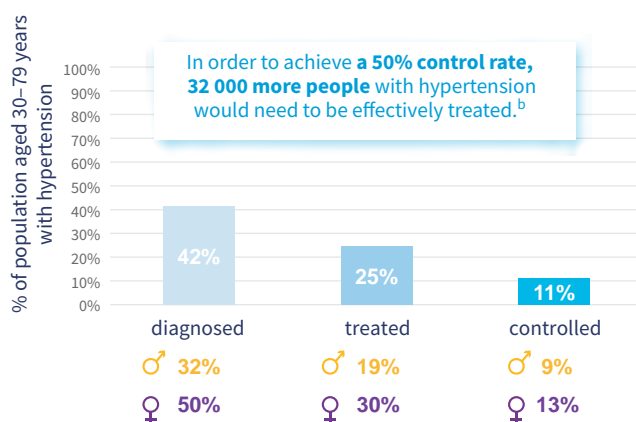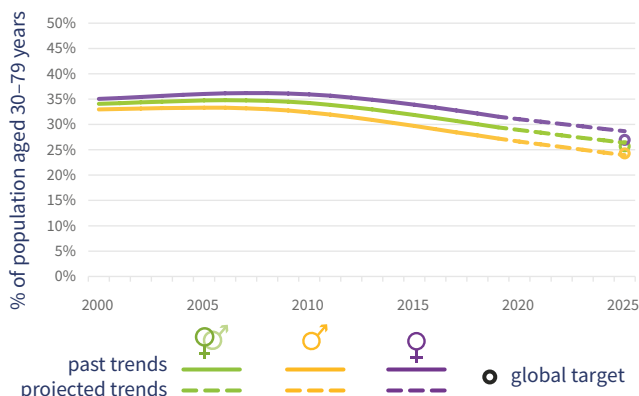**Total deaths (2019):** 23 900

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 38%   ♂ 36%   ♀ 39%

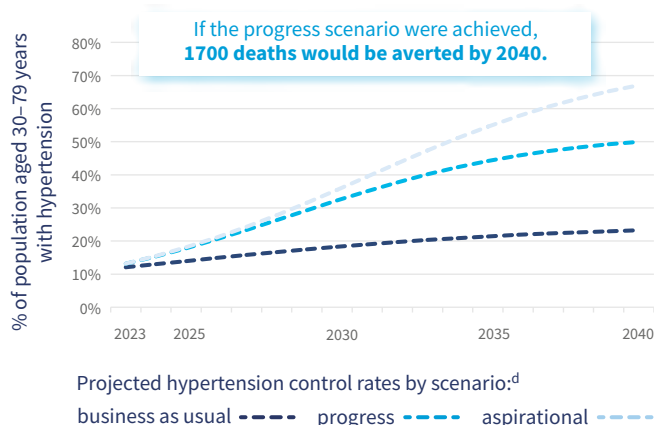### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1 million** adults aged 30–79 years with hypertension:

A 50% hypertension control rate has already been achieved.[b]

	diagnosed	treated	controlled
both	77%	70%	50%
♂	72%	64%	45%
♀	82%	76%	54%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the aspirational scenario were achieved, **12 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	11	8	2019
Cardiovascular disease deaths	6100	3300	2800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	59	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)	9	13	5	2019
Obesity, adults aged 18+ years (%)	26	21	30	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	6	1	2019
Physical inactivity, adults aged 18+ years (%)	46	38	54	2016

National response

Targets

National target for blood pressure	✖
National target for salt consumption	✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✖
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

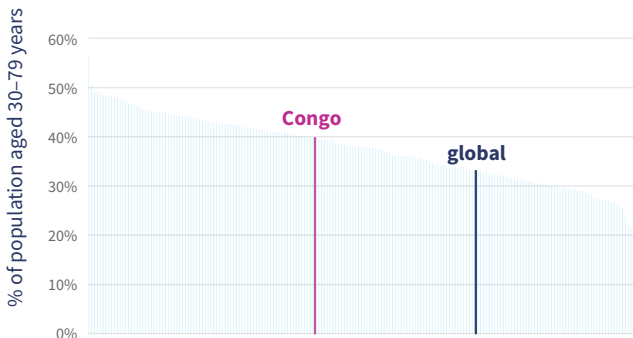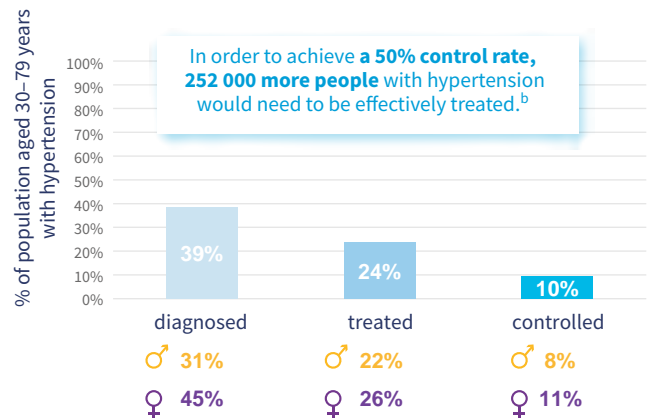# Côte d'Ivoire

Hypertension profile

Total population (2019): 26 148 000

Total deaths (2019): 195 000

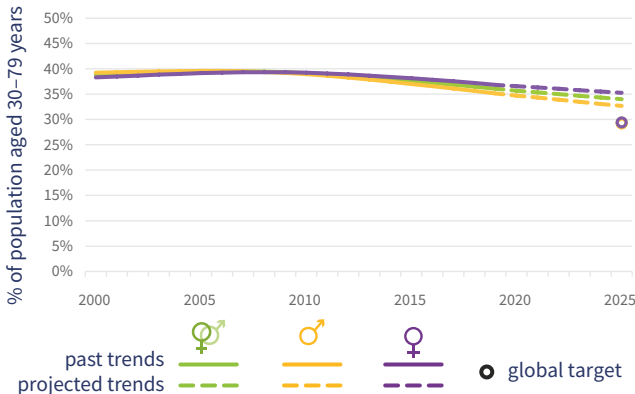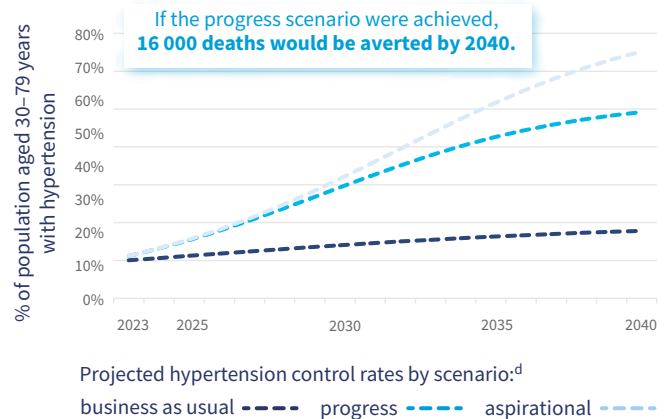Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **37%** ♂ **37%** ♀ **38%**

Prevalence of hypertension – global comparison (both sexes)[a]
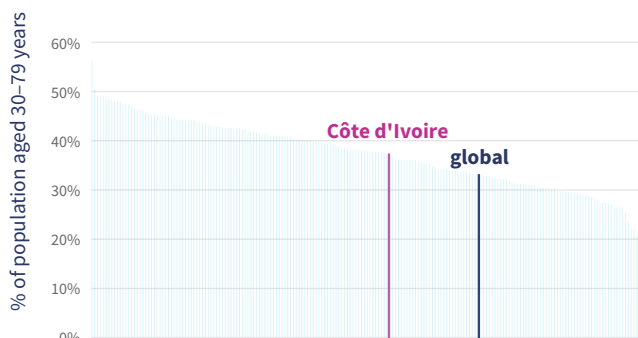
Of the **2.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.1 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
38%	23%	9%
♂ 32%	♂ 20%	♂ 6%
♀ 45%	♀ 27%	♀ 11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **55 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----
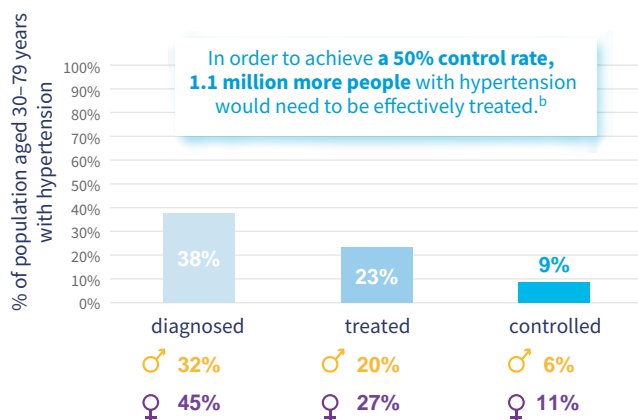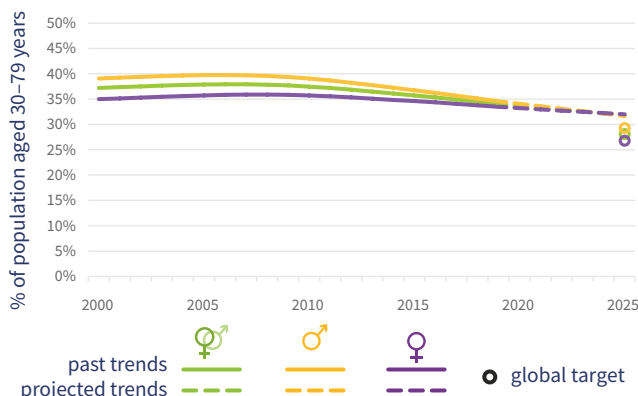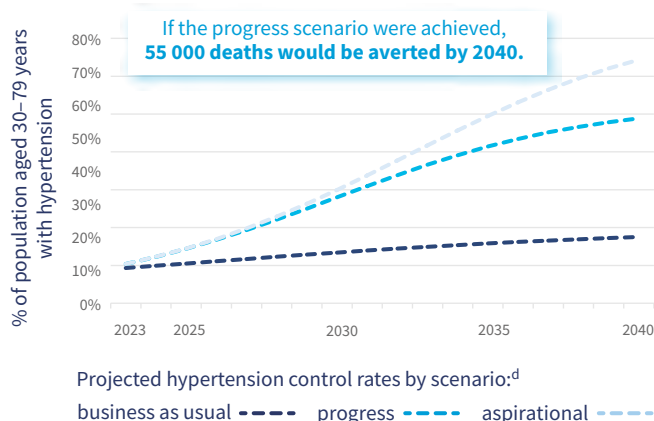
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	24	19	2019
Cardiovascular disease deaths	25 900	15 800	10 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	63	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	10	19	1	2019
Obesity, adults aged 18+ years (%)	10	6	15	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	33	29	37	2016

National response

Targets

National target for blood pressure	✔
National target for salt consumption	✔

Treatment

Guidelines for management of hypertension	✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✖
Functioning system for generating reliable cause-specific mortality data on a routine basis	✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
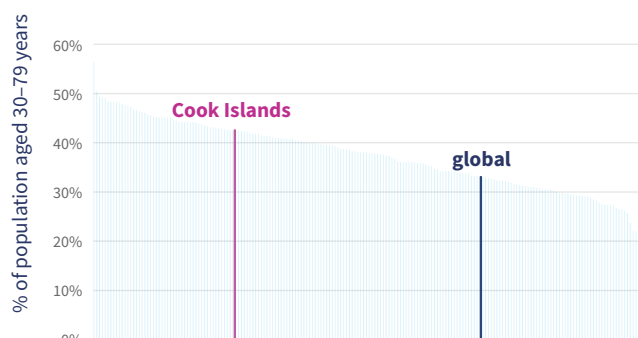
Croatia

Hypertension profile

Total population (2019): 4 130 000
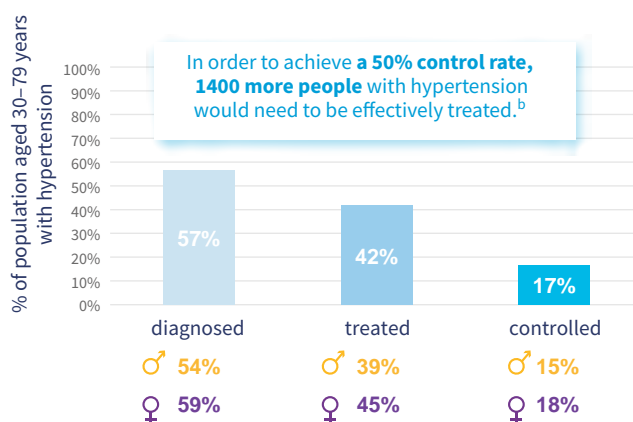**Total deaths (2019):** 51 800

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 48%   ♂ 51%   ♀ 45%

### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 425 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	75%	54%	20%
♂	70%	46%	15%
♀	79%	62%	25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **34 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress – – –   aspirational – – –
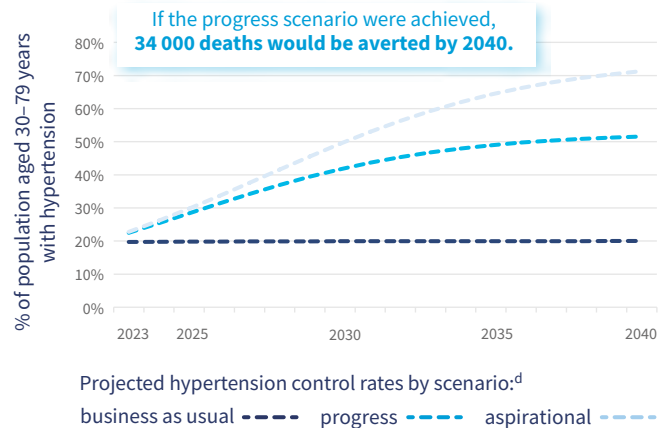
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	22	11	2019
Cardiovascular disease deaths	22 100	9700	12 400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	57	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	37	38	36	2019
Obesity, adults aged 18+ years (%)	24	24	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	14	4	2019
Physical inactivity, adults aged 18+ years (%)	31	26	36	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
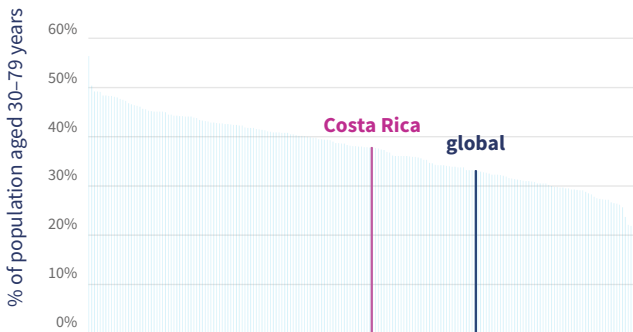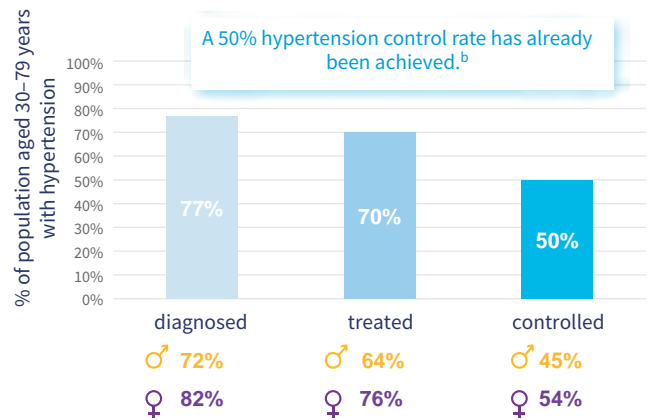
Cuba

Hypertension profile

Total population (2019): 11 317 000

Total deaths (2019): 111 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **40%** ♂ **40%** ♀ **40%**
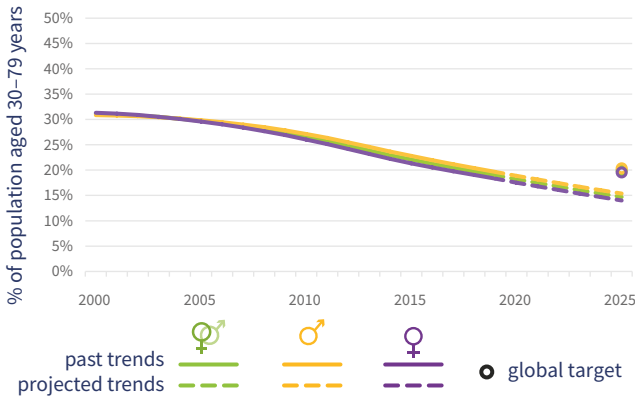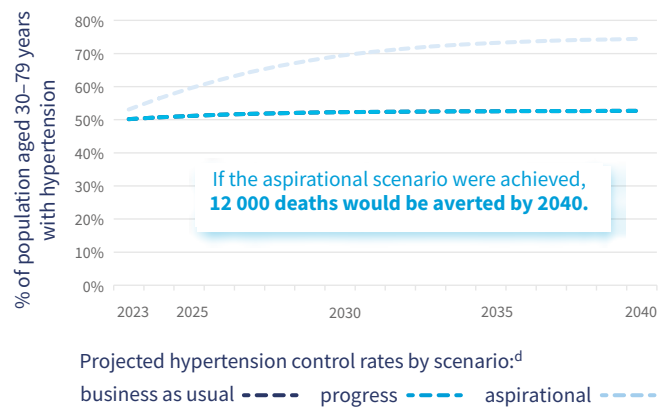
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 500 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	70%	61%	33%
♂	63%	53%	28%
♀	77%	69%	38%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **31 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ▪▪▪▪ progress ▬ ▬ ▬ aspirational ▪ ▪ ▪

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	20	13	2019
Cardiovascular disease deaths	40 600	21 400	19 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	45	46	44	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	19	26	11	2019
Obesity, adults aged 18+ years (%)	25	19	30	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	2	2019
Physical inactivity, adults aged 18+ years (%)	37	31	43	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Cyprus

Hypertension profile

Total population (2019): 1 229 000

Total deaths (2019): 6760

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **31%** ♂ **36%** ♀ **26%**

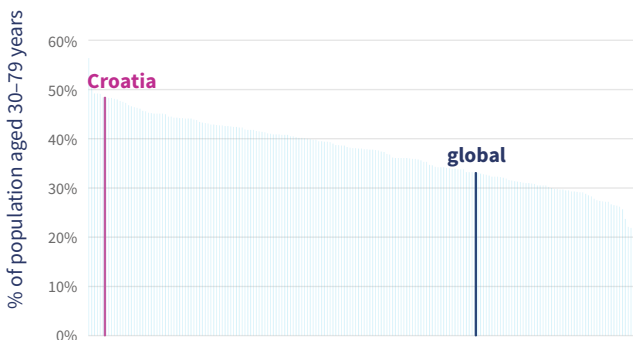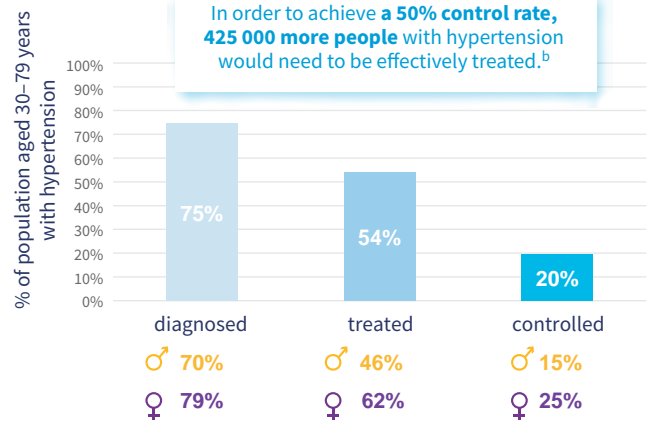### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **235 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 37 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	65%	55%	33%
♂	62%	52%	30%
♀	68%	59%	38%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **2400 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	8	11	6	2019
Cardiovascular disease deaths	2100	1100	1000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	53	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	10	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	36	48	23	2019
Obesity, adults aged 18+ years (%)	22	22	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	3	2019
Physical inactivity, adults aged 18+ years (%)	44	38	51	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension no data
Conducted recent, national survey on salt/sodium intake no data
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Czechia

Hypertension profile

Total population (2019): 10 537 000

Total deaths (2019): 113 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **42%**   ♂ **49%**   ♀ **34%**
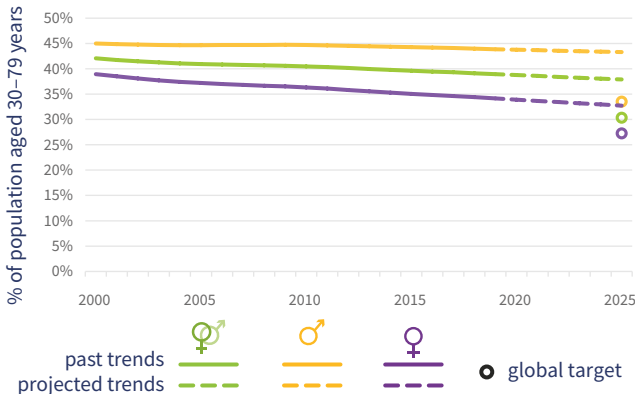
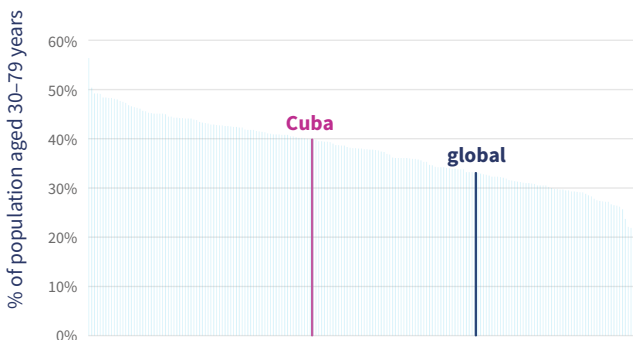---

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.3 million** adults aged 30–79 years with hypertension:
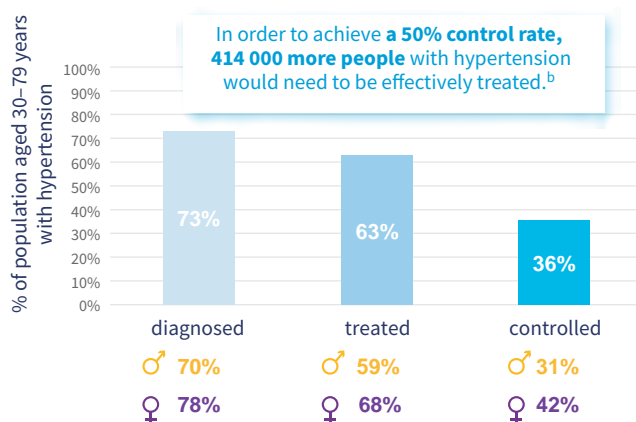
In order to achieve **a 50% control rate, 414 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	73%	63%	36%
♂	70%	59%	31%
♀	78%	68%	42%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ---   ---   ---   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **34 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual **- - -**   progress **- - -**   aspirational **- - -**

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	14	19	10	2019
Cardiovascular disease deaths	47 900	22 600	25 400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	47	51	43	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	31	35	27	2019
Obesity, adults aged 18+ years (%)	26	26	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	13	21	6	2019
Physical inactivity, adults aged 18+ years (%)	31	28	34	2016

National response

Targets

National target for blood pressure   ✖

National target for salt consumption   ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension   ✔

Conducted recent, national survey on salt/sodium intake   ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis   ✔

Treatment

Guidelines for management of hypertension   ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Democratic People's Republic of Korea

Hypertension profile

Total population (2019): 25 755 000
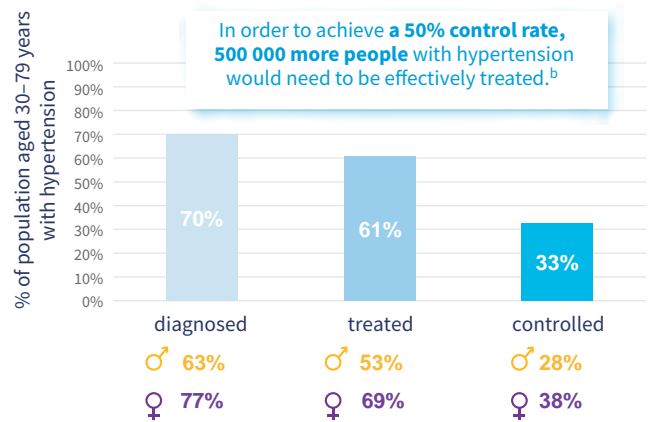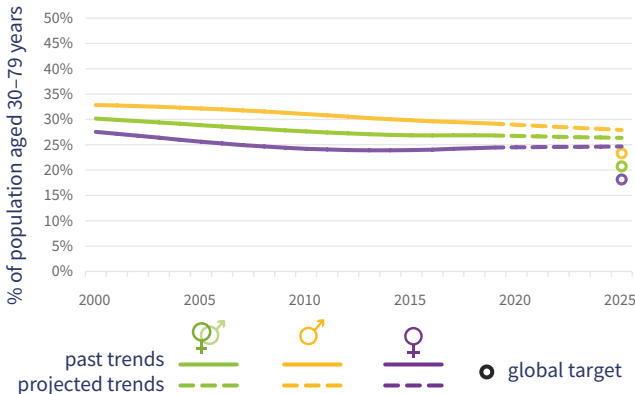
Total deaths (2019): 225 000!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 27% ♂ 28% ♀ 25%

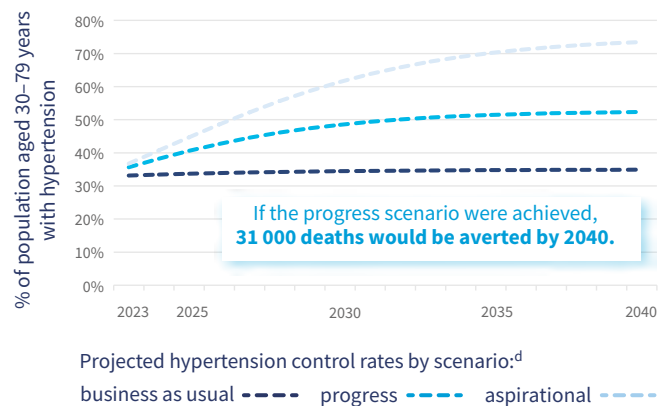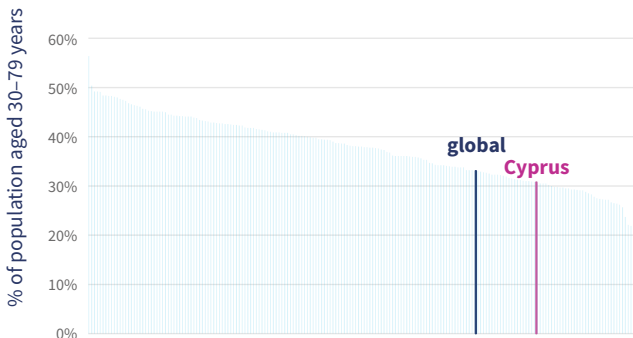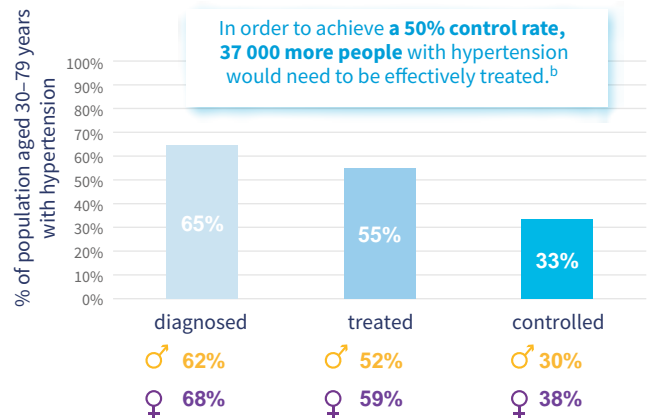## Prevalence of hypertension – global comparison (both sexes)[a]
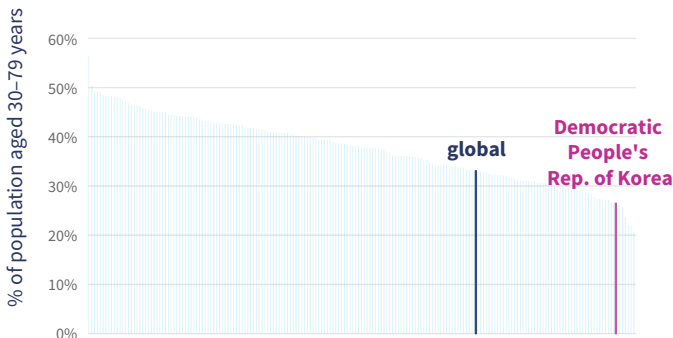
global

Democratic People's Rep. of Korea

Of the **4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.1 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
54%	43%	23%
♂ 50%	♂ 39%	♂ 20%
♀ 57%	♀ 47%	♀ 25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥ ♂ ♀

○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **174 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	30	19	2019
Cardiovascular disease deaths	90 900	41 400	49 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	47	50	44	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	12	13	12	2019
Current tobacco use, adults aged 15+ years (%)[f]	18	36	0	2019
Obesity, adults aged 18+ years (%)	7	6	7	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Democratic Republic of the Congo

Hypertension profile

Total population (2019): 89 907 000

Total deaths (2019): 722 000

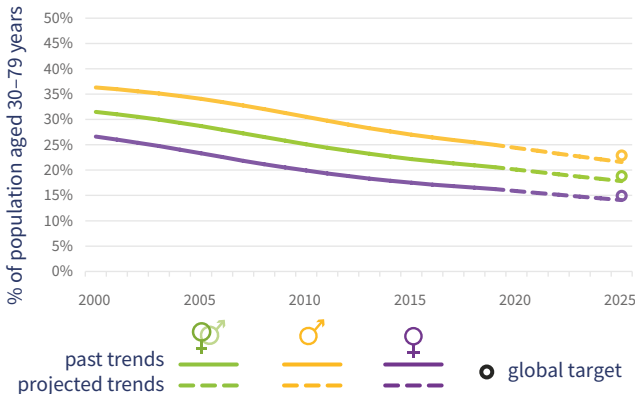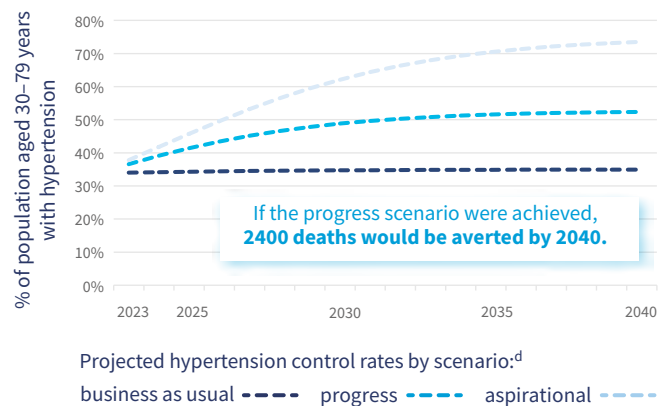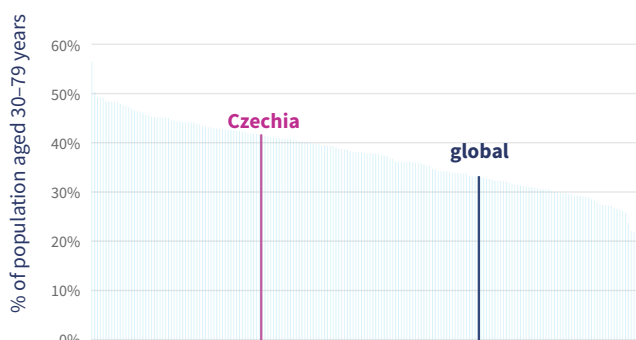Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **34%** ♂ **33%** ♀ **36%**

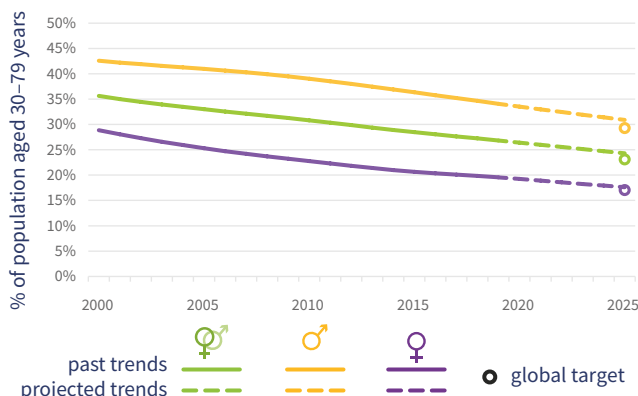## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **7.4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.9 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	40%	26%	12%
♂	35%	25%	11%
♀	44%	27%	12%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀

projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **276 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	26	22	2019
Cardiovascular disease deaths	98 600	47 700	50 900	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	59	62	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	6	5	2019
Current tobacco use, adults aged 15+ years (%)	13	23	3	2019
Obesity, adults aged 18+ years (%)	7	4	10	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	24	21	27	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Treatment

Guidelines for management of hypertension ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Denmark

Hypertension profile

Total population (2019): 5 796 000
Total deaths (2019): 54 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 36% ♂ 43% ♀ 29%

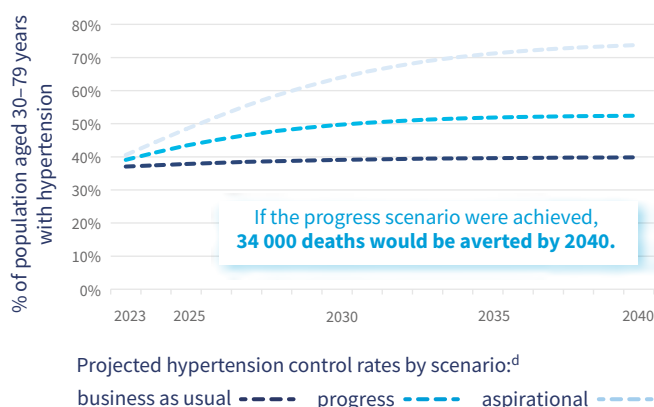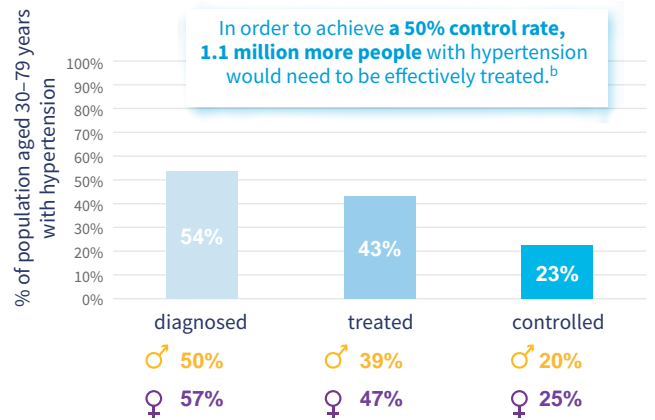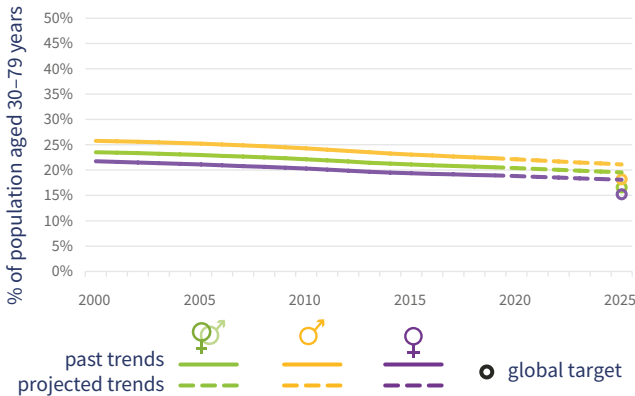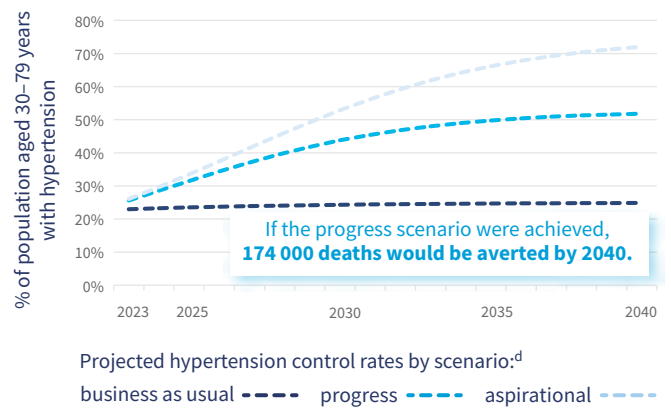### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 574 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	56%	26%	9%
♂	54%	25%	9%
♀	58%	27%	10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀ — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **15 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	13	9	2019
Cardiovascular disease deaths	12 800	6600	6200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	53	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	18	18	18	2019
Obesity, adults aged 18+ years (%)	20	22	17	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	15	4	2019
Physical inactivity, adults aged 18+ years (%)	29	26	31	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
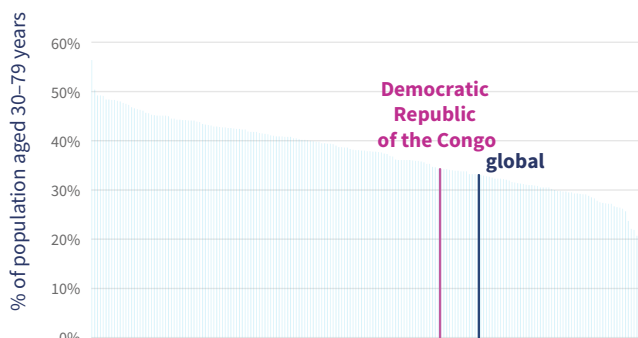
Djibouti

Hypertension profile

Total population (2019): 1 074 000

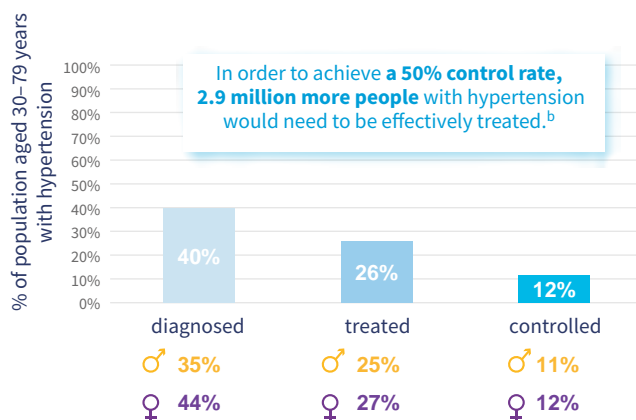**Total deaths (2019): 7270**

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚢ 34% ♂ 33% ♀ 36%
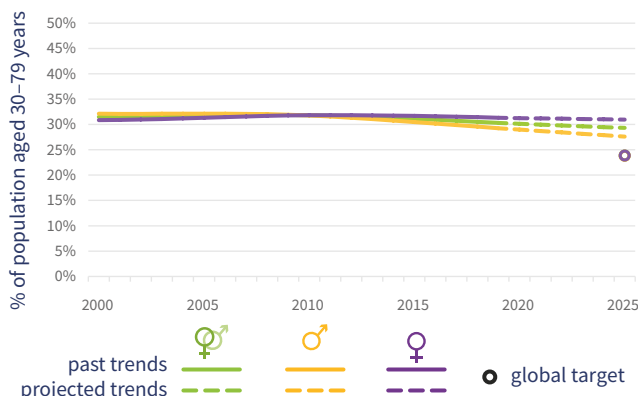
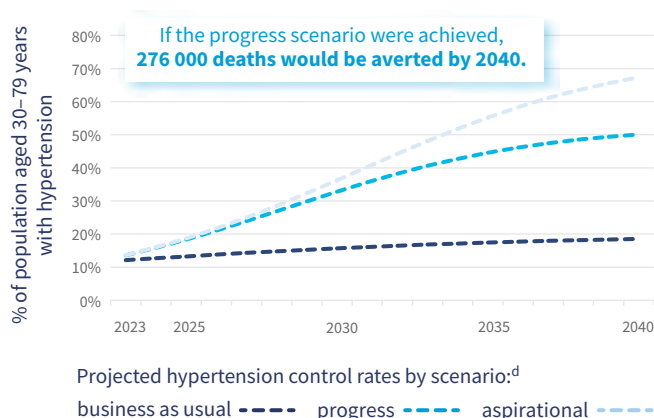### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 130 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 51 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
40%	25%	11%
♂ 33%	♂ 20%	♂ 9%
♀ 48%	♀ 29%	♀ 13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚢ ♂ ♀
projected trends ⚢ ♂ ♀   ◯ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **5100 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ------   progress ------   aspirational ------

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	23	21	2019
Cardiovascular disease deaths	1700	910	820	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	60	61	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	14	9	18	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
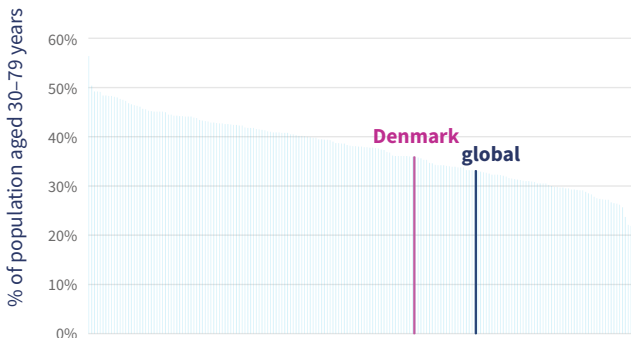
Dominica

Hypertension profile

Total population (2019): 71 400

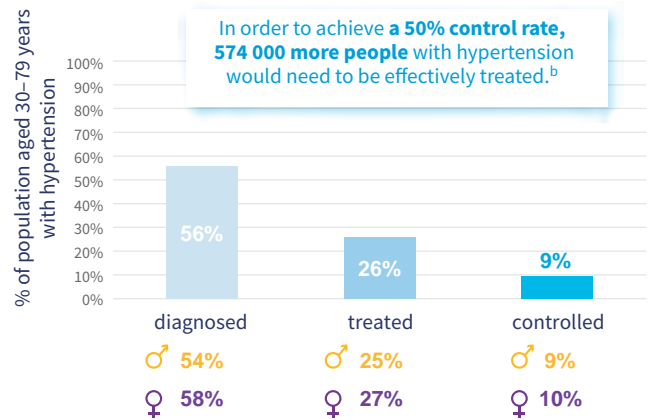**Total deaths (2019): no data**

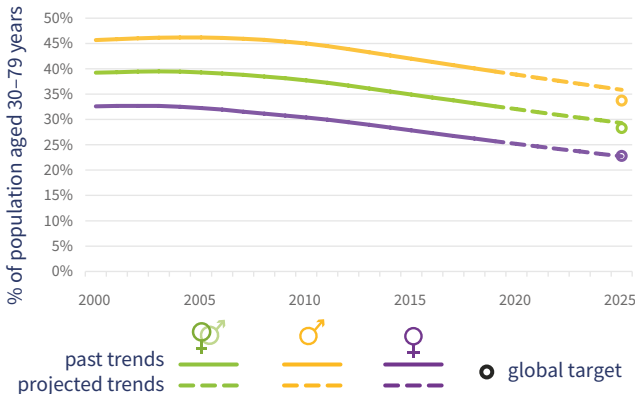Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 48%   ♂ 46%   ♀ 50%

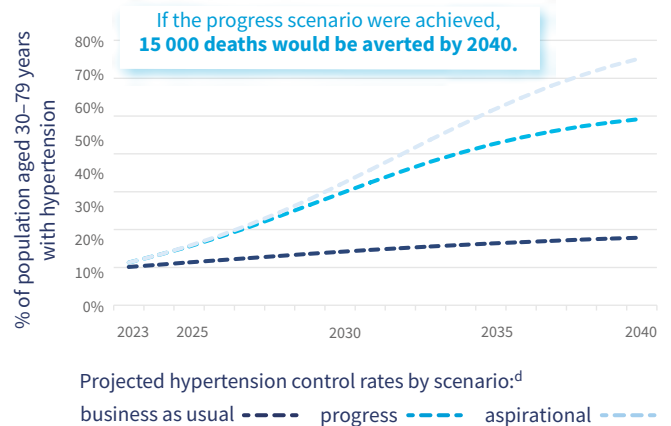### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **18 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 5900 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
58%	46%	18%
♂ 48%	♂ 36%	♂ 14%
♀ 67%	♀ 55%	♀ 21%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

Data not available
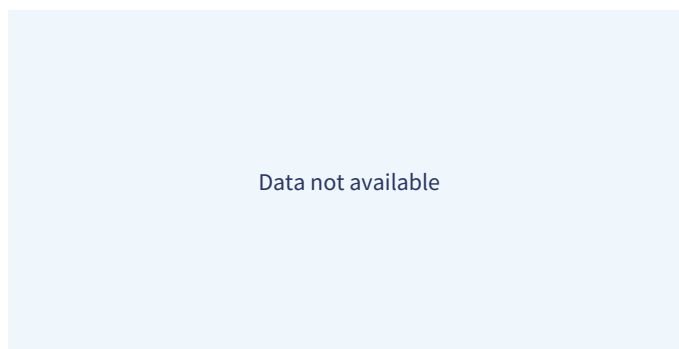
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	56	50	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	28	20	36	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	2	2019
Physical inactivity, adults aged 18+ years (%)	22	13	30	2016

National response

Targets

National target for blood pressure	✖
National target for salt consumption	✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✖
Conducted recent, national survey on salt/sodium intake	✖
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake.
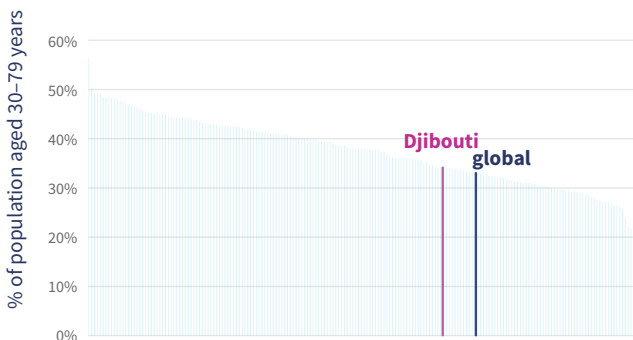
Dominican Republic

Hypertension profile

Total population (2019): 10 882 000

Total deaths (2019): 72 900!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **49%** ♂ **49%** ♀ **49%**

Prevalence of hypertension – global comparison (both sexes)[a]

Dominican Republic

global

% of population aged 30–79 years

Of the **2.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 663 000 more people** with hypertension would need to be effectively treated.[b]

% of population aged 30–79 years with hypertension

diagnosed	treated	controlled
68%	53%	22%
♂ 61%	♂ 46%	♂ 18%
♀ 75%	♀ 60%	♀ 25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

% of population aged 30–79 years

past trends — ⚥ ♂ ♀
projected trends - - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **49 000 deaths would be averted by 2040.**

% of population aged 30–79 years with hypertension

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	22	16	2019
Cardiovascular disease deaths	26 500	14 100	12 400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	54	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	11	15	7	2019
Obesity, adults aged 18+ years (%)	28	21	34	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	39	34	43	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Ecuador

Hypertension profile

Total population (2019): 17 344 000
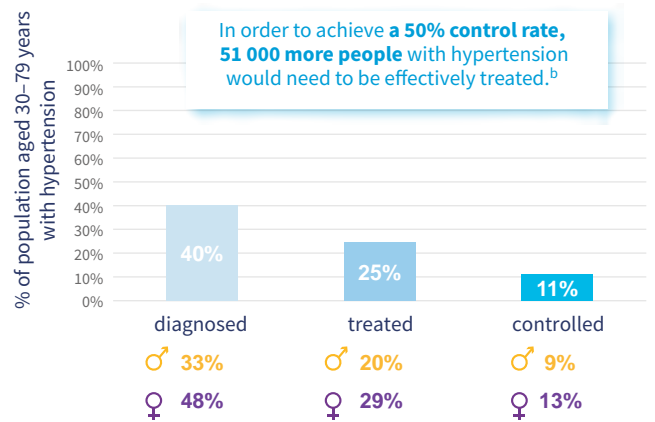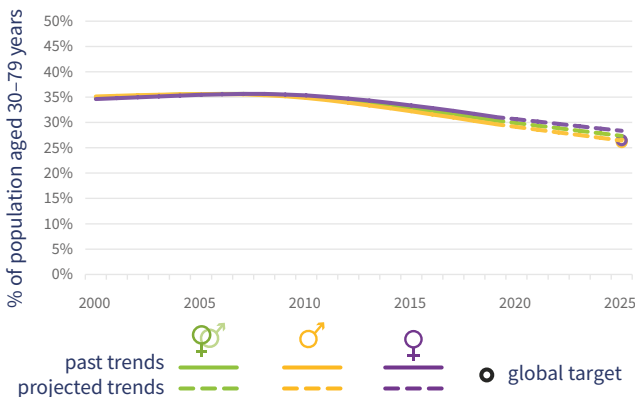**Total deaths (2019):** 80 200

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 27%   ♂ 29%   ♀ 25%

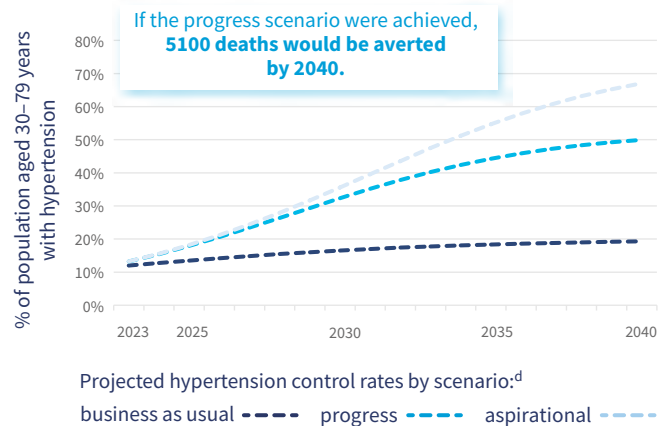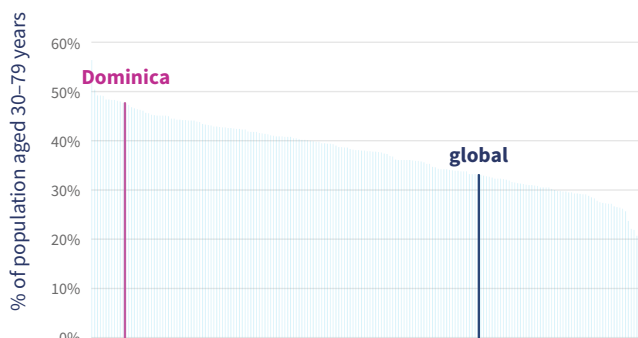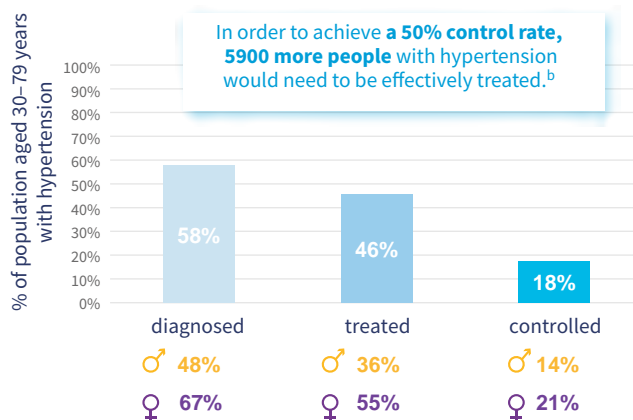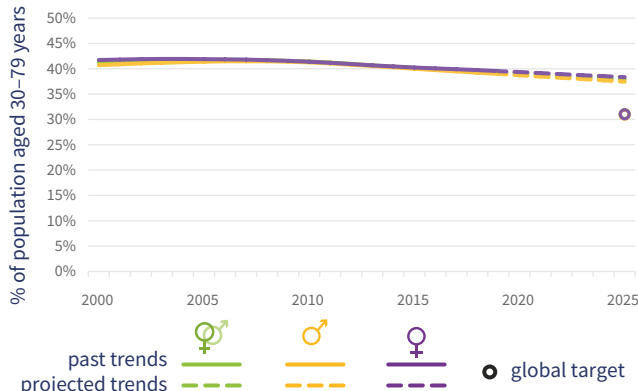## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 444 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
62%	49%	29%
♂ 51%	♂ 37%	♂ 18%
♀ 75%	♀ 63%	♀ 40%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥   ♂   ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **32 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----
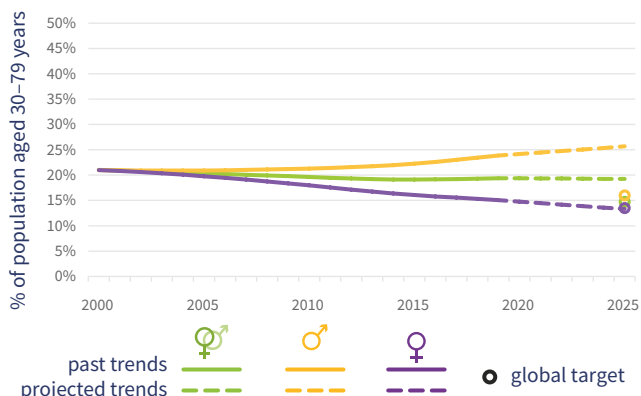
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	12	10	2019
Cardiovascular disease deaths	19 600	10 200	9400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	43	43	44	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)	12	19	4	2019
Obesity, adults aged 18+ years (%)	20	15	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	27	25	30	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
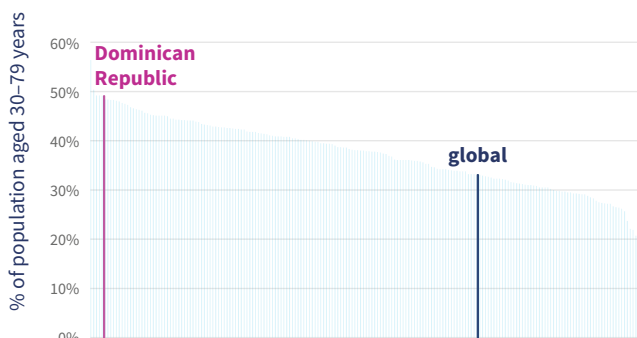
Egypt
Hypertension profile

Total population (2019): 105 600 000

Total deaths (2019): 575 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **38%** ♂ **36%** ♀ **41%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **14.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 4.6 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
53%	44%	19%
♂ 44%	♂ 35%	♂ 14%
♀ 61%	♀ 52%	♀ 23%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **448 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	28	33	23	2019
Cardiovascular disease deaths	253 000	136 000	117 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	55	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	24	48	0	2019
Obesity, adults aged 18+ years (%)	32	23	41	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	31	23	39	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

El Salvador

Hypertension profile

Total population (2019): 6 280 000
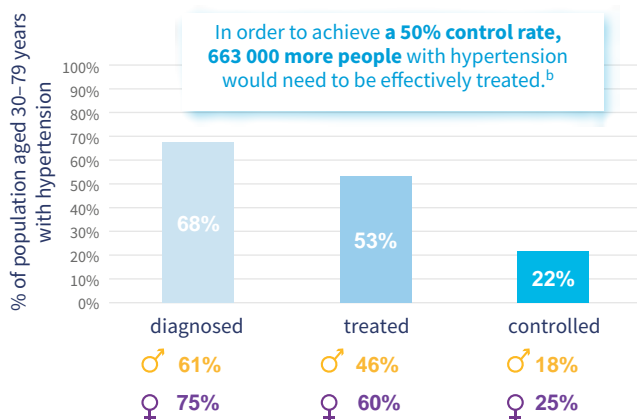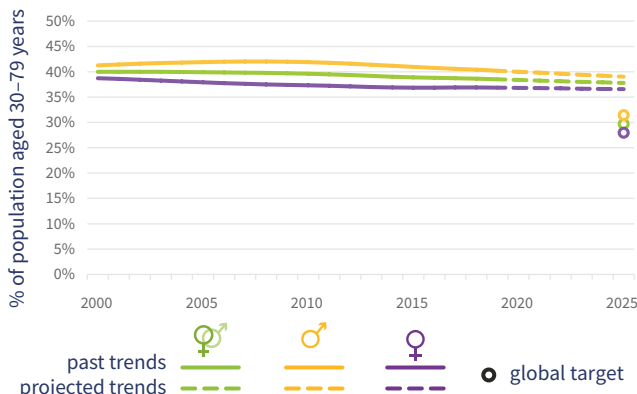
Total deaths (2019): 40 700!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 33%   ♂ 31%   ♀ 34%

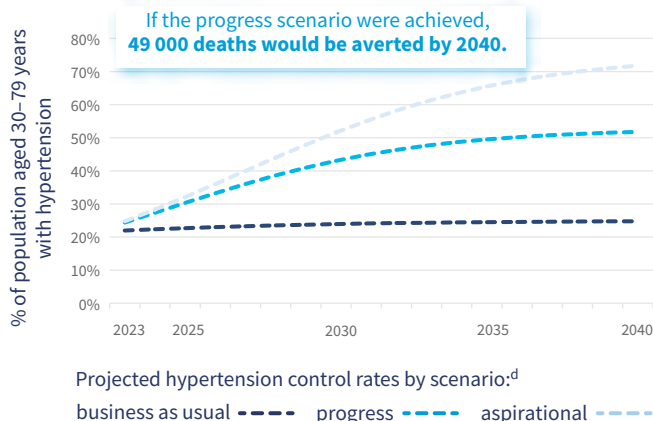### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **918 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 96 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	73%	63%	39%
♂	61%	51%	27%
♀	82%	71%	48%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

⚥ past trends / projected trends
♂ past trends / projected trends
♀ past trends / projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **6800 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress – – – aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	12	10	2019
Cardiovascular disease deaths	8200	4200	4100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	52	51	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)[f]	8	15	2	2019
Obesity, adults aged 18+ years (%)	25	19	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	6	1	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Equatorial Guinea
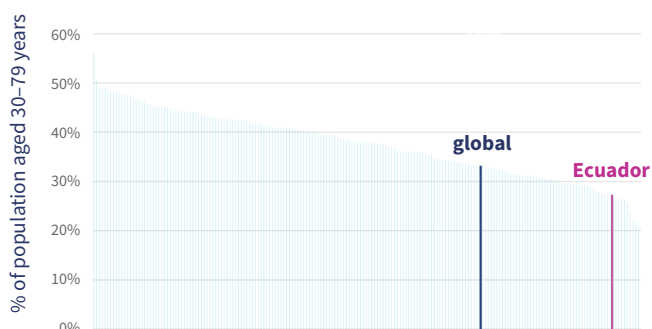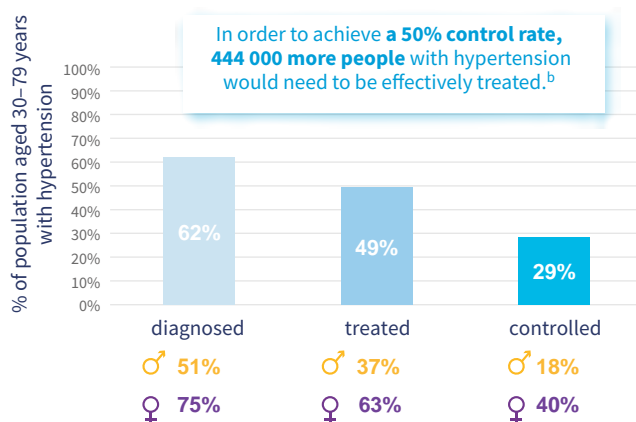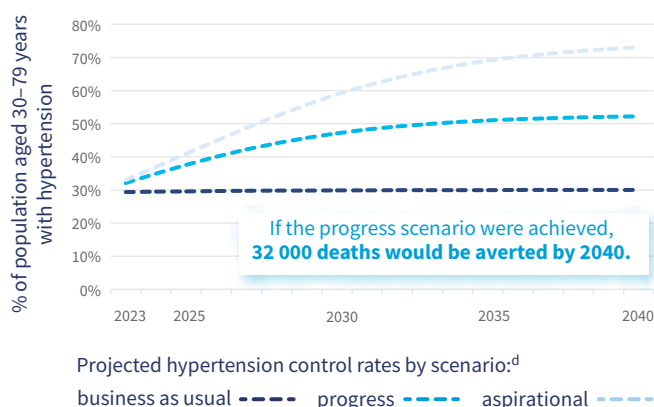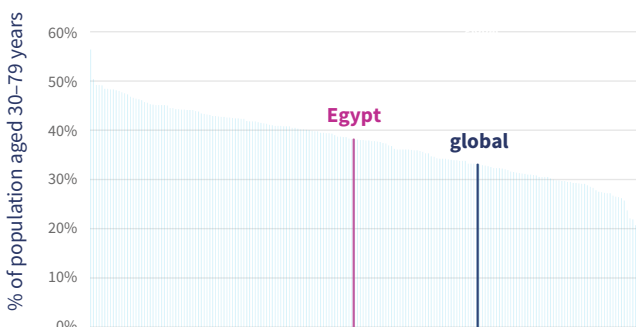
Hypertension profile

Total population (2019): 1 553 000

Total deaths (2019): 10 200

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **38%**   ♂ **37%**   ♀ **40%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **141 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 56 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	41%	26%	11%
♂	34%	23%	10%
♀	49%	30%	13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **3200 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	22	23	2019
Cardiovascular disease deaths	1200	530	660	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	65	61	68	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	8	4	13	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	10	3	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Eritrea

Hypertension profile

Total population (2019): 3 499 000
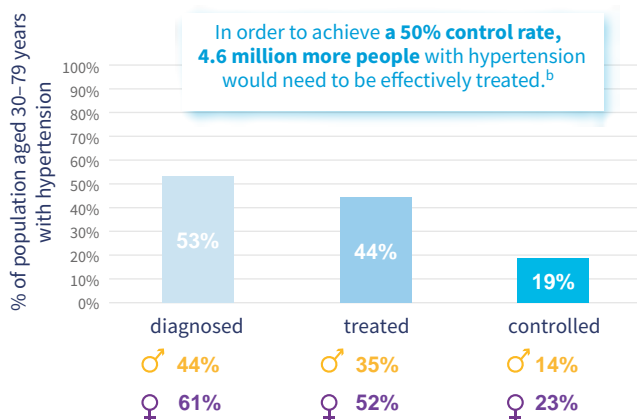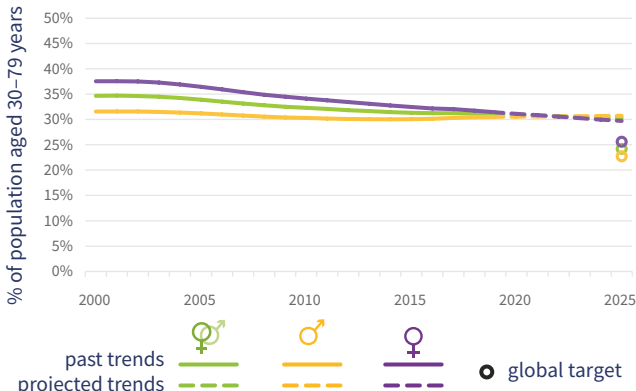
Total deaths (2019): 27 800

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 24% ♂ 23% ♀ 25%

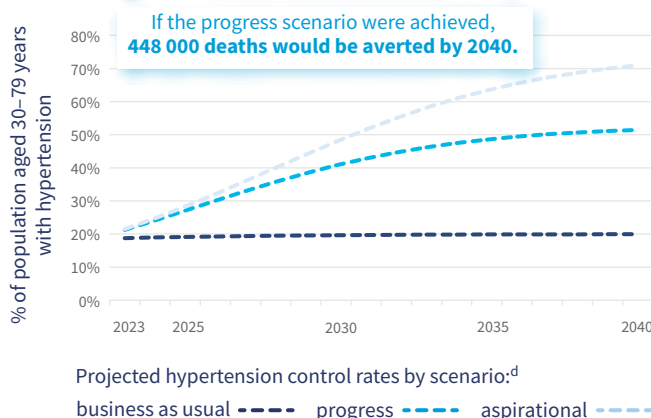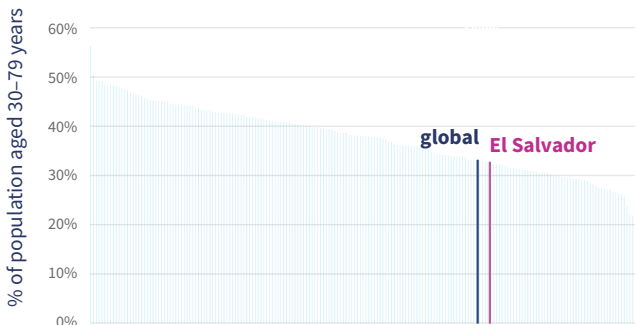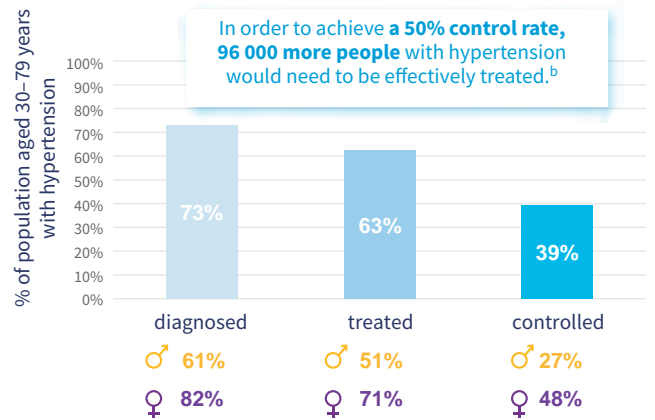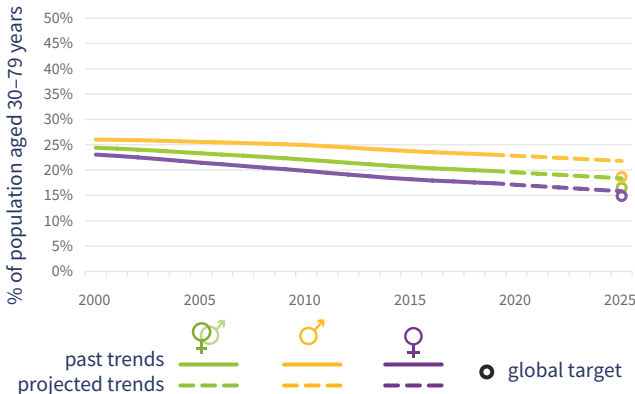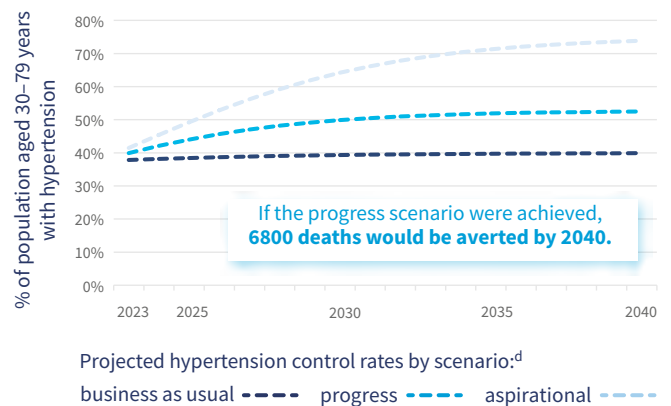### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 236 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 89 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	39%	24%	13%
♂	33%	21%	12%
♀	43%	27%	14%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **14 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	27	29	24	2019
Cardiovascular disease deaths	6200	3100	3100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	53	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	8	15	0	2019
Obesity, adults aged 18+ years (%)	5	2	8	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	0	2019
Physical inactivity, adults aged 18+ years (%)	22	14	31	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✘

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✘

Conducted recent, national survey on salt/sodium intake ✘

Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment

Guidelines for management of hypertension ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
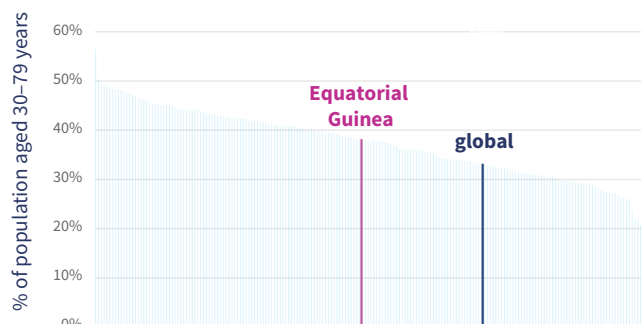
Estonia

Hypertension profile

Total population (2019): 1 327 000

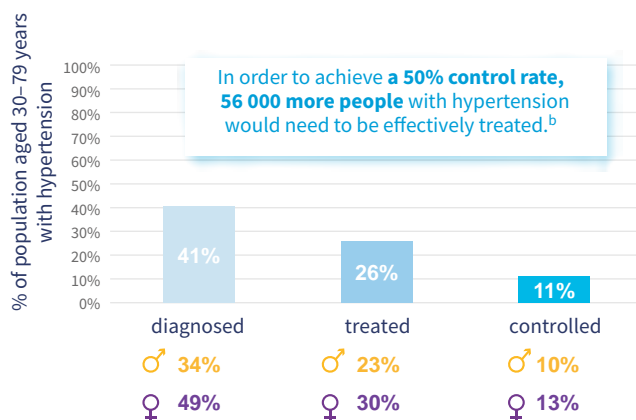**Total deaths (2019): 15 200**

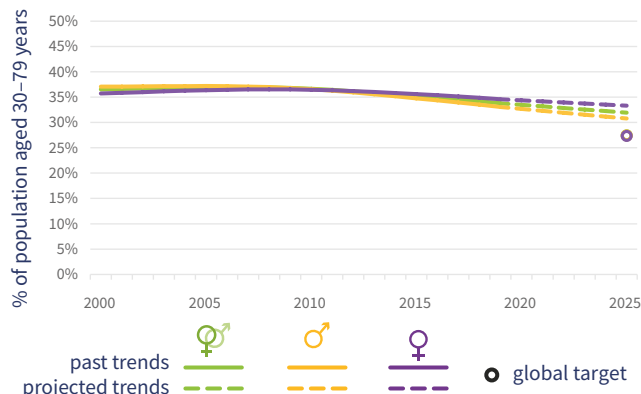Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 40%   ♂ 46%   ♀ 34%

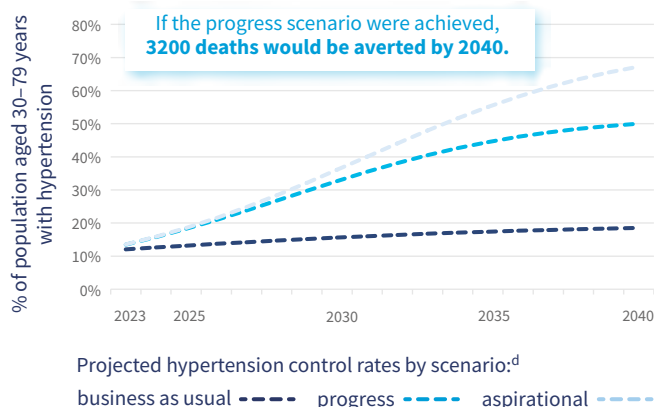### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **368 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 125 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	51%	39%	16%
♂	47%	36%	13%
♀	56%	42%	19%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **12 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	15	22	9	2019
Cardiovascular disease deaths	7700	3000	4700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	63	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	31	37	24	2019
Obesity, adults aged 18+ years (%)	21	20	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	18	5	2019
Physical inactivity, adults aged 18+ years (%)	32	29	35	2016

National response

Targets
National target for blood pressure   ✘
National target for salt consumption   ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✘
Conducted recent, national survey on salt/sodium intake   ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✔

Treatment
Guidelines for management of hypertension   ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
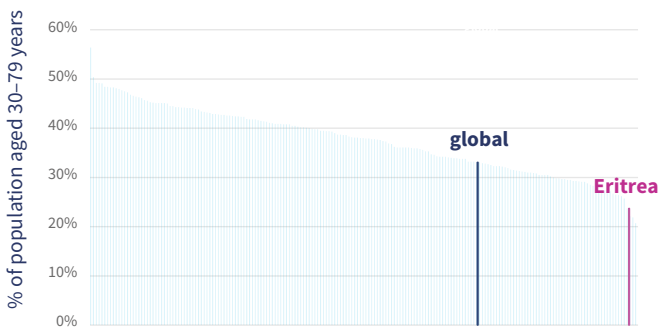
Eswatini

Hypertension profile

Total population (2019): 1 170 000
Total deaths (2019): 11 800!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **43%** ♂ **37%** ♀ **47%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **140 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 54 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	50%	35%	12%
♂	37%	27%	9%
♀	59%	40%	15%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **4800 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	35	45	24	2019
Cardiovascular disease deaths	2100	1100	950	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	61	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	7	2019
Current tobacco use, adults aged 15+ years (%)	9	17	2	2019
Obesity, adults aged 18+ years (%)	17	5	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	14	3	2019
Physical inactivity, adults aged 18+ years (%)	28	24	32	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Ethiopia
Hypertension profile

Total population (2019): 114 100 000
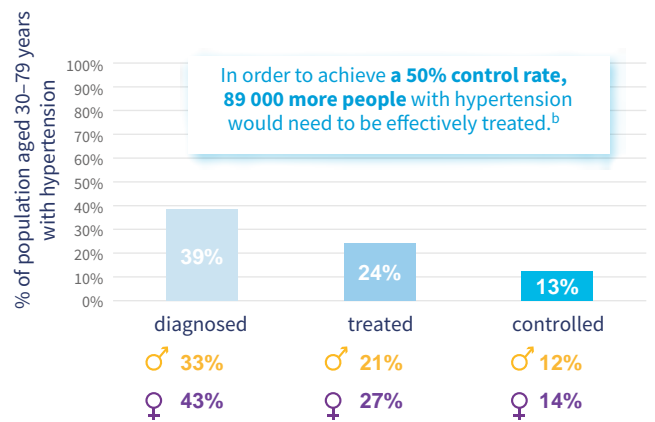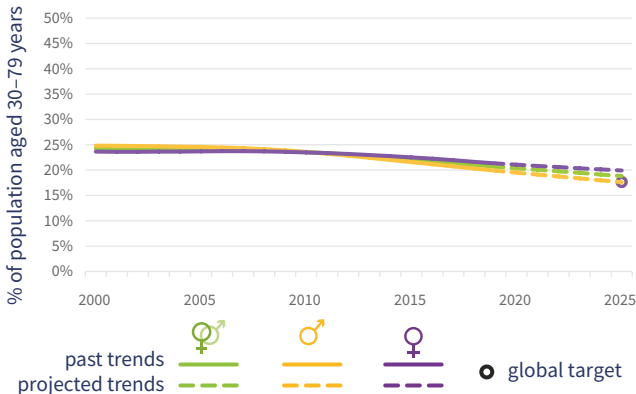**Total deaths (2019):** 627 000!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 27% ♂ 25% ♀ 30%

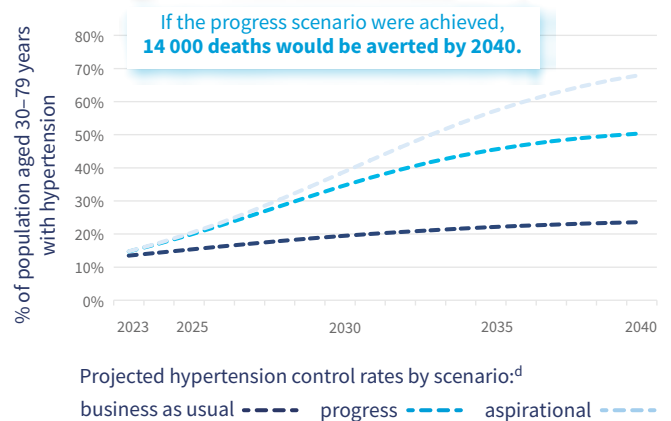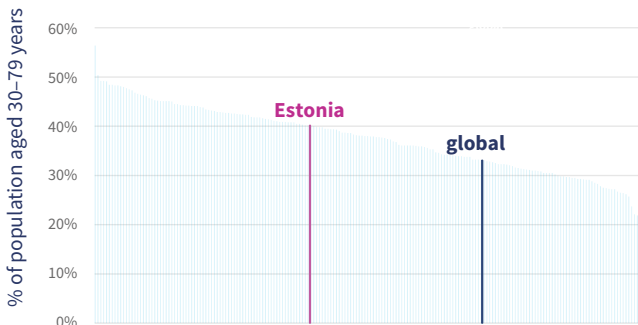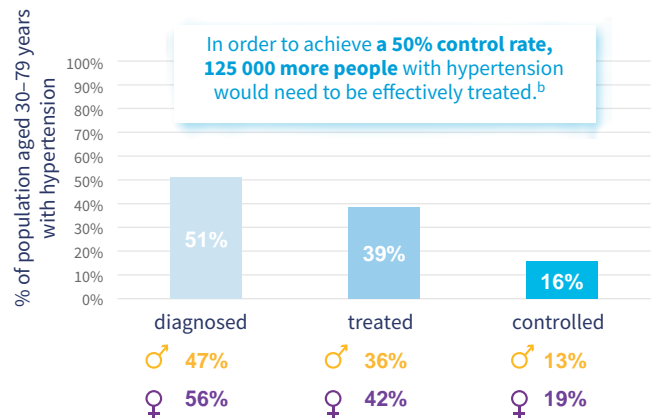## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **8.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 3.7 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	34%	16%	6%
♂	30%	16%	6%
♀	37%	16%	7%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **211 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -
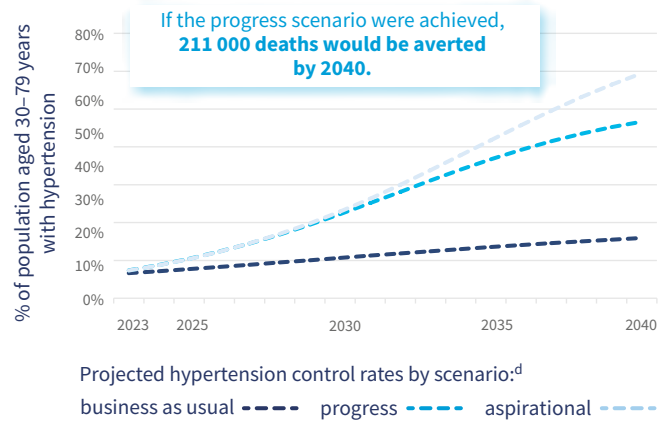
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	17	17	2019
Cardiovascular disease deaths	98 400	48 100	50 300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	45	51	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	5	9	1	2019
Obesity, adults aged 18+ years (%)	5	2	7	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	6	1	2019
Physical inactivity, adults aged 18+ years (%)	15	11	18	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Fiji

Hypertension profile

Total population (2019): 918 000

Total deaths (2019): 7130

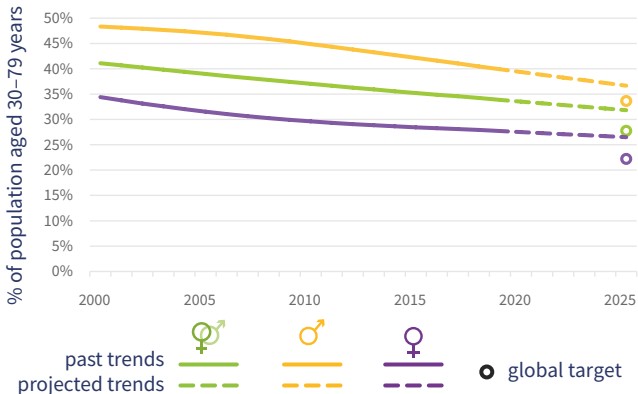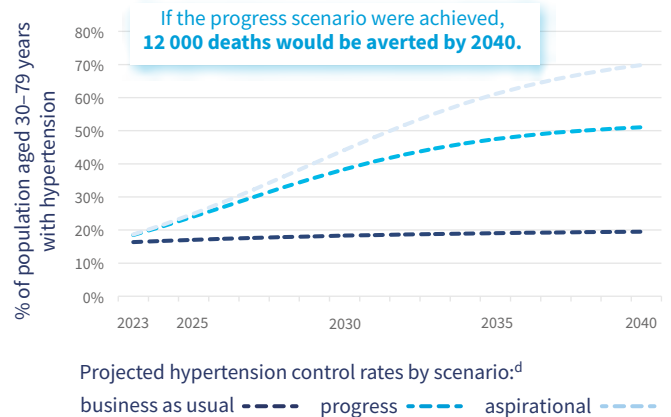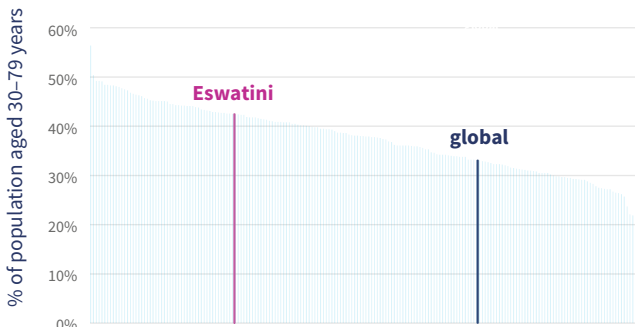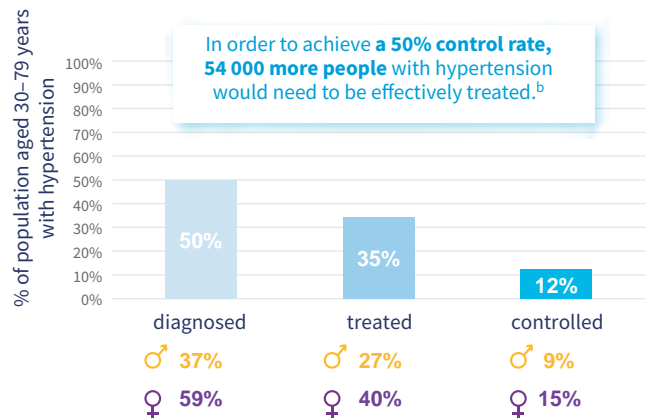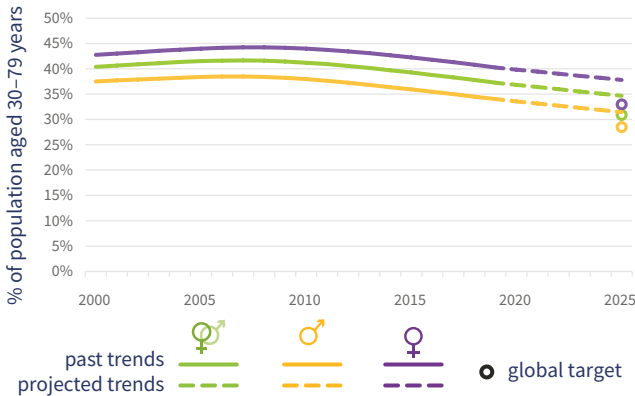**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 39%   ♂ 37%   ♀ 41%

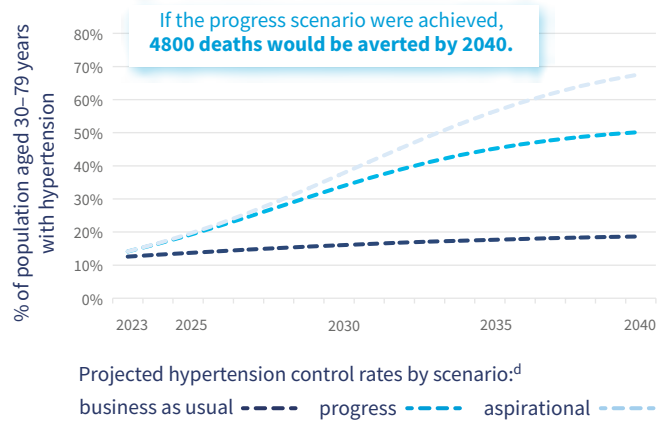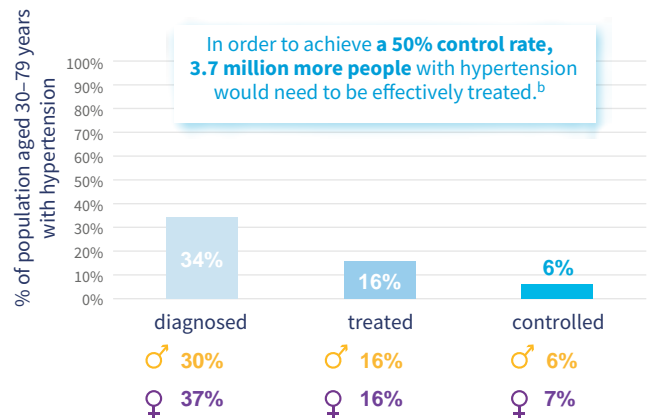### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 153 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 58 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	54%	35%	13%
♂	45%	28%	9%
♀	61%	41%	16%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends --- --- ---   ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **4200 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ------   progress ------   aspirational ------
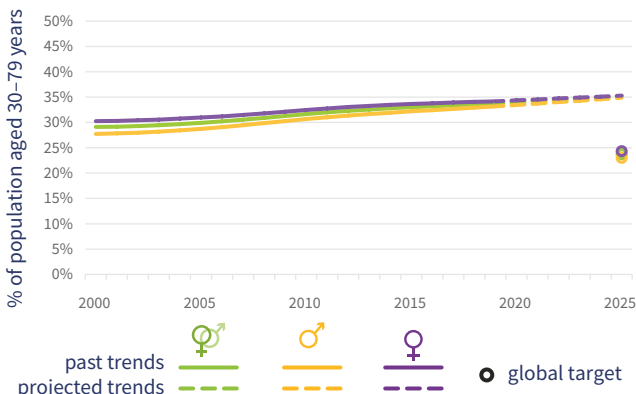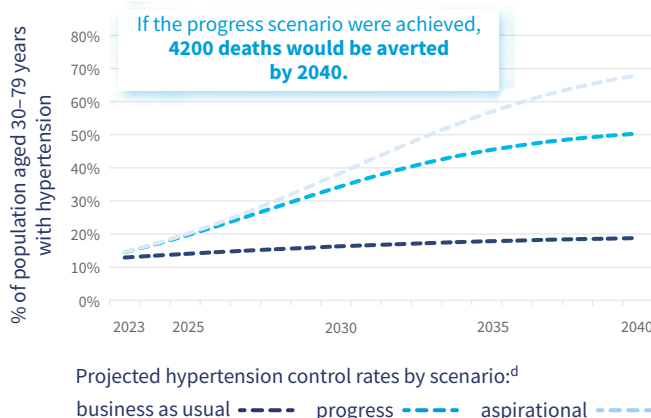
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	38	42	33	2019
Cardiovascular disease deaths	2500	1500	970	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	62	61	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	23	36	11	2019
Obesity, adults aged 18+ years (%)	30	25	35	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	6	1	2019
Physical inactivity, adults aged 18+ years (%)	17	11	24	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Finland

Hypertension profile

Total population (2019): 5 522 000
Total deaths (2019): 55 300

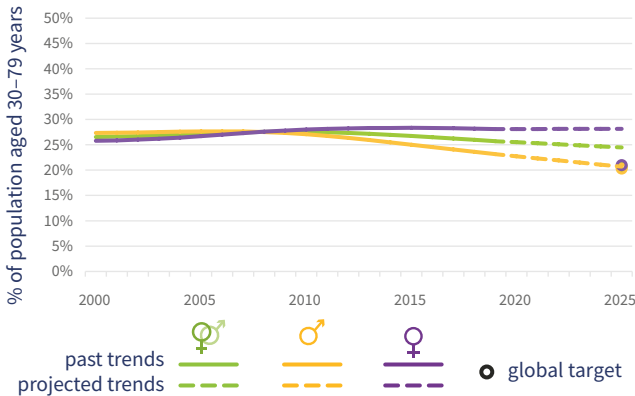**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **36%** ♂ **41%** ♀ **31%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 294 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	68%	51%	28%
♂	66%	49%	27%
♀	71%	54%	29%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **21 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----
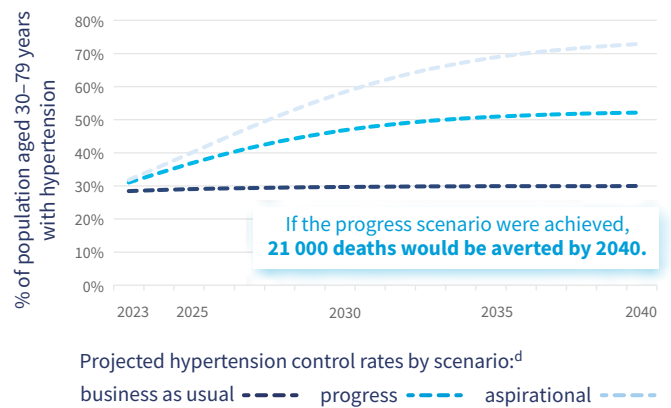
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	12	7	2019
Cardiovascular disease deaths	18 900	9600	9300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	54	51	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	10	7	2019
Current tobacco use, adults aged 15+ years (%)	22	28	17	2019
Obesity, adults aged 18+ years (%)	22	24	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	14	4	2019
Physical inactivity, adults aged 18+ years (%)	17	17	16	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
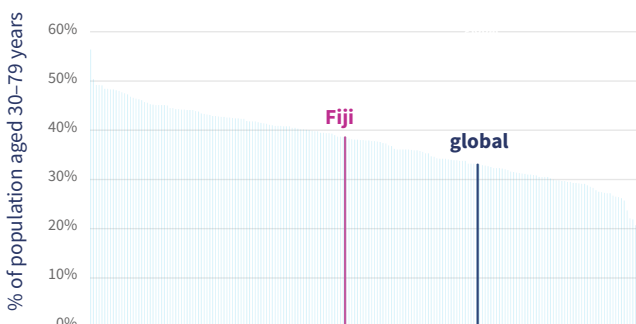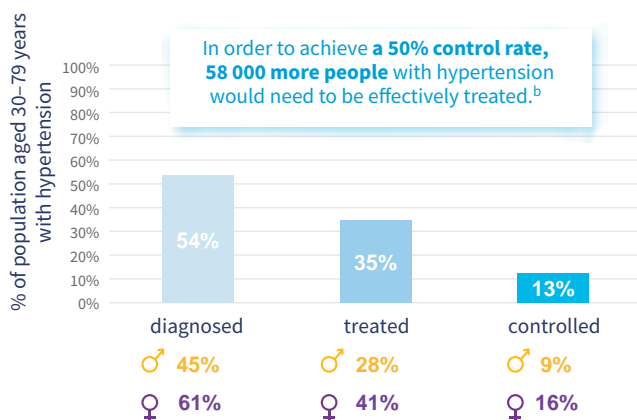Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

France

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]	⚥ 29%	♂ 34%	♀ 24%

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **14.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.8 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	65%	52%	28%
♂	62%	50%	23%
♀	68%	56%	35%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **155 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----
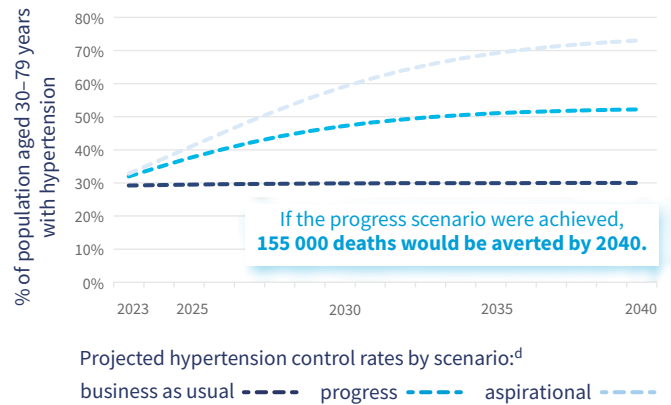
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	14	7	2019
Cardiovascular disease deaths	149 000	67 800	80 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	50	47	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	34	35	32	2019
Obesity, adults aged 18+ years (%)	22	22	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	18	5	2019
Physical inactivity, adults aged 18+ years (%)	29	24	34	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
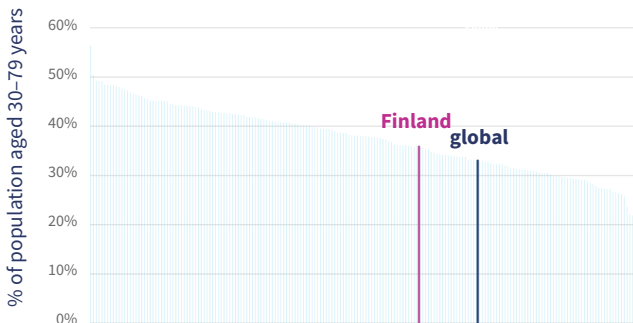
Gabon

Hypertension profile

Total population (2019): 2 243 000
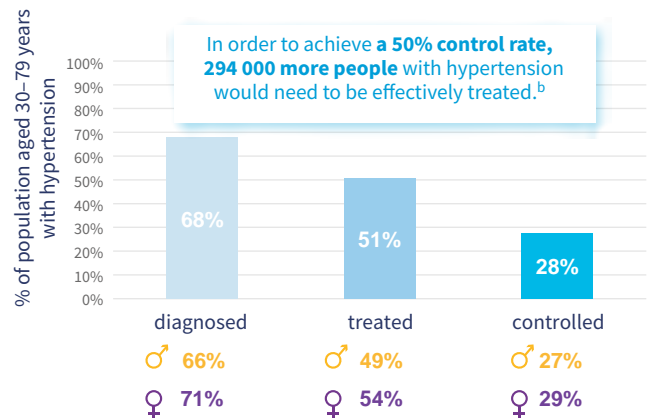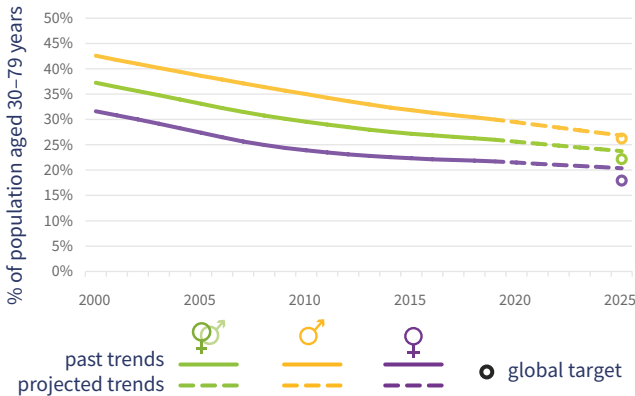
Total deaths (2019): 14 300

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **37%**   ♂ **36%**   ♀ **39%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **260 000** adults aged 30–79 years with hypertension:
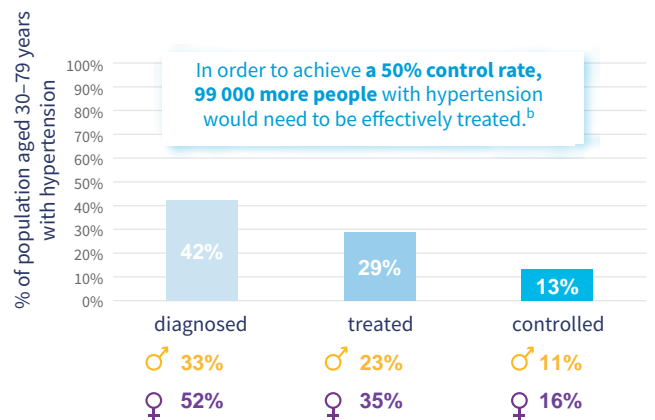
In order to achieve **a 50% control rate, 99 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
42%	29%	13%
♂ 33%	♂ 23%	♂ 11%
♀ 52%	♀ 35%	♀ 16%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **6000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----
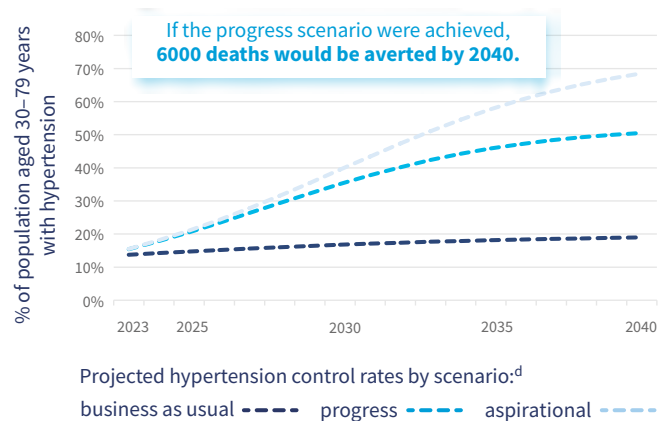
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	26	17	2019
Cardiovascular disease deaths	2600	1400	1200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	62	61	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	15	10	20	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	25	18	33	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
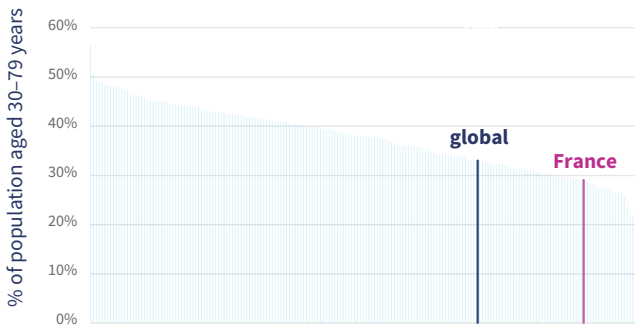
Gambia

Hypertension profile

Total population (2019): 2 509 000
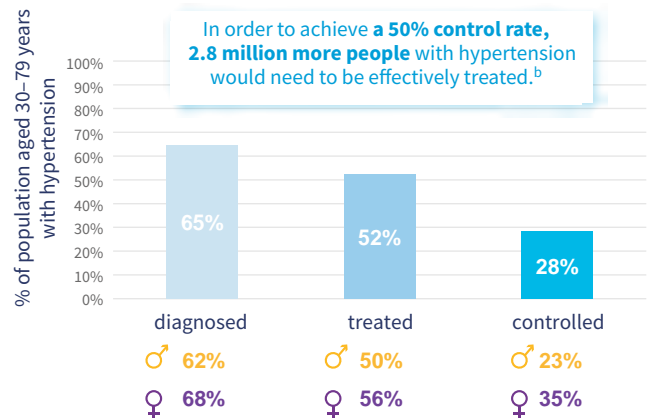**Total deaths (2019): 14 200**

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **38%**   ♂ **35%**   ♀ **40%**
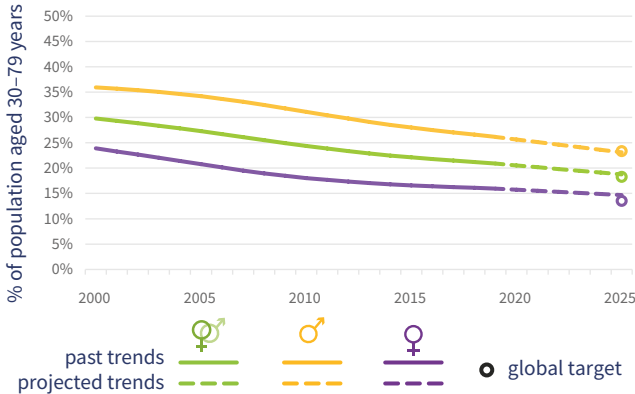

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **211 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 87 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
45%	28%	10%
♂ 36%	♂ 22%	♂ 8%
♀ 53%	♀ 33%	♀ 11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀   ○ global target
projected trends

Hypertension control rate scenarios

If the progress scenario were achieved, **5000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - - -   aspirational - - - -

---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	22	20	2019
Cardiovascular disease deaths	2200	1100	1100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	60	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	12	22	1	2019
Obesity, adults aged 18+ years (%)	10	6	15	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	0	2019
Physical inactivity, adults aged 18+ years (%)	21	16	26	2016

National response

Targets
National target for blood pressure   ✖
National target for salt consumption   ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✖
Conducted recent, national survey on salt/sodium intake   ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✖

Treatment
Guidelines for management of hypertension   ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
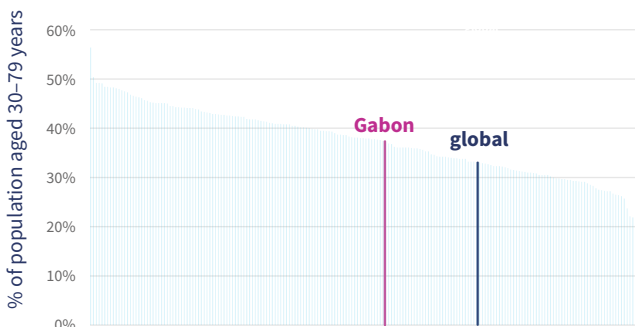
Georgia

Hypertension profile

Total population (2019): 3 771 000

Total deaths (2019): 53 400

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **45%**   ♂ **47%**   ♀ **42%**
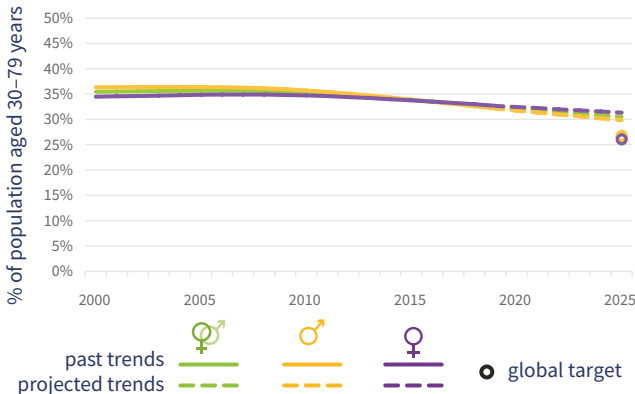
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 364 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	64%	48%	17%
♂	60%	41%	13%
♀	68%	54%	21%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **55 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual – – –   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	36	15	2019
Cardiovascular disease deaths	34 200	16 500	17 700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	62	64	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	32	56	7	2019
Obesity, adults aged 18+ years (%)	22	19	24	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	14	24	6	2019
Physical inactivity, adults aged 18+ years (%)	18	17	19	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
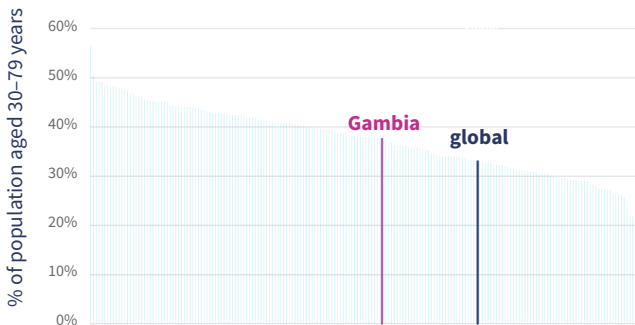
Germany

Hypertension profile

Total population (2019): 83 148 000

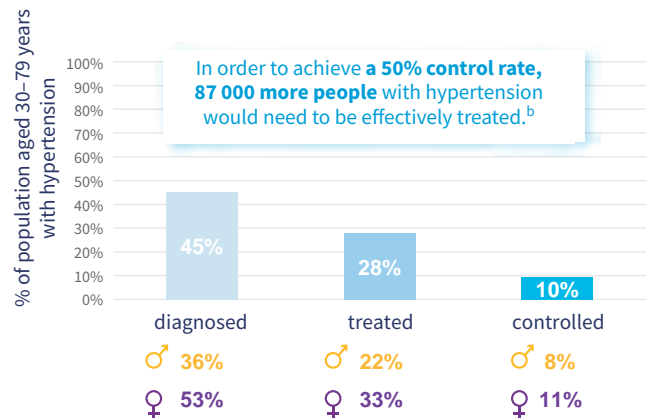**Total deaths (2019):** 845 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ☿ 30%   ♂ 34%   ♀ 25%
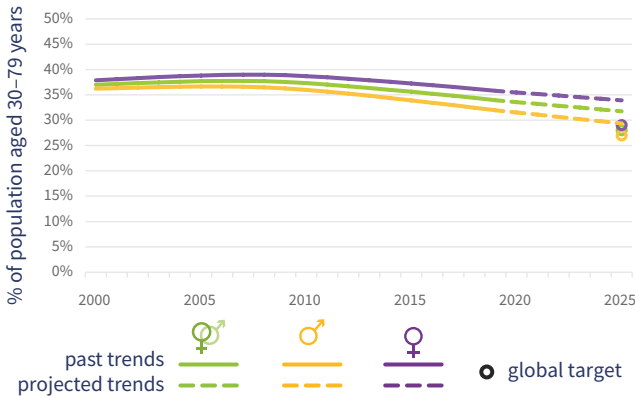
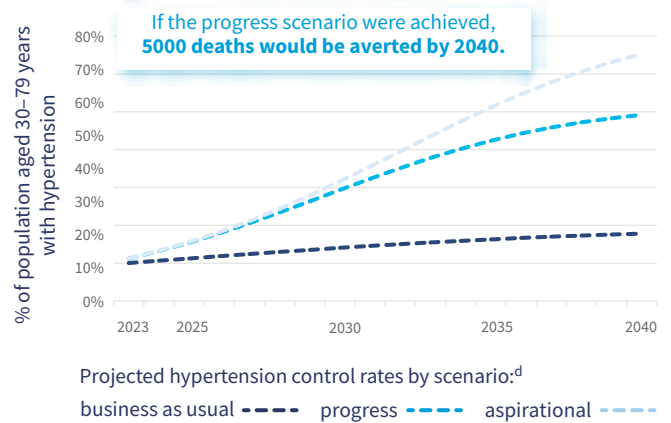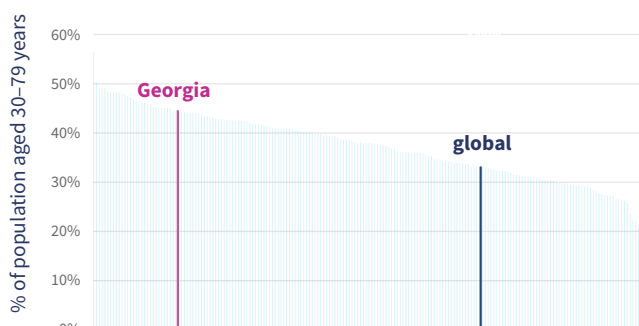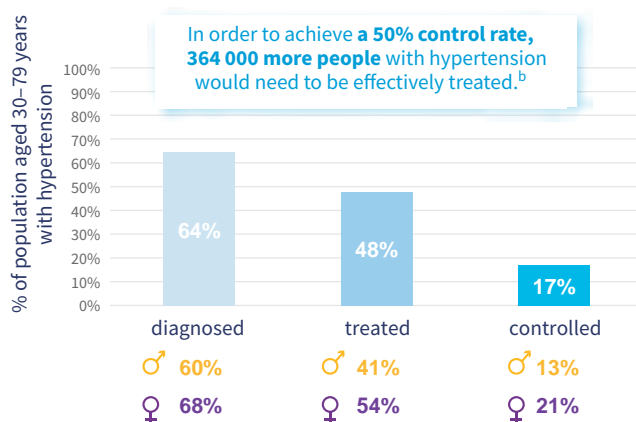## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **19.8 million** adults aged 30–79 years with hypertension:
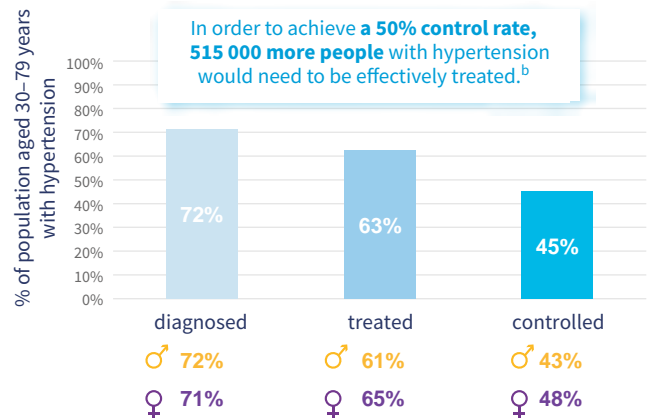
In order to achieve **a 50% control rate, 515 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	72%	63%	45%
♂	72%	61%	43%
♀	71%	65%	48%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends   ☿   ♂   ♀   ◯ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **76 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ‑ ‑ ‑ ‑   progress ‑ ‑ ‑ ‑   aspirational ‑ ‑ ‑ ‑
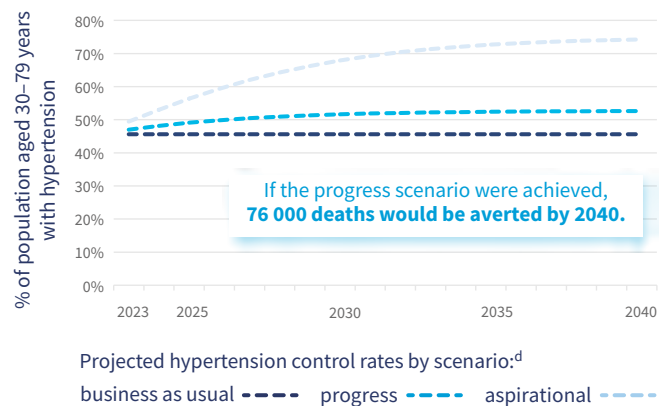
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	12	15	9	2019
Cardiovascular disease deaths	285 000	158 000	127 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	52	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	23	25	20	2019
Obesity, adults aged 18+ years (%)	22	24	20	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	19	5	2019
Physical inactivity, adults aged 18+ years (%)	42	40	44	2016

National response

Targets

National target for blood pressure	✘
National target for salt consumption	✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✘
Conducted recent, national survey on salt/sodium intake	✘
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Ghana

Hypertension profile

Total population (2019): 31 522 000
Total deaths (2019): 190 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **34%** ♂ **31%** ♀ **36%**

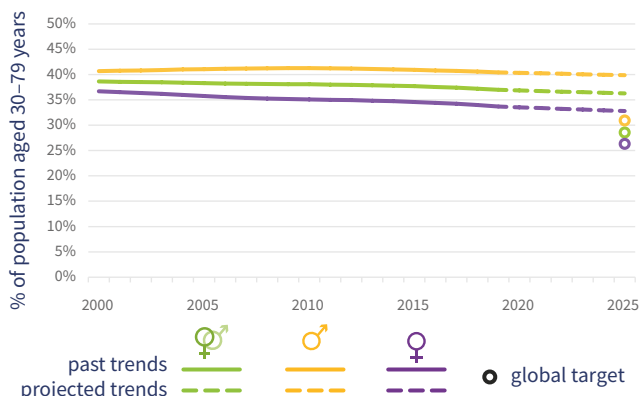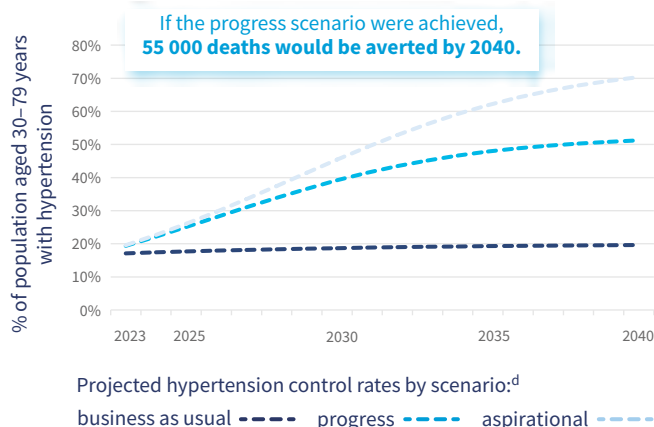### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 3.2 million adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	50%	37%	19%
♂	38%	28%	14%
♀	60%	45%	24%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends: ⚥ ♂ ♀ — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **51 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	24	21	2019
Cardiovascular disease deaths	35 100	16 500	18 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	56	64	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	8	2019
Current tobacco use, adults aged 15+ years (%)	4	7	0	2019
Obesity, adults aged 18+ years (%)	11	5	17	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	7	2	2019
Physical inactivity, adults aged 18+ years (%)	22	19	25	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
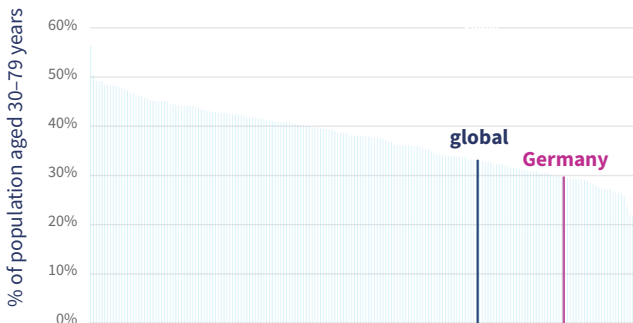
Greece

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **31%** ♂ **37%** ♀ **26%**
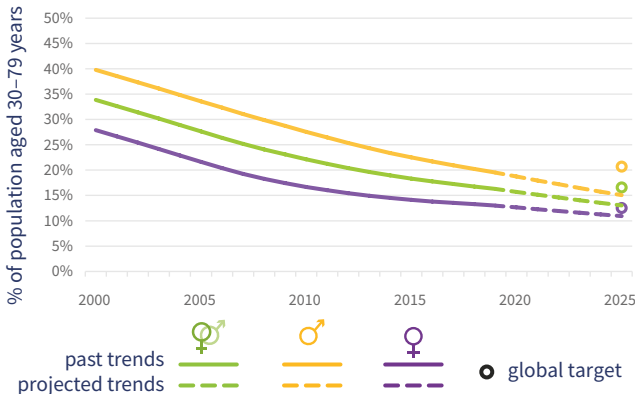
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 363 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	64%	60%	33%
♂	59%	55%	28%
♀	70%	67%	40%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **36 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - progress - - - aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	12	17	8	2019
Cardiovascular disease deaths	42 300	20 400	21 900	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	47	46	47	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)	35	38	31	2019
Obesity, adults aged 18+ years (%)	25	24	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	38	34	41	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Grenada
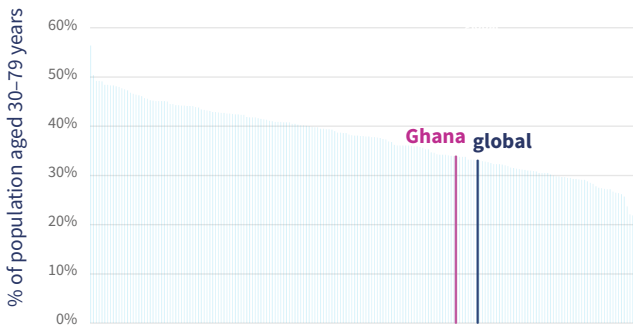
Hypertension profile

Total population (2019): 123 000
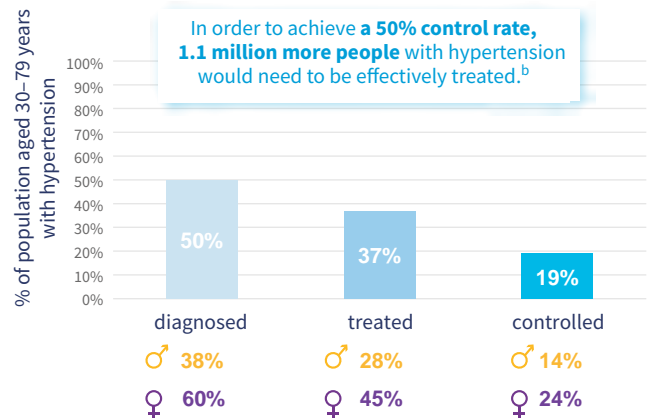
Total deaths (2019): 1010

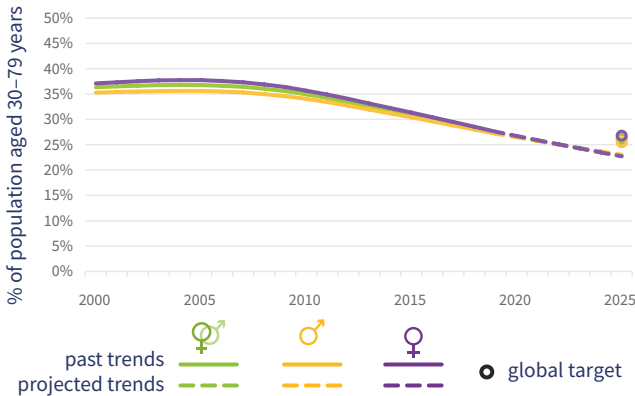**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 47% ♂ 48% ♀ 46%

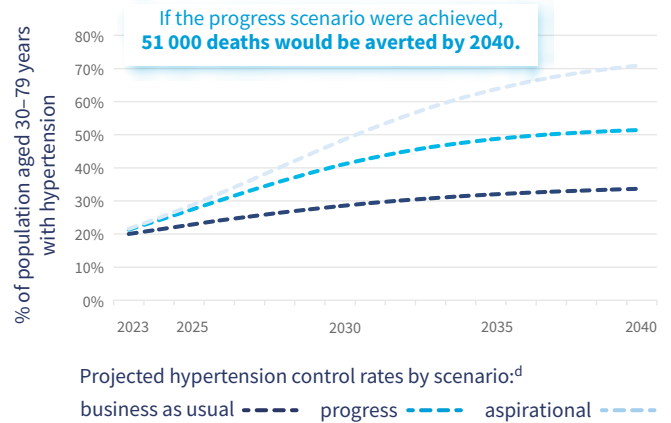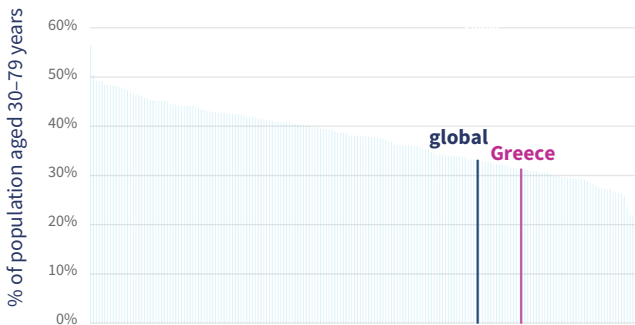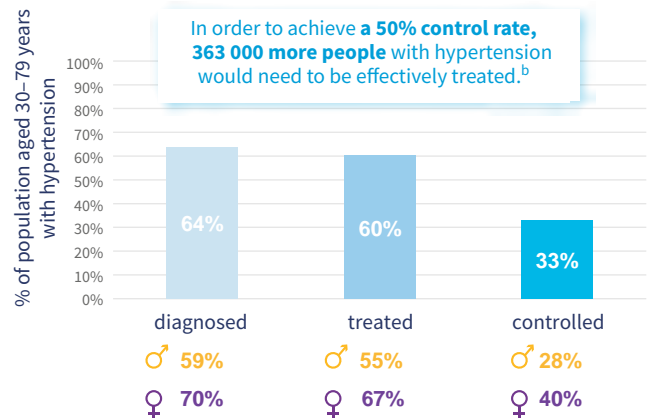### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 27 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 8300 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	63%	47%	19%
♂	53%	35%	15%
♀	73%	60%	24%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **650 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	26	20	2019
Cardiovascular disease deaths	330	170	160	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	53	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	21	13	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	3	2019
Physical inactivity, adults aged 18+ years (%)	29	22	35	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Guatemala

Hypertension profile

Total population (2019): 17 106 000
Total deaths (2019): 95 100

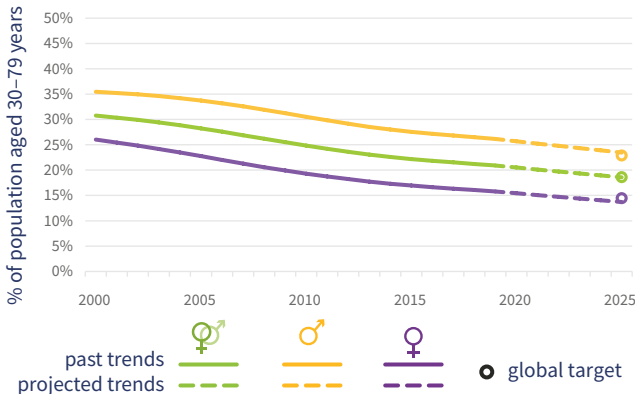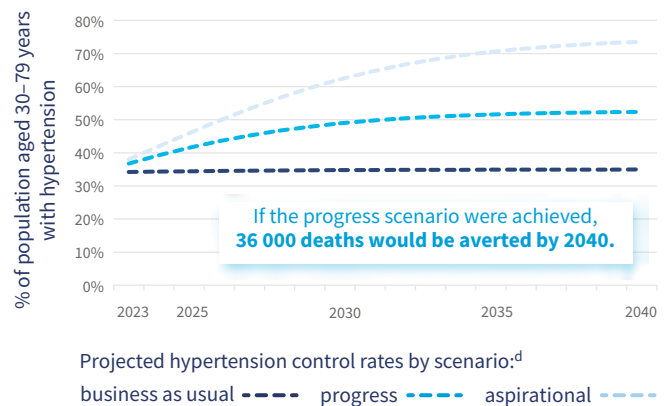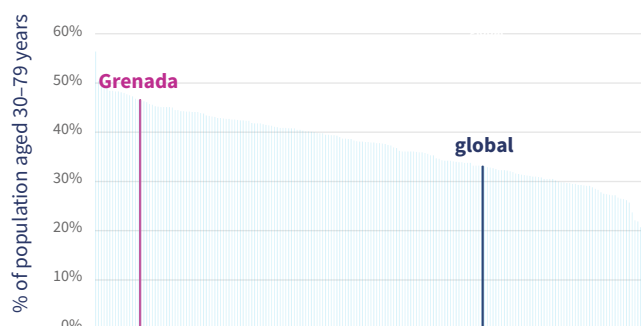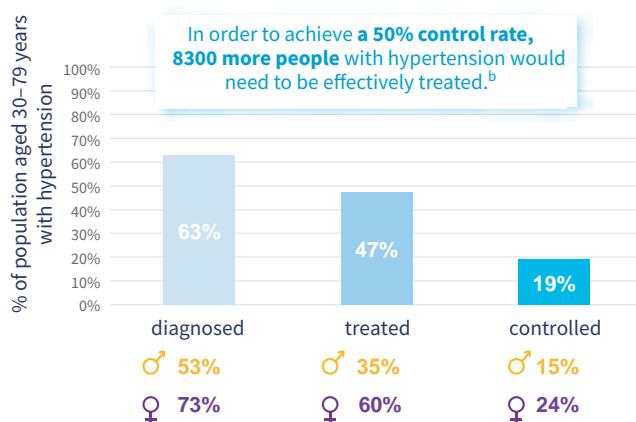Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **32%** ♂ **32%** ♀ **33%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 563 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	56%	36%	19%
♂	49%	30%	15%
♀	63%	40%	23%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ / ♂ / ♀ — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **32 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	17	16	2019
Cardiovascular disease deaths	16 500	8100	8400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	50	49	51	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)	11	20	2	2019
Obesity, adults aged 18+ years (%)	21	15	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	37	37	37	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Guinea

Hypertension profile

Total population (2019): 12 878 000

Total deaths (2019): 108 000

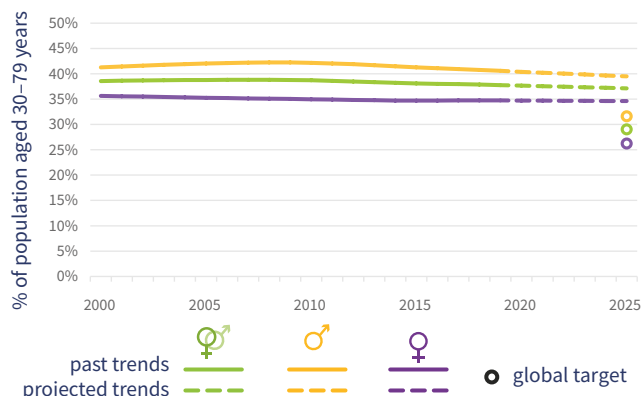**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **41%** ♂ **38%** ♀ **43%**

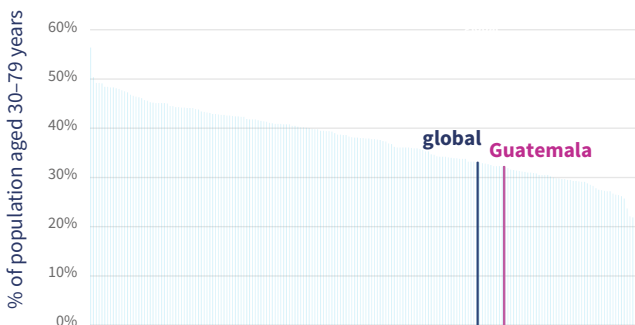### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 550 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	45%	23%	7%
♂	31%	17%	6%
♀	53%	27%	8%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **29 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	25	25	2019
Cardiovascular disease deaths	14 400	5800	8600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	52	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	8	4	12	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	15	11	18	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Guinea-Bissau

Hypertension profile

Total population (2019): 1 970 000
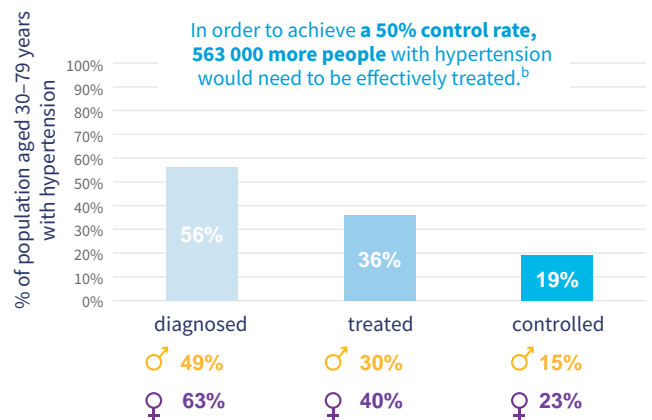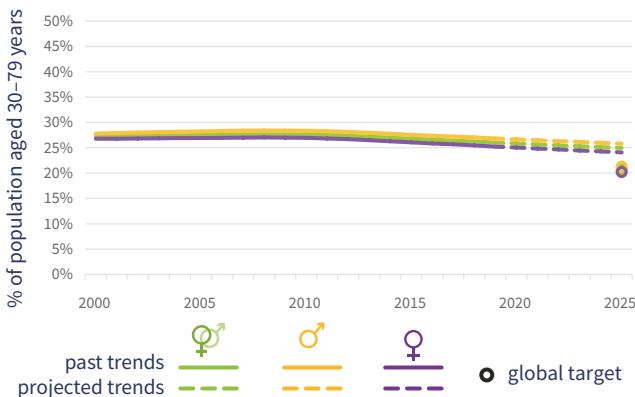**Total deaths (2019):** 16 200

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 38% ♂ 36% ♀ 40%

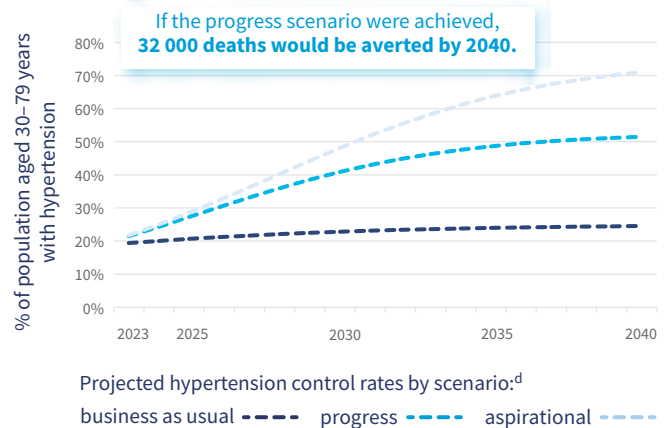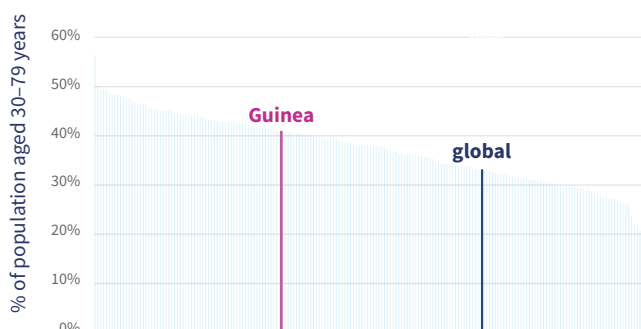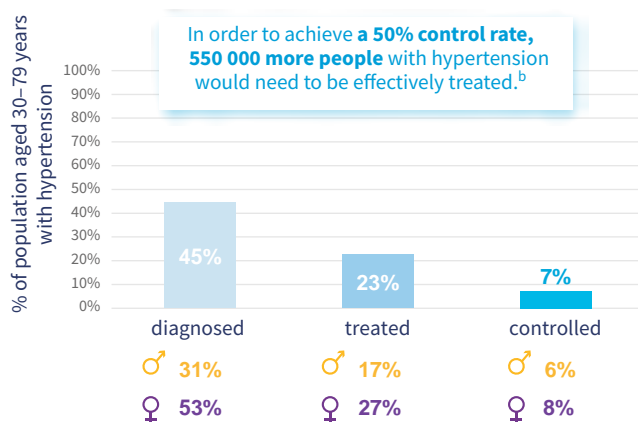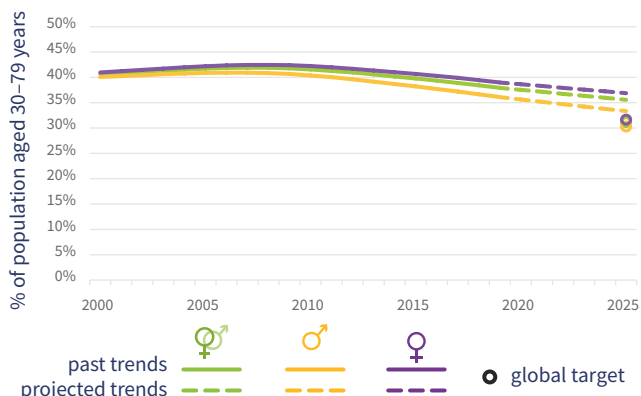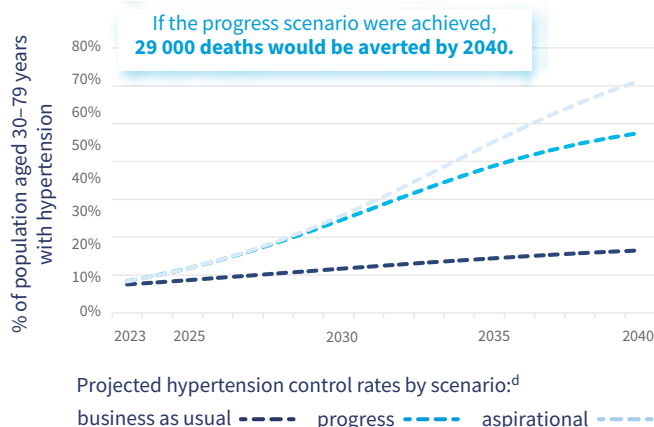### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 191 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 75 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	44%	27%	11%
♂	34%	21%	9%
♀	51%	31%	13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **4800 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual – – –   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	27	23	2019
Cardiovascular disease deaths	2100	1000	1100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	58	62	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	9	18	1	2019
Obesity, adults aged 18+ years (%)	10	5	14	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	1	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
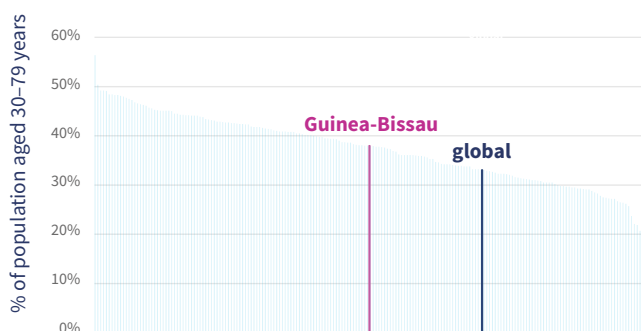
Guyana

Hypertension profile

Total population (2019): 799 000
Total deaths (2019): 8050!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **40%** ♂ **38%** ♀ **42%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **136 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 40 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
63%	47%	20%
♂ 55%	♂ 40%	♂ 16%
♀ 71%	♀ 53%	♀ 24%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends --- ⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **5800 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ▪▪▪▪   progress ▬ ▬   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	29	32	26	2019
Cardiovascular disease deaths	3000	1600	1400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	56	53	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	13	23	3	2019
Obesity, adults aged 18+ years (%)	20	13	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	9	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Haiti

Hypertension profile

Total population (2019): 11 160 000
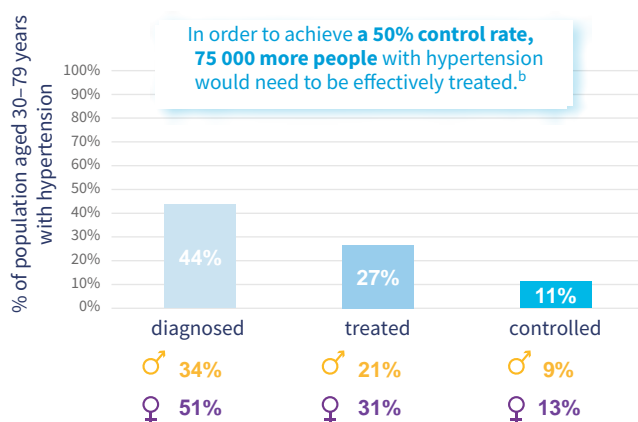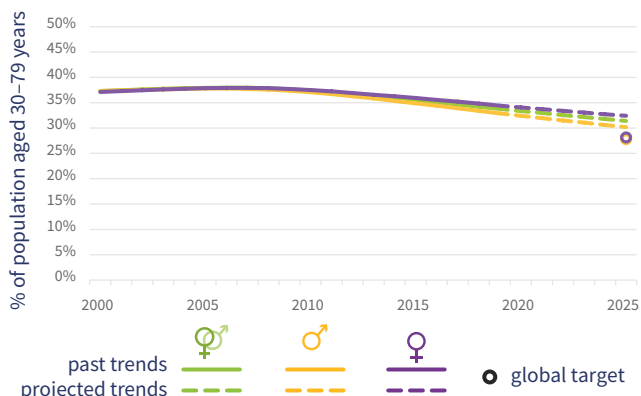**Total deaths (2019):** 97 200

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 43% ♂ 38% ♀ 48%

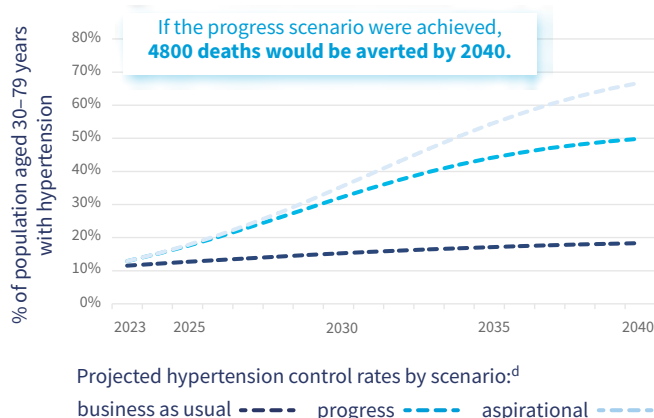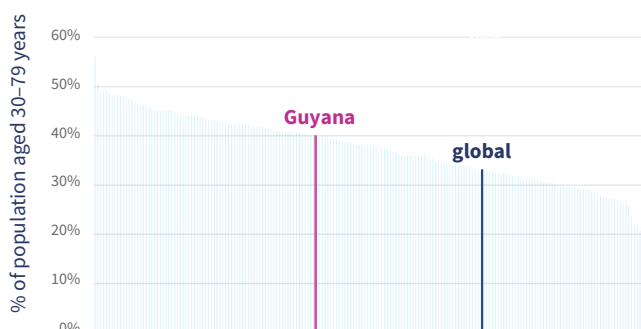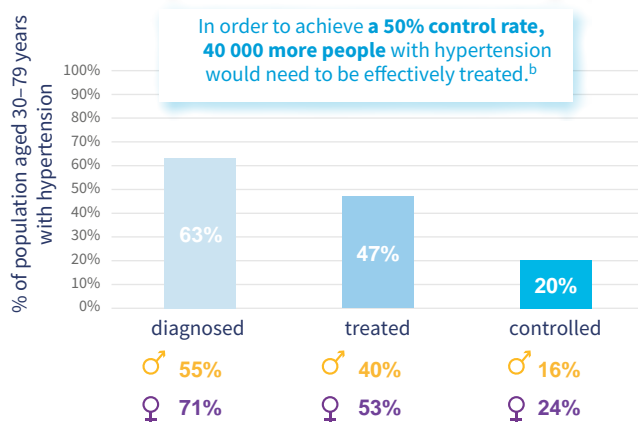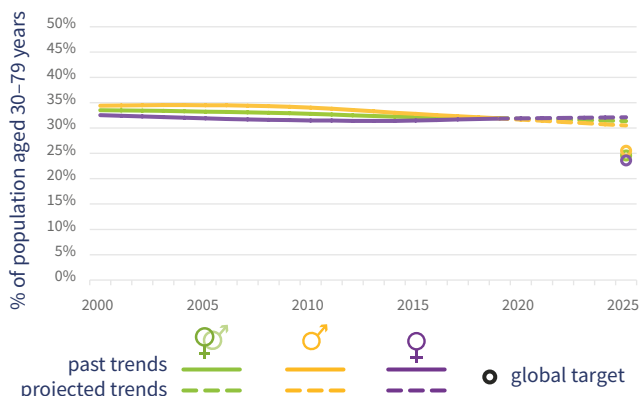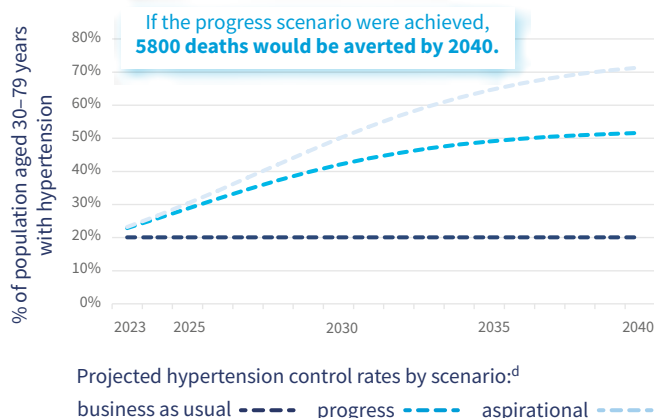## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.7 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 727 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	56%	28%	8%
♂	43%	21%	8%
♀	66%	33%	9%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **57 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	31	30	33	2019
Cardiovascular disease deaths	31 100	13 000	18 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	57	62	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	8	13	3	2019
Obesity, adults aged 18+ years (%)	23	18	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	6	1	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
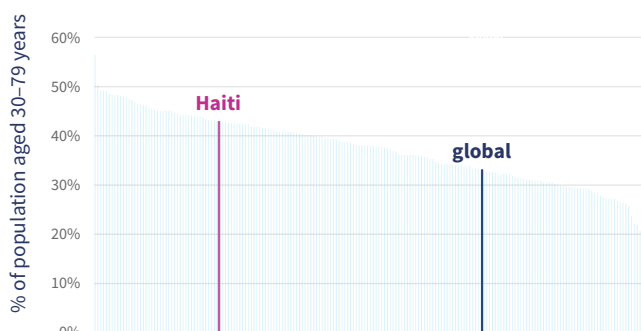
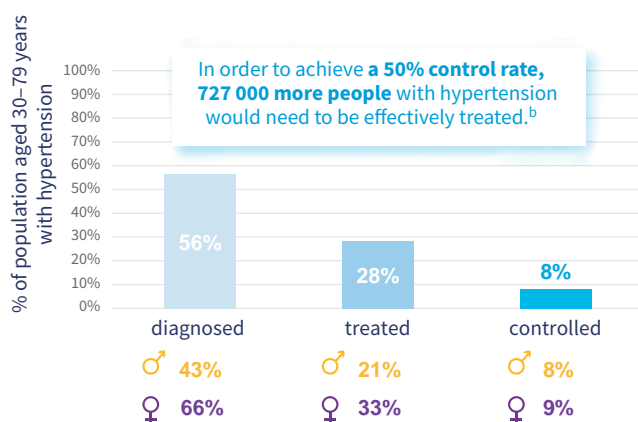# Honduras

Hypertension profile

Total population (2019): 9 959 000

Total deaths (2019): 55 000!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **34%** ♂ **33%** ♀ **34%**
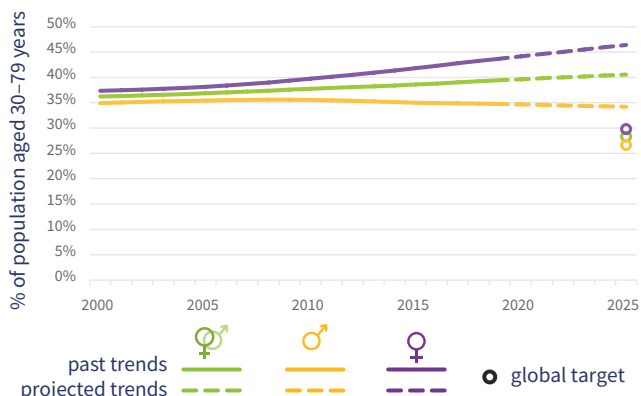

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 202 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	66%	58%	33%
♂	56%	48%	25%
♀	74%	67%	39%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **23 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	18	19	2019
Cardiovascular disease deaths	15 800	7000	8800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	53	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	21	16	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✘

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✘

Conducted recent, national survey on salt/sodium intake ✘

Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Hungary

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 48%   ♂ 56%   ♀ 41%

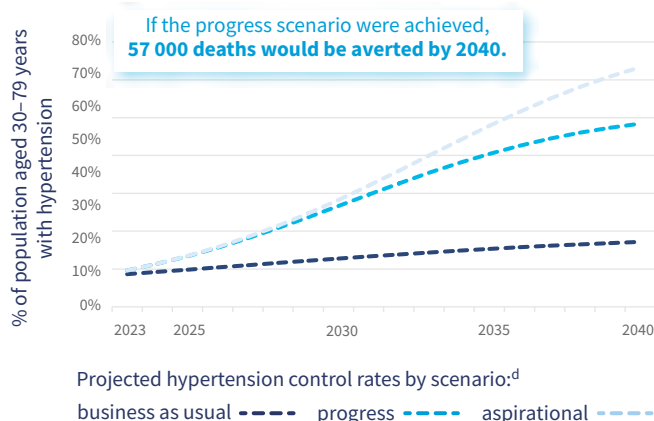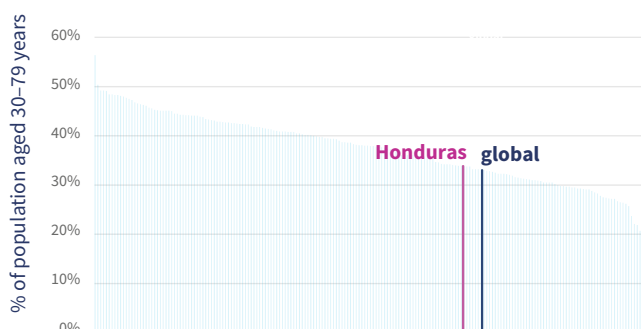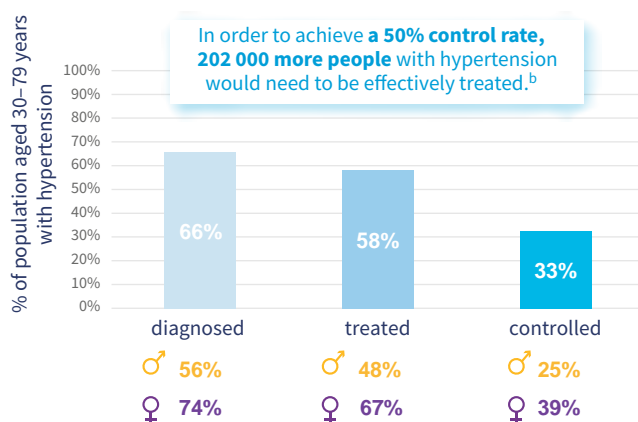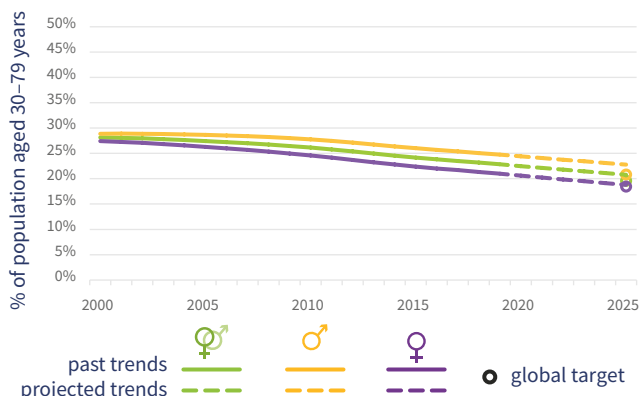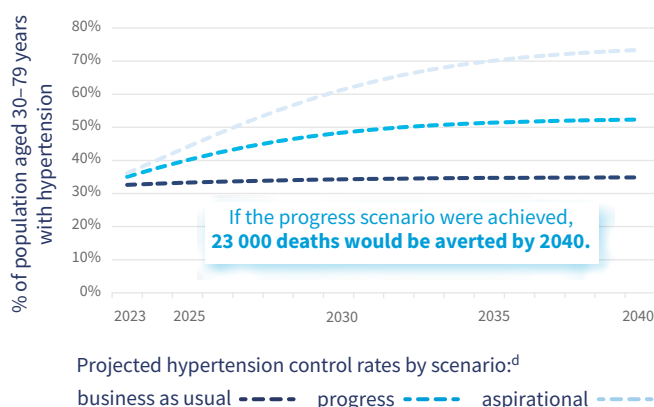## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 871 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	60%	52%	23%
♂	52%	46%	18%
♀	71%	60%	28%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **86 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress --- aspirational ---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	30	15	2019
Cardiovascular disease deaths	62 100	27 300	34 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	58	51	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	14	17	12	2019
Current tobacco use, adults aged 15+ years (%)[f]	32	36	28	2019
Obesity, adults aged 18+ years (%)	26	28	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	17	5	2019
Physical inactivity, adults aged 18+ years (%)	39	33	43	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
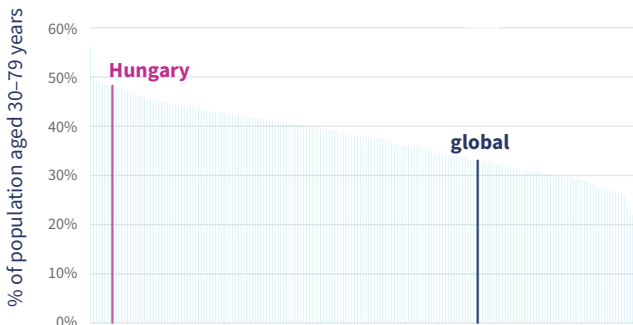
Iceland

Hypertension profile

Total population (2019): 361 000
Total deaths (2019): 2340

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **28%** ♂ **31%** ♀ **24%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **63 000** adults aged 30–79 years with hypertension:

A 50% hypertension control rate has already been achieved.[b]

	diagnosed	treated	controlled
both sexes	82%	71%	52%
♂	83%	71%	51%
♀	82%	72%	53%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the aspirational scenario were achieved, **950 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---   progress ----   aspirational ----
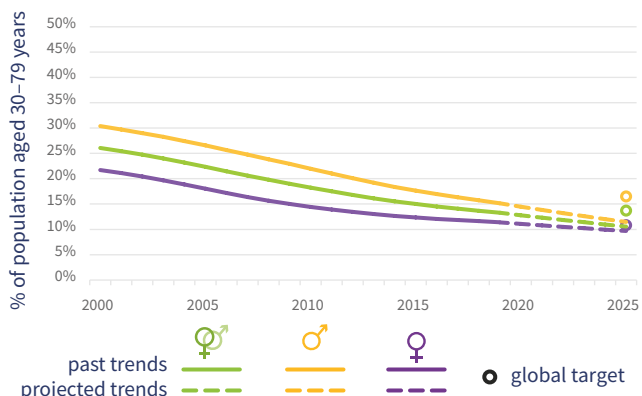
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	9	10	7	2019
Cardiovascular disease deaths	700	370	330	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	50	47	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	10	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	13	13	13	2019
Obesity, adults aged 18+ years (%)	22	24	19	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	12	4	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

India

Hypertension profile

Total population (2019): 1 383 000 000

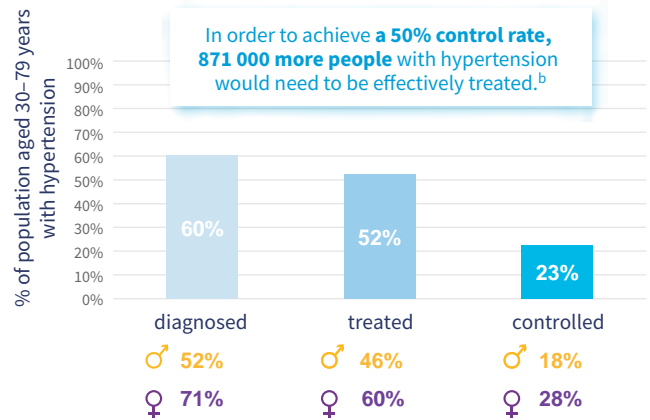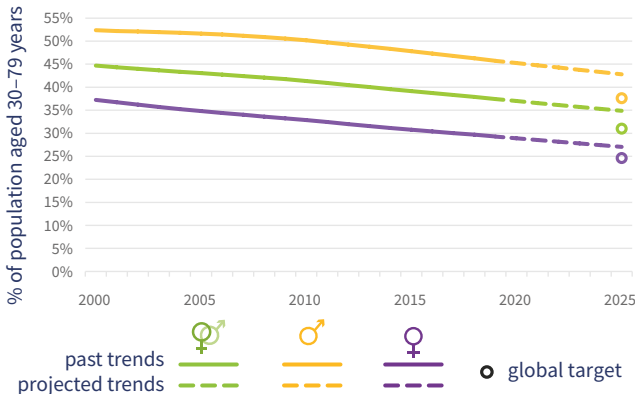**Total deaths (2019):** 9 171 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 31% ♂ 32% ♀ 31%

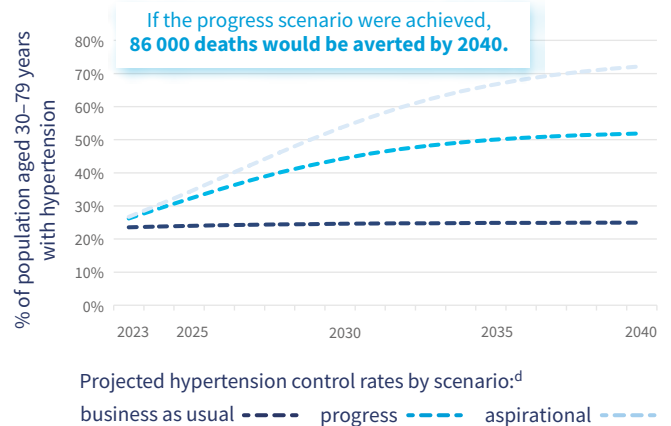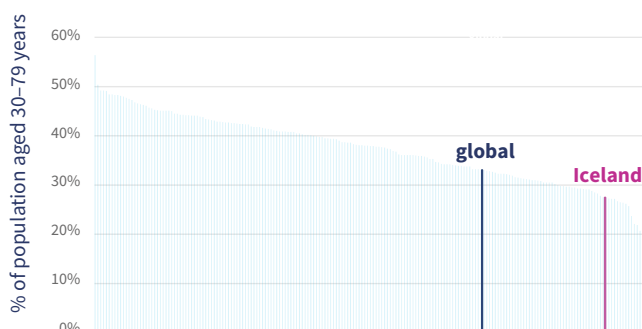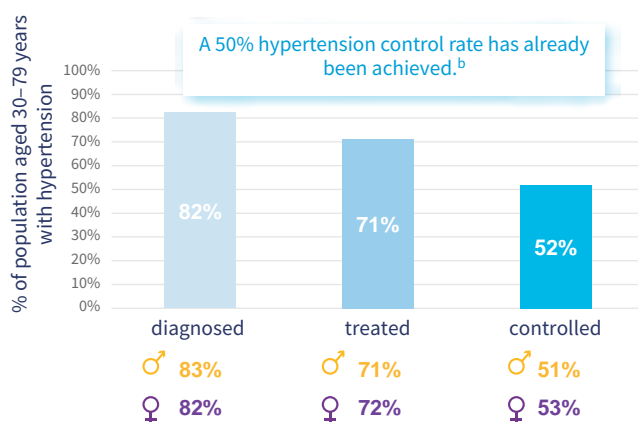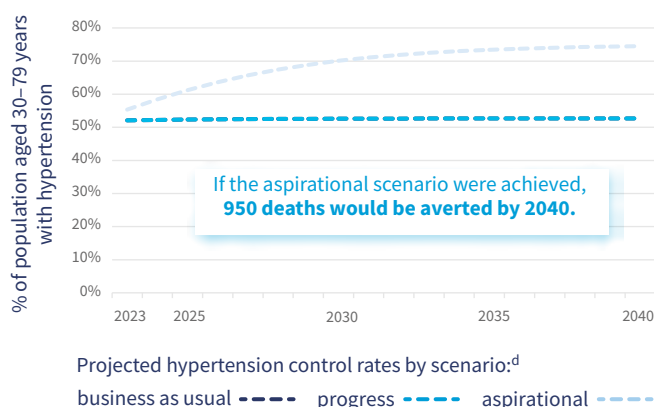### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **188.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 67 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	37%	30%	15%
♂	32%	25%	11%
♀	42%	35%	19%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ / ♂ / ♀ — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **4.6 million deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	25	19	2019
Cardiovascular disease deaths	2 566 000	1 451 000	1 116 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	51	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)	28	42	14	2019
Obesity, adults aged 18+ years (%)	4	3	5	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	8	2	2019
Physical inactivity, adults aged 18+ years (%)	34	25	44	2016

National response

Targets

National target for blood pressure	✔
National target for salt consumption	✔

Treatment

Guidelines for management of hypertension	✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✔
Functioning system for generating reliable cause-specific mortality data on a routine basis	✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
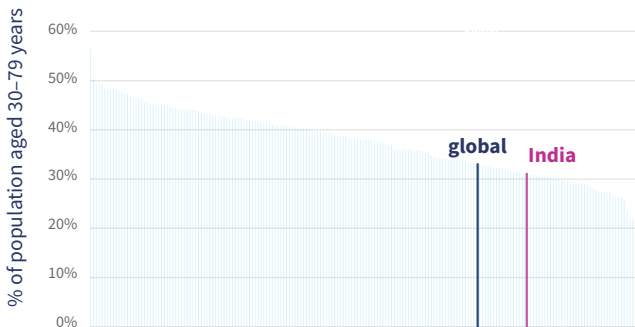
Indonesia

Hypertension profile

Total population (2019): 269 600 000

Total deaths (2019): 1 816 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **40%** ♂ **36%** ♀ **45%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **51.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 23.4 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	36%	19%	4%
♂	29%	15%	4%
♀	41%	21%	5%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **1.3 million deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ------ progress – – – aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	28	21	2019
Cardiovascular disease deaths	697 000	355 000	342 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	69	67	71	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)	37	71	4	2019
Obesity, adults aged 18+ years (%)	7	5	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	23	23	22	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Iran (Islamic Republic of)

Hypertension profile

Total population (2019): 86 564 000
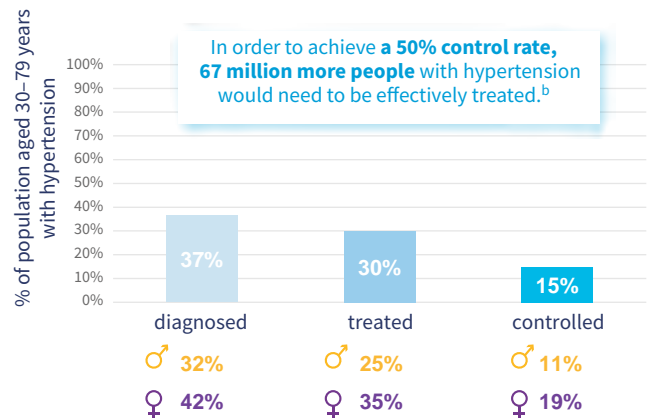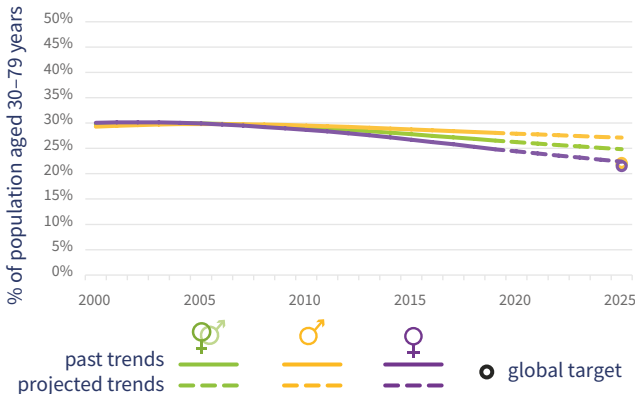
Total deaths (2019): 365 000!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚧ 26%   ♂ 27%   ♀ 26%

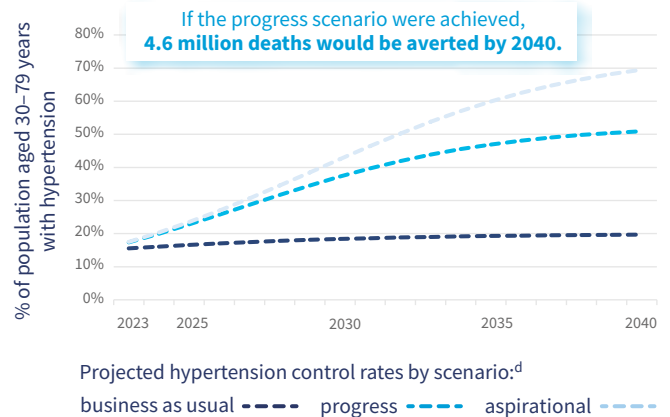### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **10 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.7 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	59%	48%	24%
♂	49%	38%	19%
♀	69%	58%	30%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends: ⚧ ♂ ♀
projected trends: ⚧ (dashed) ♂ (dashed) ♀ (dashed) ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **256 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- · progress ---- · aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	15	18	12	2019
Cardiovascular disease deaths	157 000	90 200	66 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	52	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	14	25	3	2019
Obesity, adults aged 18+ years (%)	26	19	32	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	1	0	2019
Physical inactivity, adults aged 18+ years (%)	33	23	43	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
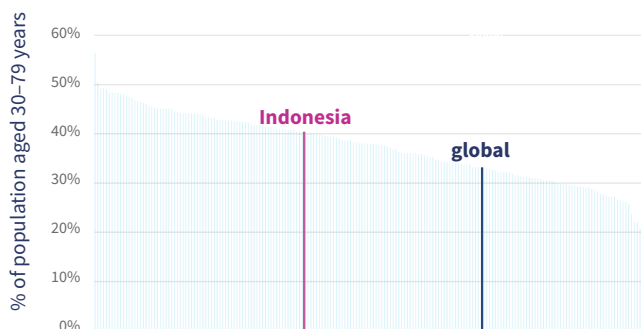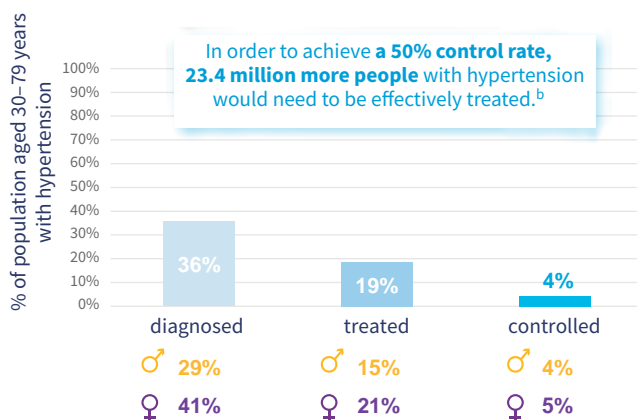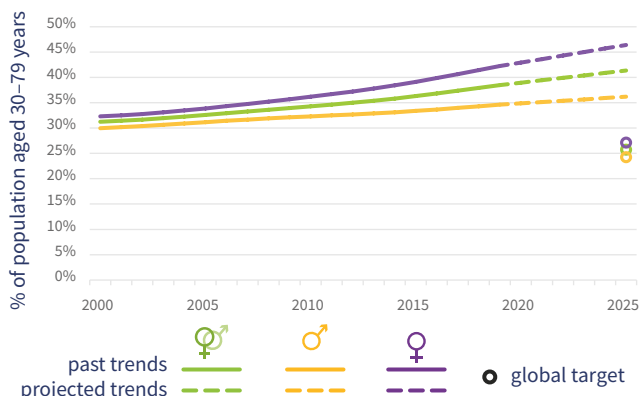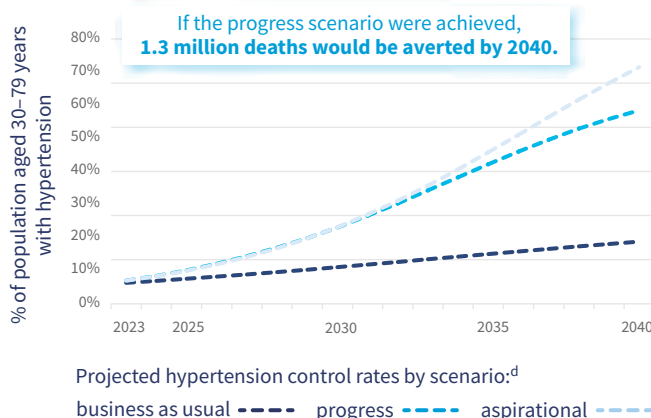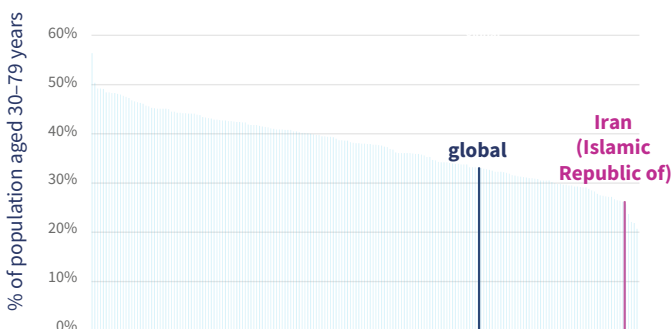
Iraq

Hypertension profile

Total population (2019): 41 564 000
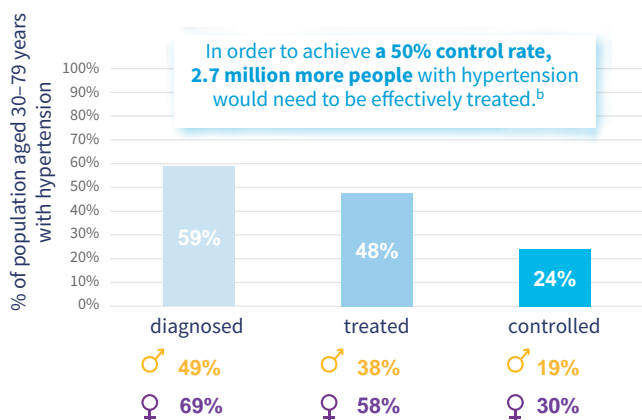**Total deaths (2019):** 160 000

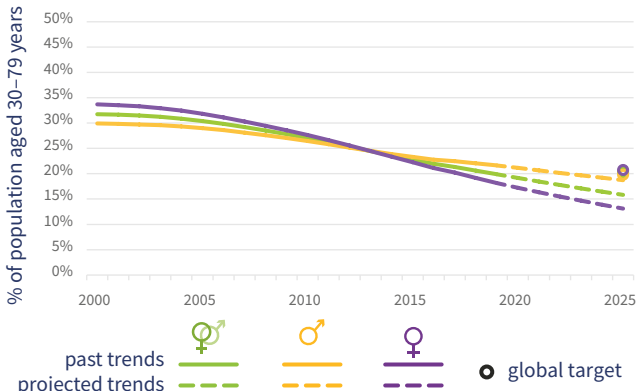**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 48%   ♂ 48%   ♀ 48%

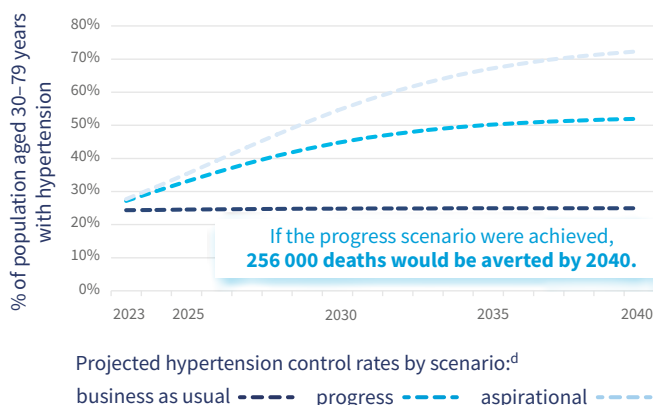### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **5.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	61%	44%	13%
♂	56%	39%	11%
♀	67%	48%	15%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **142 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	28	20	2019
Cardiovascular disease deaths	62 900	33 300	29 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	64	62	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	19	36	2	2019
Obesity, adults aged 18+ years (%)	30	23	37	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	52	39	65	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
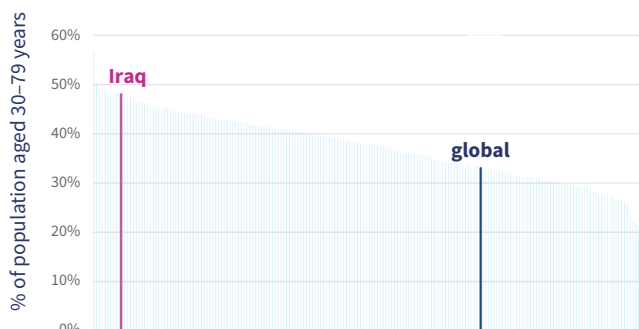
Ireland
Hypertension profile

Total population (2019): 4 896 000
Total deaths (2019): 30 800

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **32%**   ♂ **38%**   ♀ **27%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 249 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	50%	41%	24%
♂	48%	38%	21%
♀	54%	45%	28%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥ ♂ ♀
projected trends   ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **13 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	11	8	2019
Cardiovascular disease deaths	8300	4300	4000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	51	53	49	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	21	23	20	2019
Obesity, adults aged 18+ years (%)	25	25	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	18	6	2019
Physical inactivity, adults aged 18+ years (%)	33	28	37	2016

National response

Targets
National target for blood pressure   ✘
National target for salt consumption   ✔

Treatment
Guidelines for management of hypertension   ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✔
Conducted recent, national survey on salt/sodium intake   no data
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Israel
Hypertension profile

Total population (2019): 8 608 000
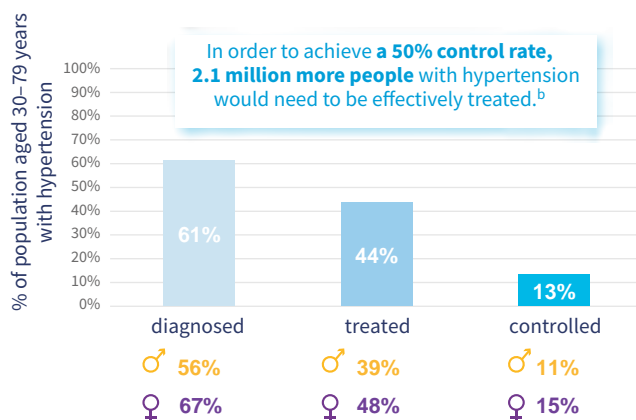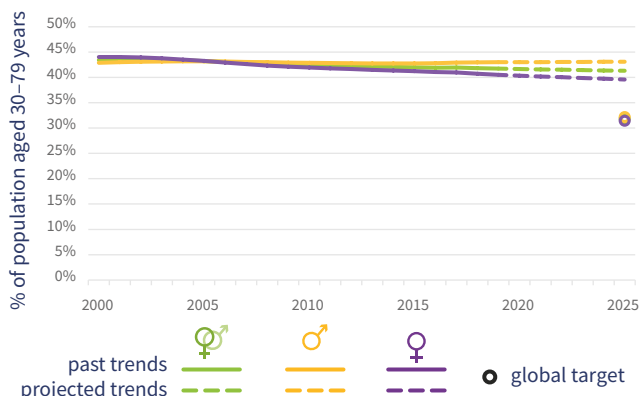**Total deaths (2019):** 45 400

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 29% ♂ 33% ♀ 25%

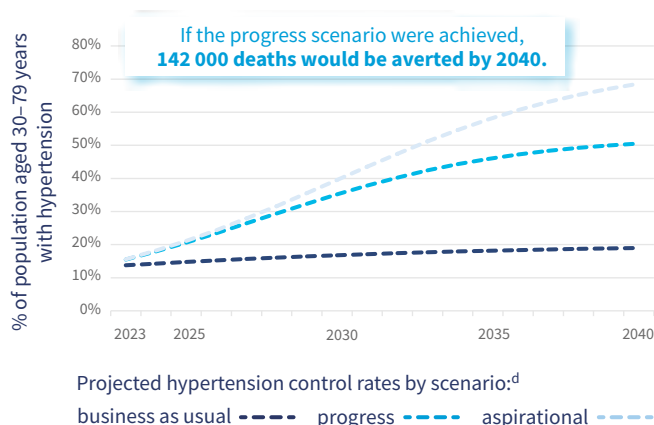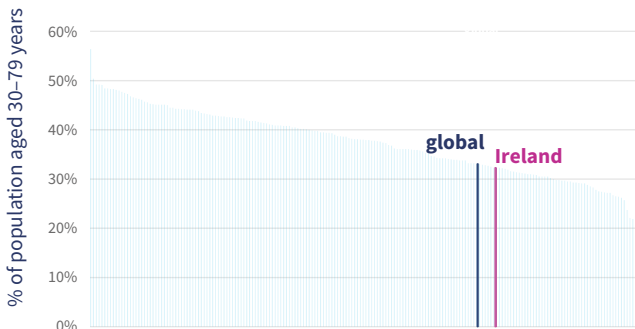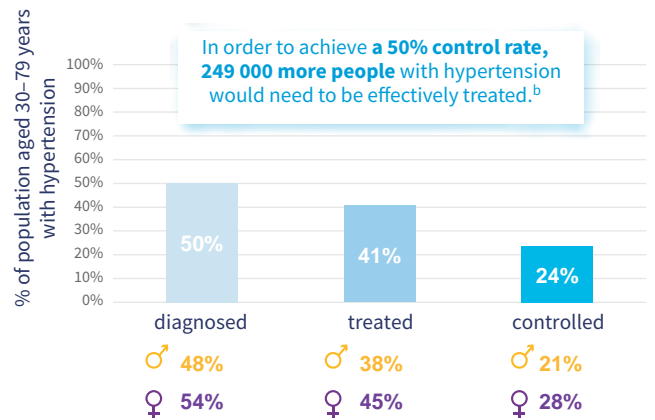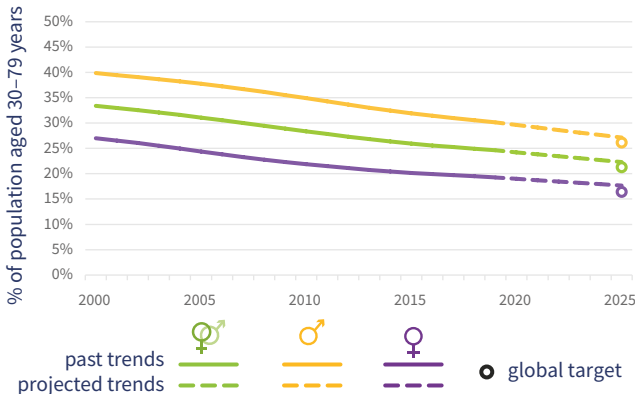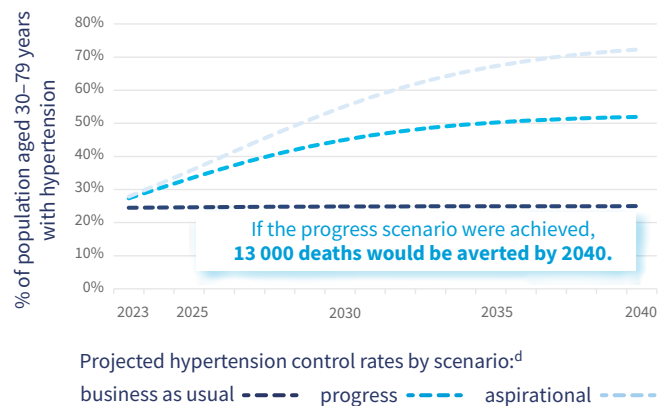## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 280 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	63%	53%	27%
♂	61%	50%	24%
♀	66%	57%	31%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends --- ⚥ ♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **13 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	9	11	7	2019
Cardiovascular disease deaths	10 200	5100	5100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	51	51	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	10	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	22	29	14	2019
Obesity, adults aged 18+ years (%)	26	26	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
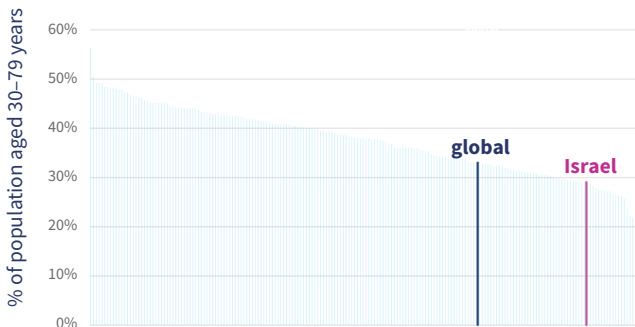
Italy

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **34%**   ♂ **39%**   ♀ **29%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **16.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 3.3 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	62%	54%	28%
♂	59%	51%	25%
♀	65%	58%	33%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **295 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -
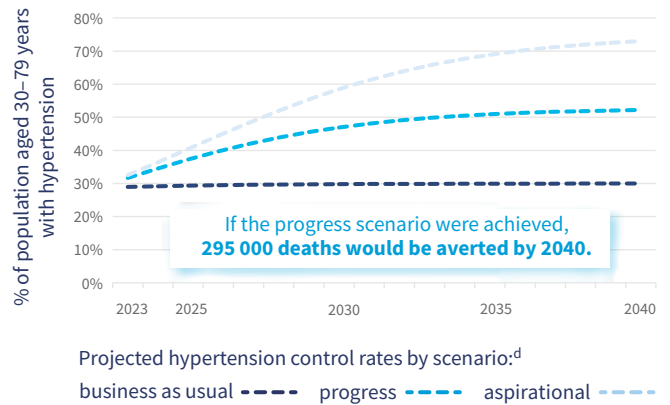
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	9	11	7	2019
Cardiovascular disease deaths	227 000	98 800	129 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	47	47	48	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	8	2019
Current tobacco use, adults aged 15+ years (%)[f]	23	27	20	2019
Obesity, adults aged 18+ years (%)	20	20	20	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	4	2019
Physical inactivity, adults aged 18+ years (%)	41	36	46	2016

National response

Targets

National target for blood pressure	✖
National target for salt consumption	✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✖
Conducted recent, national survey on salt/sodium intake	✖
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Treatment

Guidelines for management of hypertension	✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Jamaica

Hypertension profile

Total population (2019): 2 814 000
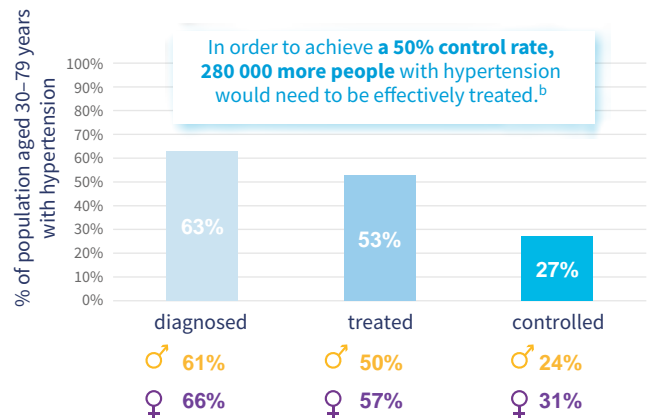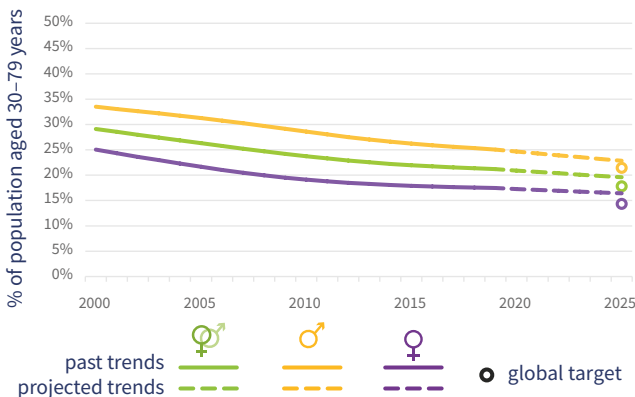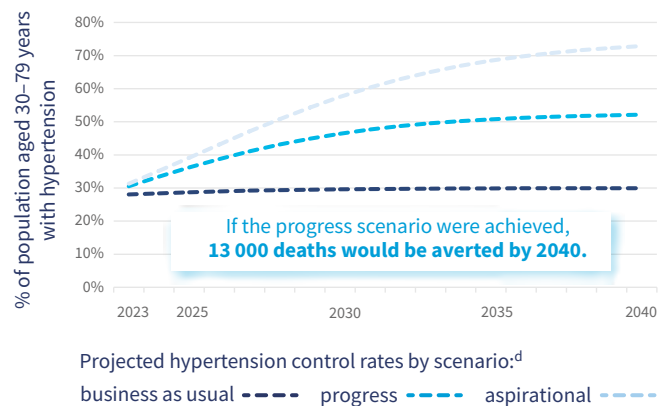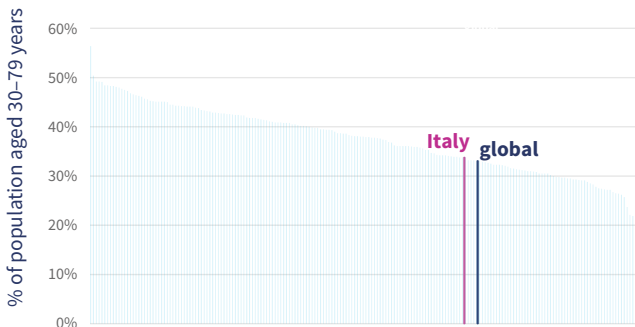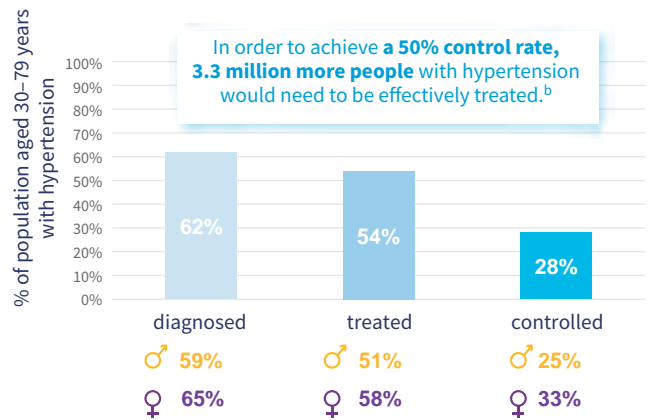**Total deaths (2019): 19 300**

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **46%** ♂ **45%** ♀ **48%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **670 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 206 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	65%	51%	19%
♂	51%	37%	14%
♀	77%	64%	24%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **11 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	16	17	2019
Cardiovascular disease deaths	5400	2600	2800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	51	51	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	10	16	4	2019
Obesity, adults aged 18+ years (%)	25	15	33	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	6	1	2019
Physical inactivity, adults aged 18+ years (%)	33	28	37	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Japan

Hypertension profile

Total population (2019): 125 800 000
Total deaths (2019): 1 352 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **31%** ♂ **40%** ♀ **23%**

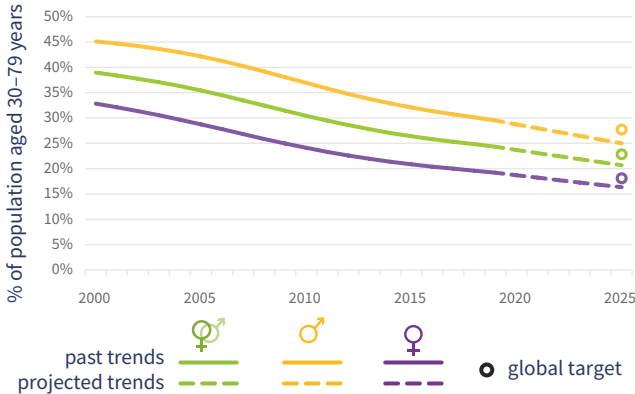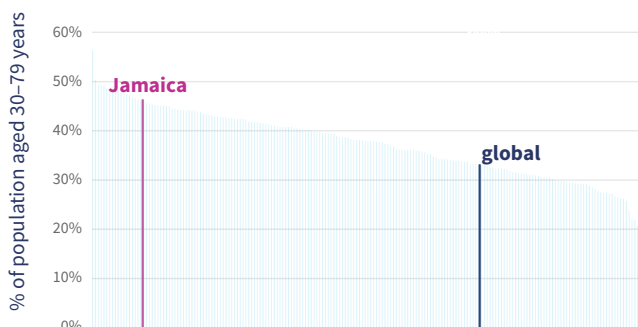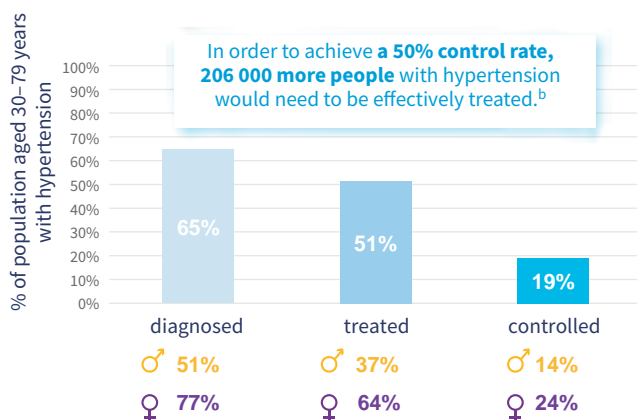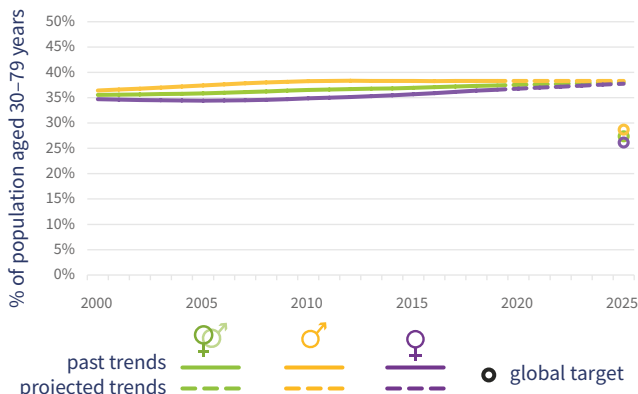### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **33.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 6.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	67%	48%	26%
♂	66%	46%	24%
♀	69%	51%	30%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀ — ◯ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **388 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - - progress - - - - aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	8	11	6	2019
Cardiovascular disease deaths	364 000	165 000	199 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	45	48	42	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)[f]	21	31	10	2019
Obesity, adults aged 18+ years (%)	4	5	4	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	35	34	37	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension no data

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Jordan

Hypertension profile

Total population (2019): 10 699 000
Total deaths (2019): 28 900

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 38% ♂ 40% ♀ 36%

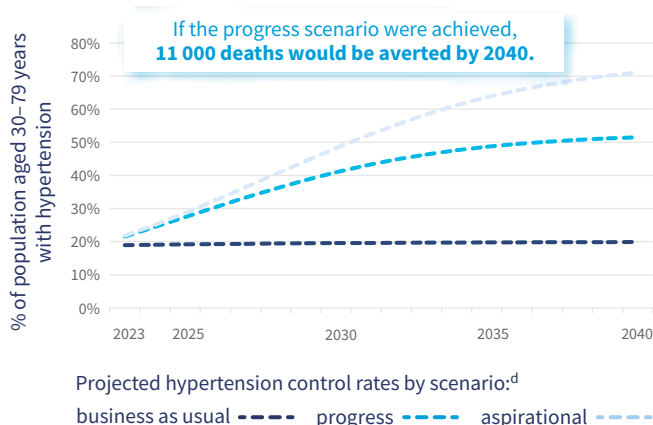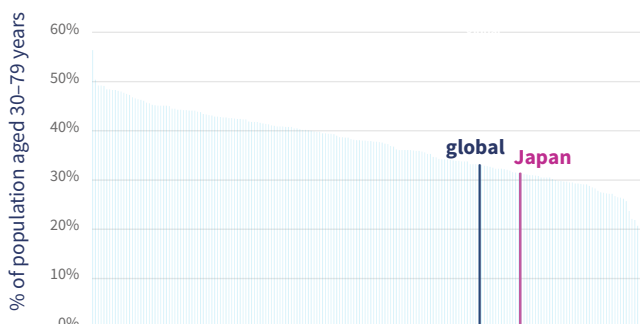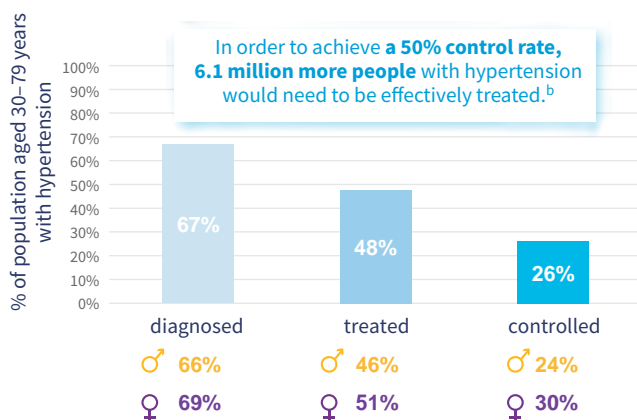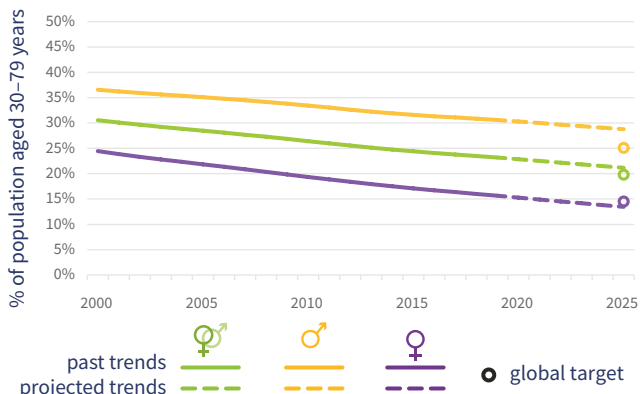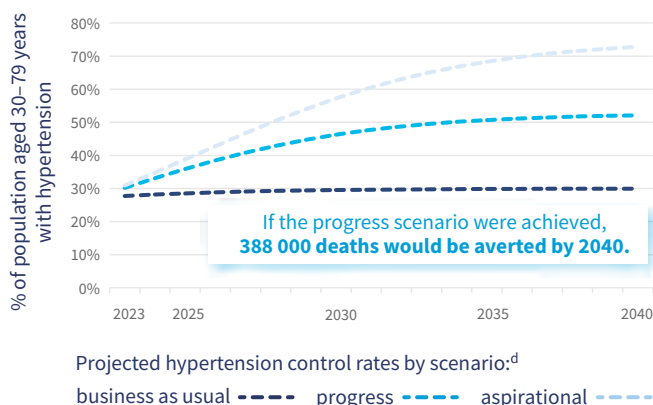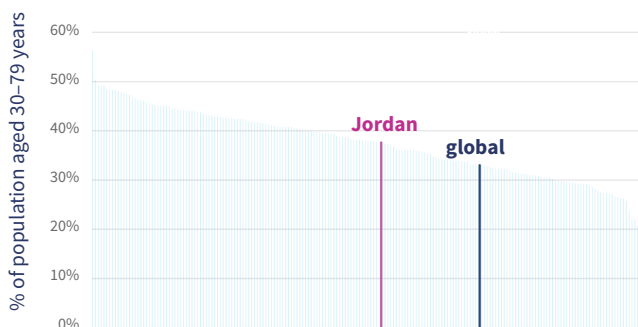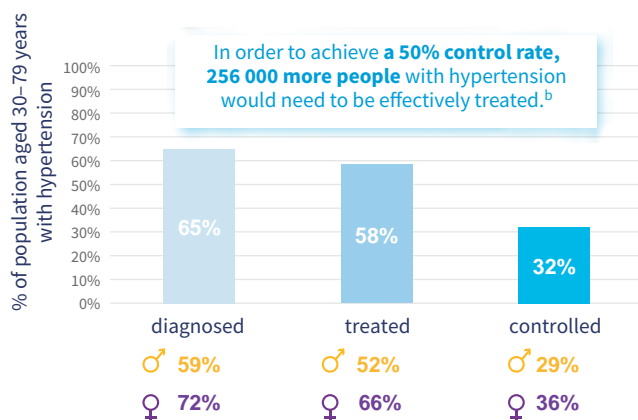### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 256 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	65%	58%	32%
♂	59%	52%	29%
♀	72%	66%	36%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **18 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	15	17	14	2019
Cardiovascular disease deaths	9700	4700	5000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	58	62	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)[f]	35	57	13	2019
Obesity, adults aged 18+ years (%)	36	28	43	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	12	10	13	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Kazakhstan

Hypertension profile

Total population (2019): 18 754 000
Total deaths (2019): 127 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 42% ♂ 41% ♀ 43%

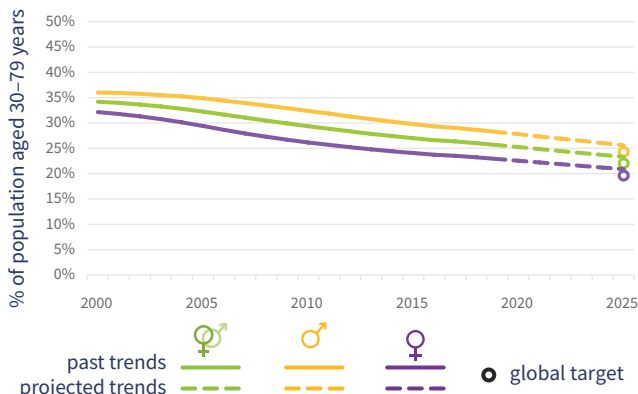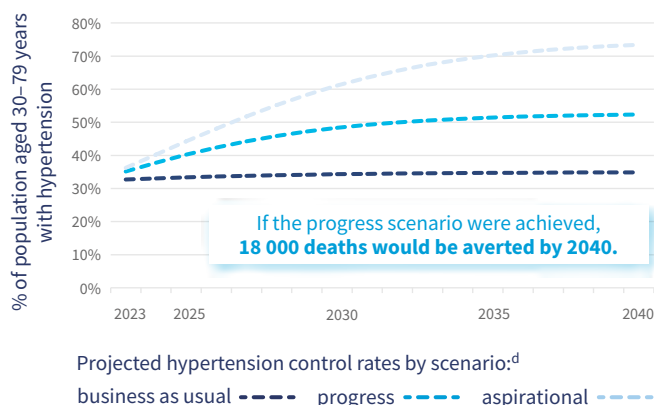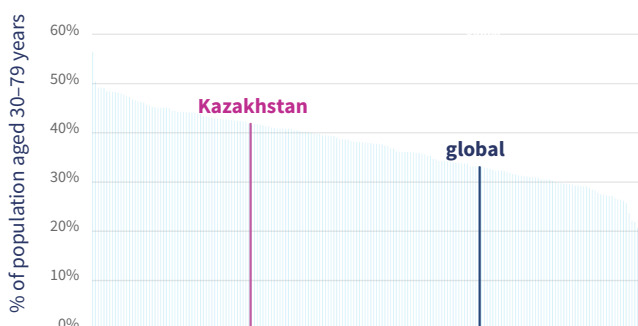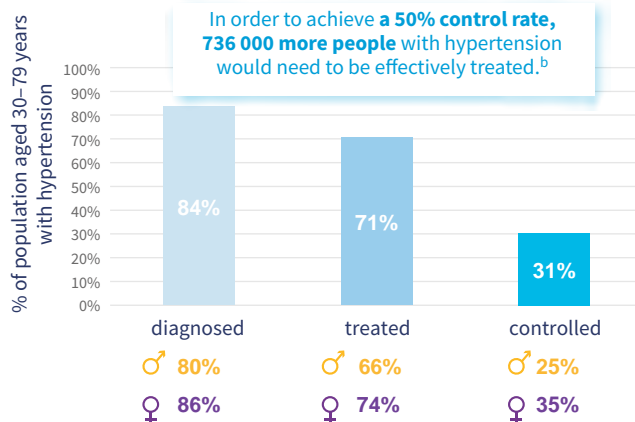## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 736 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	84%	71%	31%
♂	80%	66%	25%
♀	86%	74%	35%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⭕ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **64 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	31	15	2019
Cardiovascular disease deaths	60 300	27 500	32 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	64	63	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	24	40	7	2019
Obesity, adults aged 18+ years (%)	21	19	23	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	8	1	2019
Physical inactivity, adults aged 18+ years (%)	28	26	29	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Kenya

Hypertension profile

Total population (2019): 50 951 000

Total deaths (2019): 294 000

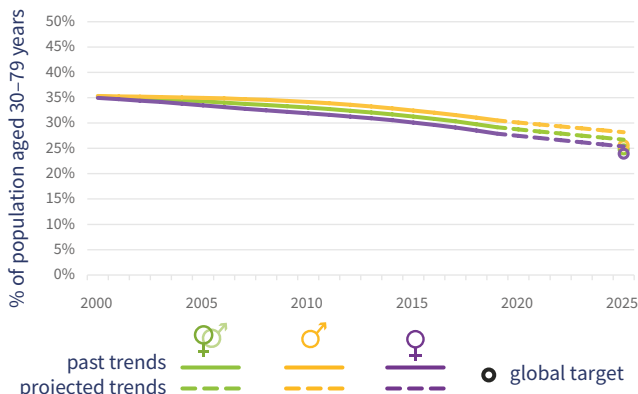Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 33% ♂ 31% ♀ 35%

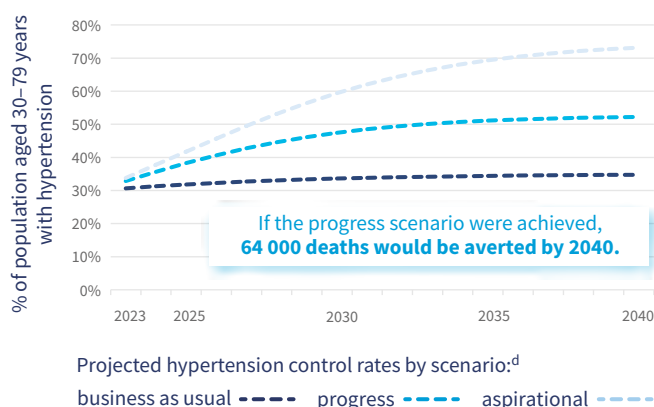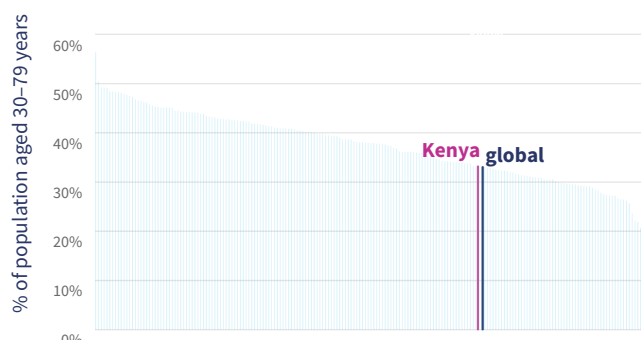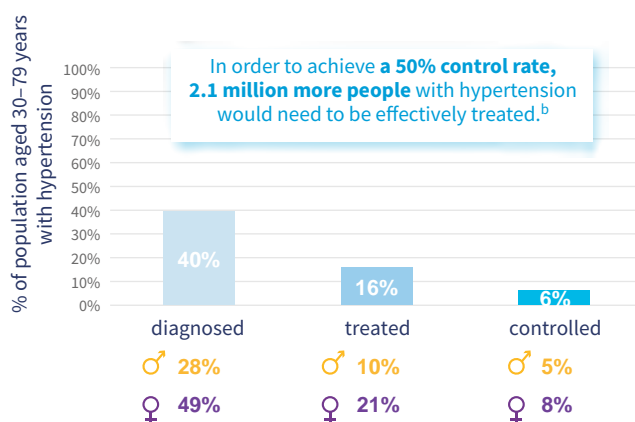## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **4.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	40%	16%	6%
♂	28%	10%	5%
♀	49%	21%	8%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **74 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	23	20	2019
Cardiovascular disease deaths	36 000	18 000	18 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	57	64	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	4	8	2019
Current tobacco use, adults aged 15+ years (%)	12	20	3	2019
Obesity, adults aged 18+ years (%)	7	3	11	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	15	14	17	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Kiribati

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 42%   ♂ 40%   ♀ 44%

Prevalence of hypertension – global comparison (both sexes)[a]

Of the 18 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 7800 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	34%	15%	7%
♂	31%	16%	5%
♀	36%	15%	8%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

⚥ past trends / projected trends
♂
♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **520 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	51	58	44	2019
Cardiovascular disease deaths	390	220	170	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	46	50	39	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	42	55	28	2019
Obesity, adults aged 18+ years (%)	46	42	50	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	1	0	2019
Physical inactivity, adults aged 18+ years (%)	40	34	46	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Kuwait

Hypertension profile

Total population (2019): 4 441 000
Total deaths (2019): 8240

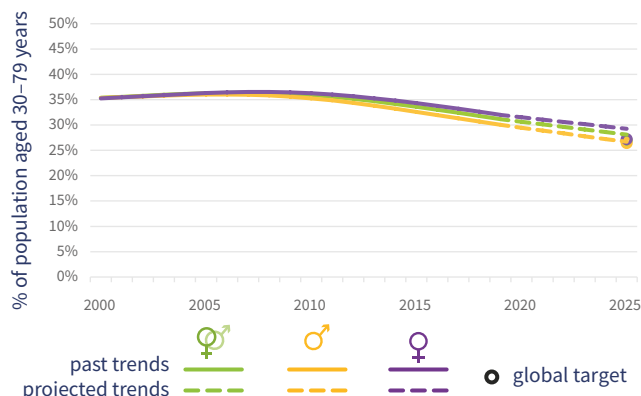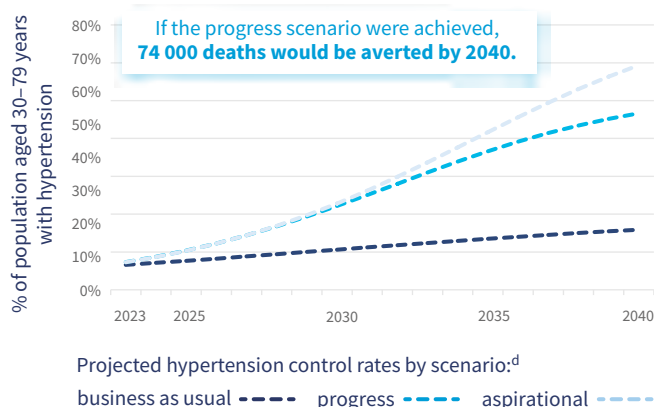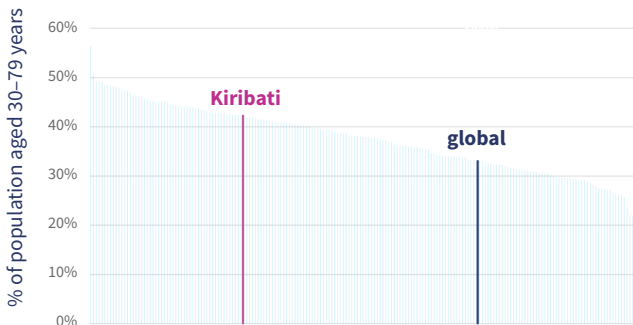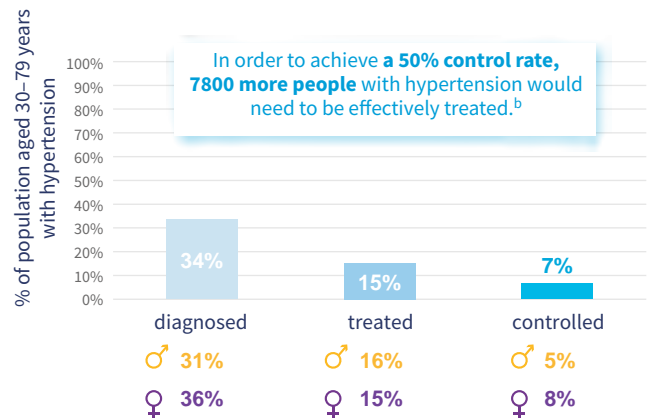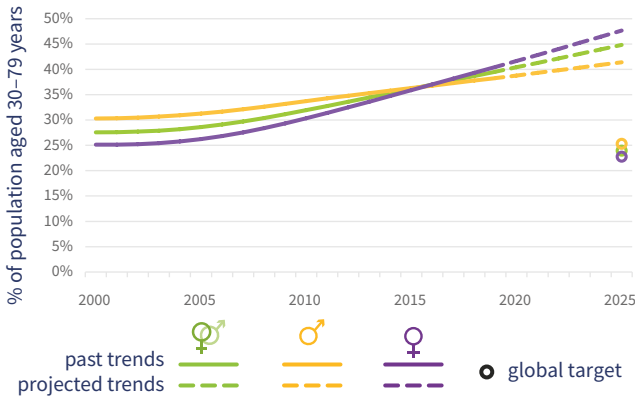**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 41% ♂ 44% ♀ 35%

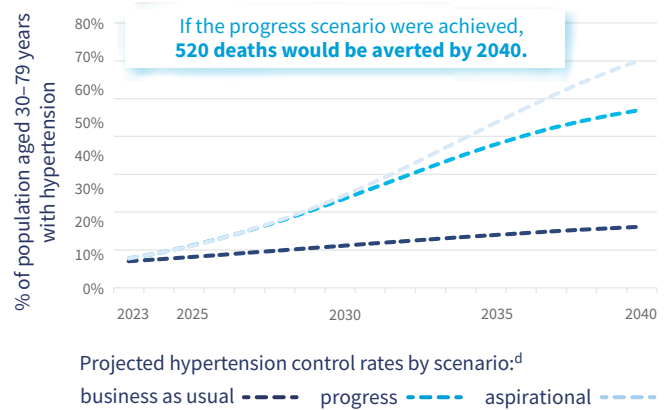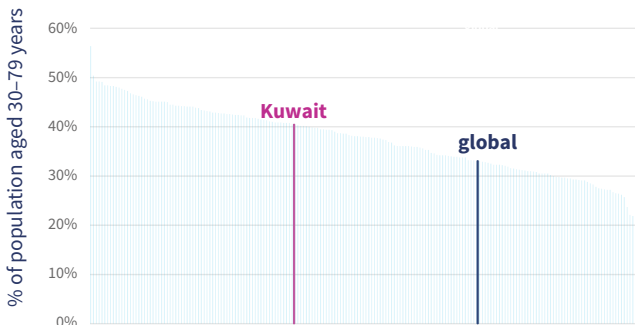### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **921 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 210 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	63%	56%	31%
♂	58%	51%	27%
♀	73%	67%	39%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — — ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **3500 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	12	14	8	2019
Cardiovascular disease deaths	3300	2900	460	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	55	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)	18	34	2	2019
Obesity, adults aged 18+ years (%)	38	33	46	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	67	61	75	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Kyrgyzstan

Hypertension profile

Total population (2019): 6 324 000
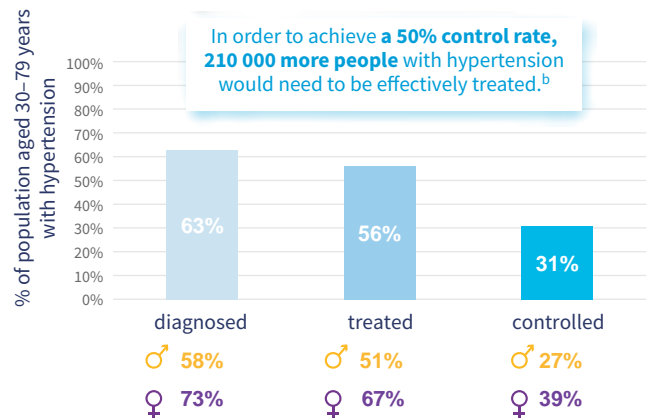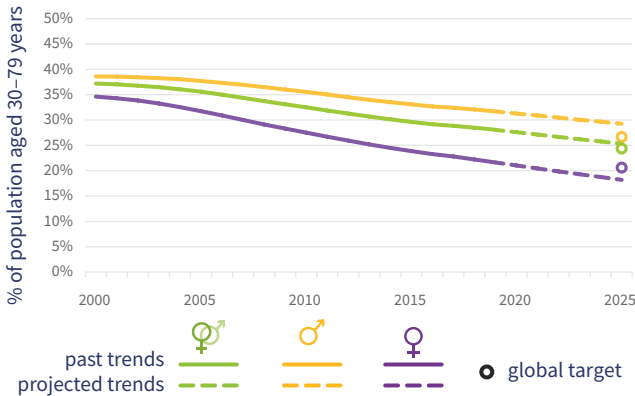
Total deaths (2019): 29 900

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 41% ♂ 38% ♀ 43%

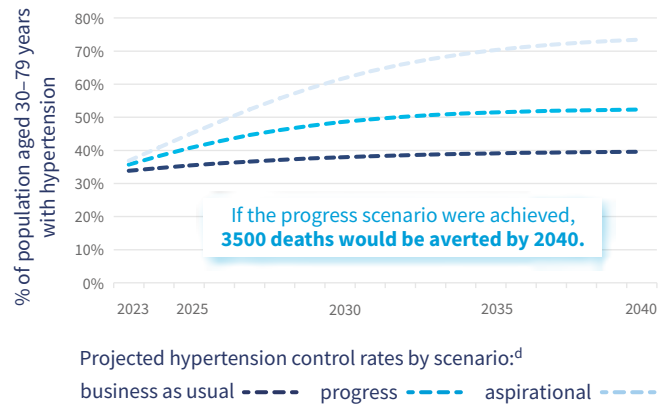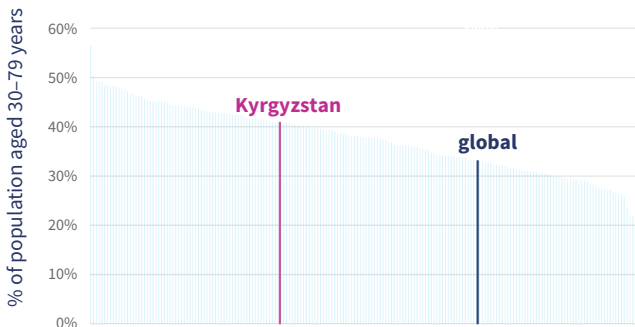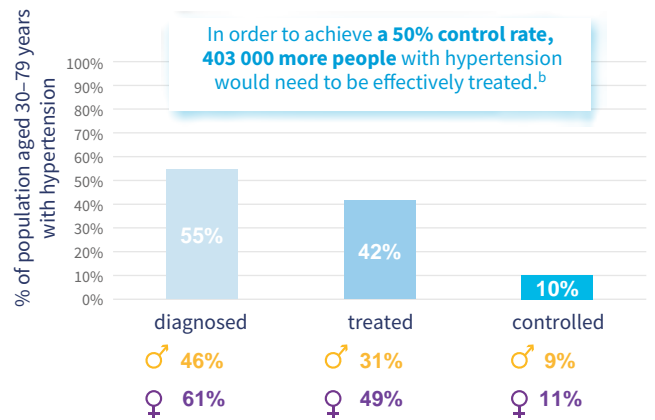## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 403 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	55%	42%	10%
♂	46%	31%	9%
♀	61%	49%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends ---
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **24 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	20	27	15	2019
Cardiovascular disease deaths	14 000	6800	7100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	44	44	44	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	28	52	3	2019
Obesity, adults aged 18+ years (%)	17	14	19	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	9	1	2019
Physical inactivity, adults aged 18+ years (%)	14	11	17	2016

National response

Targets

National target for blood pressure ✘

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✘

Conducted recent, national survey on salt/sodium intake ✘

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Lao People's Democratic Republic

Hypertension profile

Total population (2019): 7 212 000

Total deaths (2019): 43 500

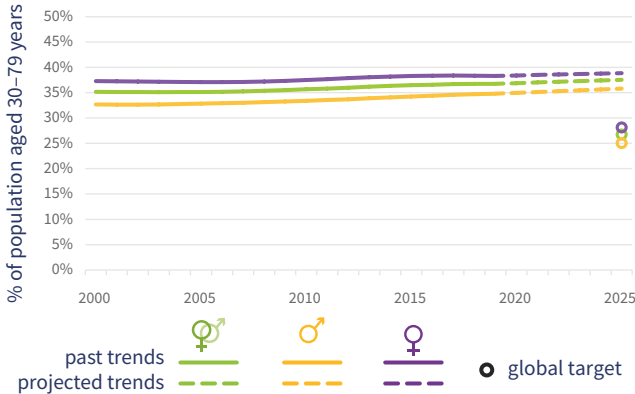Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 29%   ♂ 26%   ♀ 31%

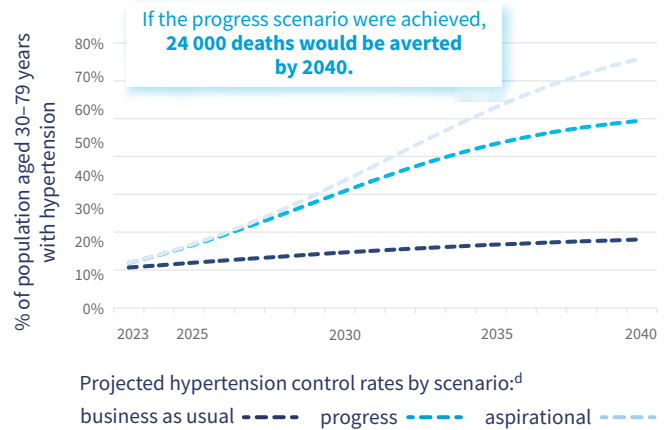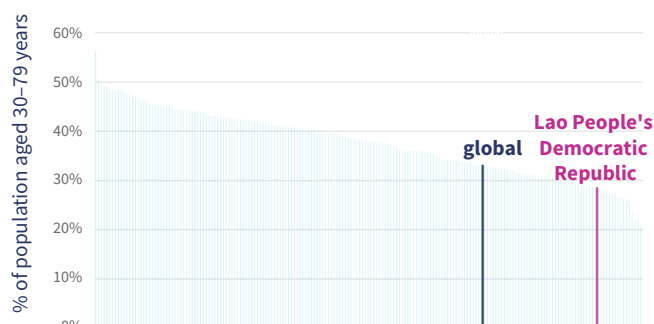## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **712 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 258 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	45%	32%	14%
♂	40%	27%	13%
♀	49%	36%	16%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **25 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	27	31	23	2019
Cardiovascular disease deaths	12 500	6500	6100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	55	51	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)	33	54	11	2019
Obesity, adults aged 18+ years (%)	5	4	7	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	18	5	2019
Physical inactivity, adults aged 18+ years (%)	16	12	21	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Latvia

Hypertension profile

Total population (2019): 1 917 000
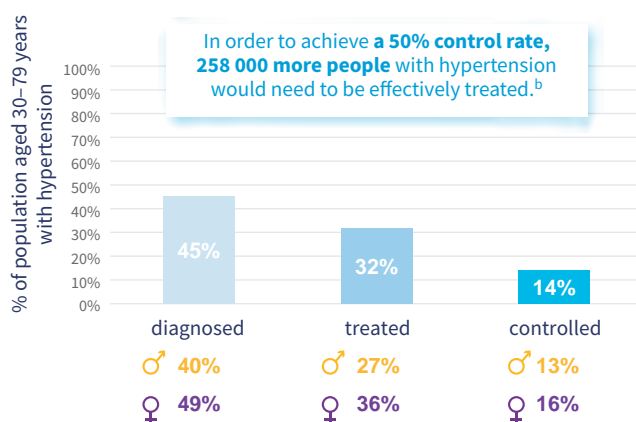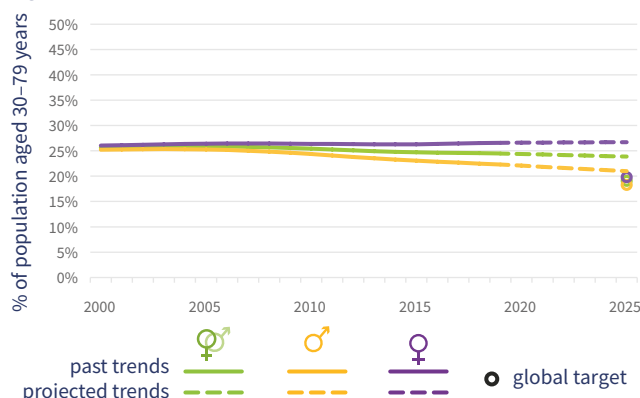**Total deaths (2019):** 29 800

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 44%   ♂ 49%   ♀ 39%

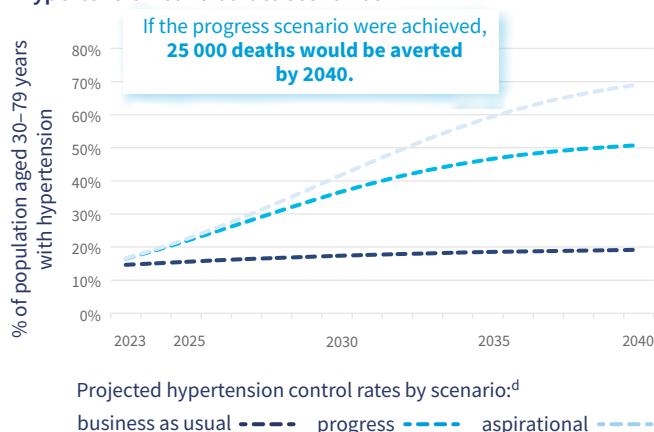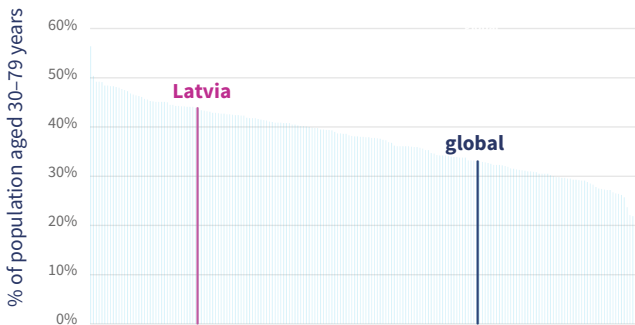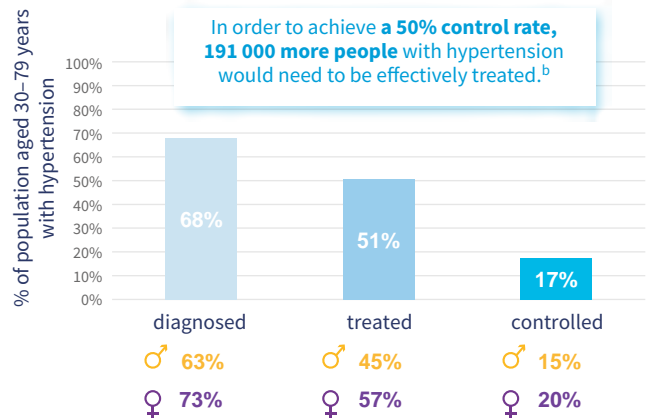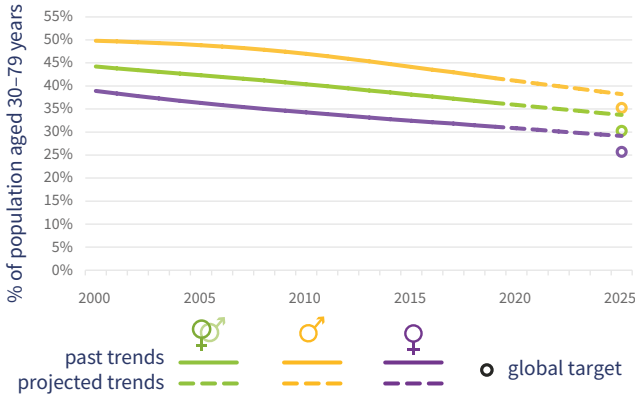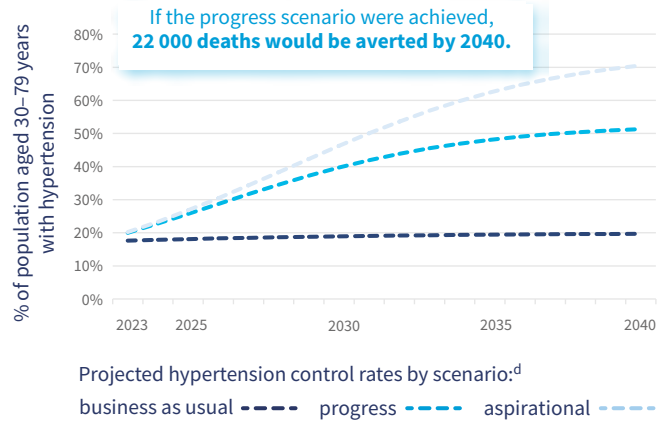## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 605 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 191 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	68%	51%	17%
♂	63%	45%	15%
♀	73%	57%	20%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **22 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	31	14	2019
Cardiovascular disease deaths	16 900	6700	10 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	57	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	10	6	2019
Current tobacco use, adults aged 15+ years (%)	37	51	24	2019
Obesity, adults aged 18+ years (%)	24	22	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	13	22	6	2019
Physical inactivity, adults aged 18+ years (%)	30	25	33	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Lebanon

Hypertension profile

Total population (2019): 5 782 000

Total deaths (2019): 37 800

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **38%**   ♂ **42%**   ♀ **34%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 284 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	55%	49%	27%
♂	49%	44%	23%
♀	61%	55%	32%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **16 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----
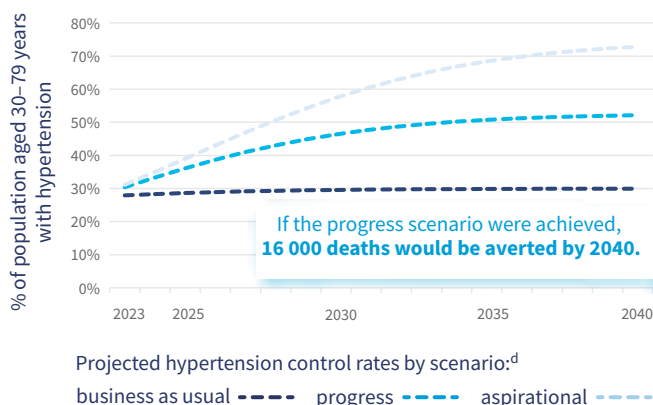
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	20	24	15	2019
Cardiovascular disease deaths	17 500	10 400	7200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	57	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	38	48	29	2019
Obesity, adults aged 18+ years (%)	32	27	37	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	3	0	2019
Physical inactivity, adults aged 18+ years (%)	36	40	33	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
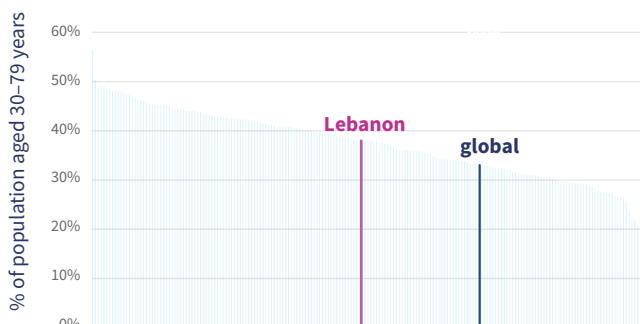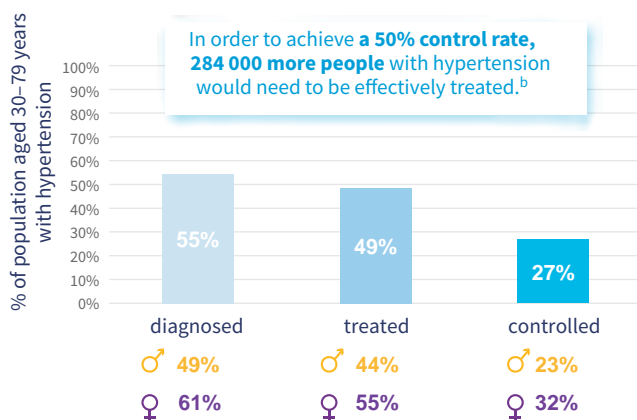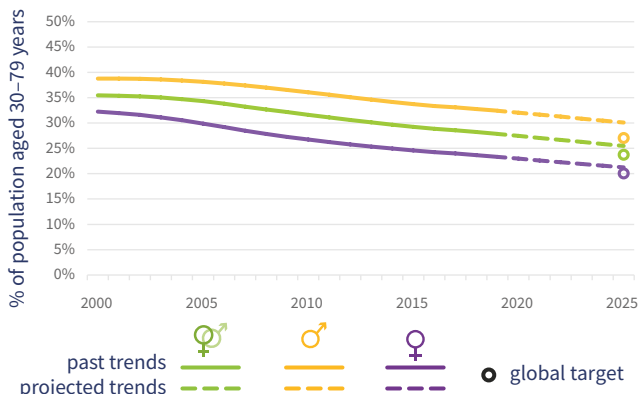
Lesotho

Hypertension profile

Total population (2019): 2 226 000
Total deaths (2019): 35 700

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **40%** ♂ **32%** ♀ **47%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the 297 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 95 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	54%	44%	18%
♂	41%	29%	14%
♀	61%	51%	21%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **13 700 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	43	49	37	2019
Cardiovascular disease deaths	6600	3000	3600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	55	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	7	2019
Current tobacco use, adults aged 15+ years (%)	24	43	6	2019
Obesity, adults aged 18+ years (%)	17	5	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	8	1	2019
Physical inactivity, adults aged 18+ years (%)	6	7	6	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
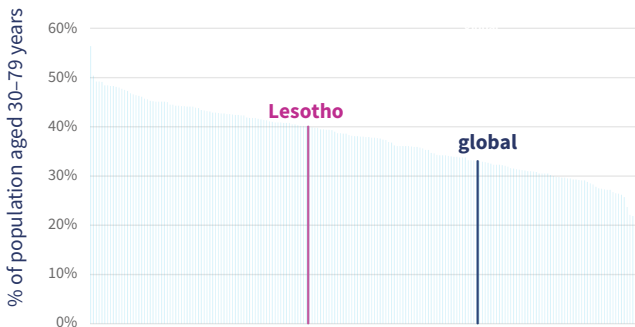
Liberia

Hypertension profile

Total population (2019): 4 985 000
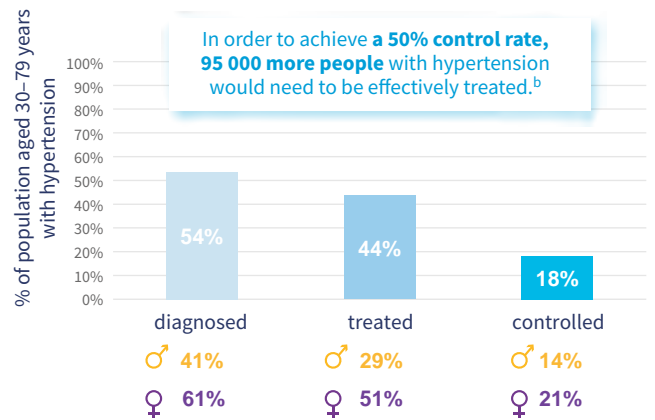**Total deaths (2019): 36 600**

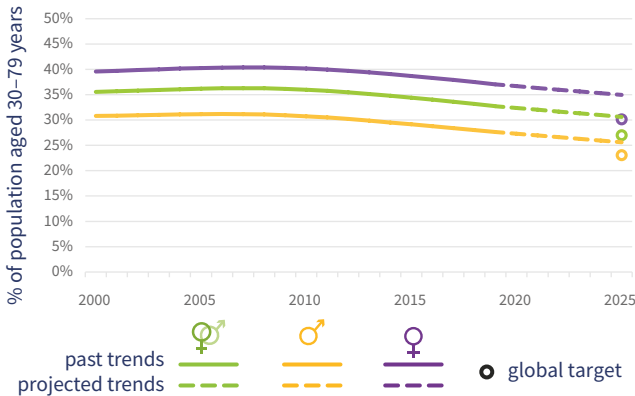Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **39%**   ♂ **37%**   ♀ **41%**

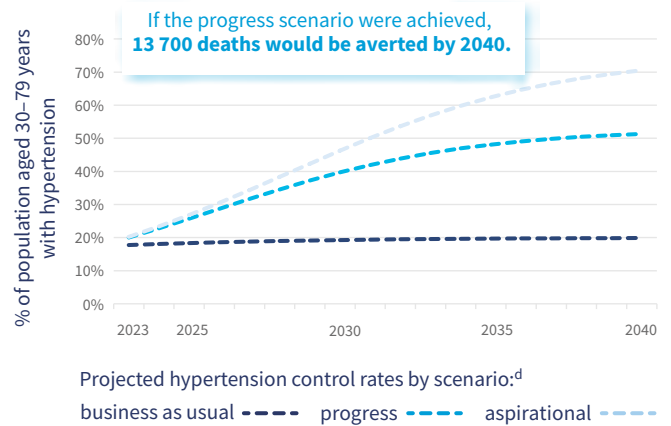## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 555 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 233 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	42%	26%	8%
♂	36%	24%	8%
♀	47%	29%	9%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥ ♂ ♀
projected trends   ⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **9600 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	18	15	20	2019
Cardiovascular disease deaths	4200	1800	2500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	58	61	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	8	15	2	2019
Obesity, adults aged 18+ years (%)	10	6	14	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	6	1	2019
Physical inactivity, adults aged 18+ years (%)	25	22	29	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
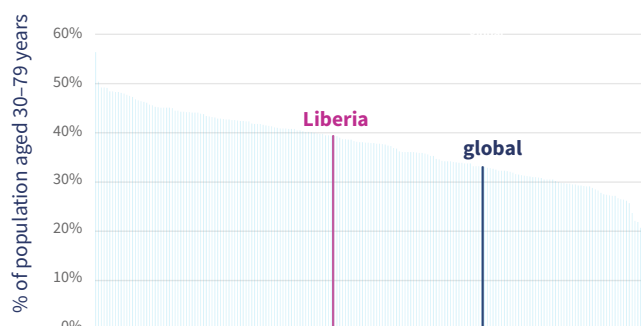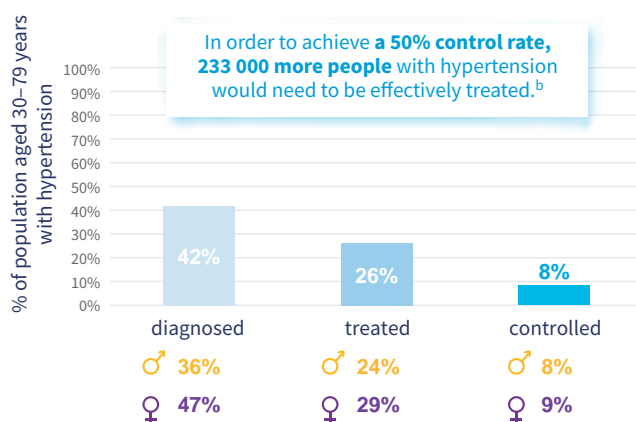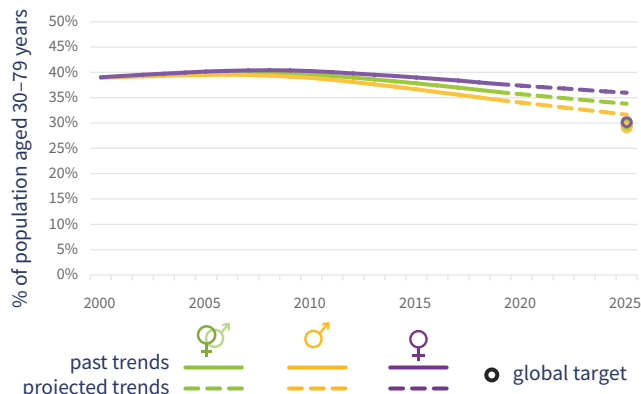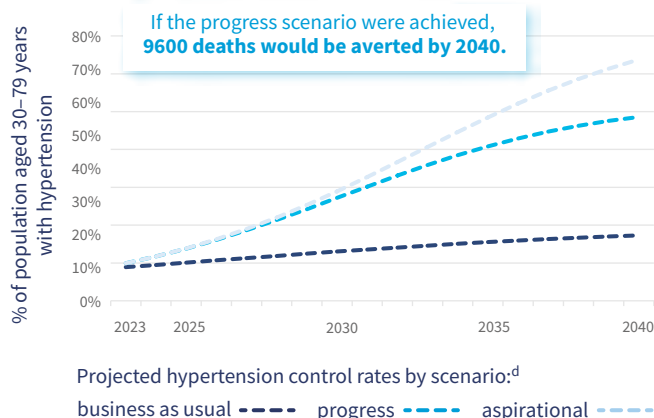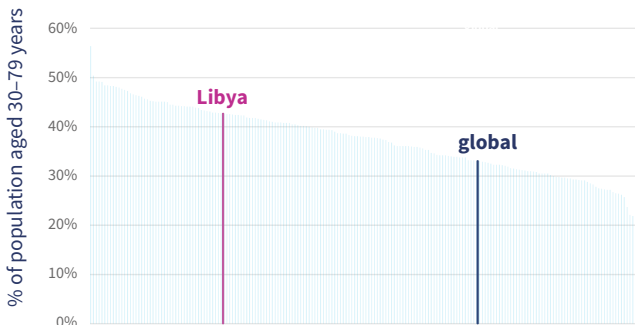
Libya

Hypertension profile

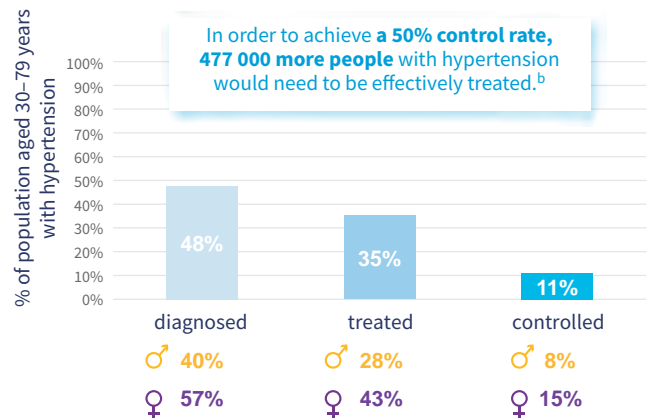**Total population (2019):** 6 569 000

Total deaths (2019): 27 100

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **43%**   ♂ **46%**   ♀ **39%**
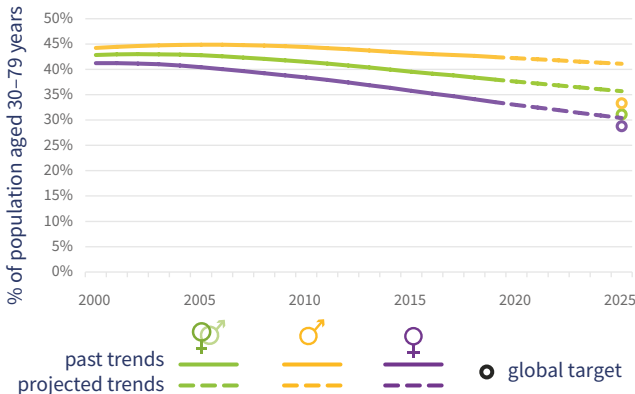

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 477 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	48%	35%	11%
♂	40%	28%	8%
♀	57%	43%	15%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀

projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **27 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----
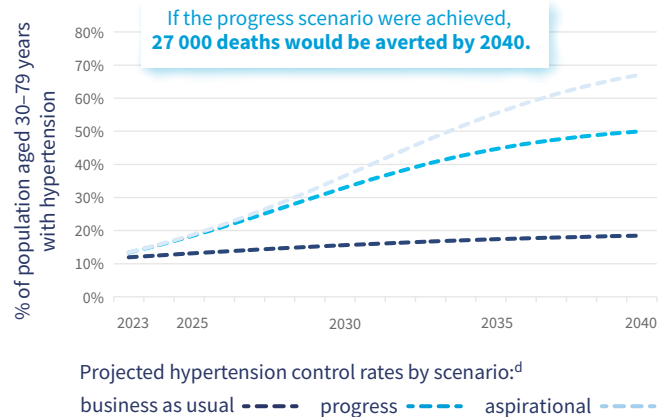
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	20	18	2019
Cardiovascular disease deaths	10 700	5200	5500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	59	62	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	33	25	40	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	36	31	42	2016

National response

Targets

National target for blood pressure ✘

National target for salt consumption ✘

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Lithuania

Hypertension profile

Total population (2019): 2 849 000

Total deaths (2019): 42 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **48%** ♂ **54%** ♀ **42%**

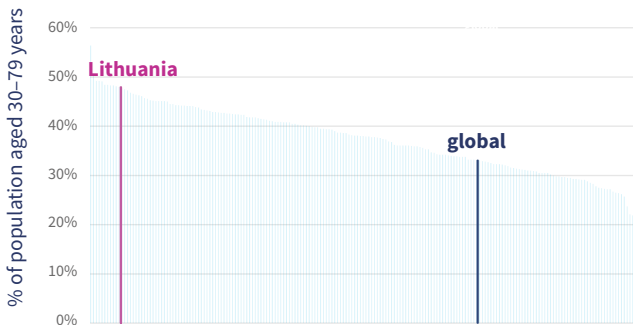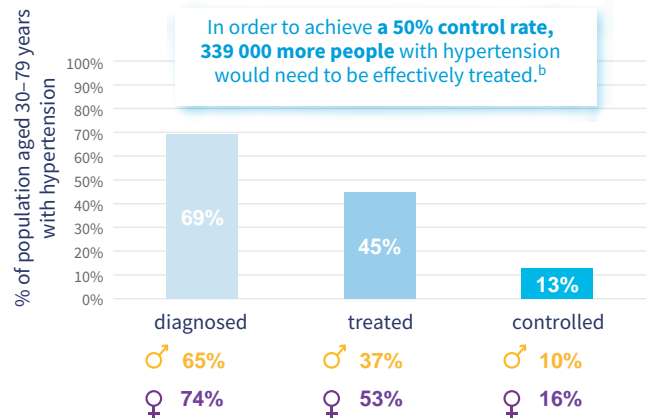### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 940 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 339 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
69%	45%	13%
♂ 65%	♂ 37%	♂ 10%
♀ 74%	♀ 53%	♀ 16%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **28 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	28	12	2019
Cardiovascular disease deaths	24 000	9400	14 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	60	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	7	2019
Current tobacco use, adults aged 15+ years (%)	32	43	22	2019
Obesity, adults aged 18+ years (%)	26	24	28	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	19	5	2019
Physical inactivity, adults aged 18+ years (%)	27	23	29	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Luxembourg

Hypertension profile

Total population (2019): 620 000
Total deaths (2019): 4250

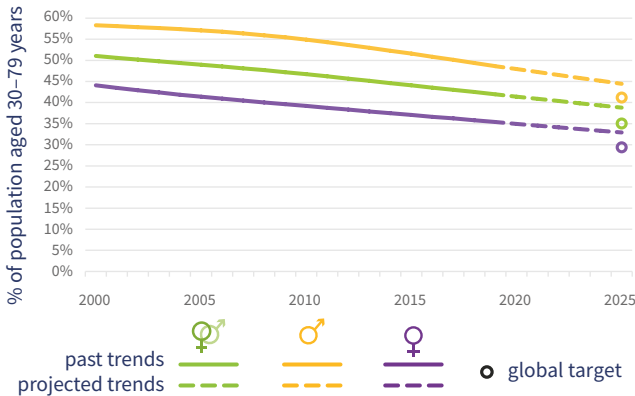**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 31% ♂ 37% ♀ 24%

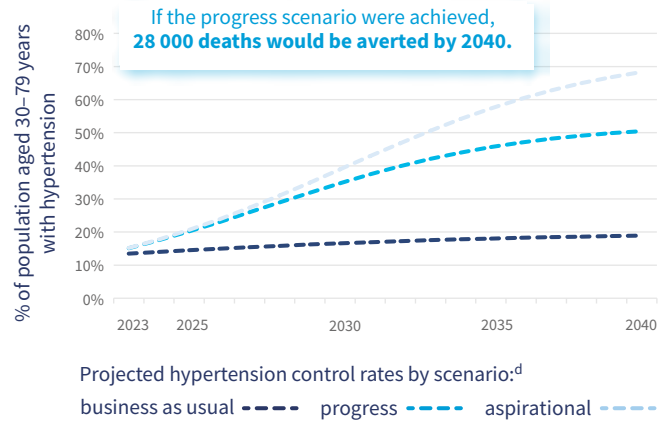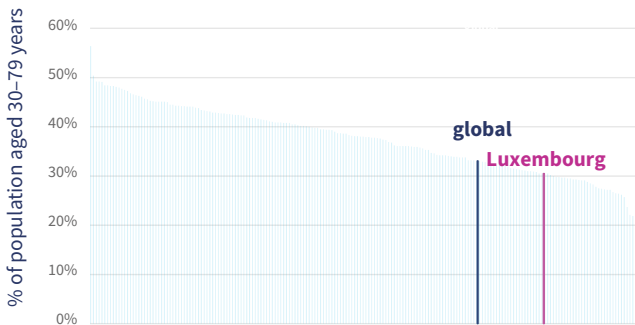## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 126 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 25 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	59%	51%	30%
♂	59%	51%	27%
♀	60%	51%	34%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **950 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual – – –   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	12	7	2019
Cardiovascular disease deaths	1300	600	680	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	51	53	49	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	10	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	22	23	20	2019
Obesity, adults aged 18+ years (%)	23	25	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	18	5	2019
Physical inactivity, adults aged 18+ years (%)	28	26	30	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Madagascar

Hypertension profile

Total population (2019): 27 533 000
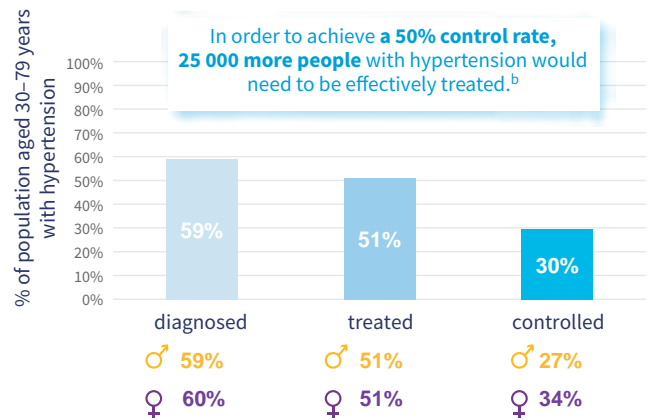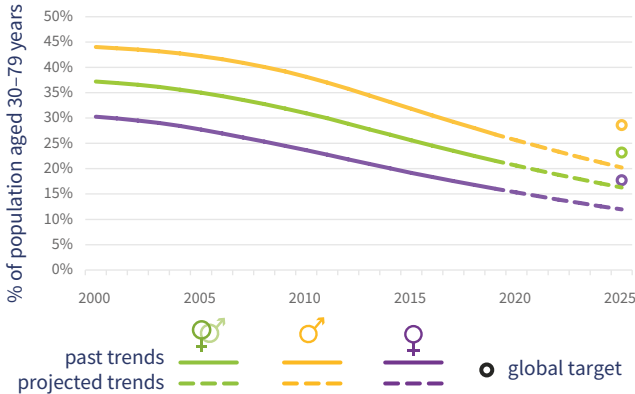**Total deaths (2019):** 178 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 37% ♂ 35% ♀ 39%

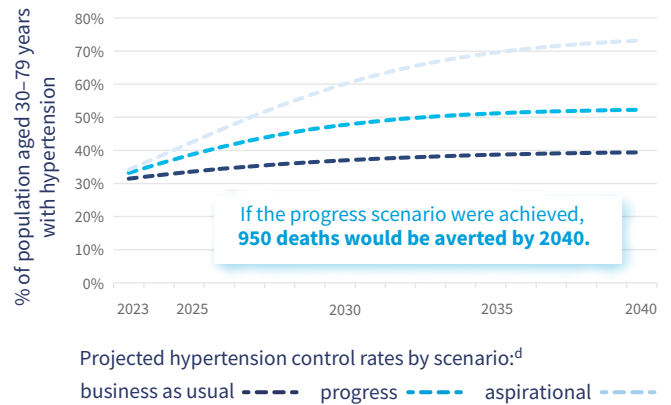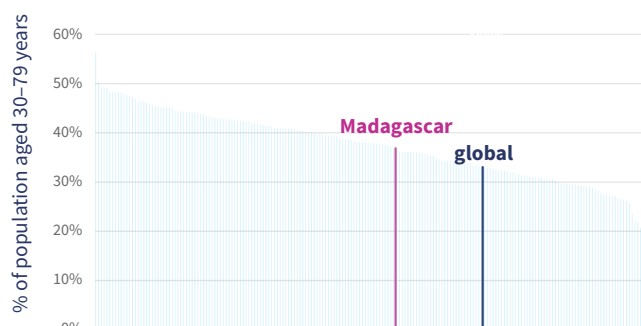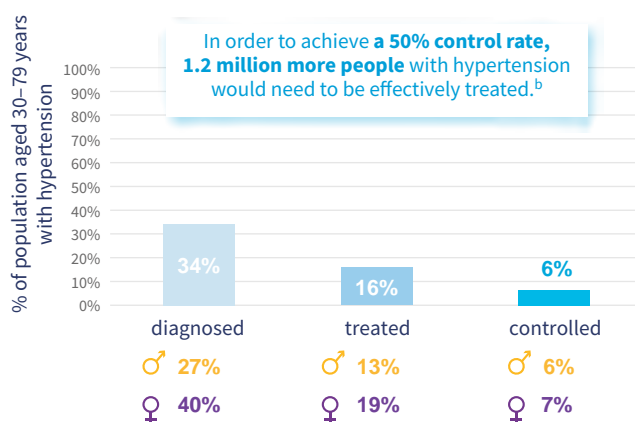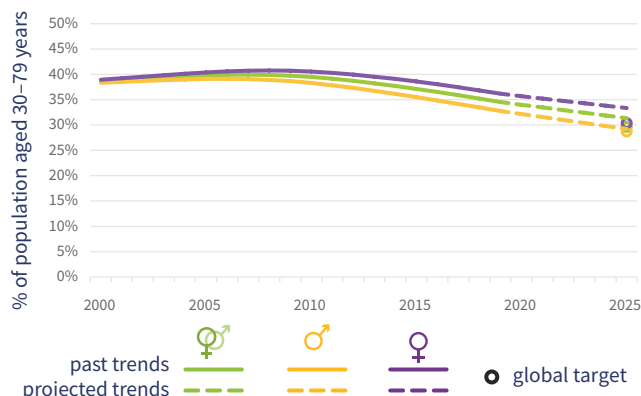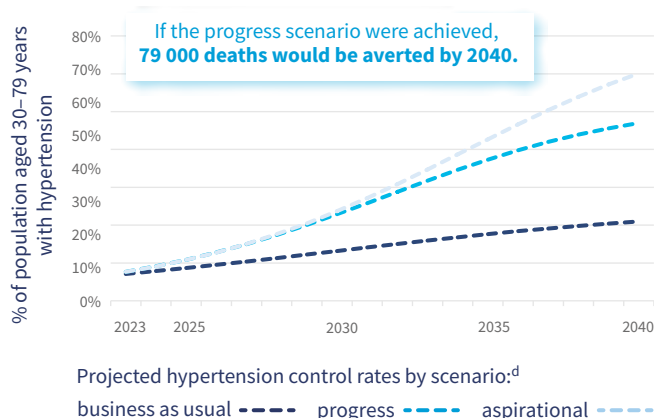## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 2.8 million adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.2 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
34%	16%	6%
♂ 27%	♂ 13%	♂ 6%
♀ 40%	♀ 19%	♀ 7%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **79 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	26	26	26	2019
Cardiovascular disease deaths	40 500	19 600	20 900	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	59	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	28	43	14	2019
Obesity, adults aged 18+ years (%)	5	3	8	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	0	2019
Physical inactivity, adults aged 18+ years (%)	17	13	21	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Malawi

Hypertension profile

Total population (2019): 18 867 000
Total deaths (2019): 108 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **30%** ♂ **27%** ♀ **32%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 508 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	38%	24%	11%
♂	27%	17%	6%
♀	45%	29%	14%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **23 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	26	20	2019
Cardiovascular disease deaths	14 000	7500	6400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	64	64	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	11	18	4	2019
Obesity, adults aged 18+ years (%)	6	2	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	6	1	2019
Physical inactivity, adults aged 18+ years (%)	16	13	18	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
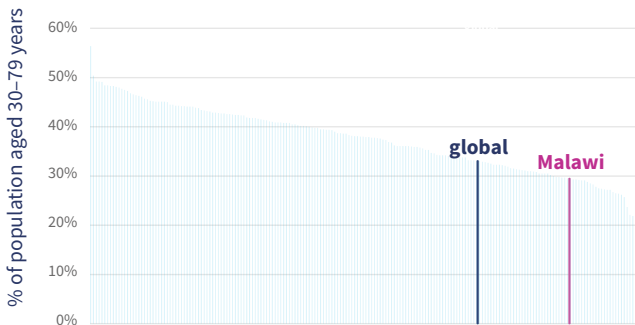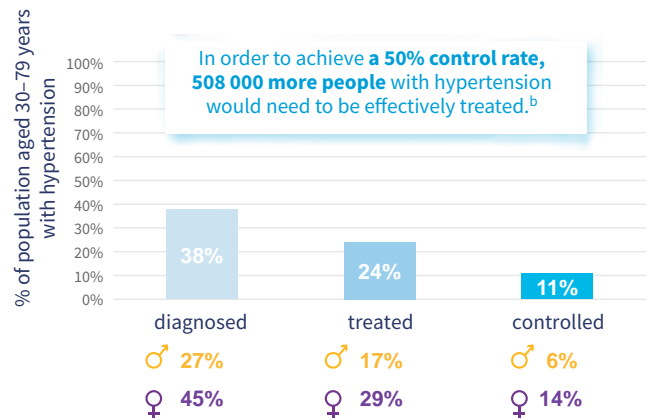
Malaysia

Hypertension profile

Total population (2019): 32 804 000
Total deaths (2019): 185 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 41% ♂ 41% ♀ 41%

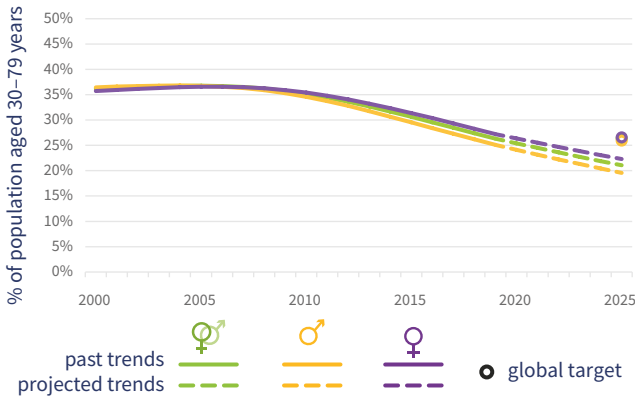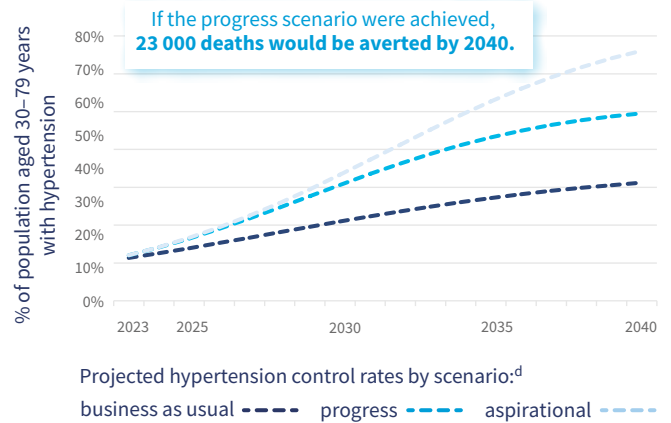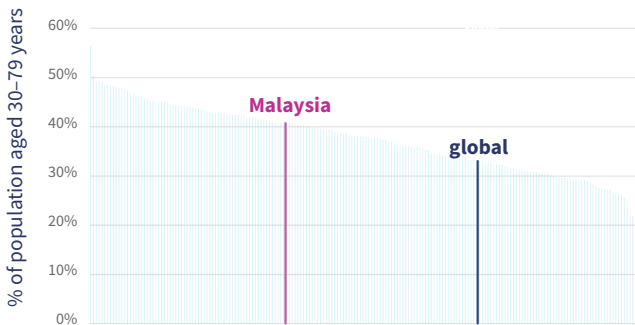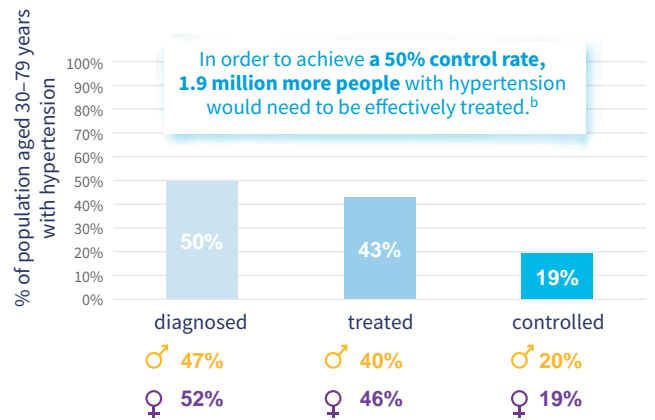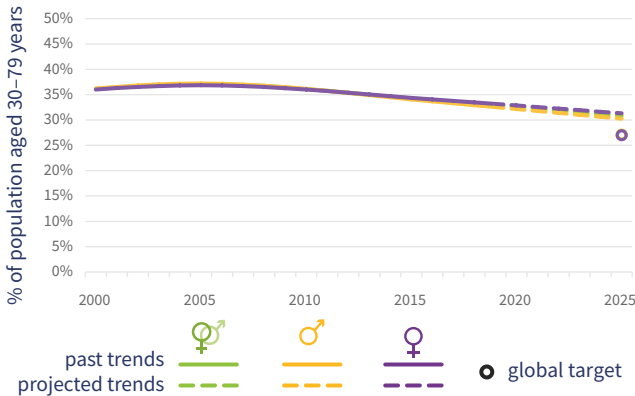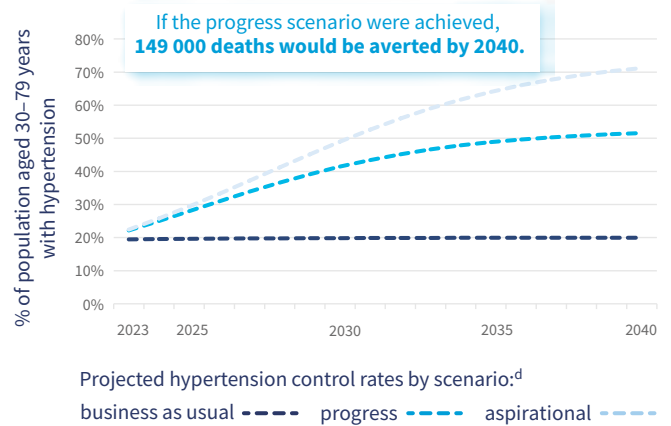### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.9 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	50%	43%	19%
♂	47%	40%	20%
♀	52%	46%	19%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **149 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	18	22	15	2019
Cardiovascular disease deaths	63 600	37 100	26 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	62	62	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)	23	44	1	2019
Obesity, adults aged 18+ years (%)	16	13	18	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	1	0	2019
Physical inactivity, adults aged 18+ years (%)	39	35	43	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Maldives

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **34%** ♂ **33%** ♀ **35%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **65 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 24 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	43%	**31%**	**15%**
♂	**39%**	**28%**	**14%**
♀	**48%**	**34%**	**15%**

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ---- ---- ---- ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **1400 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----
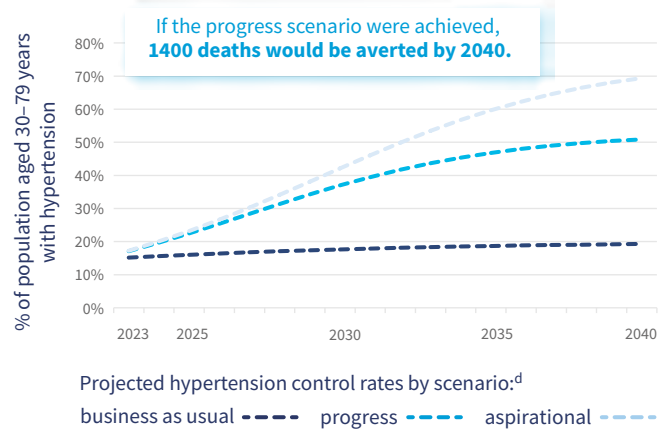
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	12	14	9	2019
Cardiovascular disease deaths	480	300	180	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	53	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	10	10	2019
Current tobacco use, adults aged 15+ years (%)	26	45	6	2019
Obesity, adults aged 18+ years (%)	9	6	11	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	0	2019
Physical inactivity, adults aged 18+ years (%)	30	26	35	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
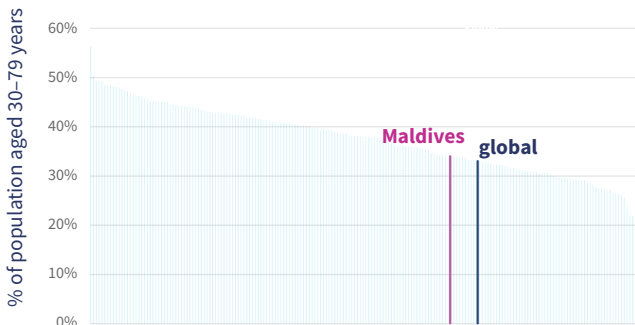
Mali

Hypertension profile

Total population (2019): 20 567 000
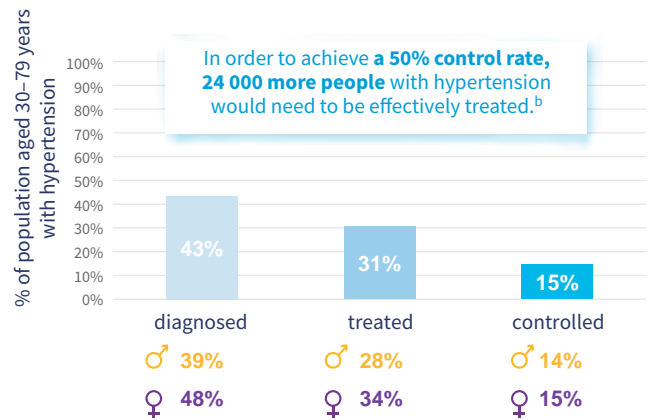**Total deaths (2019):** 154 000

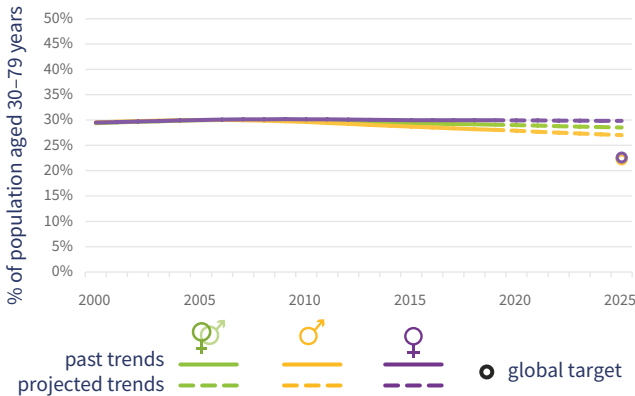**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ **35%**   ♂ **31%**   ♀ **38%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 553 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	53%	36%	15%
♂	43%	30%	12%
♀	60%	40%	16%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **37 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	20	24	2019
Cardiovascular disease deaths	15 300	6300	9000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	50	45	55	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	9	16	1	2019
Obesity, adults aged 18+ years (%)	9	5	12	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	1	2019
Physical inactivity, adults aged 18+ years (%)	40	34	47	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
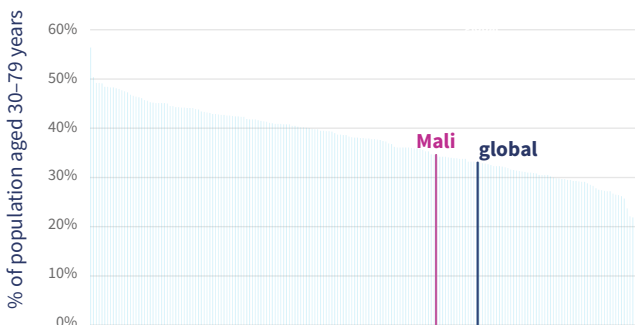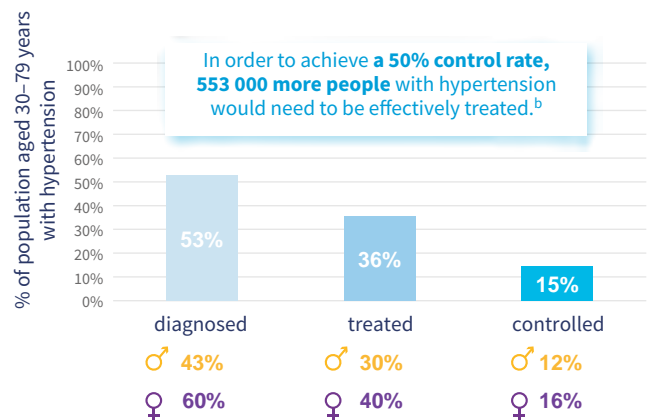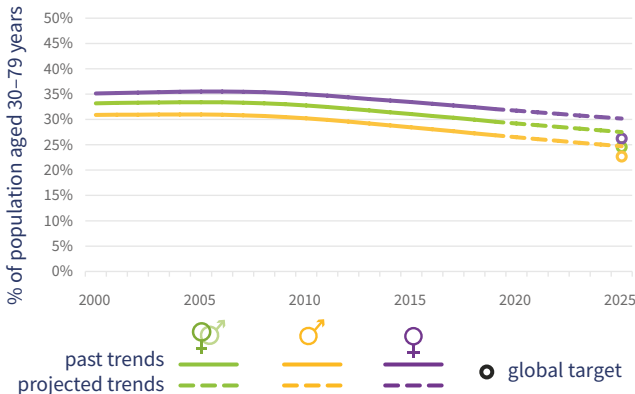
Malta

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 30% ♂ 34% ♀ 25%

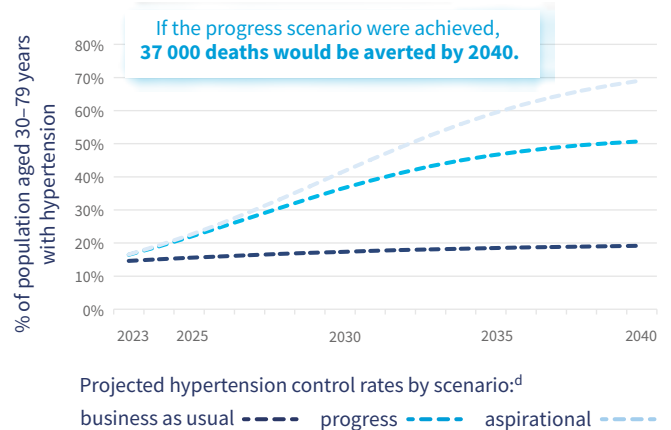## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 103 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2900 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	71%	66%	45%
♂	70%	65%	43%
♀	74%	69%	48%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends ---
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **700 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	13	8	2019
Cardiovascular disease deaths	1400	650	700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	54	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	11	8	2019
Current tobacco use, adults aged 15+ years (%)[f]	25	27	22	2019
Obesity, adults aged 18+ years (%)	29	29	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	13	4	2019
Physical inactivity, adults aged 18+ years (%)	42	36	47	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized esti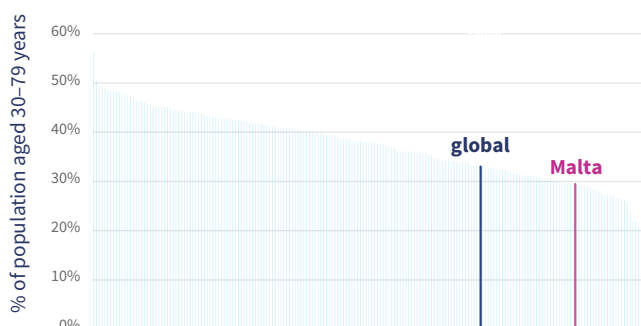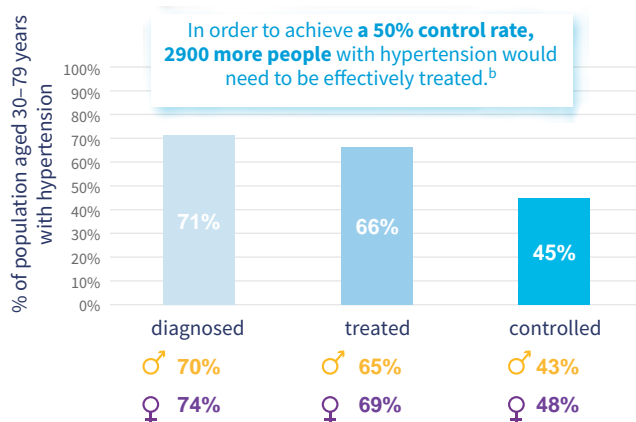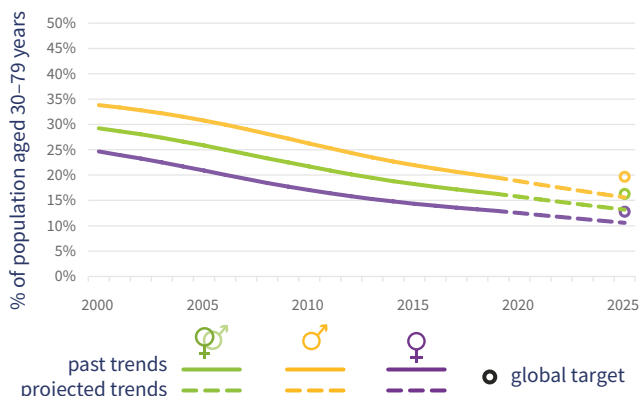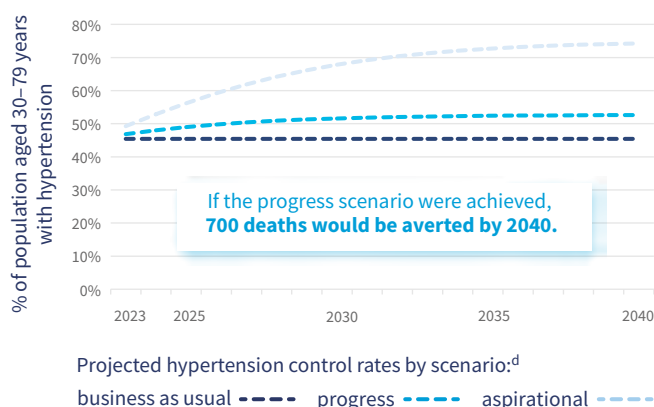mates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
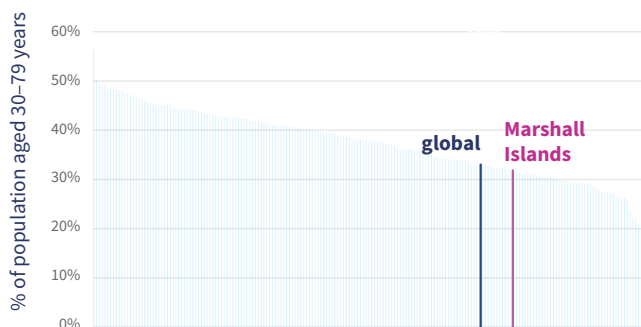
Marshall Islands

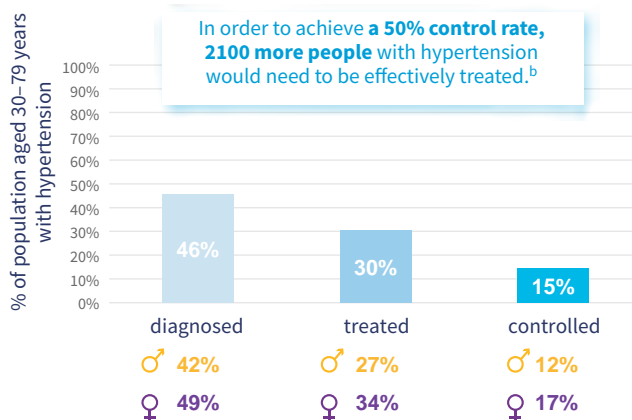## Hypertension profile

Total population (2019): 44 700

Total deaths (2019): no data

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **32%**   ♂ **31%**   ♀ **33%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2100 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	46%	30%	15%
♂	42%	27%	12%
♀	49%	34%	17%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends (dashed)
○ global target

Hypertension control rate scenarios

Data not available
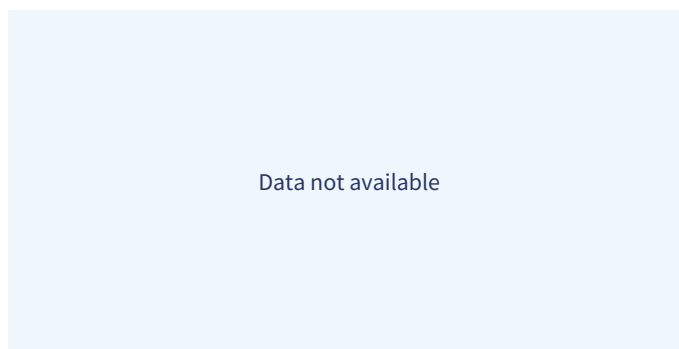
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	49	45	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	28	49	8	2019
Obesity, adults aged 18+ years (%)	53	48	57	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	no data	no data	no data	2019
Physical inactivity, adults aged 18+ years (%)	44	37	50	2016

National response

Targets

National target for blood pressure ✘

National target for salt consumption ✘

Treatment

Guidelines for management of hypertension ✘

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✘

Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake.

Mauritania

Hypertension profile

Total population (2019): 4 384 000
Total deaths (2019): 26 300

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **38%**   ♂ **36%**   ♀ **40%**
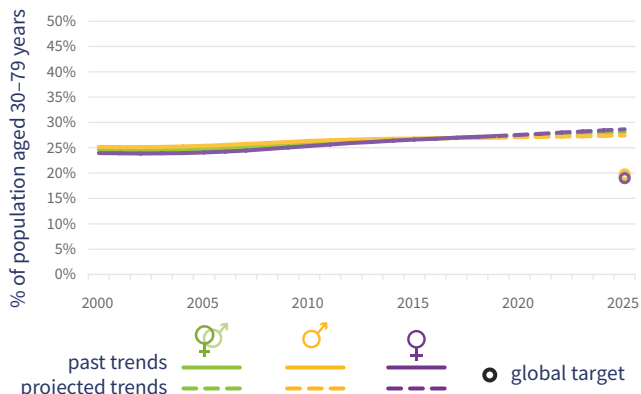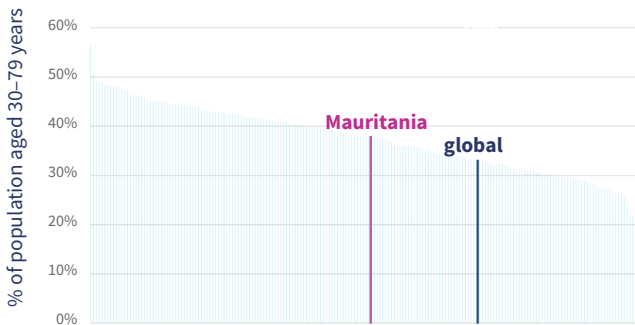
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **501 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 198 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
43%	26%	11%
♂ 34%	♂ 21%	♂ 9%
♀ 51%	♀ 31%	♀ 13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **7800 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - - -   aspirational - - - -
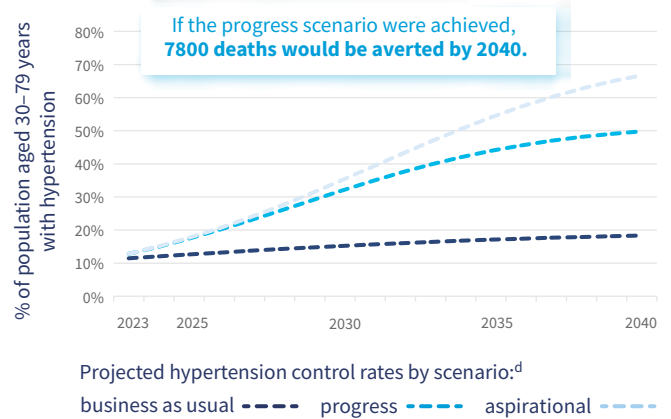
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	14	18	2019
Cardiovascular disease deaths	3600	1400	2200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	55	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	11	20	2	2019
Obesity, adults aged 18+ years (%)	13	7	19	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	41	37	46	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Mauritius

Hypertension profile

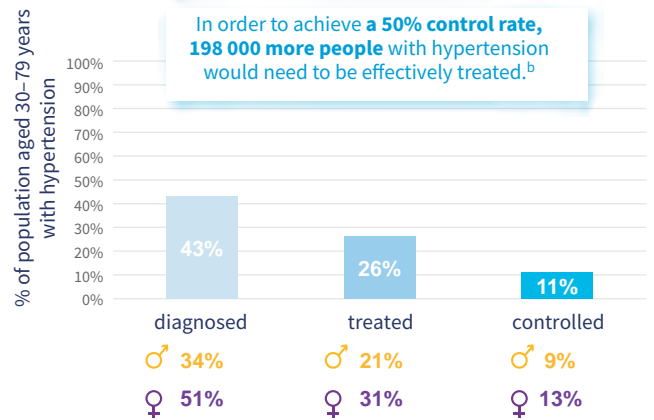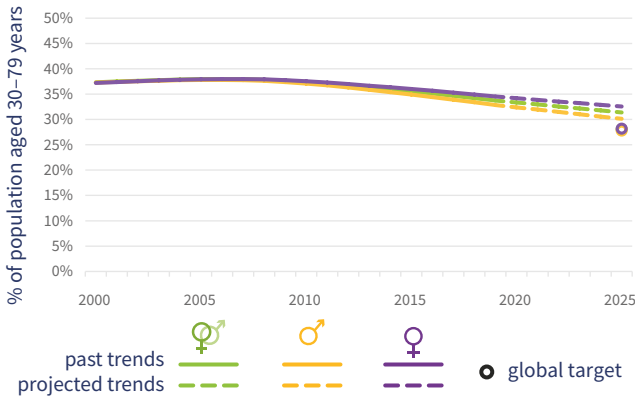**Total population (2019): 1 296 000**

Total deaths (2019): 11 400

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **33%** ♂ **34%** ♀ **32%**
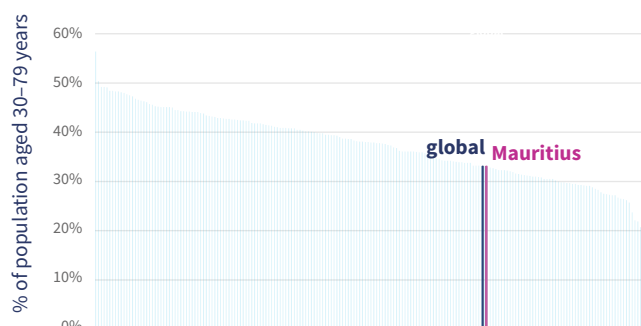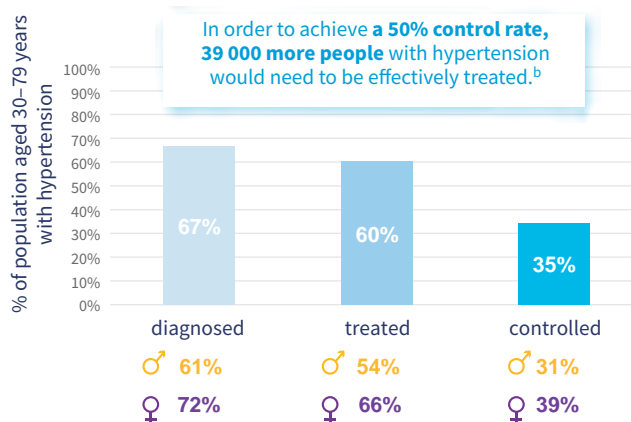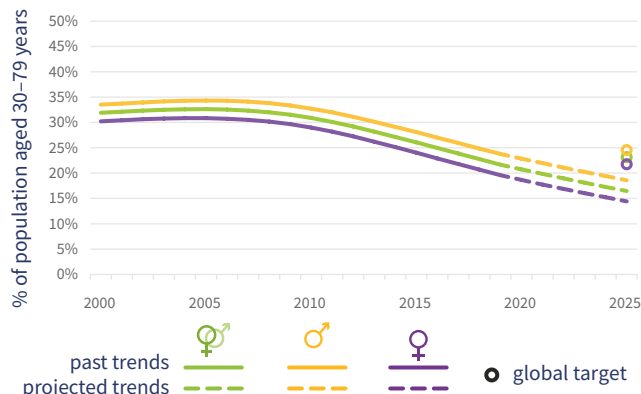
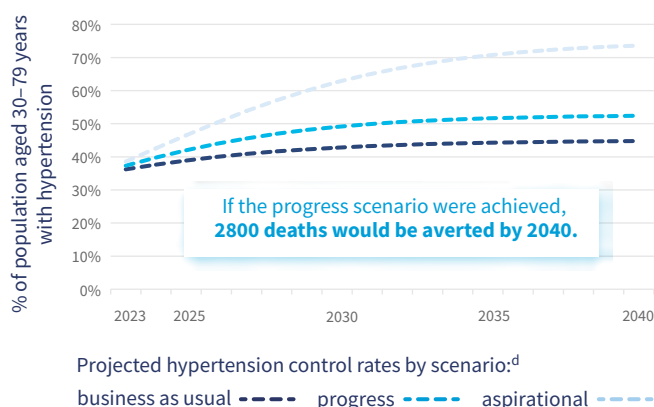### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 268 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 39 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	67%	60%	35%
♂	61%	54%	31%
♀	72%	66%	39%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **2800 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	28	18	2019
Cardiovascular disease deaths	3600	1900	1700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	56	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	11	11	10	2019
Current tobacco use, adults aged 15+ years (%)[f]	21	38	3	2019
Obesity, adults aged 18+ years (%)	11	6	16	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	12	3	2019
Physical inactivity, adults aged 18+ years (%)	30	28	32	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
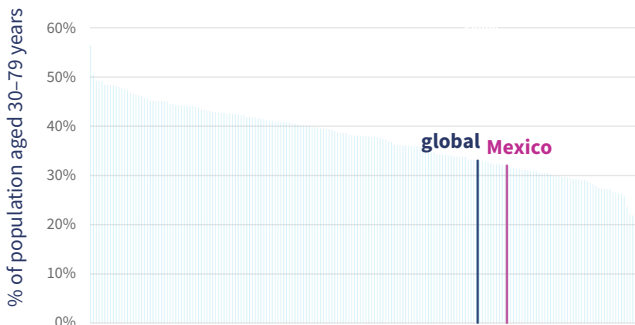
Mexico

Hypertension profile

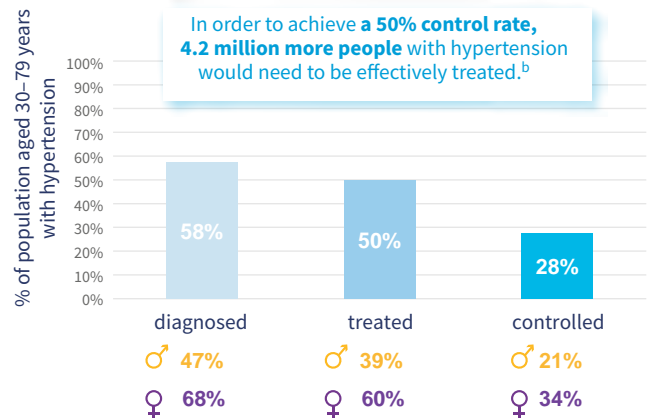**Total population (2019):** 125 100 000

Total deaths (2019): 712 000!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **32%**   ♂ **33%**   ♀ **31%**

Prevalence of hypertension – global comparison (both sexes)[a]

y-axis: % of population aged 30–79 years (0%–60%)
global | Mexico

Of the **18.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 4.2 million more people** with hypertension would need to be effectively treated.[b]

y-axis: % of population aged 30–79 years with hypertension (0%–100%)

	diagnosed	treated	controlled
both sexes	58%	50%	28%
♂	47%	39%	21%
♀	68%	60%	34%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

y-axis: % of population aged 30–79 years (0%–50%)
x-axis: 2000, 2005, 2010, 2015, 2020, 2025

past trends ⚥ ♂ ♀
projected trends (dashed)   ○ global target

Hypertension control rate scenarios

y-axis: % of population aged 30–79 years with hypertension (0%–80%)
x-axis: 2023, 2025, 2030, 2035, 2040

If the progress scenario were achieved, **290 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	18	13	2019
Cardiovascular disease deaths	188 000	98 600	89 300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	52	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	9	8	2019
Current tobacco use, adults aged 15+ years (%)	13	20	6	2019
Obesity, adults aged 18+ years (%)	29	24	33	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	9	2	2019
Physical inactivity, adults aged 18+ years (%)	29	25	32	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Micronesia (Federated States of)

Hypertension profile

Total population (2019): 111 000
Total deaths (2019): 1030!

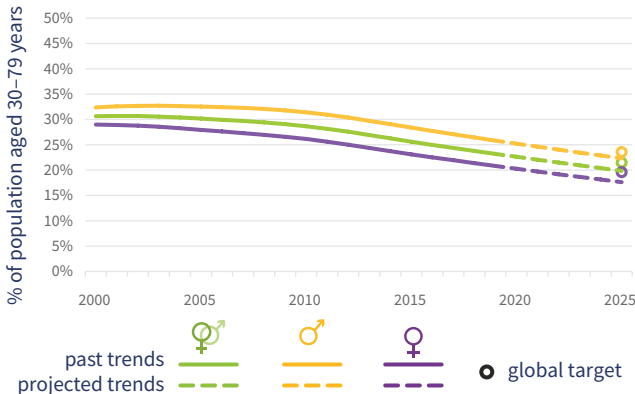**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **33%** ♂ **32%** ♀ **34%**

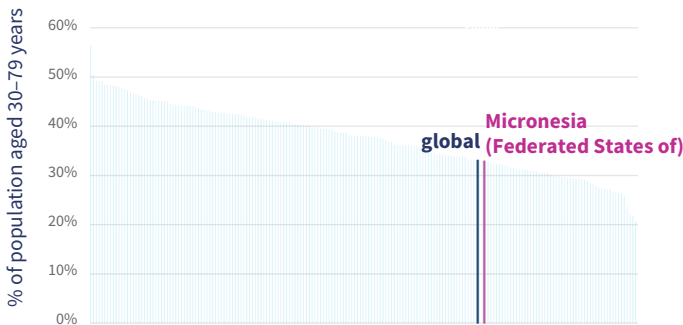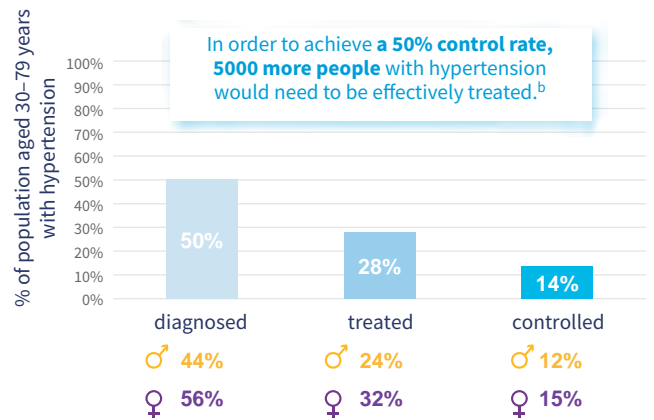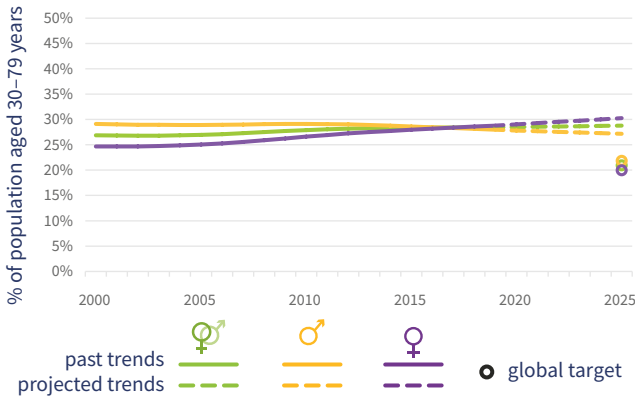### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **14 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 5000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
50%	28%	14%
♂ 44%	♂ 24%	♂ 12%
♀ 56%	♀ 32%	♀ 15%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **670 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----
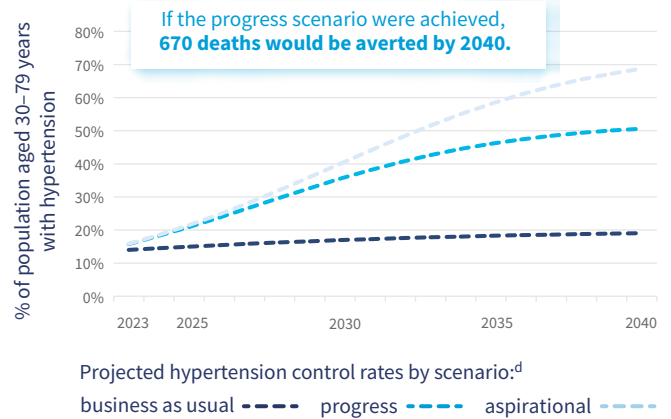
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	46	52	40	2019
Cardiovascular disease deaths	370	220	150	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	46	48	43	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	46	40	52	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	4	1	2019
Physical inactivity, adults aged 18+ years (%)	37	33	40	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Monaco

Hypertension profile

Total population (2019): 37 000

Total deaths (2019): no data

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019) ⚥ no data ♂ no data ♀ no data

Prevalence of hypertension – global comparison (both sexes)

Data not available

Data not available

Trends in uncontrolled hypertension in adults aged 30–79 years

Data not available

Hypertension control rate scenarios

Data not available

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	51	53	50	2019

Risk factors[a]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	no data	no data	no data	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	no data	no data	no data	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment

Guidelines for management of hypertension ✖

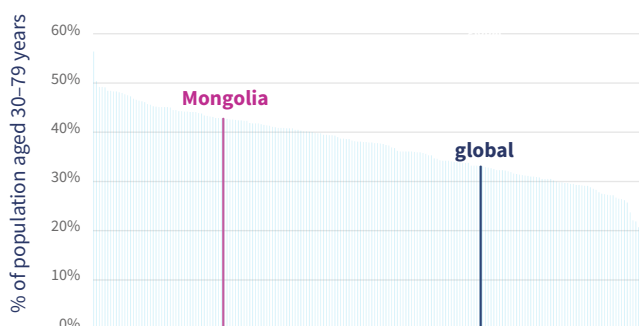Footnote: a. Age-standardized estimates are presented for all indicators except salt intake.

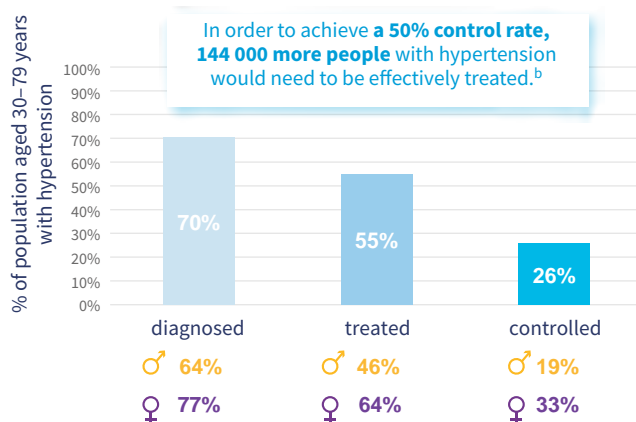# Mongolia

Hypertension profile

Total population (2019): 3 232 000
Total deaths (2019): 23 400

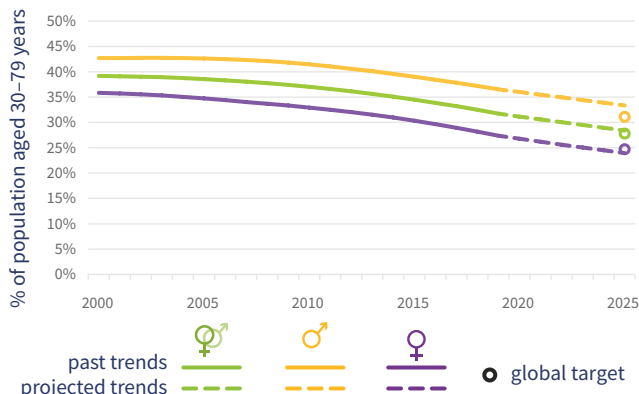**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ 43%   ♂ 45%   ♀ 41%

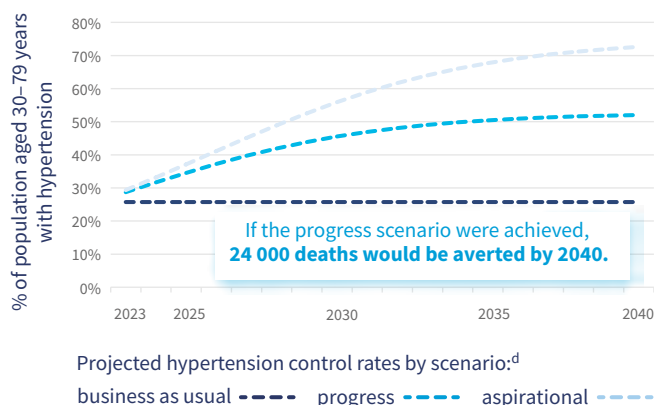### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 578 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 144 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	70%	55%	26%
♂	64%	46%	19%
♀	77%	64%	33%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends   ⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **24 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ------   progress ------   aspirational ------

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	35	45	26	2019
Cardiovascular disease deaths	10 400	6000	4400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	62	64	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	30	52	7	2019
Obesity, adults aged 18+ years (%)	21	18	23	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	3	2019
Physical inactivity, adults aged 18+ years (%)	19	18	19	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
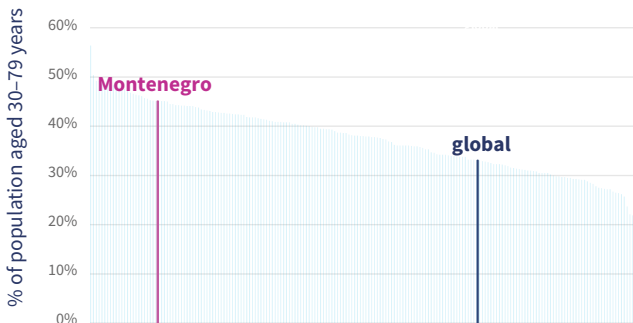
Montenegro

Hypertension profile

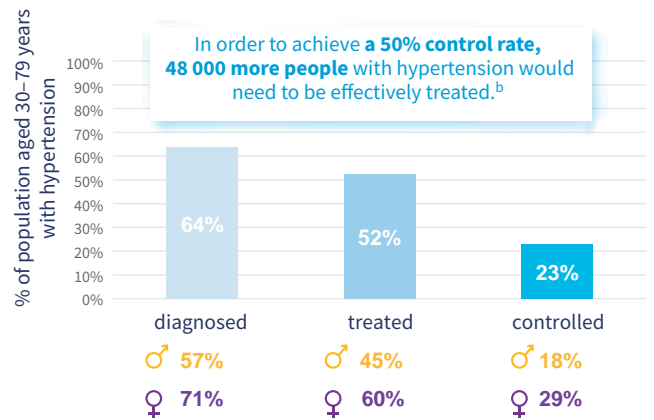**Total population (2019):** 630 000
Total deaths (2019): 7280

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **45%**   ♂ **50%**   ♀ **41%**
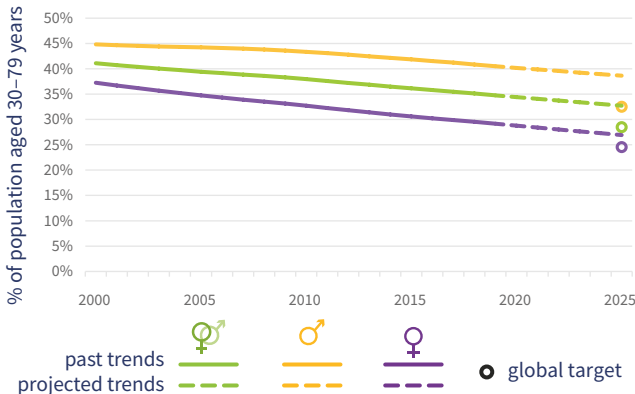
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **185 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 48 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	64%	**52%**	**23%**
♂	**57%**	**45%**	**18%**
♀	**71%**	**60%**	**29%**

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **8200 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----
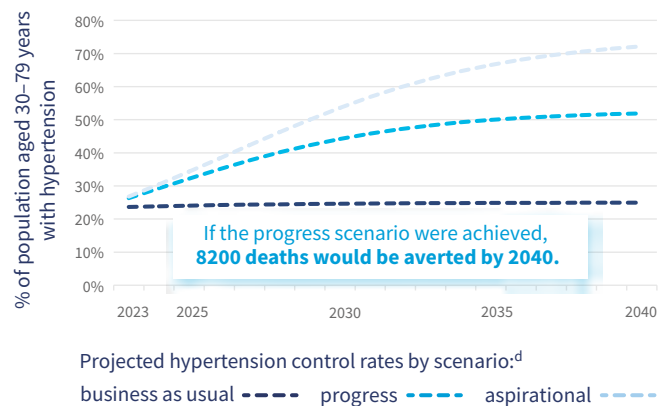
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	29	16	2019
Cardiovascular disease deaths	4600	2300	2300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	56	56	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)	32	32	31	2019
Obesity, adults aged 18+ years (%)	23	23	23	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	17	4	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Global report on hypertension: the race against a silent killer

Morocco

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **35%**   ♂ **35%**   ♀ **36%**

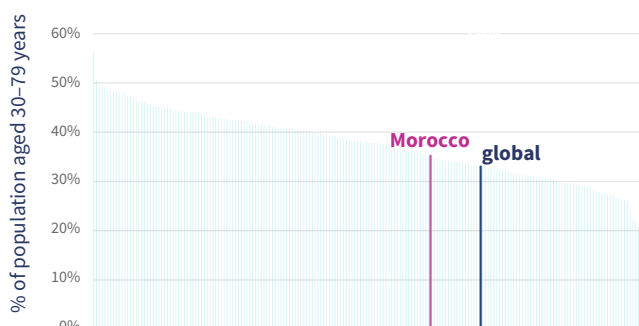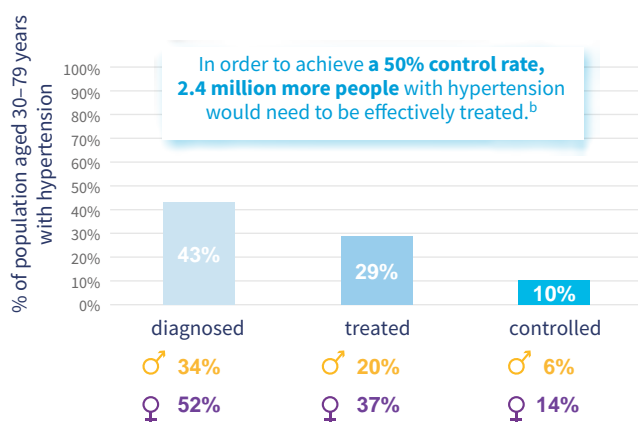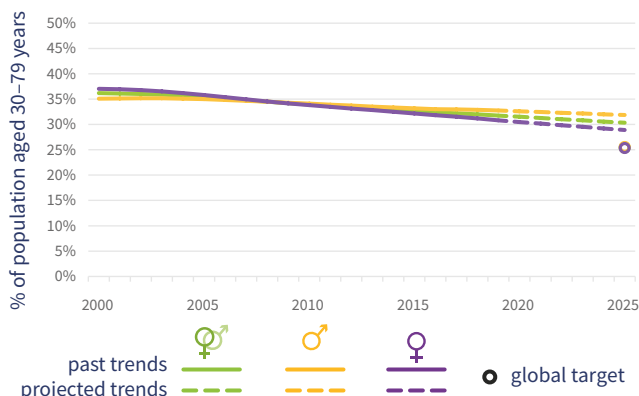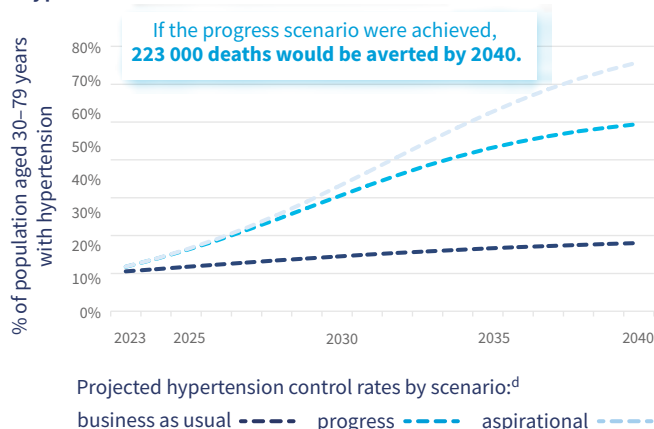### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.4 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	43%	29%	10%
♂	34%	20%	6%
♀	52%	37%	14%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥ ♂ ♀
projected trends   ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **223 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	26	22	2019
Cardiovascular disease deaths	127 000	60 700	65 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	59	67	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	15	29	1	2019
Obesity, adults aged 18+ years (%)	26	19	32	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	26	21	31	2016

National response

Targets
National target for blood pressure   ✔
National target for salt consumption   ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✔
Conducted recent, national survey on salt/sodium intake   ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✘

Treatment
Guidelines for management of hypertension   ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
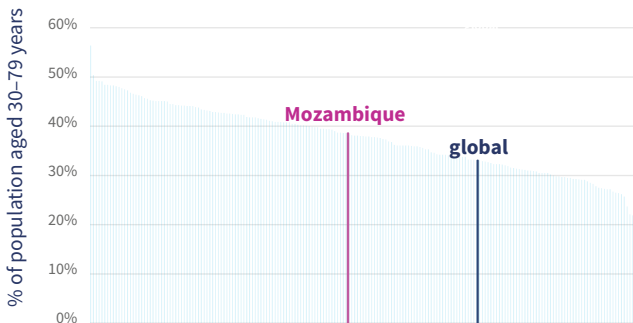
Mozambique

Hypertension profile

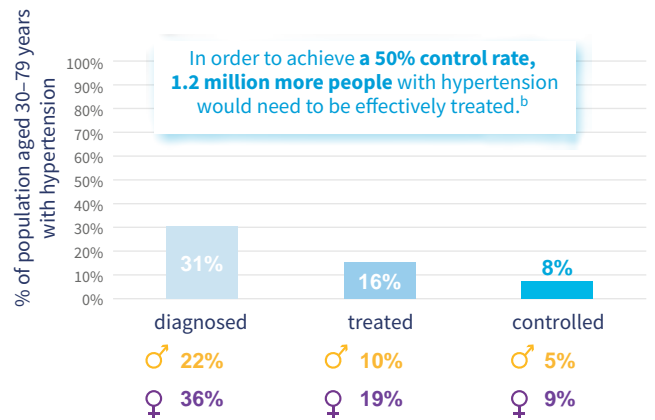**Total population (2019):** 30 286 000
Total deaths (2019): 284 000!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **39%** ♂ **34%** ♀ **42%**
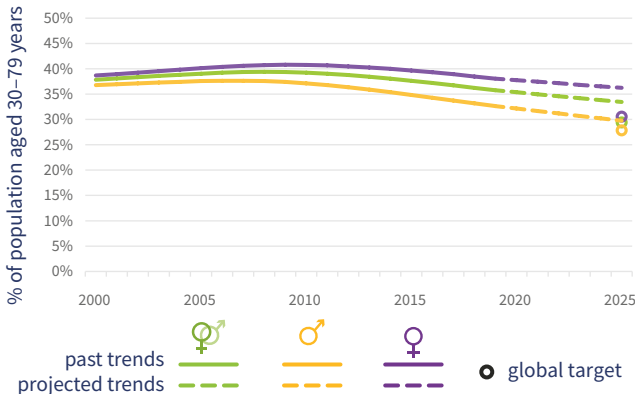

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.9 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.2 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	31%	16%	8%
♂	22%	10%	5%
♀	36%	19%	9%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **100 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----
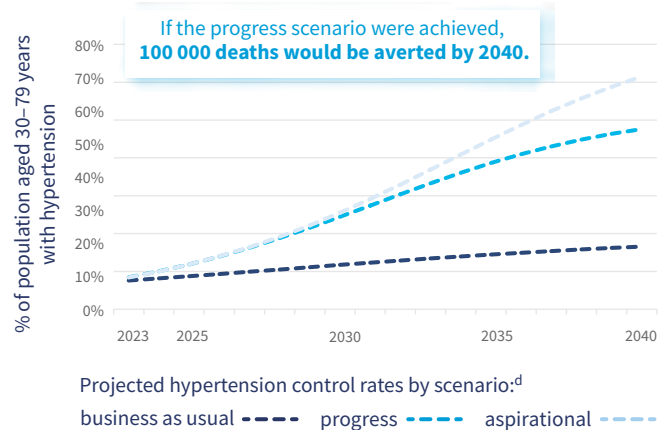
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	31	39	24	2019
Cardiovascular disease deaths	45 400	24 000	21 400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	65	66	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	15	24	6	2019
Obesity, adults aged 18+ years (%)	7	3	11	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	6	5	6	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
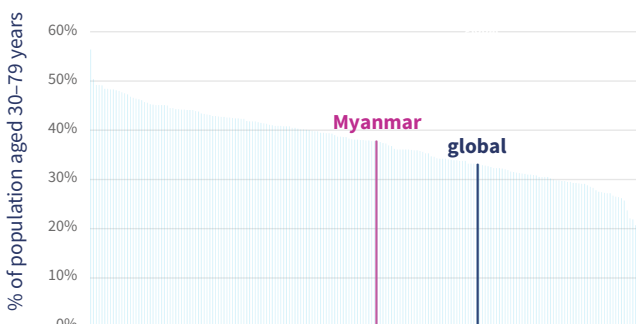
Myanmar

Hypertension profile

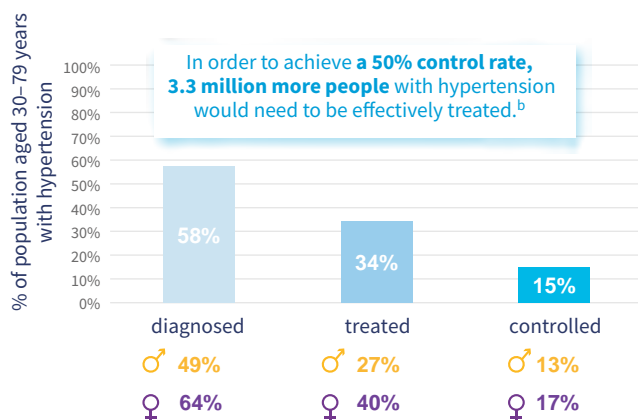**Total population (2019):** 53 040 000
Total deaths (2019): 387 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **38%**   ♂ **35%**   ♀ **40%**
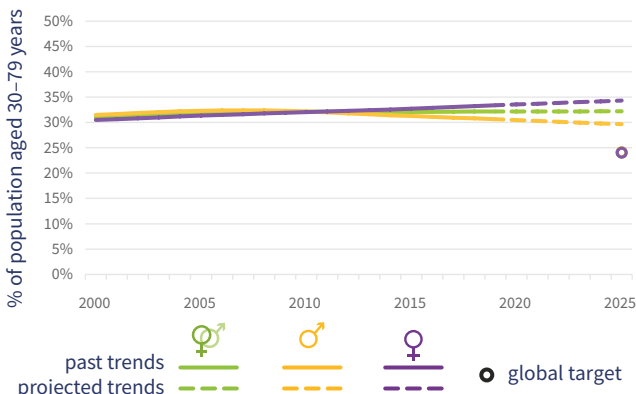

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **9.4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 3.3 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	58%	34%	15%
♂	49%	27%	13%
♀	64%	40%	17%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **307 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ─ ─ ─   progress ─ ─ ─   aspirational ─ ─ ─

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	31	20	2019
Cardiovascular disease deaths	119 000	58 500	60 700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	58	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)	45	69	21	2019
Obesity, adults aged 18+ years (%)	6	4	7	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	4	1	2019
Physical inactivity, adults aged 18+ years (%)	11	8	13	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Namibia

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 44% ♂ 43% ♀ 45%

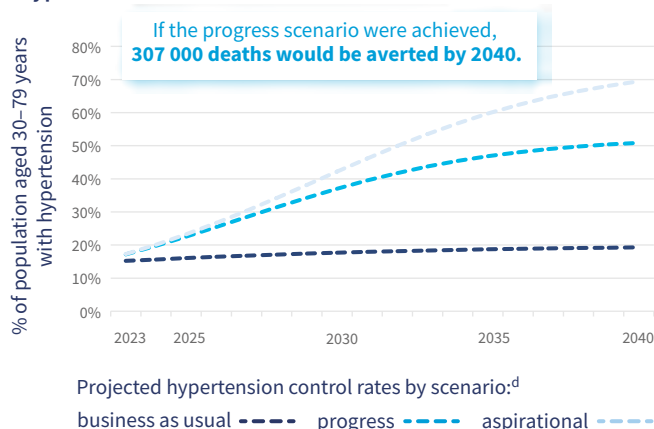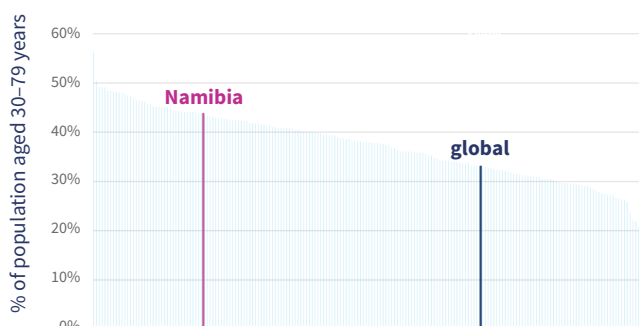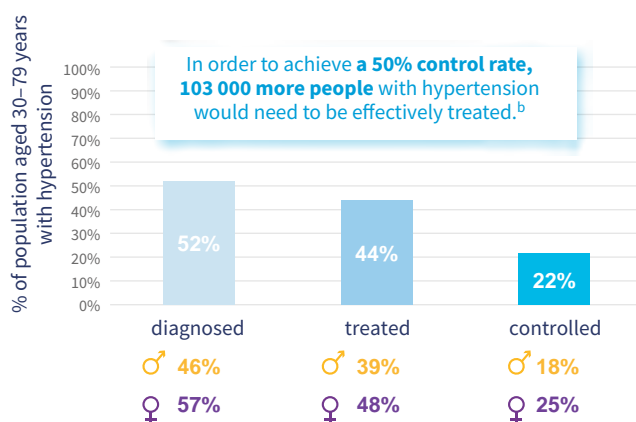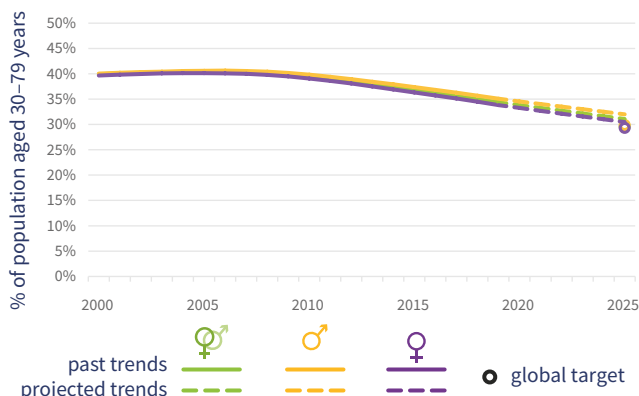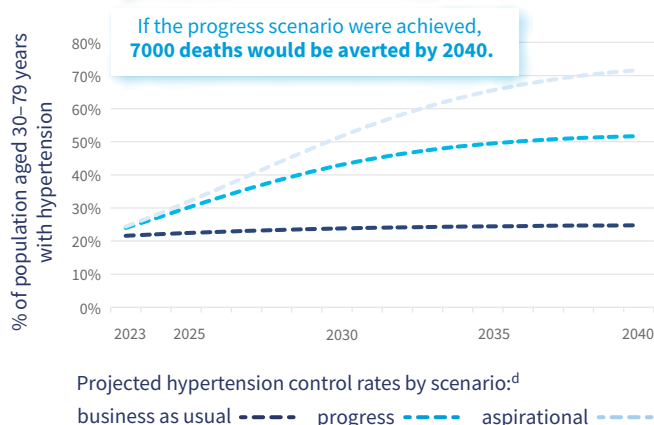### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 341 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 103 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
52%	44%	22%
♂ 46%	♂ 39%	♂ 18%
♀ 57%	♀ 48%	♀ 25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **7000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	30	17	2019
Cardiovascular disease deaths	3300	1600	1700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	58	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	7	2019
Current tobacco use, adults aged 15+ years (%)	16	25	6	2019
Obesity, adults aged 18+ years (%)	17	8	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	2	2019
Physical inactivity, adults aged 18+ years (%)	33	29	37	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
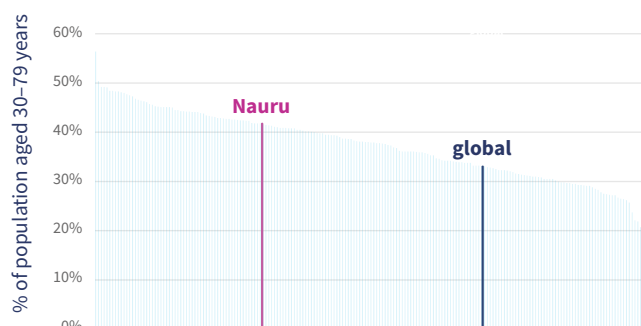
Nauru

Hypertension profile
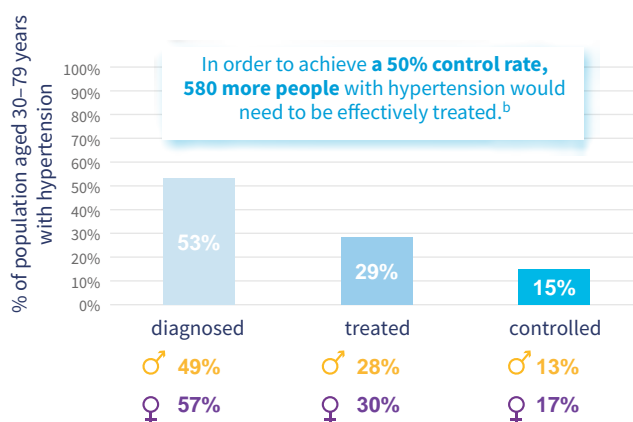
Total population (2019): 12 100
Total deaths (2019): no data

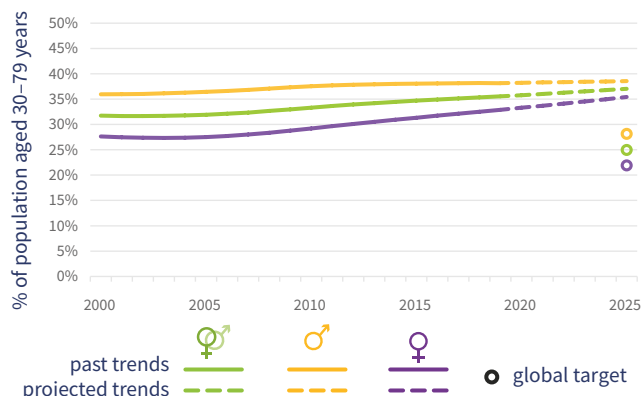**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **42%** ♂ **44%** ♀ **40%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1600** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 580 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	53%	29%	15%
♂	49%	28%	13%
♀	57%	30%	17%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

Data not available
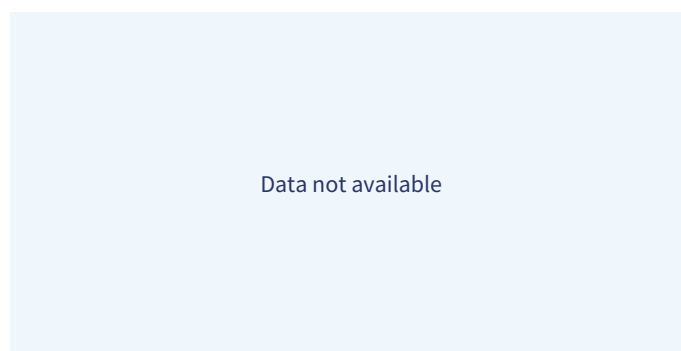
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	65	62	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	49	48	50	2019
Obesity, adults aged 18+ years (%)	61	59	63	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	42	35	49	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake.

Nepal

Hypertension profile

Total population (2019): 28 832 000

Total deaths (2019): 176 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 36% ♂ 40% ♀ 34%

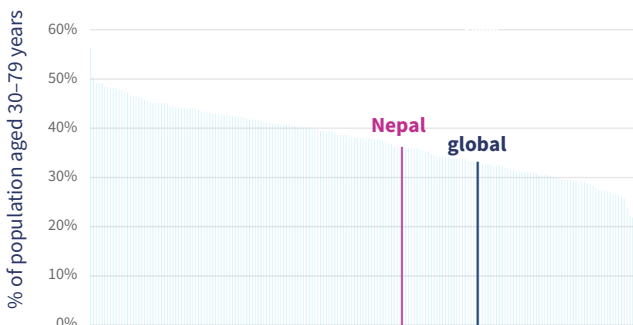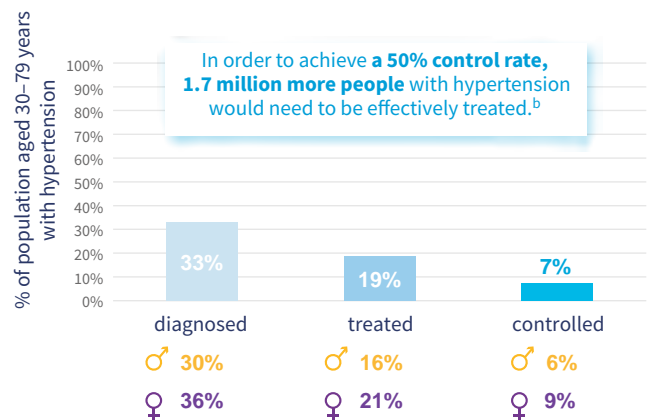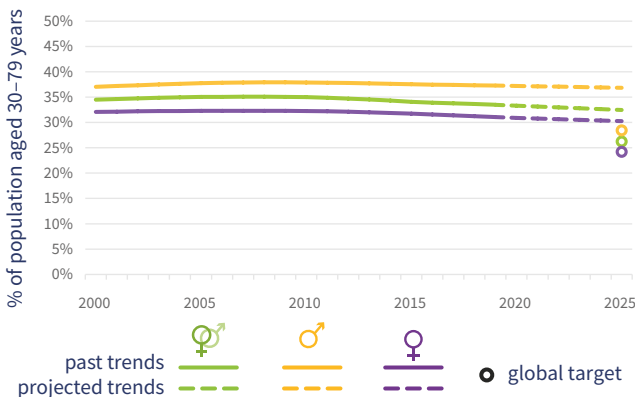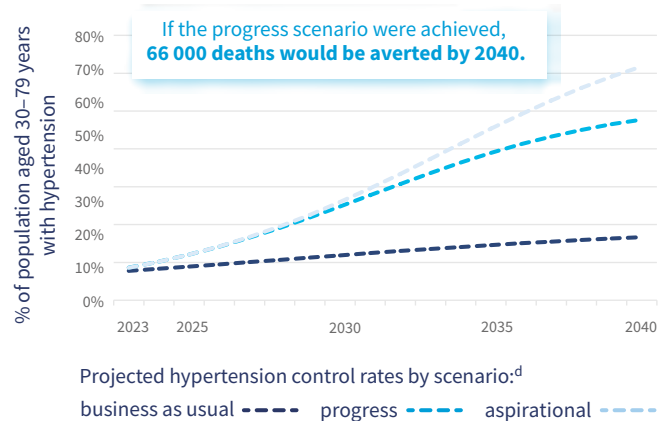### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 3.9 million adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate,
1.7 million more people** with hypertension
would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	33%	19%	7%
♂	30%	16%	6%
♀	36%	21%	9%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved,
66 000 deaths would be averted by 2040.

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	24	19	2019
Cardiovascular disease deaths	39 000	22 800	16 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	46	50	39	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	9	8	2019
Current tobacco use, adults aged 15+ years (%)	32	49	14	2019
Obesity, adults aged 18+ years (%)	4	3	5	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	0	2019
Physical inactivity, adults aged 18+ years (%)	13	12	15	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of
hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
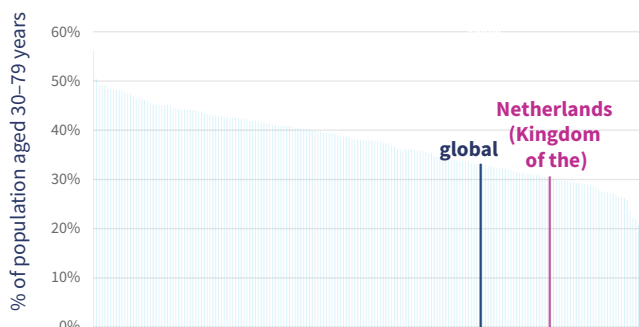
Netherlands (Kingdom of the)

Hypertension profile

Total population (2019): 17 363 000
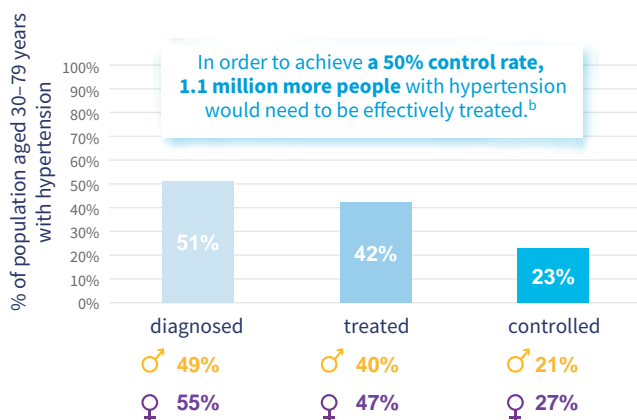
Total deaths (2019): 153 000

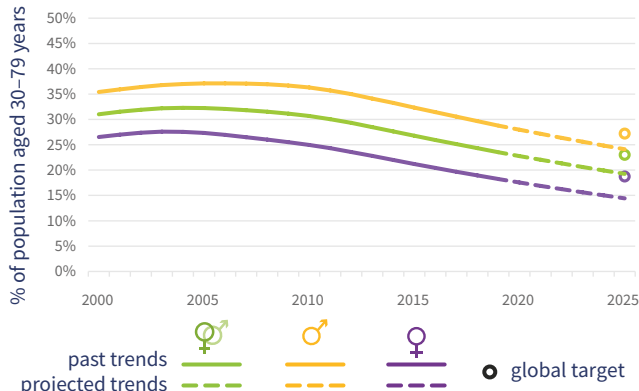**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 31% ♂ 36% ♀ 25%

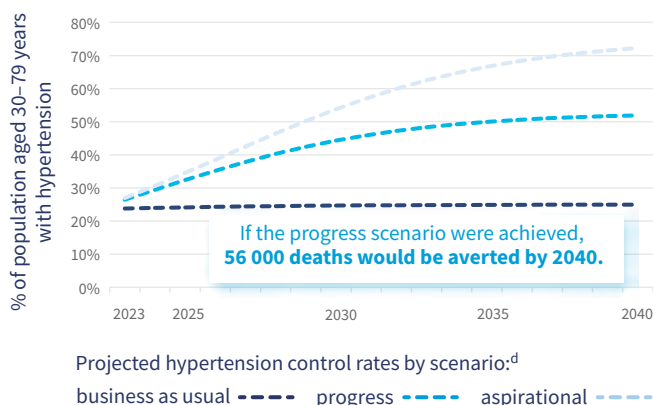## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	51%	42%	23%
♂	49%	40%	21%
♀	55%	47%	27%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **56 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	12	9	2019
Cardiovascular disease deaths	36 400	17 600	18 900	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	51	45	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	23	25	20	2019
Obesity, adults aged 18+ years (%)	20	21	20	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	15	4	2019
Physical inactivity, adults aged 18+ years (%)	27	25	29	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
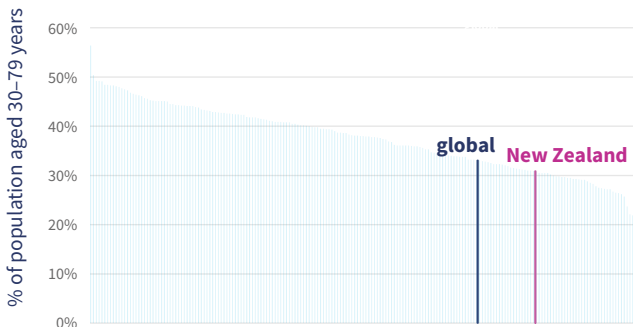
New Zealand

Hypertension profile

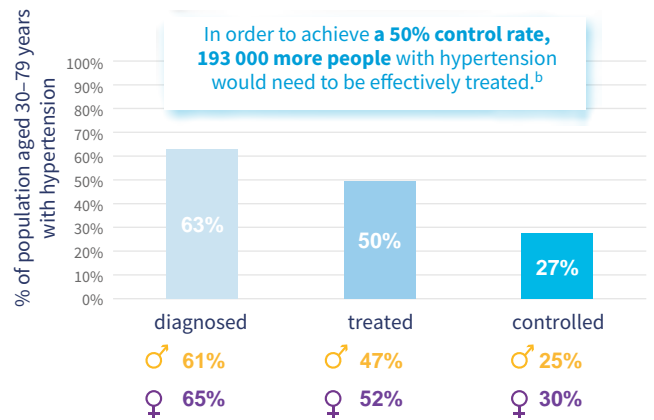**Total population (2019):** 4 959 000

Total deaths (2019): 33 300

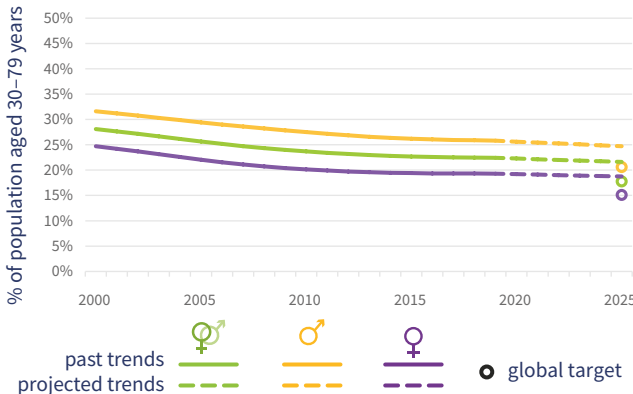**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ **31%**   ♂ **34%**   ♀ **28%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **968 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 193 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	63%	50%	27%
♂	61%	47%	25%
♀	65%	52%	30%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **12 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----
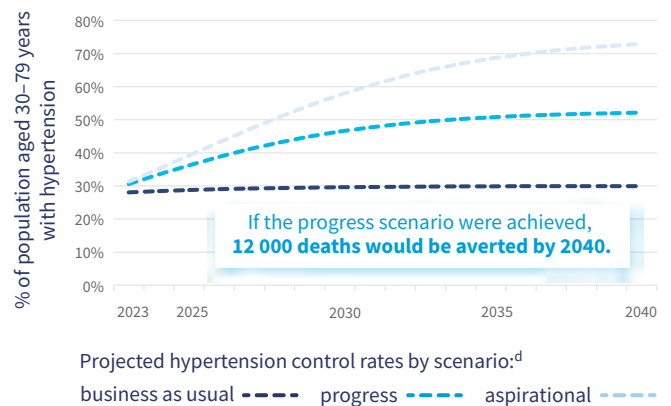
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	12	9	2019
Cardiovascular disease deaths	9700	5000	4800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	45	46	45	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	14	16	13	2019
Obesity, adults aged 18+ years (%)	31	30	31	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	15	5	2019
Physical inactivity, adults aged 18+ years (%)	42	39	45	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Treatment

Guidelines for management of hypertension ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Nicaragua

Hypertension profile

Total population (2019): 6 664 000

Total deaths (2019): 32 200

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **36%**   ♂ **35%**   ♀ **37%**

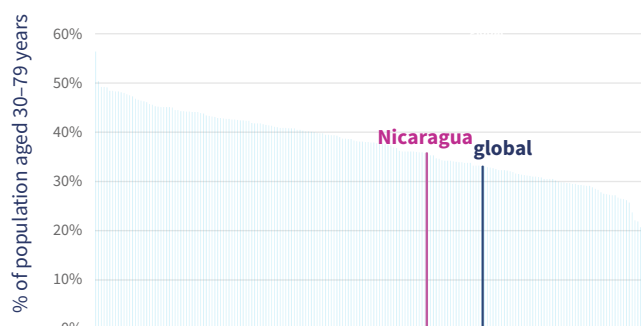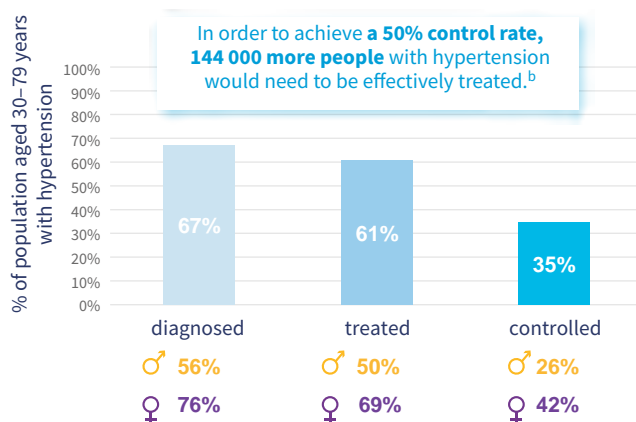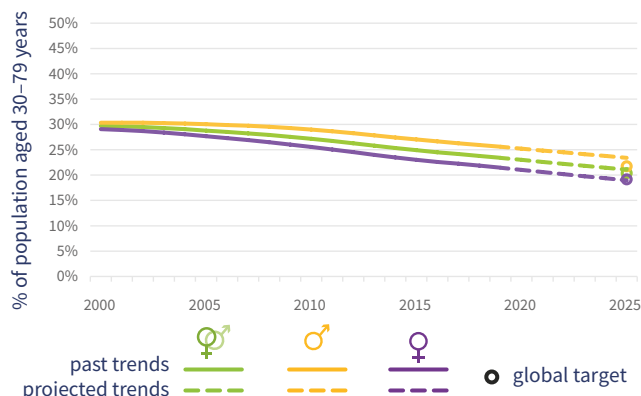### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **904 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 144 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	67%	61%	35%
♂	56%	50%	26%
♀	76%	69%	42%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends ---
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **10 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ▪▪▪   progress ▬ ▬ ▬   aspirational ▬ ▬ ▬
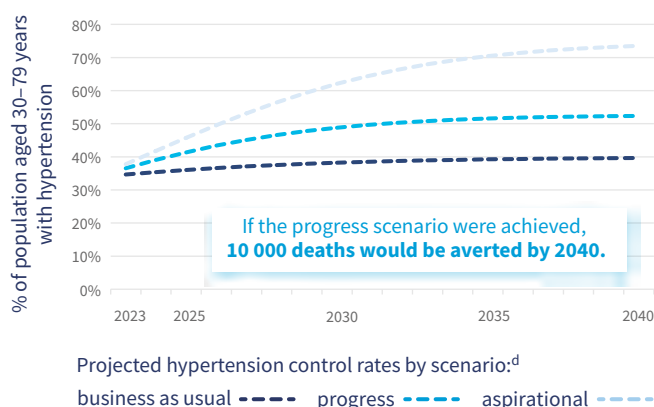
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	15	18	13	2019
Cardiovascular disease deaths	9800	4800	5000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	56	54	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	24	18	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets

National target for blood pressure	✖
National target for salt consumption	✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✖
Conducted recent, national survey on salt/sodium intake	✖
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
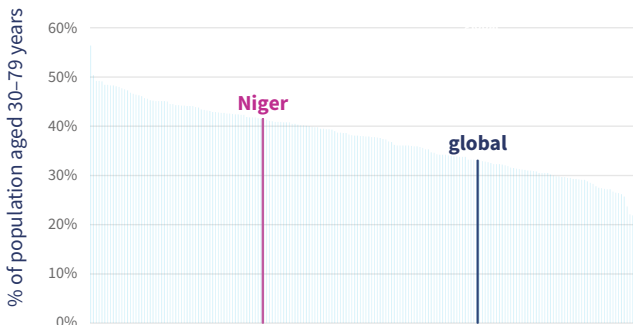
Niger

Hypertension profile

Total population (2019): 23 443 000
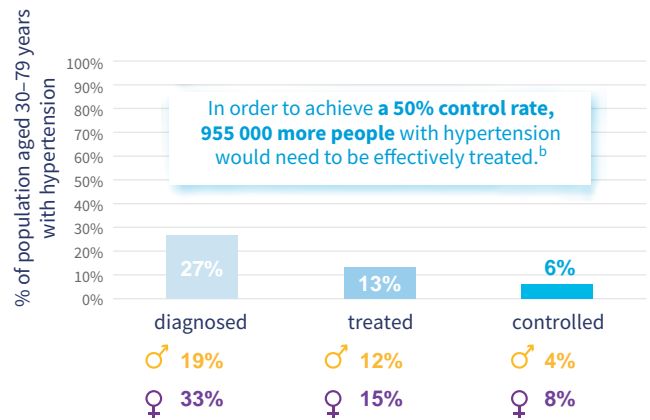
Total deaths (2019): 183 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **42%**   ♂ **40%**   ♀ **43%**

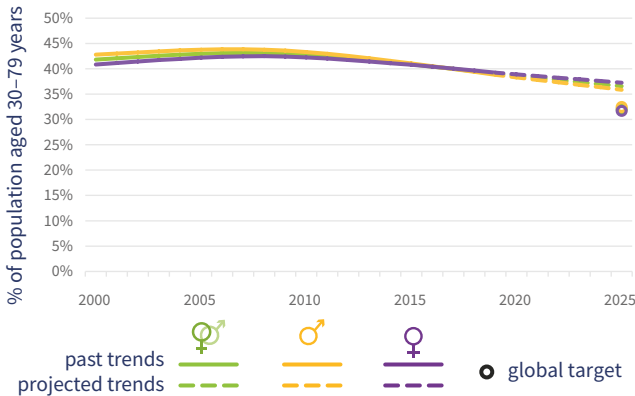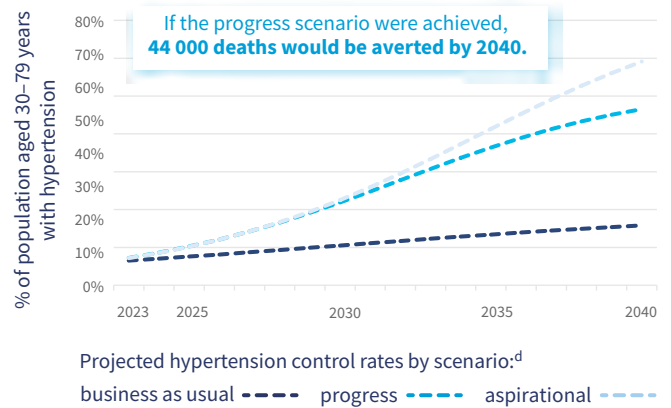## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 955 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	27%	13%	6%
♂	19%	12%	4%
♀	33%	15%	8%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends   ⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **44 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	21	21	2019
Cardiovascular disease deaths	20 900	10 100	10 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	53	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	8	14	1	2019
Obesity, adults aged 18+ years (%)	6	3	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	22	20	25	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
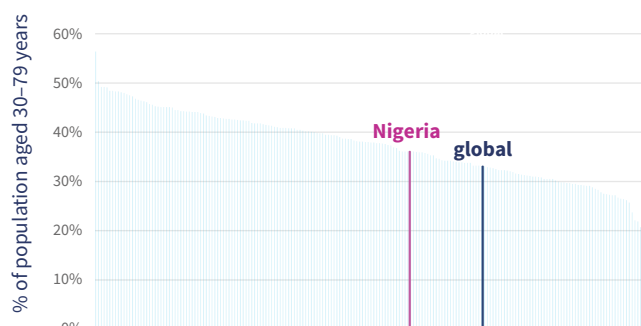
Nigeria

Hypertension profile

Total population (2019): 203 300 000

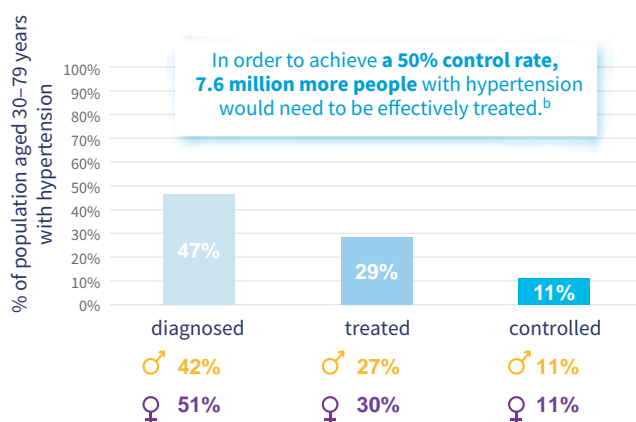**Total deaths (2019):** 1 650 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 36% ♂ 33% ♀ 39%
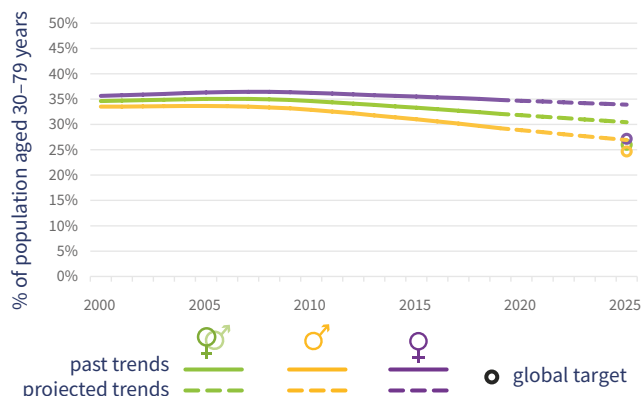
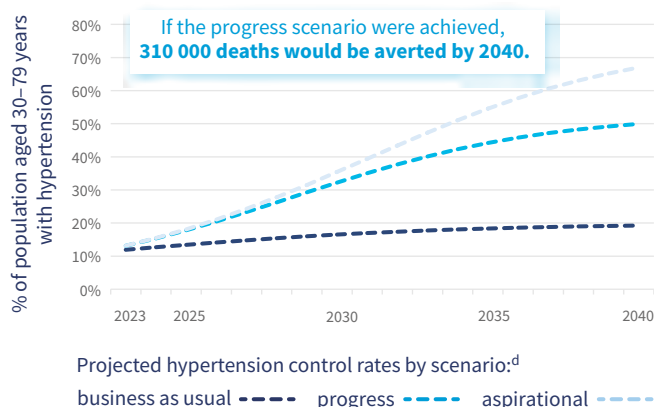### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **19.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 7.6 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	47%	29%	11%
♂	42%	27%	11%
♀	51%	30%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **310 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - progress - - - aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	16	18	2019
Cardiovascular disease deaths	147 000	69 100	77 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	62	61	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	6	6	2019
Current tobacco use, adults aged 15+ years (%)	4	7	1	2019
Obesity, adults aged 18+ years (%)	9	5	13	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	1	2019
Physical inactivity, adults aged 18+ years (%)	27	25	30	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
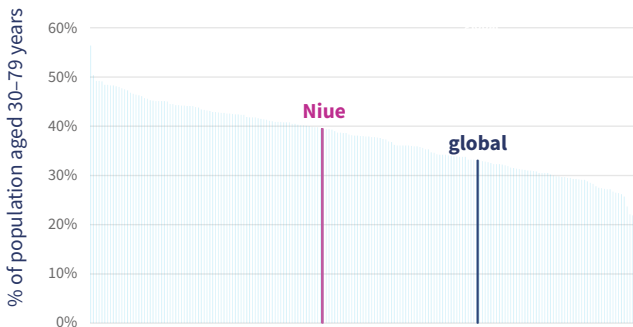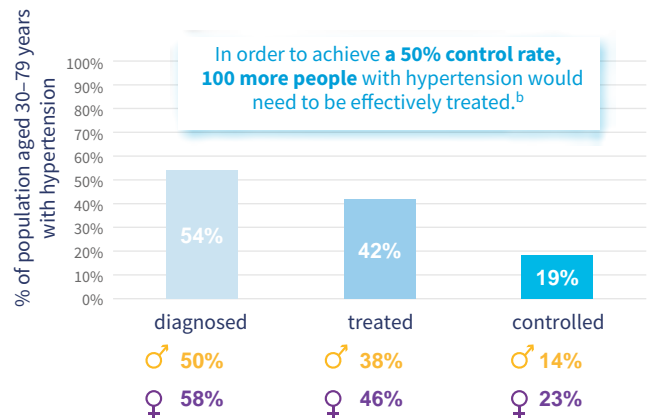
Niue

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **40%**   ♂ **39%**   ♀ **40%**

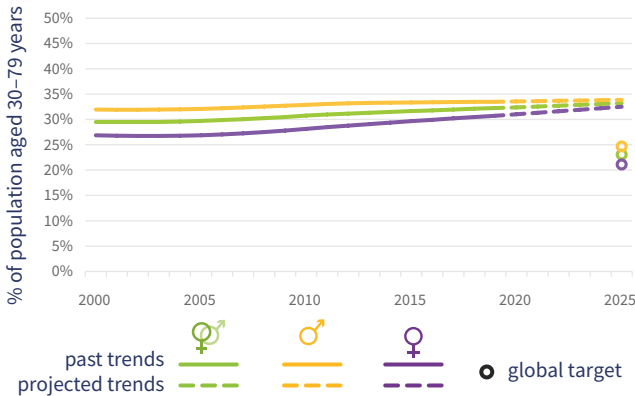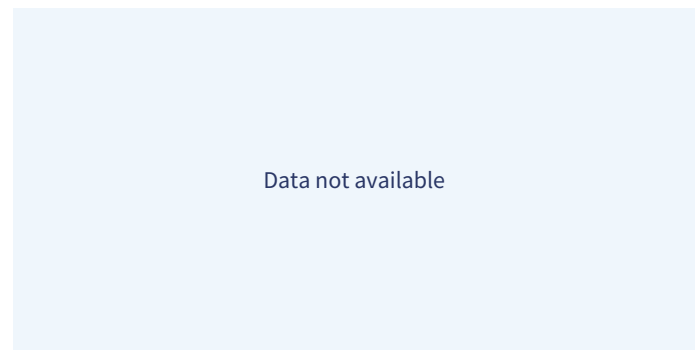### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **340** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 100 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	54%	42%	19%
♂	50%	38%	14%
♀	58%	46%	23%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

⚥ past trends   ♂   ♀
projected trends   ○ global target

Hypertension control rate scenarios

Data not available

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	59	59	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	8	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	50	45	55	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	16	3	2019
Physical inactivity, adults aged 18+ years (%)	7	8	6	2016

National response

Targets
National target for blood pressure   ✖
National target for salt consumption   ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✖
Conducted recent, national survey on salt/sodium intake   ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✖

Treatment
Guidelines for management of hypertension   ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake.
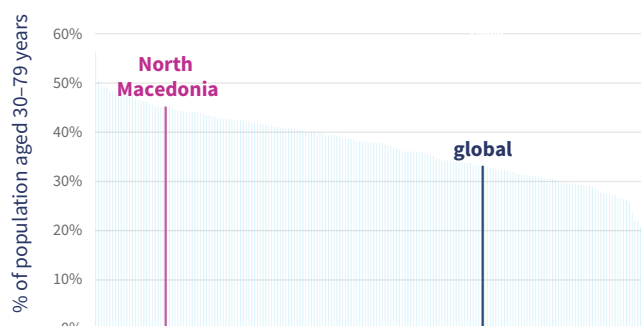
North Macedonia

Hypertension profile

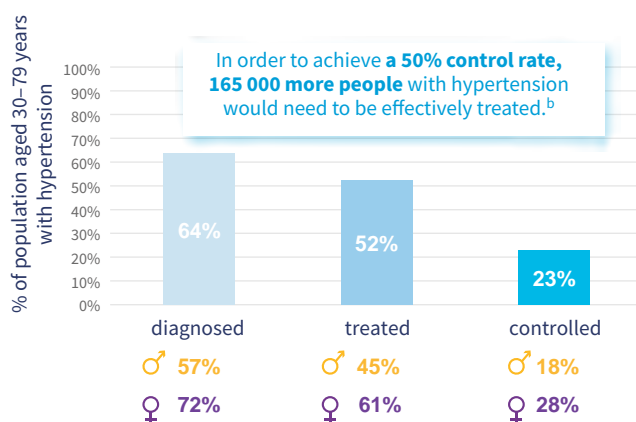**Total population (2019): 2 114 000**
Total deaths (2019): 25 000

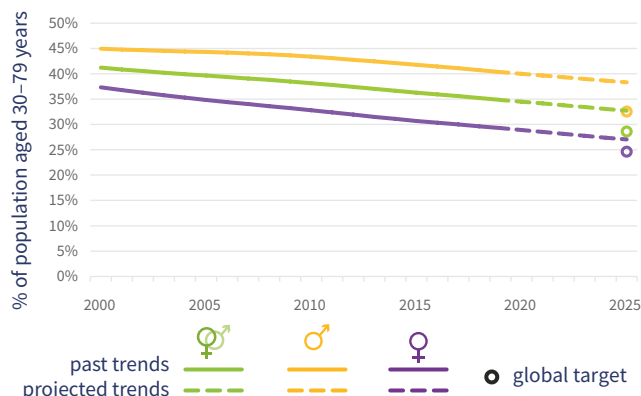**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **45%** ♂ **49%** ♀ **41%**
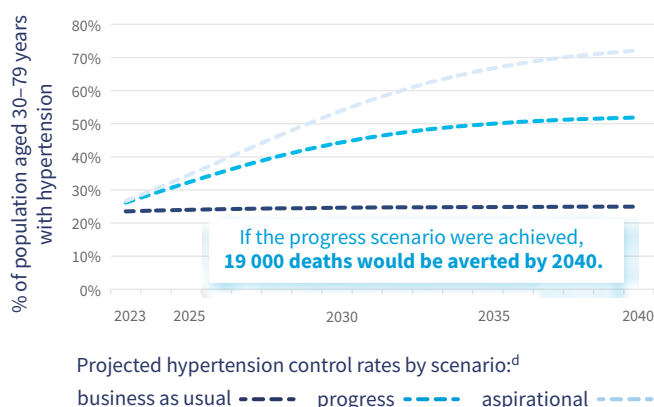
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **625 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 165 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	64%	52%	23%
♂	57%	45%	18%
♀	72%	61%	28%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ◦ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **19 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	28	17	2019
Cardiovascular disease deaths	15 500	7400	8100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	59	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	10	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	22	23	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	8	2	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
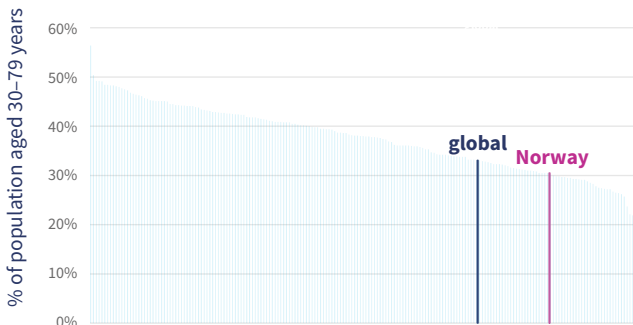
Norway

Hypertension profile

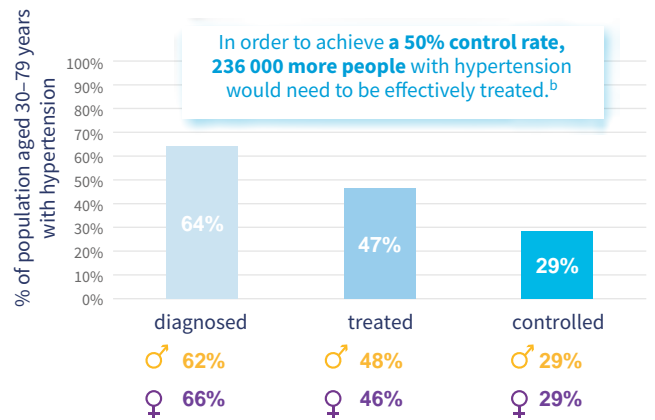**Total population (2019): 5 348 000**

Total deaths (2019): 40 900

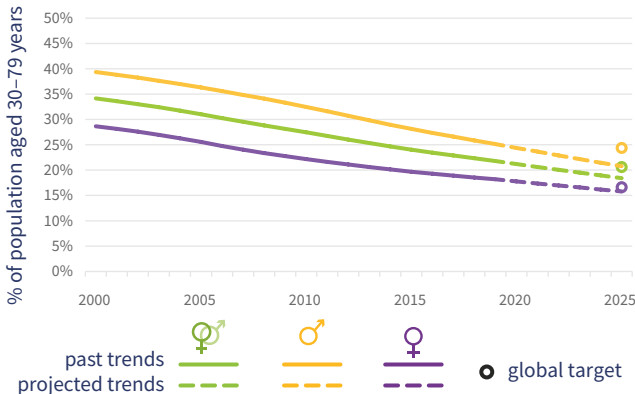**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **31%** ♂ **35%** ♀ **26%**
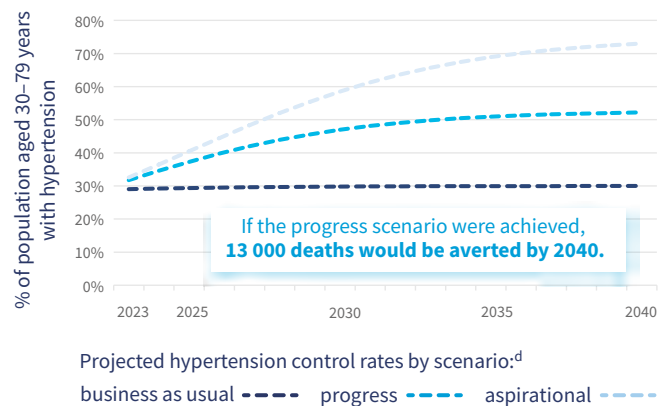
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 236 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	64%	47%	29%
♂	62%	48%	29%
♀	66%	46%	29%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **13 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	9	10	7	2019
Cardiovascular disease deaths	10 300	4900	5400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	49	50	47	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	17	18	16	2019
Obesity, adults aged 18+ years (%)	23	24	23	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	10	3	2019
Physical inactivity, adults aged 18+ years (%)	32	30	34	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
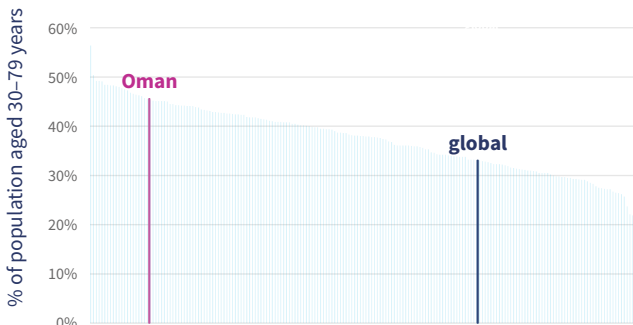
Oman

Hypertension profile

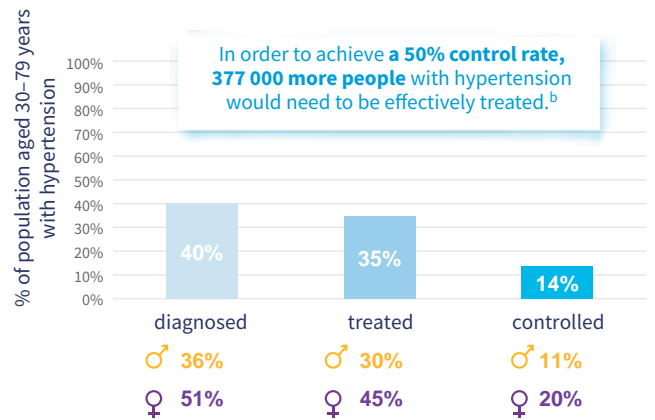**Total population (2019):** 4 603 000
Total deaths (2019): 16 300

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]　⚥ **46%**　♂ **48%**　♀ **39%**
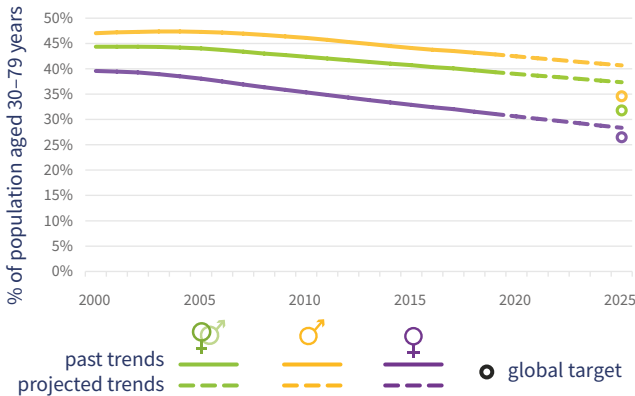

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **920 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 377 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
40%	35%	14%
♂ 36%	♂ 30%	♂ 11%
♀ 51%	♀ 45%	♀ 20%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —　○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **20 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -　progress - - -　aspirational - - -
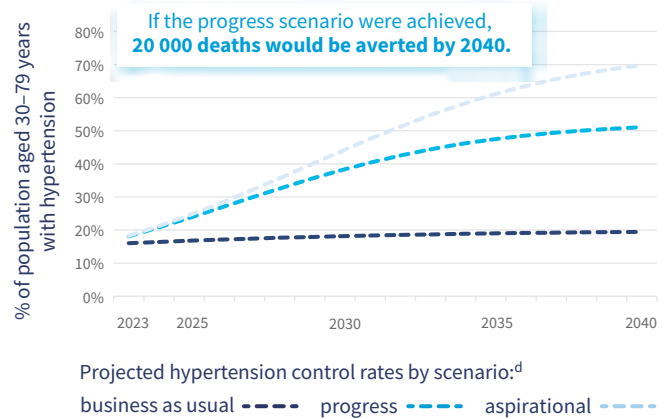
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	22	20	2019
Cardiovascular disease deaths	7800	4600	3300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	56	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	5	2019
Current tobacco use, adults aged 15+ years (%)	8	15	0	2019
Obesity, adults aged 18+ years (%)	27	23	34	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	1	0	2019
Physical inactivity, adults aged 18+ years (%)	33	30	40	2016

National response

Targets
National target for blood pressure　✔
National target for salt consumption　✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension　✔
Conducted recent, national survey on salt/sodium intake　✔
Functioning system for generating reliable cause-specific mortality data on a routine basis　✖

Treatment
Guidelines for management of hypertension　✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
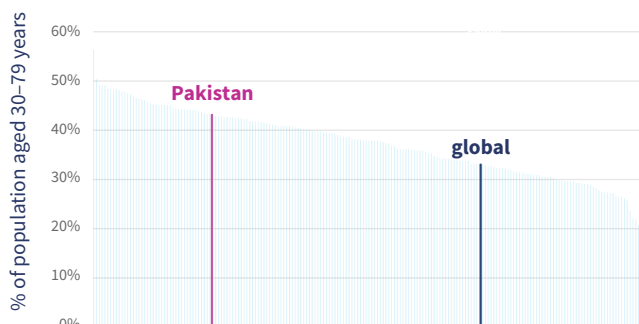
Pakistan

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **43%**   ♂ **42%**   ♀ **45%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **32.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 12.5 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	44%	35%	11%
♂	34%	25%	8%
♀	54%	44%	14%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ⭘ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **839 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	29	32	27	2019
Cardiovascular disease deaths	450 000	245 000	205 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	57	58	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	9	8	2019
Current tobacco use, adults aged 15+ years (%)	21	34	8	2019
Obesity, adults aged 18+ years (%)	9	6	11	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	34	24	43	2016

National response

Targets
National target for blood pressure   ✖
National target for salt consumption   ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✔
Conducted recent, national survey on salt/sodium intake   ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✖

Treatment
Guidelines for management of hypertension   ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Palau

Hypertension profile
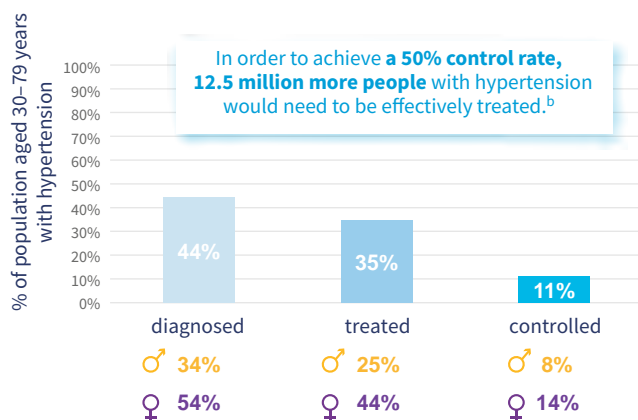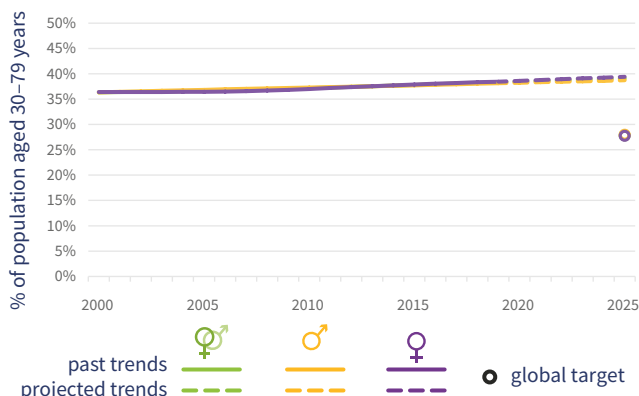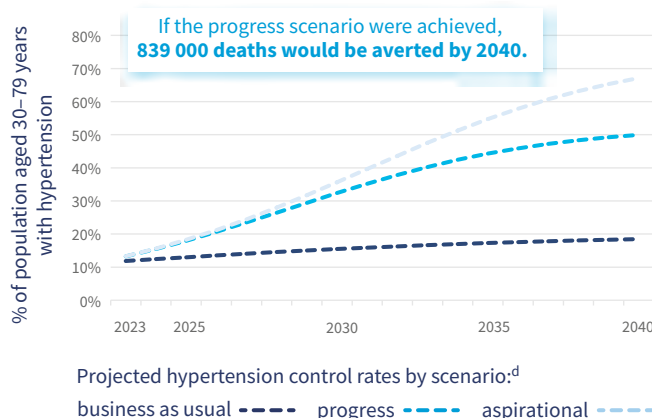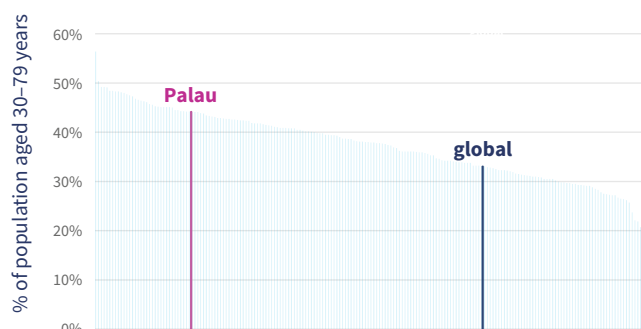
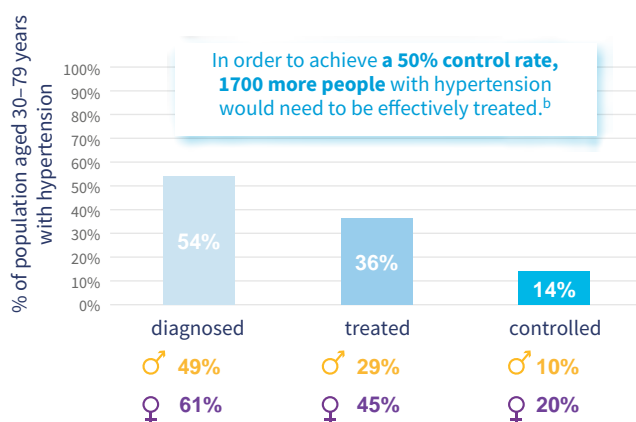**Total population (2019):** 17 900
Total deaths (2019): **no data**!

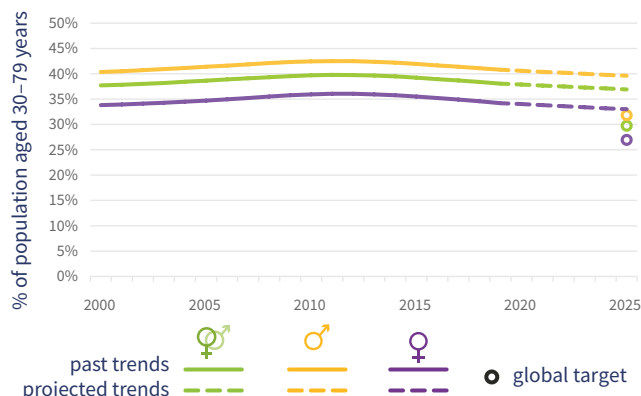**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ 44%   ♂ 45%   ♀ 43%

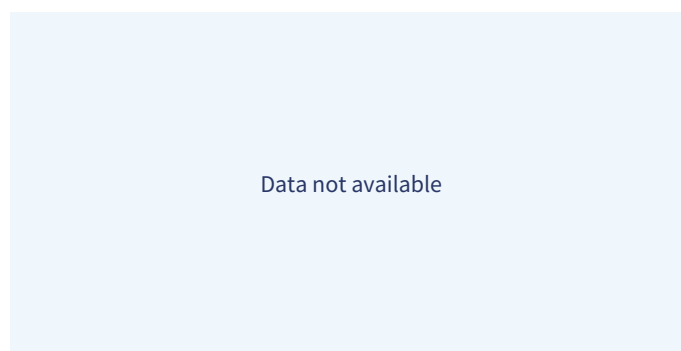
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **4900** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1700 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	54%	36%	14%
♂	49%	29%	10%
♀	61%	45%	20%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀   ◉ global target

Hypertension control rate scenarios

Data not available

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	55	53	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	7	2019
Current tobacco use, adults aged 15+ years (%)[e]	18	28	8	2019
Obesity, adults aged 18+ years (%)	55	52	59	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	no data	no data	no data	2019
Physical inactivity, adults aged 18+ years (%)	41	28	53	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake. e. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
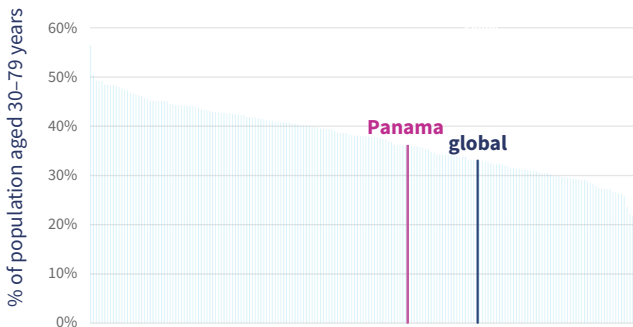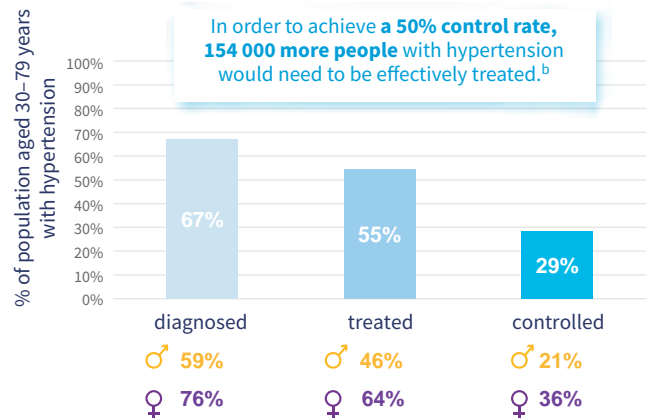
Panama

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **36%**   ♂ **37%**   ♀ **35%**

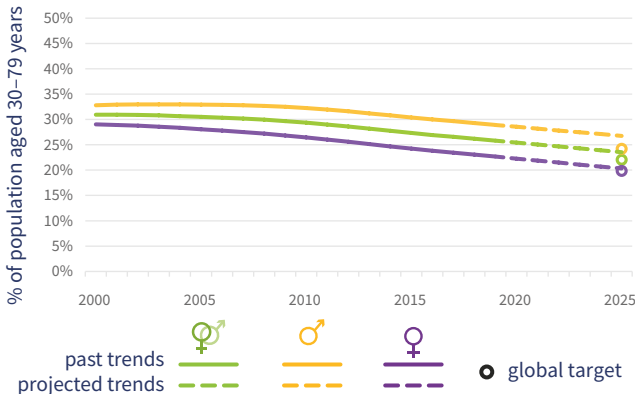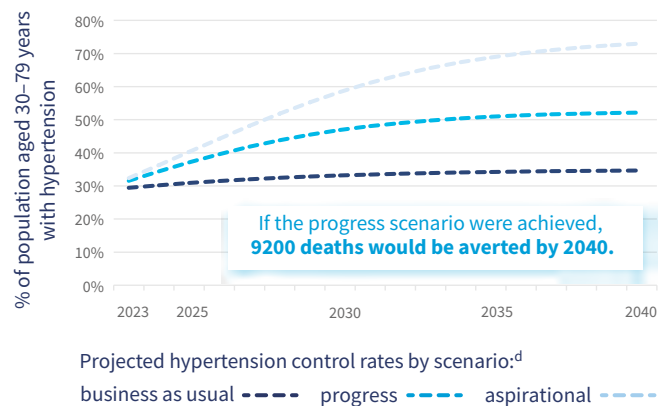## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **718 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 154 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
67%	55%	29%
♂ 59%	♂ 46%	♂ 21%
♀ 76%	♀ 64%	♀ 36%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **9200 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	13	9	2019
Cardiovascular disease deaths	5800	3200	2600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	53	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)	5	8	2	2019
Obesity, adults aged 18+ years (%)	23	18	28	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
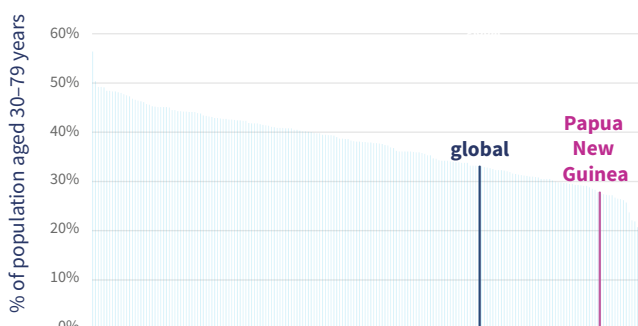
Papua New Guinea

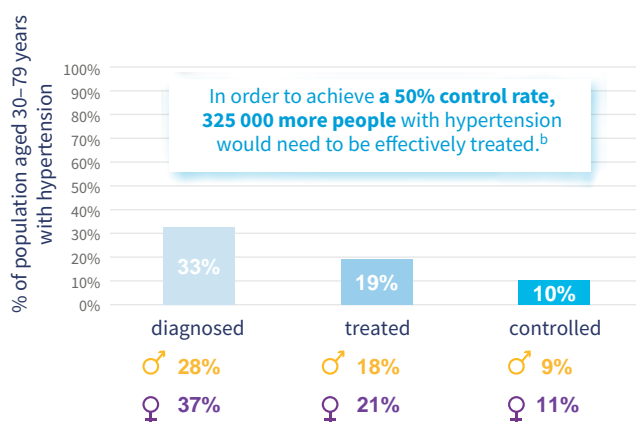## Hypertension profile

Total population (2019): 9 542 000

Total deaths (2019): 60 600!

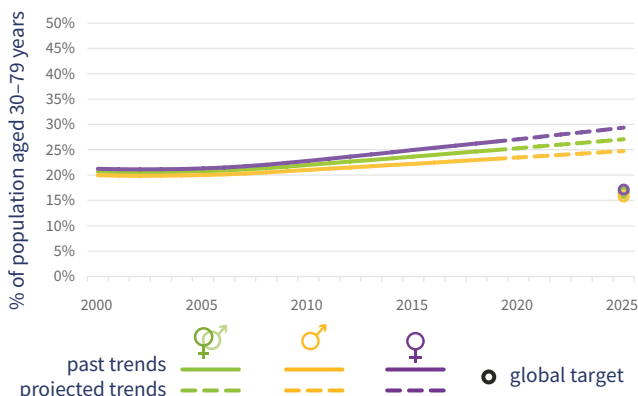**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 28% ♂ 25% ♀ 30%

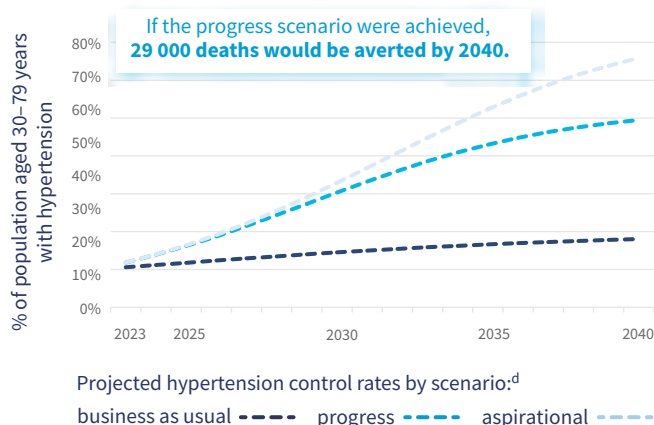### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **812 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 325 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
33%	19%	10%
♂ 28%	♂ 18%	♂ 9%
♀ 37%	♀ 21%	♀ 11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **29 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	36	40	32	2019
Cardiovascular disease deaths	14 800	8800	6000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	41	41	41	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	40	54	26	2019
Obesity, adults aged 18+ years (%)	21	17	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	15	11	18	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
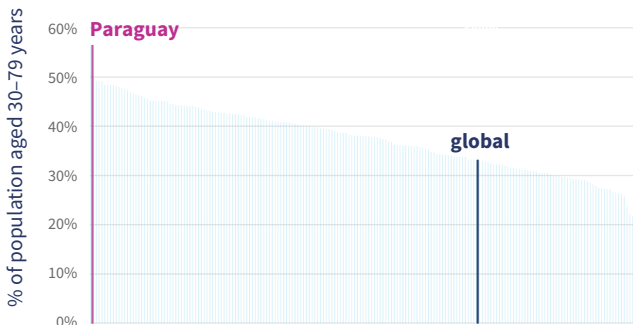
Paraguay

Hypertension profile

Total population (2019): 6 530 000
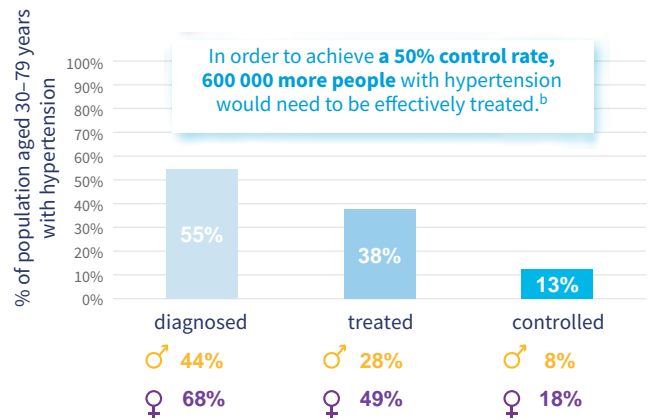**Total deaths (2019):** 34 400!

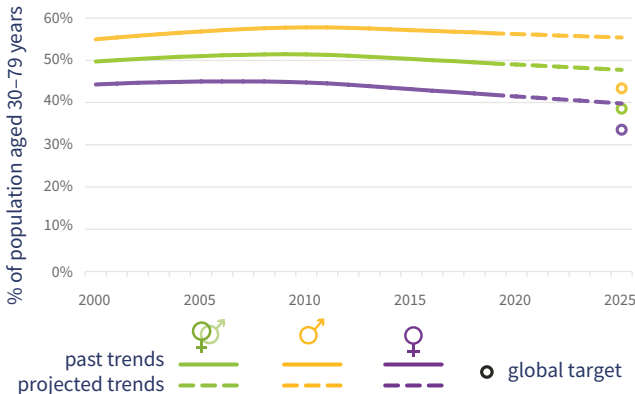**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 56% ♂ 62% ♀ 51%

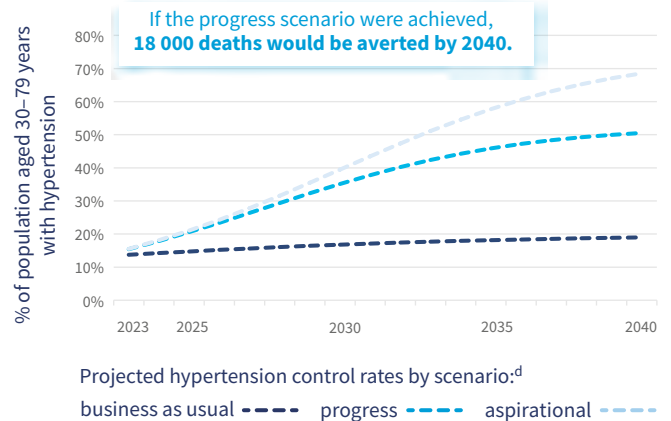### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 600 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	55%	38%	13%
♂	44%	28%	8%
♀	68%	49%	18%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **18 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	19	13	2019
Cardiovascular disease deaths	9200	5200	4000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	52	58	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)[f]	12	20	5	2019
Obesity, adults aged 18+ years (%)	20	17	23	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	9	2	2019
Physical inactivity, adults aged 18+ years (%)	37	38	37	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Global report on hypertension: the race against a silent killer
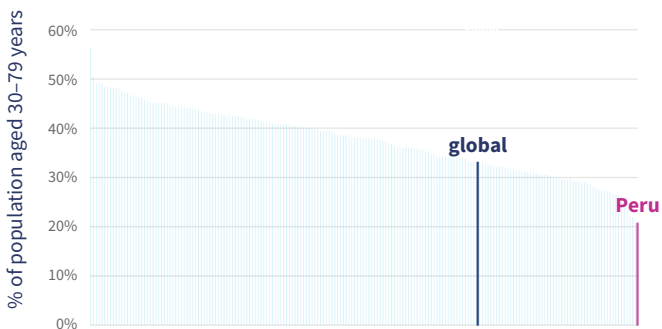
Peru

Hypertension profile

Total population (2019): 32 825 000
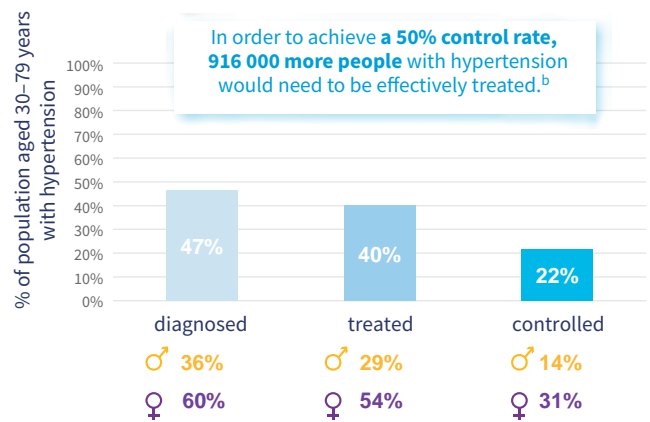**Total deaths (2019):** 142 000

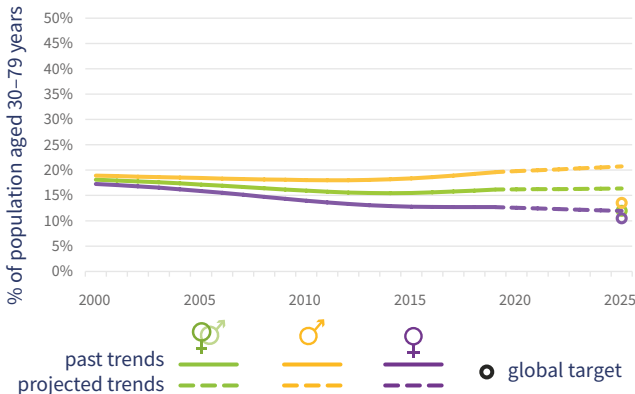Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **21%**   ♂ **23%**   ♀ **18%**

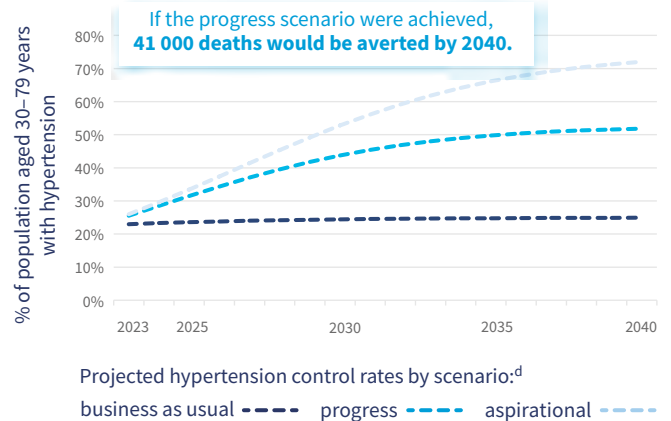### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 916 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	47%	40%	22%
♂	36%	29%	14%
♀	60%	54%	31%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **41 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- · · ·   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	10	10	2019
Cardiovascular disease deaths	25 300	12 700	12 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	49	47	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)[f]	9	14	3	2019
Obesity, adults aged 18+ years (%)	20	15	24	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	12	3	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
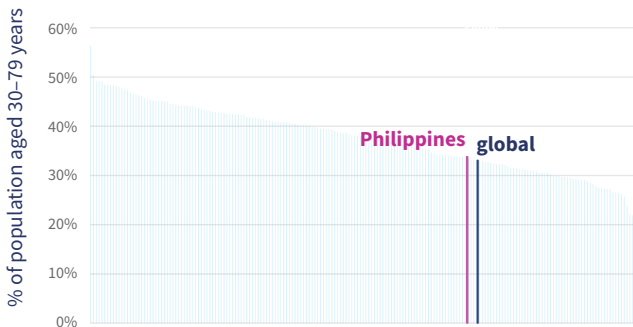
Philippines

Hypertension profile

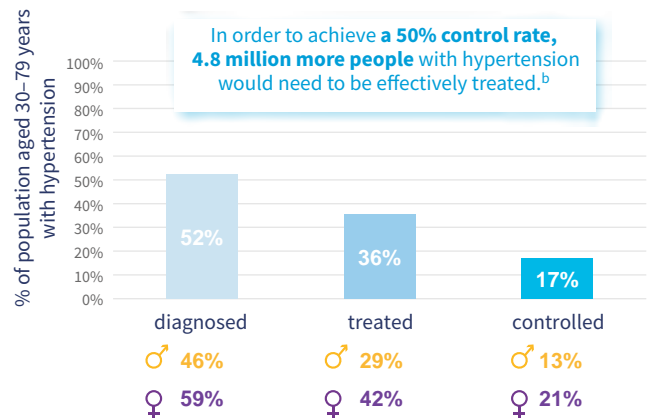**Total population (2019):** 110 400 000

Total deaths (2019): 734 000

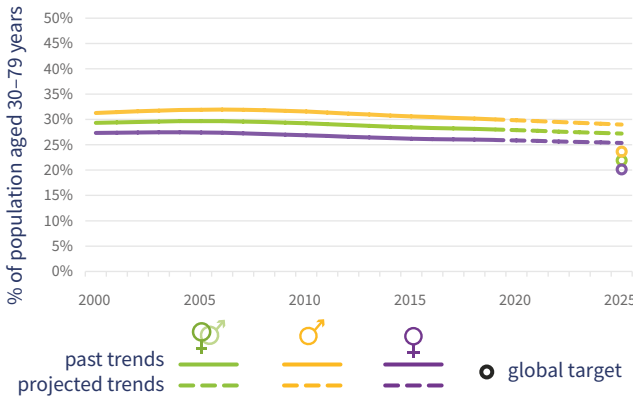**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **34%** ♂ **35%** ♀ **33%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **14.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 4.8 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
52%	36%	17%
♂ 46%	♂ 29%	♂ 13%
♀ 59%	♀ 42%	♀ 21%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **514 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	30	19	2019
Cardiovascular disease deaths	250 000	132 000	118 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	53	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)[f]	23	40	7	2019
Obesity, adults aged 18+ years (%)	6	5	8	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	2	2019
Physical inactivity, adults aged 18+ years (%)	40	30	49	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Poland

Hypertension profile

Total population (2019): 38 494 000
Total deaths (2019): 401 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 49% ♂ 56% ♀ 43%

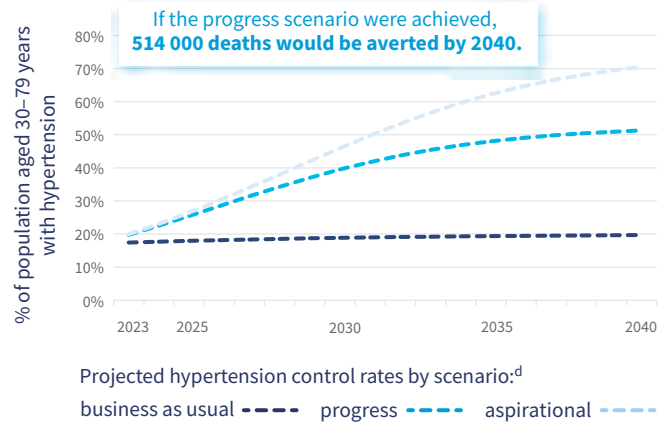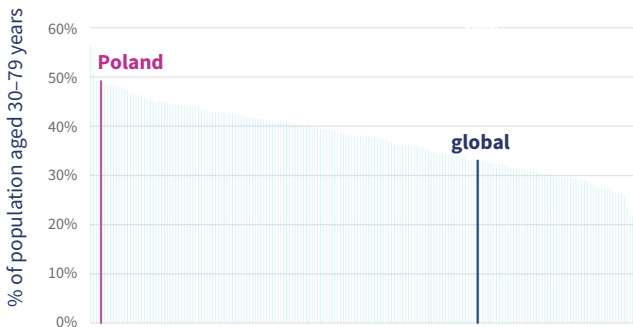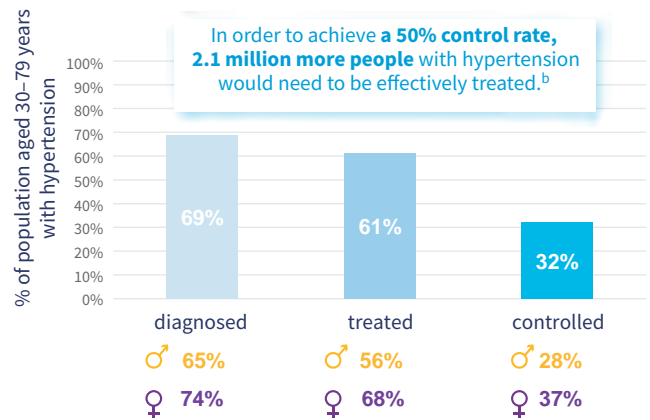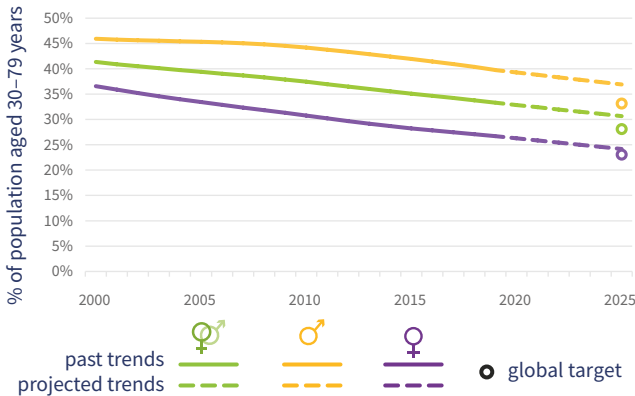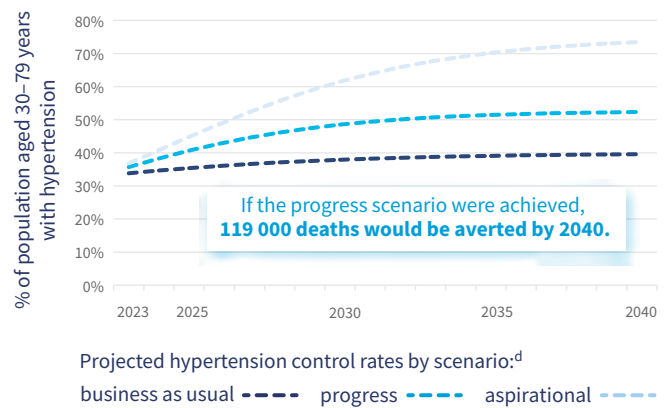### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **13 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.1 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
69%	61%	32%
♂ 65%	♂ 56%	♂ 28%
♀ 74%	♀ 68%	♀ 37%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **119 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ------   progress ------   aspirational ------

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	23	12	2019
Cardiovascular disease deaths	173 000	77 200	95 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	50	52	48	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	11	13	9	2019
Current tobacco use, adults aged 15+ years (%)	25	29	21	2019
Obesity, adults aged 18+ years (%)	23	24	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	19	5	2019
Physical inactivity, adults aged 18+ years (%)	32	31	33	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
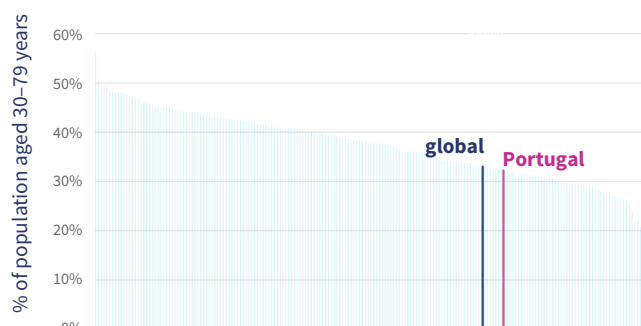
Portugal

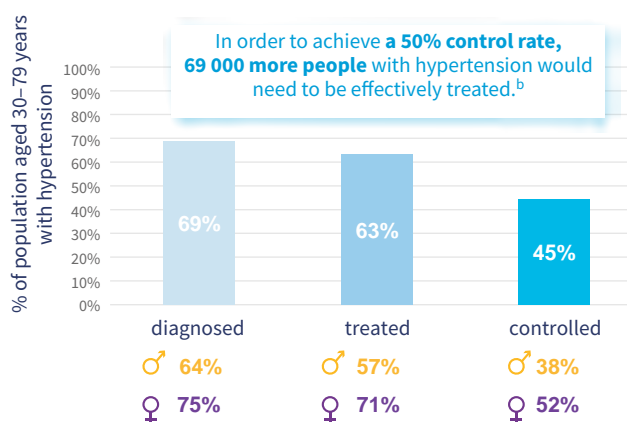## Hypertension profile

Total population (2019): 10 290 000

Total deaths (2019): 111 000

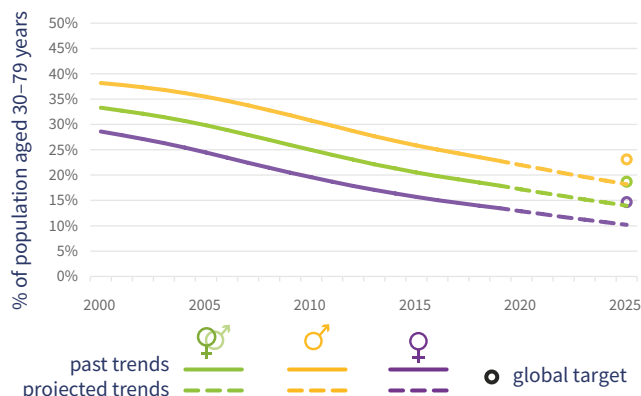Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **32%** ♂ **37%** ♀ **28%**

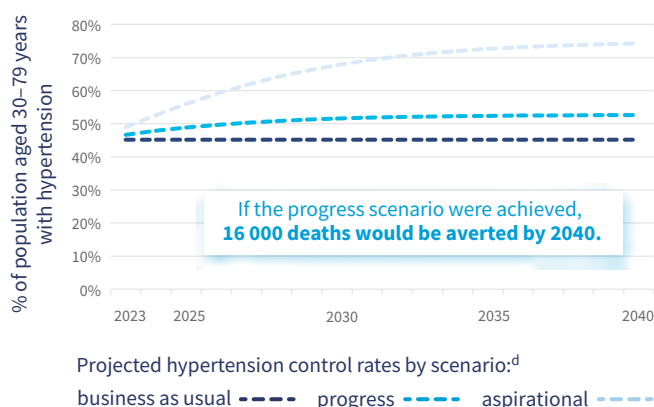### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.7 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 69 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	69%	63%	45%
♂	64%	57%	38%
♀	75%	71%	52%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **16 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	15	7	2019
Cardiovascular disease deaths	32 600	14 900	17 700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	45	48	44	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)[f]	25	31	20	2019
Obesity, adults aged 18+ years (%)	21	20	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	17	5	2019
Physical inactivity, adults aged 18+ years (%)	43	38	48	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
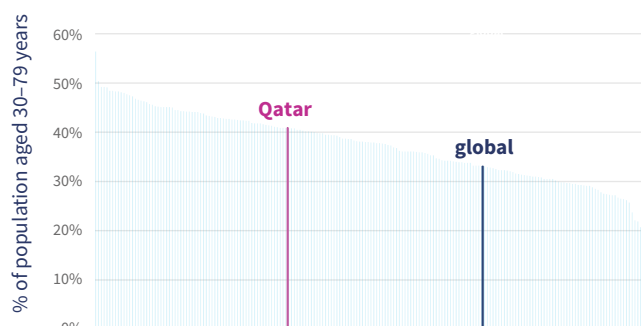
Qatar

Hypertension profile

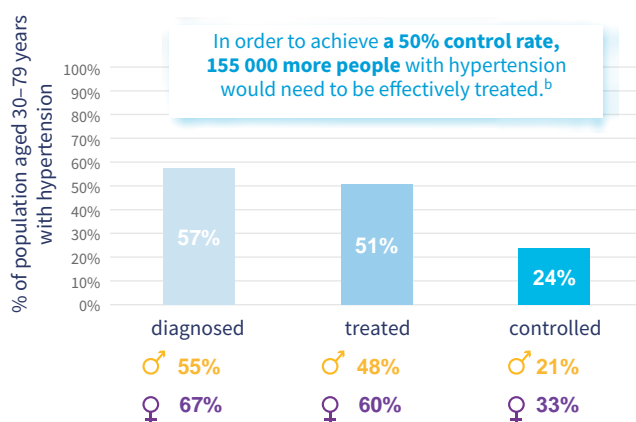**Total population (2019): 2 807 000**

Total deaths (2019): 4540

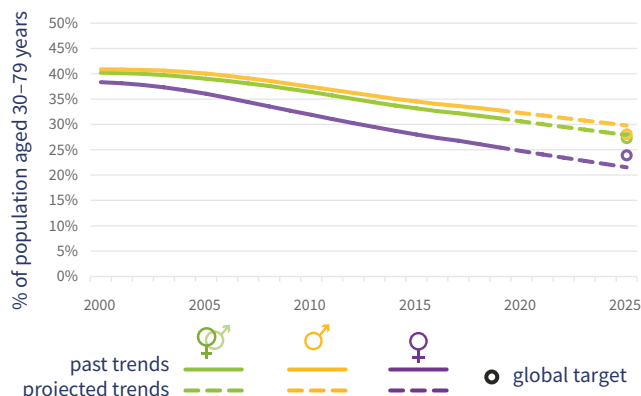| Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] | ⚥ 41% | ♂ 42% | ♀ 38% |

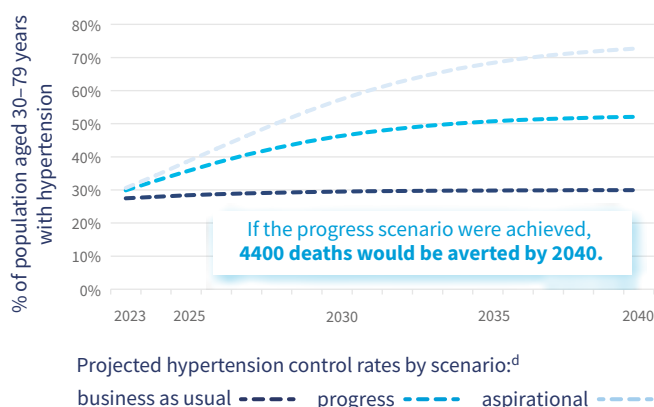### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **497 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 155 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
57%	51%	24%
♂ 55%	♂ 48%	♂ 21%
♀ 67%	♀ 60%	♀ 33%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **4400 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	10	13	2019
Cardiovascular disease deaths	1500	930	560	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	59	53	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	5	2019
Current tobacco use, adults aged 15+ years (%)	12	22	2	2019
Obesity, adults aged 18+ years (%)	35	33	43	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	1	0	2019
Physical inactivity, adults aged 18+ years (%)	37	33	49	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
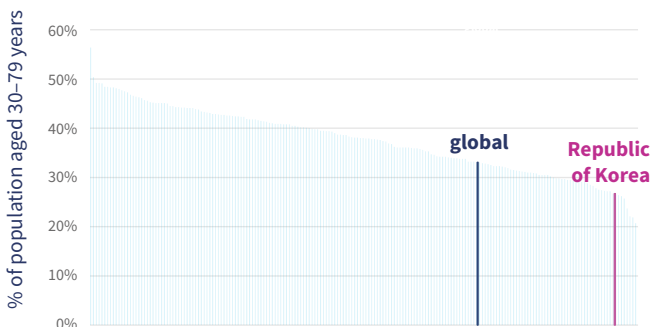
Republic of Korea

Hypertension profile

Total population (2019): 51 804 000
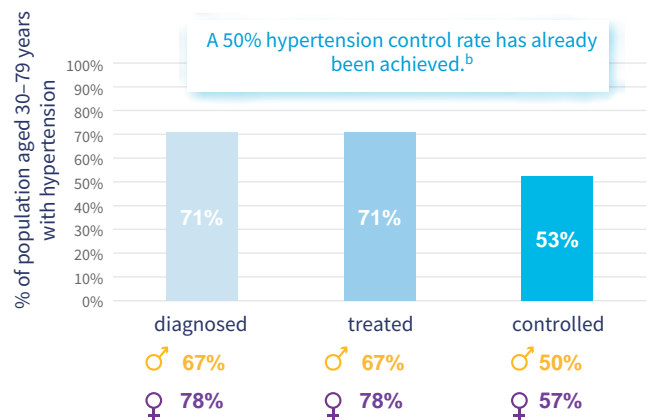
Total deaths (2019): 295 000

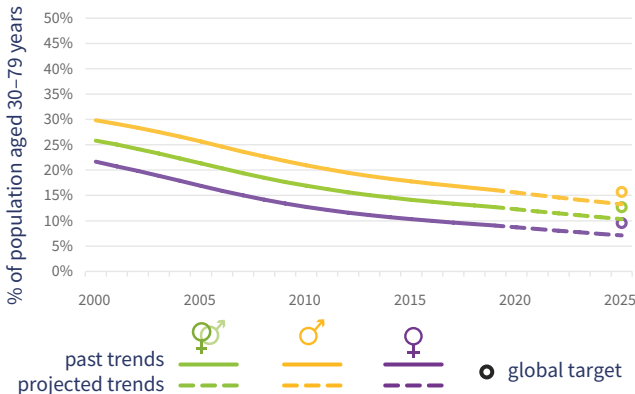Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 27% ♂ 32% ♀ 21%

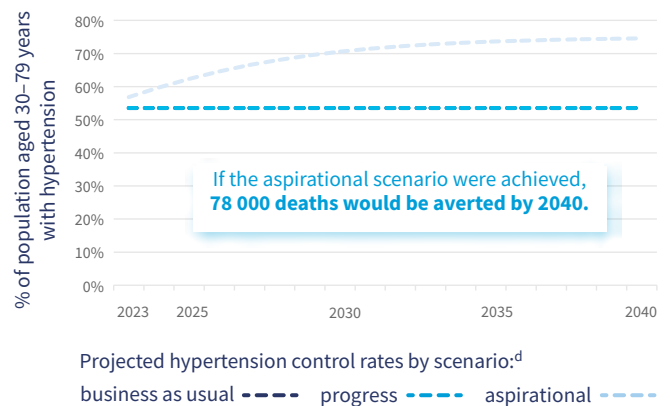## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 10.4 million adults aged 30–79 years with hypertension:

A 50% hypertension control rate has already been achieved.[b]

	diagnosed	treated	controlled
	71%	71%	53%
♂	67%	67%	50%
♀	78%	78%	57%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ○ global target

Hypertension control rate scenarios

If the aspirational scenario were achieved, **78 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ------ progress ------ aspirational ------

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	7	10	4	2019
Cardiovascular disease deaths	64 400	29 900	34 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	42	40	43	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	12	13	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	21	37	6	2019
Obesity, adults aged 18+ years (%)	5	4	5	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	4	2019
Physical inactivity, adults aged 18+ years (%)	35	30	41	2016

National response

Targets

		Treatment	
National target for blood pressure	no data	Guidelines for management of hypertension	✖
National target for salt consumption	no data		

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
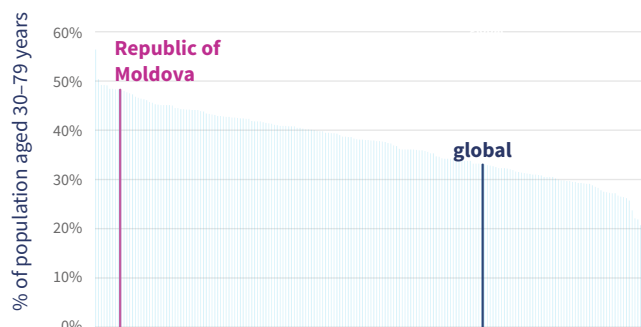
Republic of Moldova

Hypertension profile

Total population (2019): 3 109 000
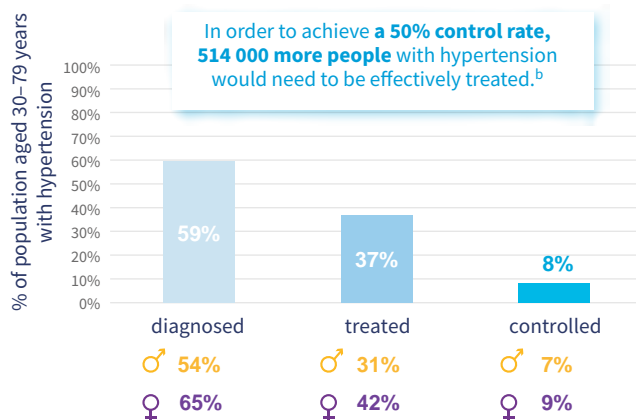
Total deaths (2019): 41 000

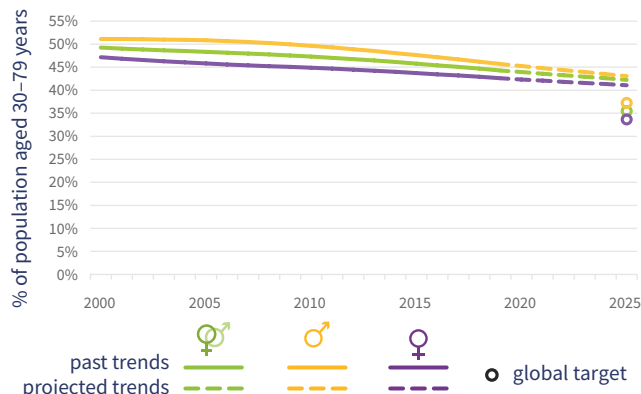Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 48%   ♂ 49%   ♀ 47%

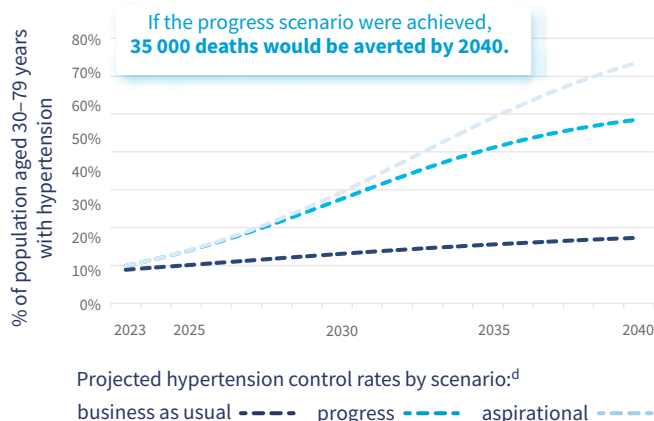## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 514 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	59%	37%	8%
♂	54%	31%	7%
♀	65%	42%	9%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **35 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	34	16	2019
Cardiovascular disease deaths	23 300	10 500	12 900	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	63	64	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	29	51	6	2019
Obesity, adults aged 18+ years (%)	19	16	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	18	5	2019
Physical inactivity, adults aged 18+ years (%)	11	12	11	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
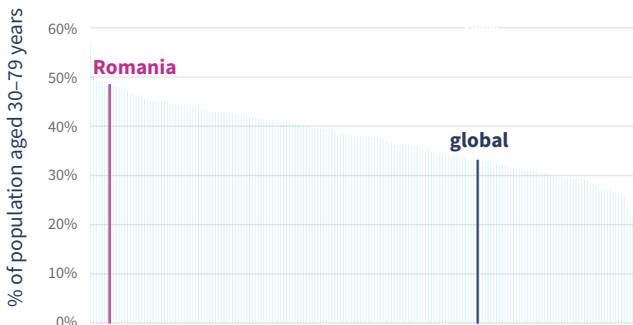
Romania

Hypertension profile

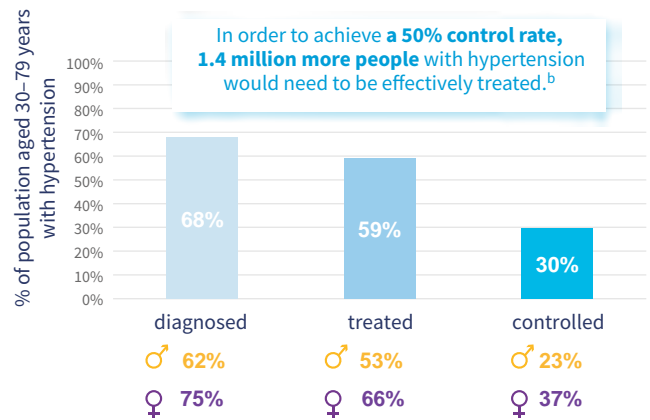**Total population (2019):** 19 524 000
Total deaths (2019): 259 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **48%** ♂ **53%** ♀ **44%**
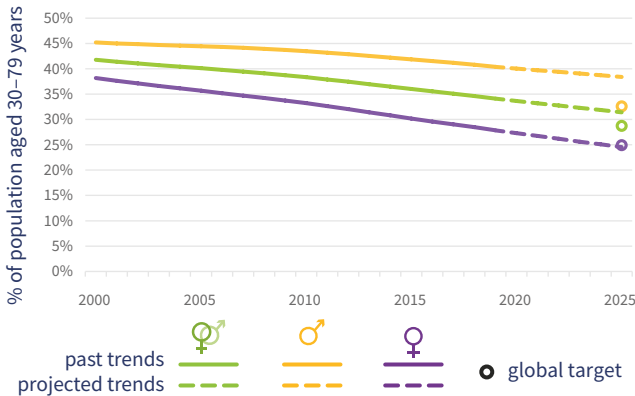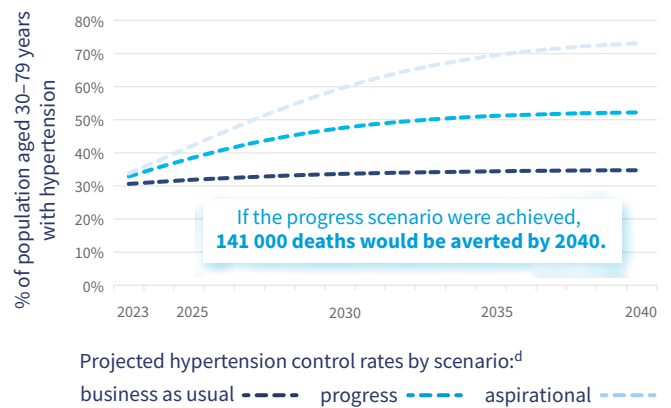
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.4 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	68%	59%	30%
♂	62%	53%	23%
♀	75%	66%	37%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **141 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	29	14	2019
Cardiovascular disease deaths	144 000	66 900	77 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	61	61	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)	28	37	20	2019
Obesity, adults aged 18+ years (%)	23	23	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	17	27	8	2019
Physical inactivity, adults aged 18+ years (%)	35	32	38	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
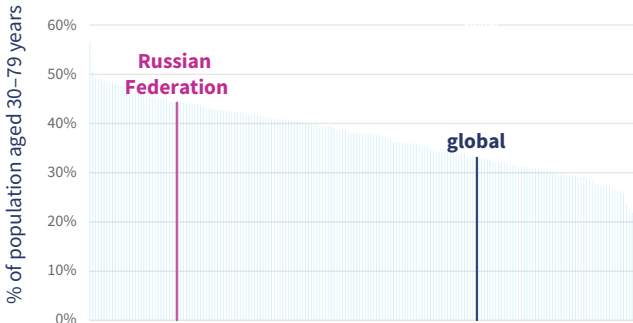
Russian Federation

Hypertension profile

Total population (2019): 145 700 000

Total deaths (2019): 1 790 000!

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **44%**   ♂ **47%**   ♀ **41%**

Prevalence of hypertension – global comparison (both sexes)[a]

% of population aged 30–79 years

Russian Federation

global

Of the **43.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 13.9 million more people** with hypertension would need to be effectively treated.[b]

% of population aged 30–79 years with hypertension

diagnosed	treated	controlled
74%	50%	18%
♂ 67%	♂ 43%	♂ 14%
♀ 81%	♀ 57%	♀ 21%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

% of population aged 30–79 years

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **1.3 million deaths would be averted by 2040.**

% of population aged 30–79 years with hypertension

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	35	15	2019
Cardiovascular disease deaths	1 004 000	436 000	568 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	55	55	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	8	2019
Current tobacco use, adults aged 15+ years (%)	27	42	13	2019
Obesity, adults aged 18+ years (%)	23	18	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	18	4	2019
Physical inactivity, adults aged 18+ years (%)	17	17	18	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Rwanda

Hypertension profile

Total population (2019): 12 835 000
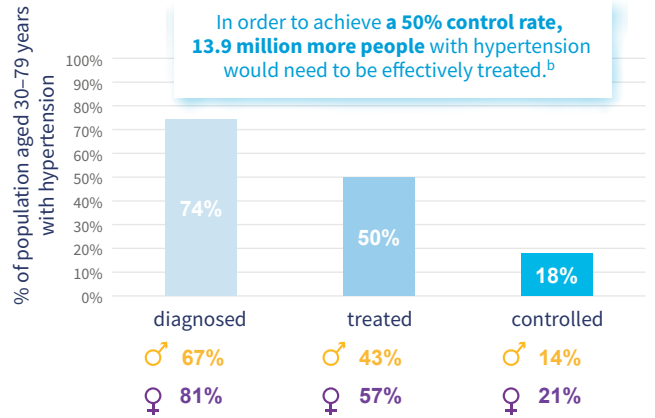**Total deaths (2019):** 64 300

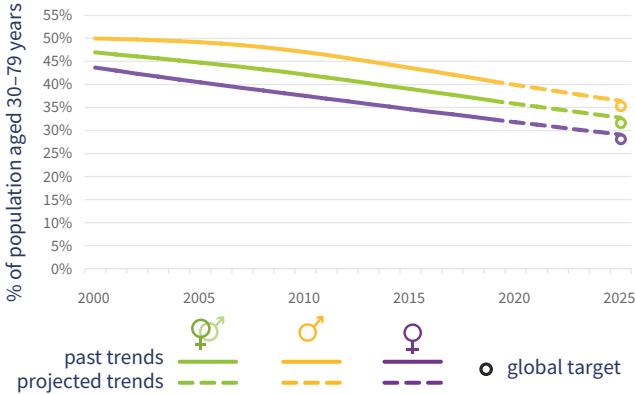**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ 30%   ♂ 29%   ♀ 31%

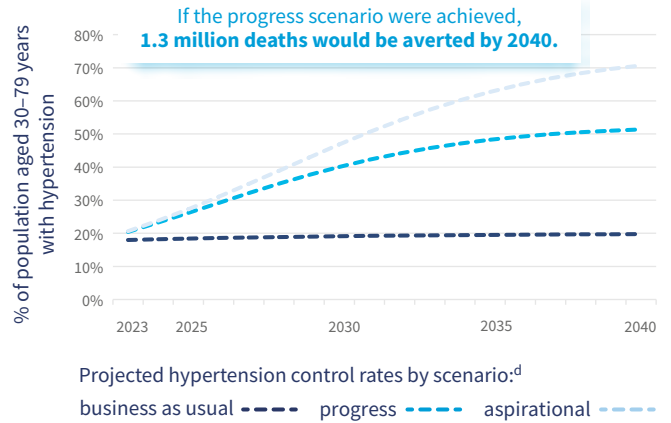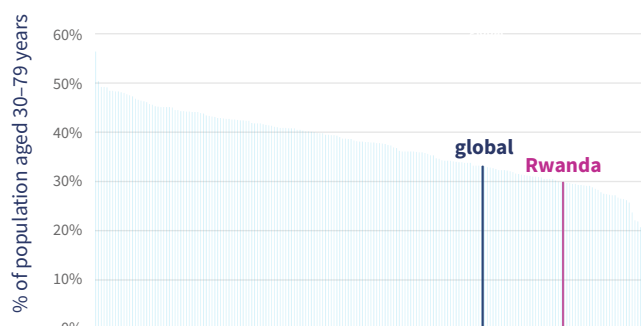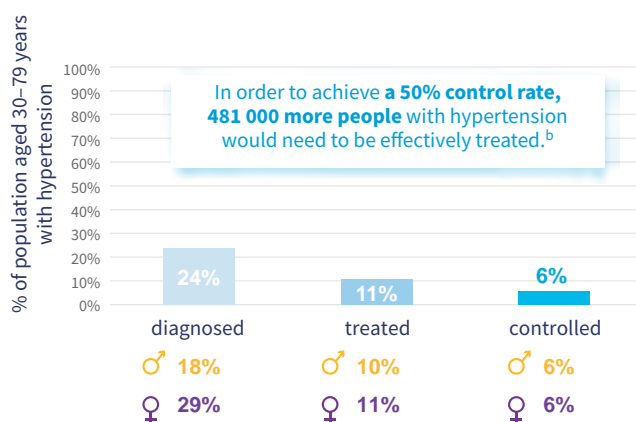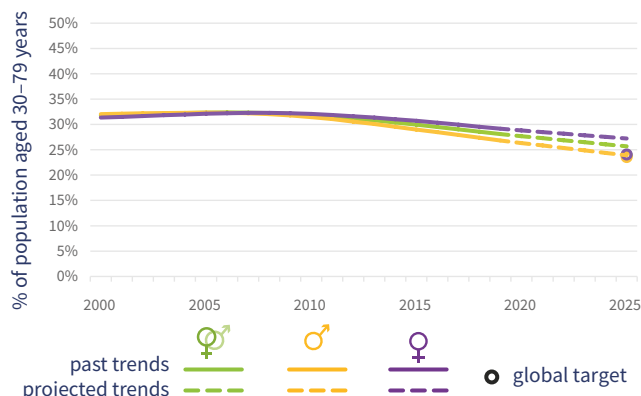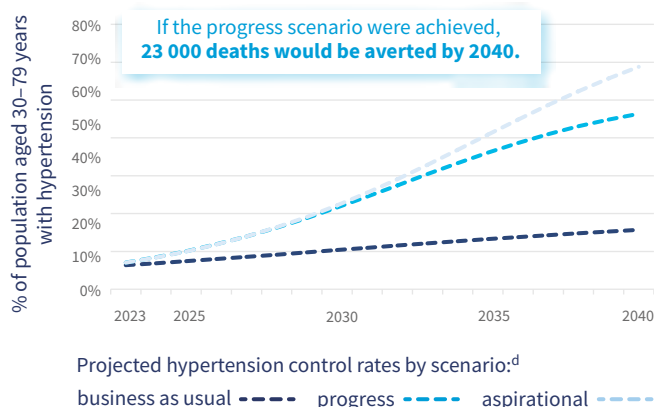## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 481 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	24%	11%	6%
♂	18%	10%	6%
♀	29%	11%	6%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **23 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ╌╌╌   progress ╌╌╌   aspirational ╌╌╌

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	20	22	19	2019
Cardiovascular disease deaths	11 200	5400	5900	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	51	58	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	14	21	7	2019
Obesity, adults aged 18+ years (%)	6	2	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	15	11	18	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
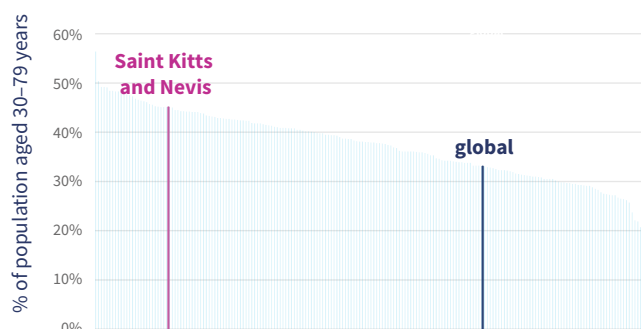
Saint Kitts and Nevis
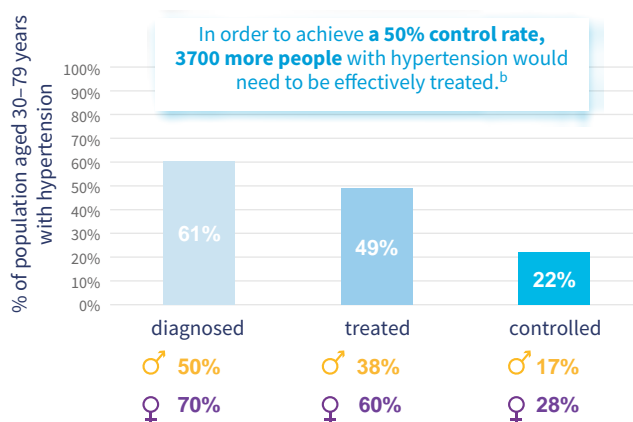
Hypertension profile

Total population (2019): 47 700
Total deaths (2019): no data

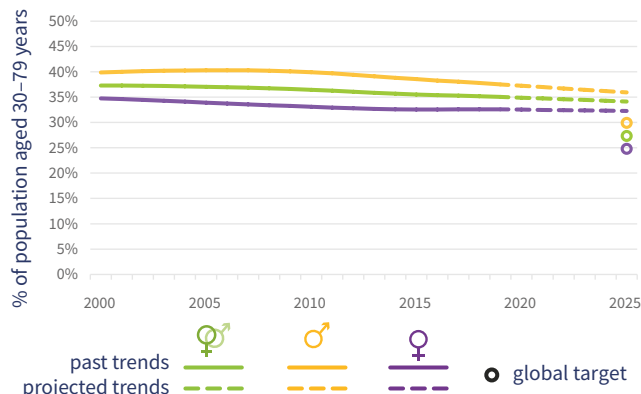**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ 45%   ♂ 45%   ♀ 45%

### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **13 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 3700 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	61%	49%	22%
♂	50%	38%	17%
♀	70%	60%	28%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

Data not available
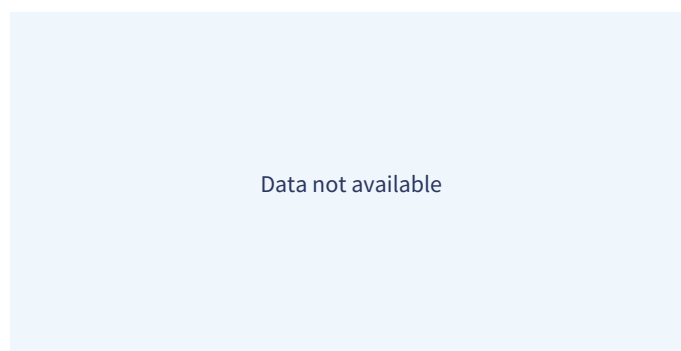
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	61	49	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	23	15	30	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	3	2019
Physical inactivity, adults aged 18+ years (%)	32	24	40	2016

National response

Targets
National target for blood pressure   ✘
National target for salt consumption   ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✘
Conducted recent, national survey on salt/sodium intake   ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✔

Treatment
Guidelines for management of hypertension   ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake.
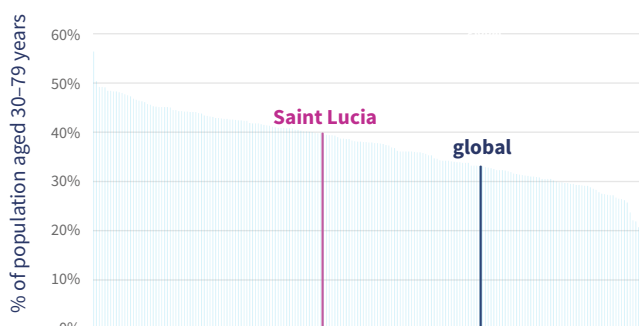
Saint Lucia

Hypertension profile

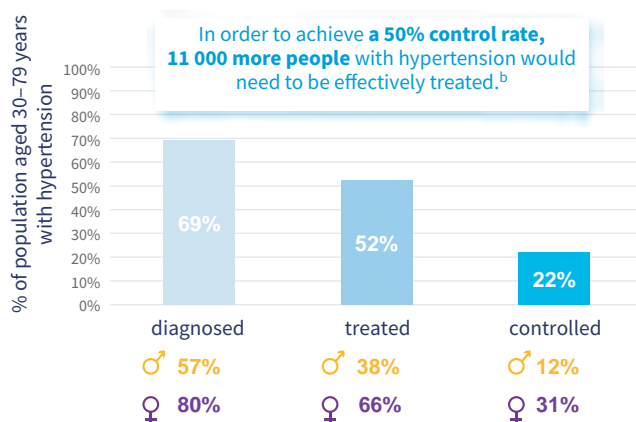**Total population (2019):** 179 000
Total deaths (2019): 1500

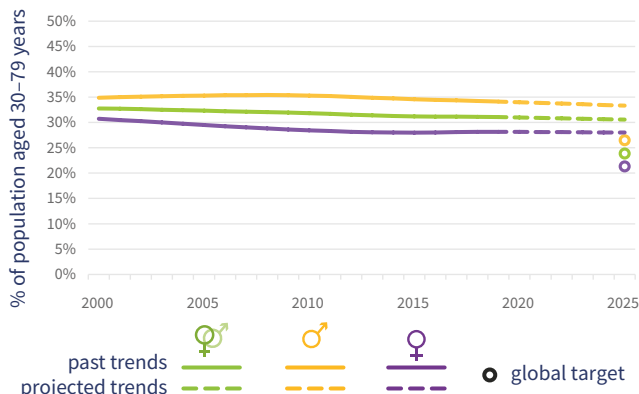Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **40%**   ♂ **39%**   ♀ **41%**

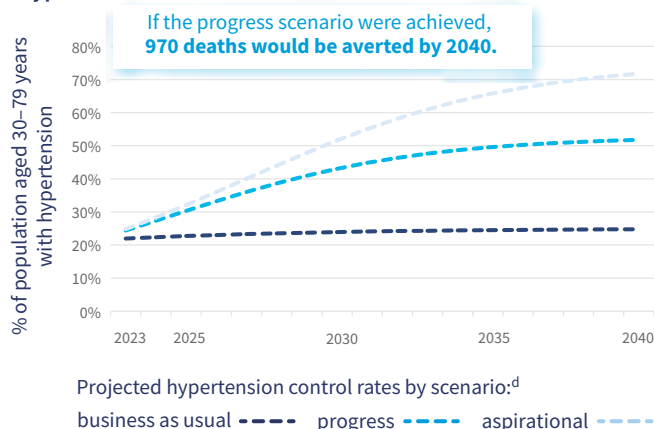### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **40 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 11 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	69%	52%	22%
♂	57%	38%	12%
♀	80%	66%	31%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   - -   - -   - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **970 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	18	21	15	2019
Cardiovascular disease deaths	490	280	220	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	53	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	20	12	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	15	4	2019
Physical inactivity, adults aged 18+ years (%)	40	27	52	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Saint Vincent and the Grenadines
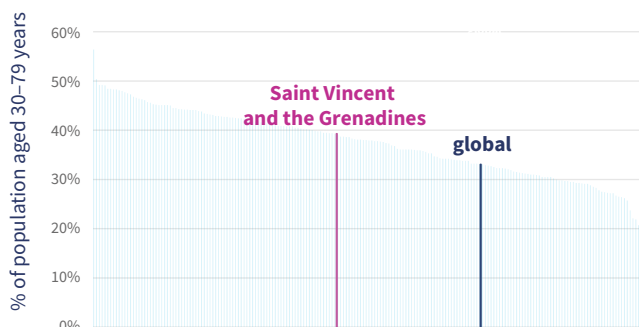
Hypertension profile

Total population (2019): 105 000
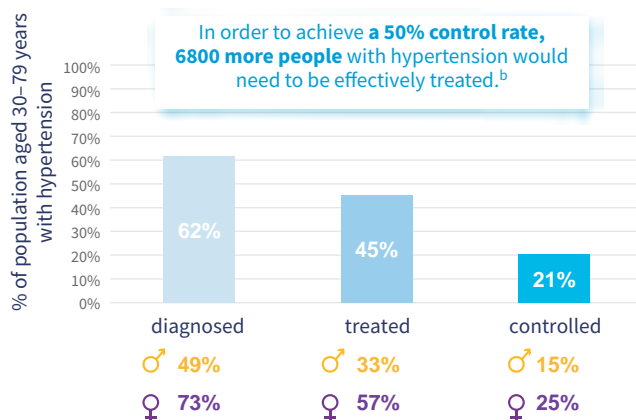**Total deaths (2019):** 930

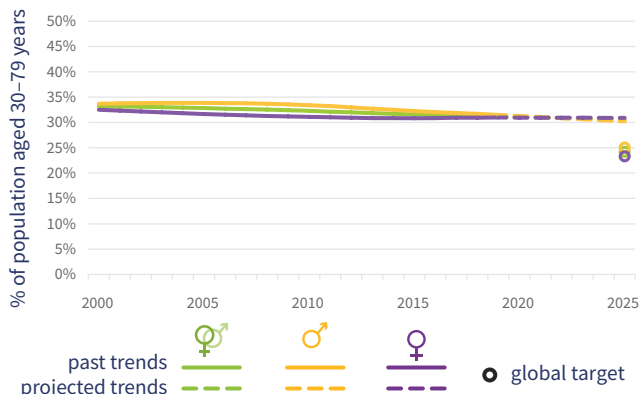**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ **39%**   ♂ **37%**   ♀ **42%**

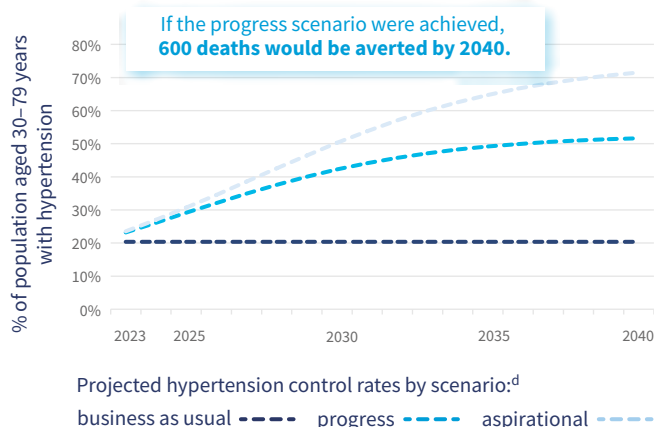## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 23 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 6800 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	62%	45%	21%
♂	49%	33%	15%
♀	73%	57%	25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥   ♂   ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **600 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	23	18	2019
Cardiovascular disease deaths	330	170	160	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	54	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	24	17	31	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✘

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
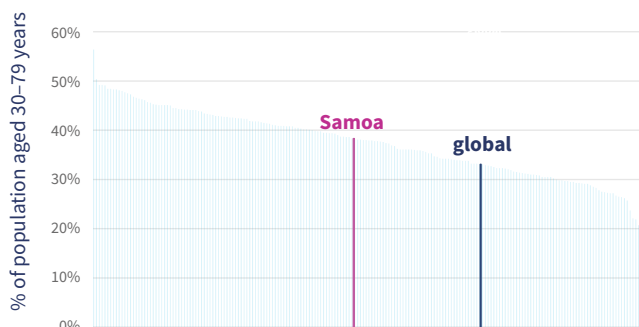
Samoa

Hypertension profile

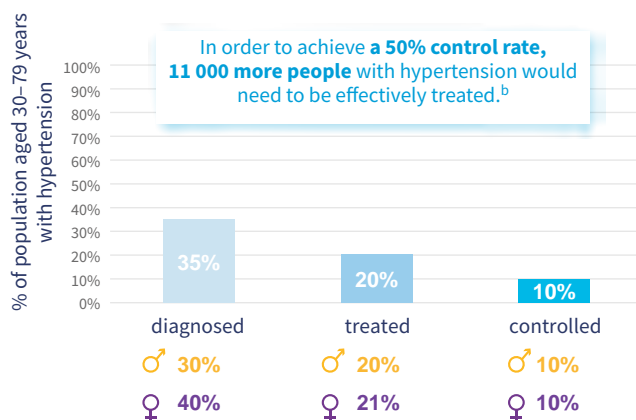**Total population (2019):** 212 000

Total deaths (2019): 1210

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **38%**   ♂ **39%**   ♀ **38%**
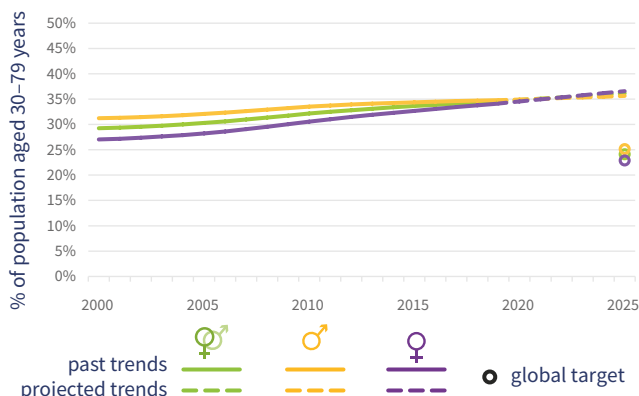
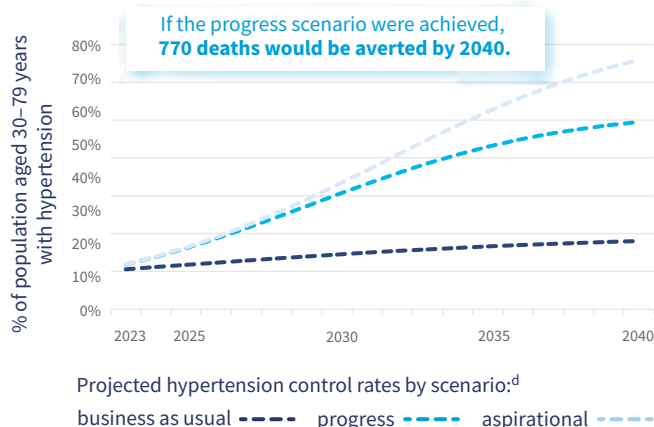### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **27 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 11 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	35%	20%	10%
♂	30%	20%	10%
♀	40%	21%	10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends --- ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **770 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---   progress ---   aspirational ---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	31	33	29	2019
Cardiovascular disease deaths	450	230	220	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	54	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	5	5	5	2019
Current tobacco use, adults aged 15+ years (%)	26	37	15	2019
Obesity, adults aged 18+ years (%)	47	40	55	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	4	1	2019
Physical inactivity, adults aged 18+ years (%)	13	8	17	2016

National response

Targets

National target for blood pressure	✖
National target for salt consumption	✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✖
Conducted recent, national survey on salt/sodium intake	✖
Functioning system for generating reliable cause-specific mortality data on a routine basis	✖

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
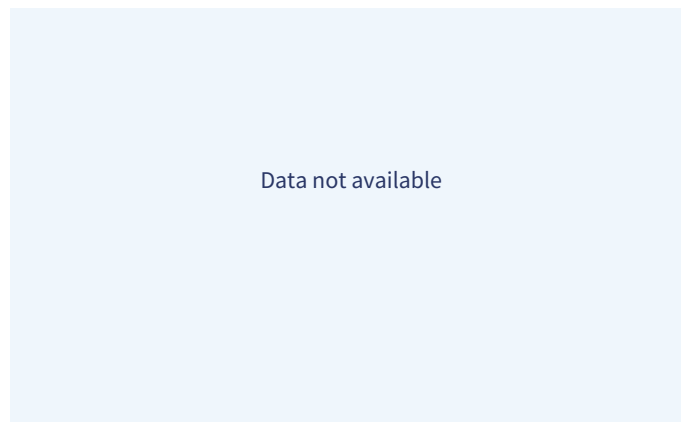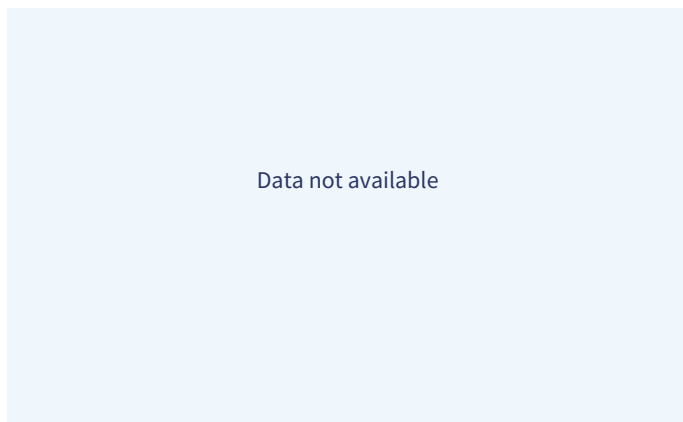
San Marino

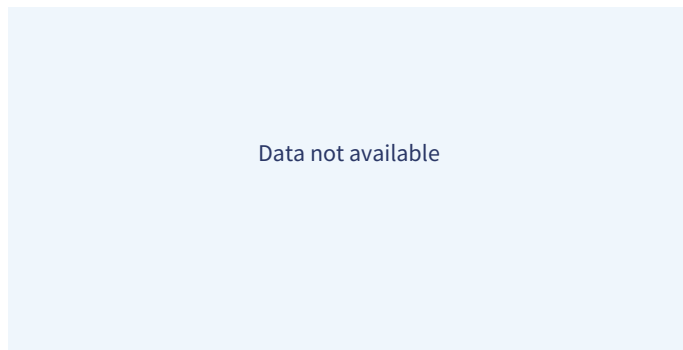## Hypertension profile

Total population (2019): 34 200

Total deaths (2019): no data

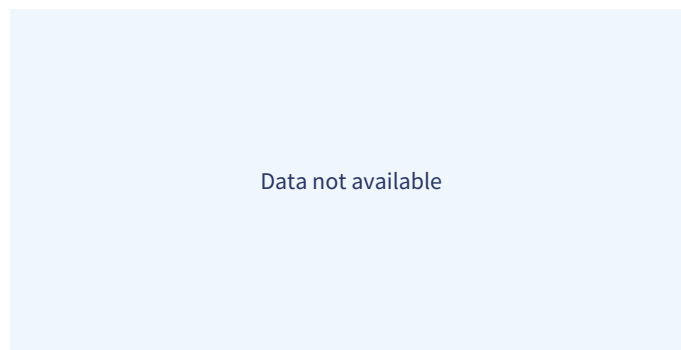**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)**   no data

Prevalence of hypertension – global comparison (both sexes)

Data not available

Data not available

Trends in uncontrolled hypertension in adults aged 30–79 years

Data not available

Hypertension control rate scenarios

Data not available

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	50	50	49	2019

Risk factors[a]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	no data	no data	no data	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	no data	no data	no data	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✖

Footnote: a. Age-standardized estimates are presented for all indicators except salt intake.
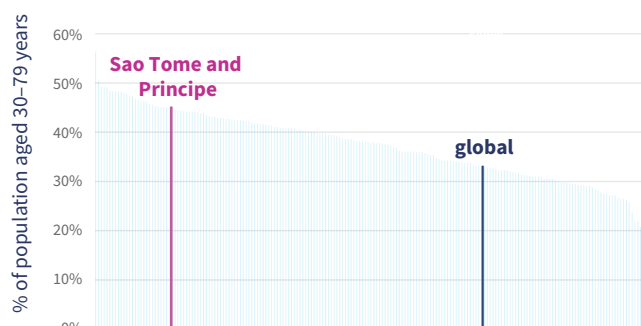
Sao Tome and Principe

Hypertension profile

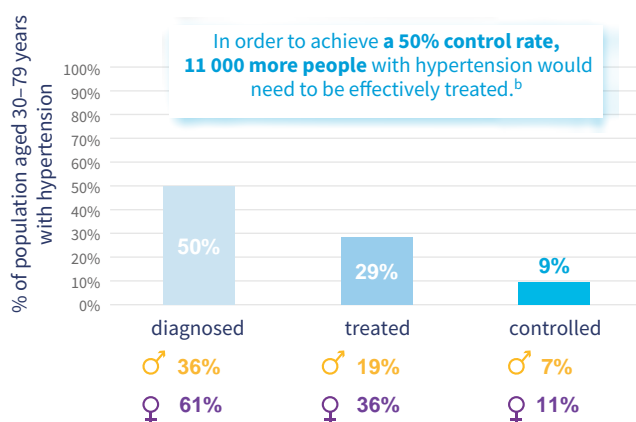**Total population (2019):** 215 000
Total deaths (2019): 1000

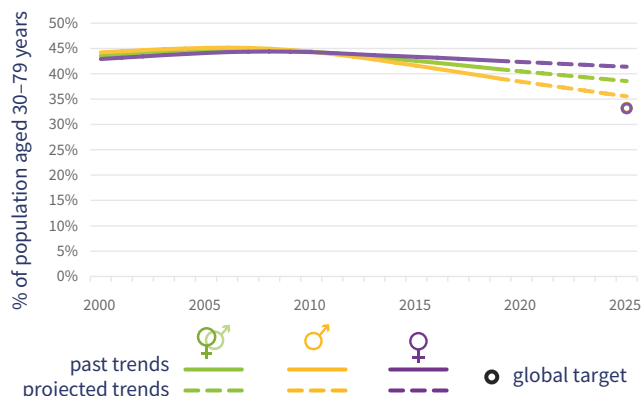**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **45%** ♂ **42%** ♀ **48%**
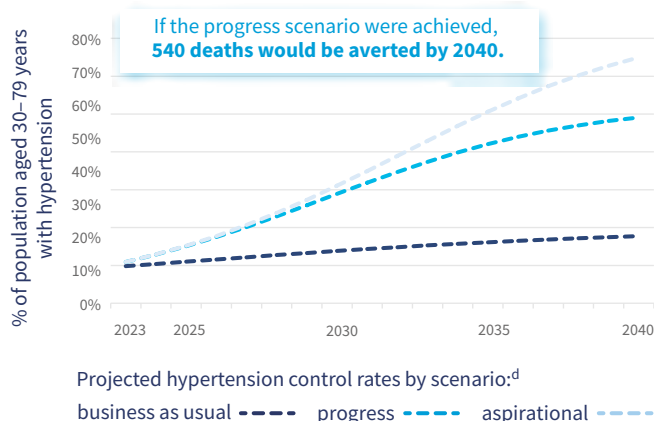
Prevalence of hypertension – global comparison (both sexes)[a]

Of the 27 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 11 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	50%	29%	9%
♂	36%	19%	7%
♀	61%	36%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **540 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	22	20	2019
Cardiovascular disease deaths	240	90	150	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	60	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	6	10	1	2019
Obesity, adults aged 18+ years (%)	12	7	17	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	8	2	2019
Physical inactivity, adults aged 18+ years (%)	15	10	21	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
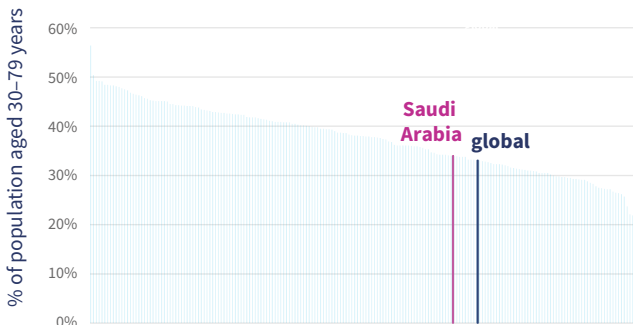
Saudi Arabia

Hypertension profile

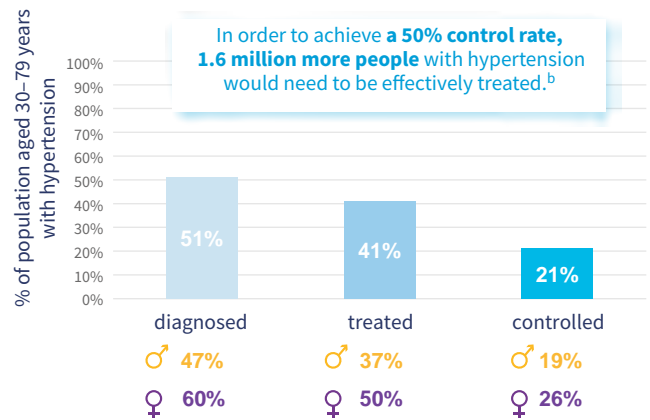**Total population (2019):** 35 827 000

Total deaths (2019): 143 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **34%** ♂ **36%** ♀ **30%**
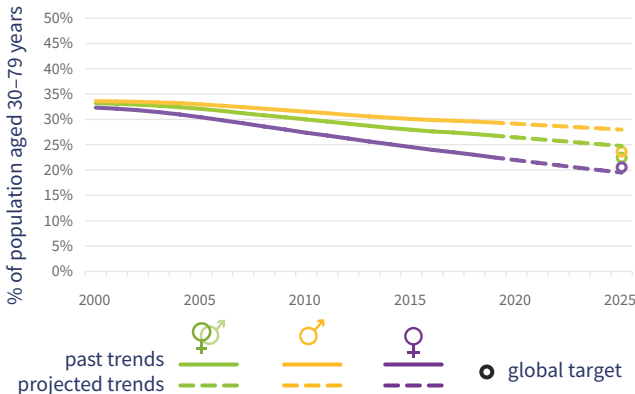

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **5.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.6 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	51%	41%	21%
♂	47%	37%	19%
♀	60%	50%	26%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀ — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **125 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ‑ ‑ ‑   progress ‑ ‑ ‑   aspirational ‑ ‑ ‑

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	22	18	2019
Cardiovascular disease deaths	60 300	38 200	22 100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	57	49	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	5	2019
Current tobacco use, adults aged 15+ years (%)	14	26	2	2019
Obesity, adults aged 18+ years (%)	35	31	42	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	53	45	65	2016

National response

Targets

National target for blood pressure	✔	
National target for salt consumption	✘	

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✘
Functioning system for generating reliable cause-specific mortality data on a routine basis	✘

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Senegal

Hypertension profile

Total population (2019): 16 001 000
Total deaths (2019): 86 600

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **41%** ♂ **37%** ♀ **43%**

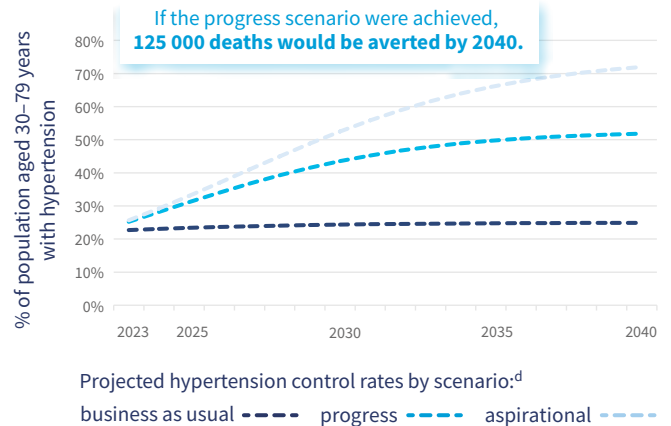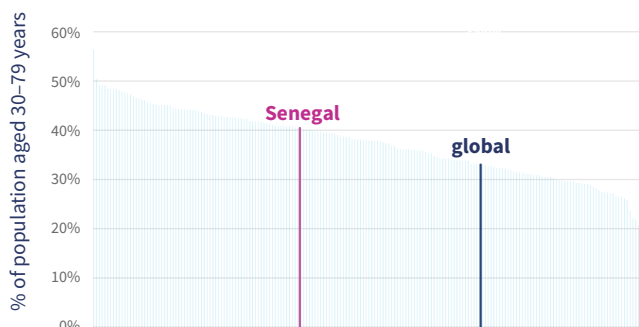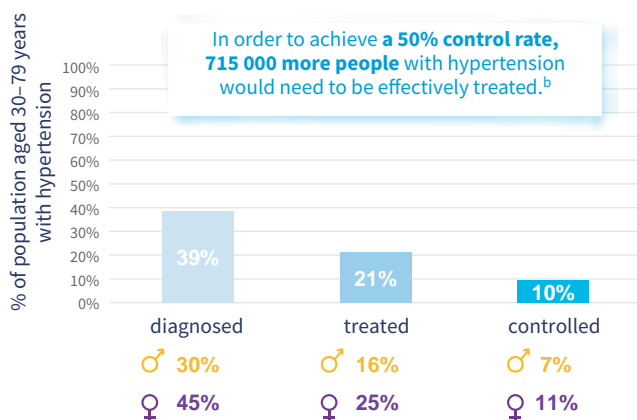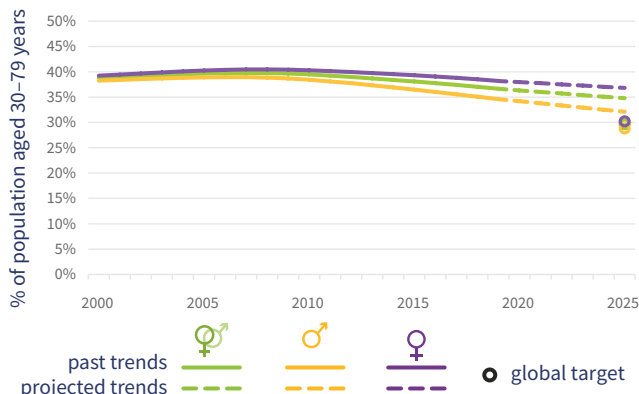### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.7 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 715 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	39%	21%	10%
♂	30%	16%	7%
♀	45%	25%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **28 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	20	19	20	2019
Cardiovascular disease deaths	14 100	6100	8000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	62	58	66	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	7	14	1	2019
Obesity, adults aged 18+ years (%)	9	4	13	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	23	18	28	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Serbia

Hypertension profile

Total population (2019): 7 401 000

Total deaths (2019): 115 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 46% ♂ 50% ♀ 42%

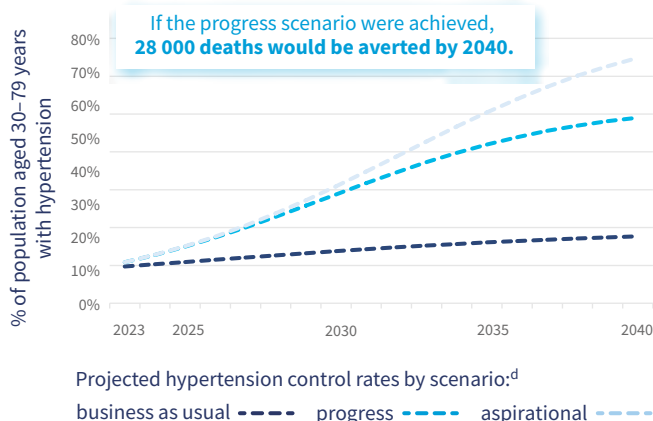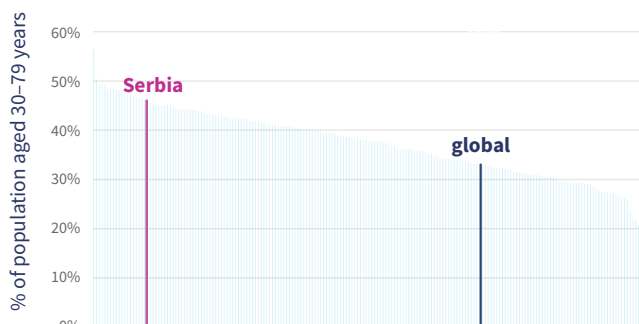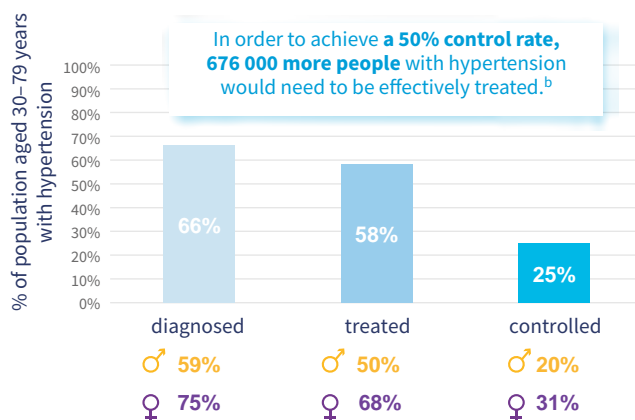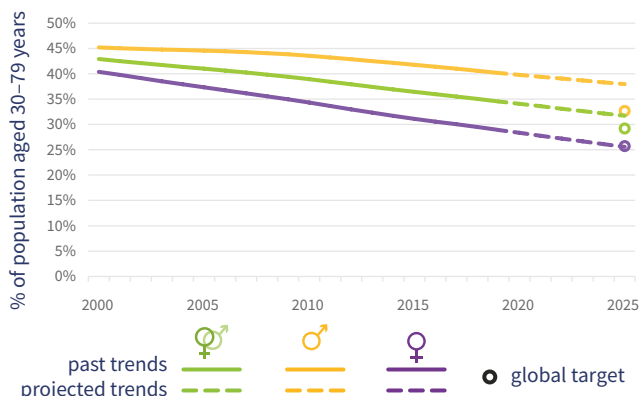### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.9 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 676 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	66%	58%	25%
♂	59%	50%	20%
♀	75%	68%	31%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends --- ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **46 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	28	16	2019
Cardiovascular disease deaths	59 300	27 300	32 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	59	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	40	41	39	2019
Obesity, adults aged 18+ years (%)	22	21	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	3	2019
Physical inactivity, adults aged 18+ years (%)	39	35	44	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Treatment

Guidelines for management of hypertension ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Seychelles

Hypertension profile

Total population (2019): 104 000
Total deaths (2019): 770

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ 44%   ♂ 46%   ♀ 42%

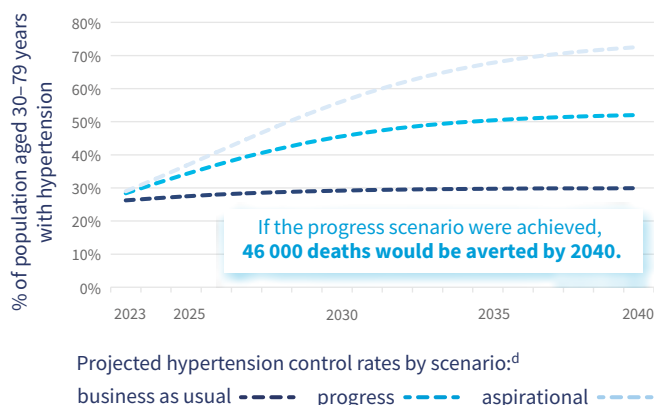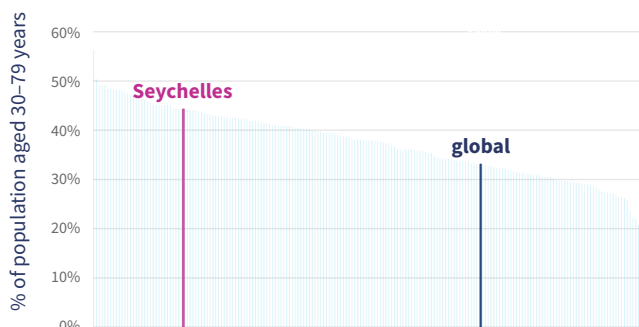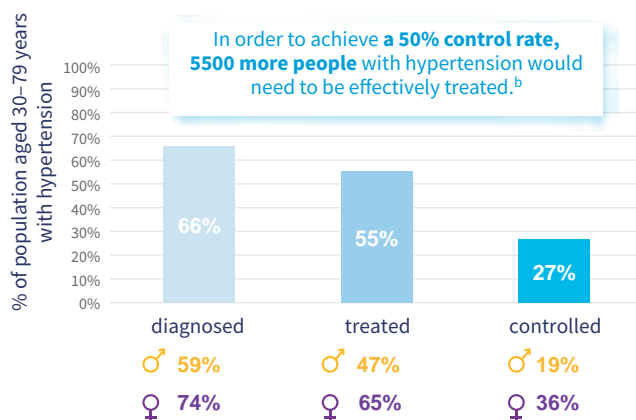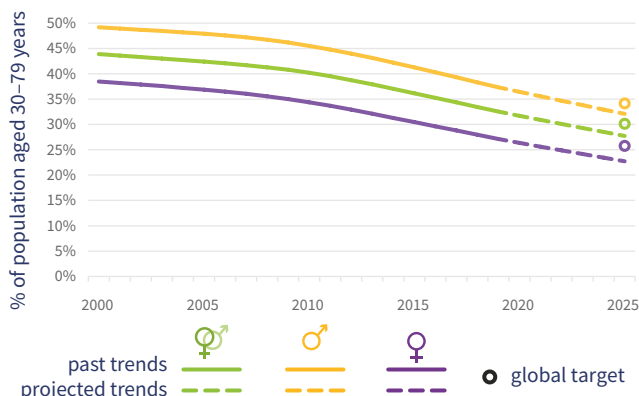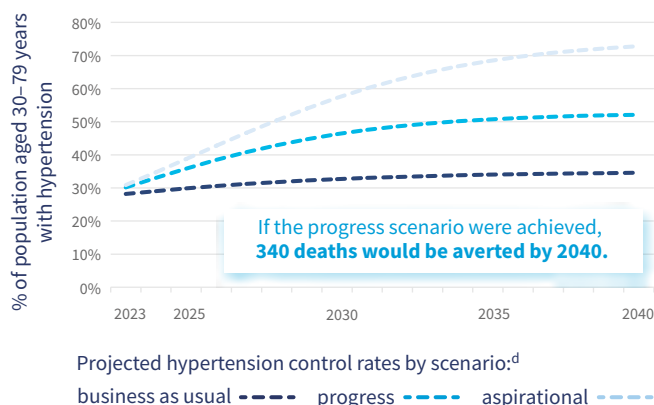## Prevalence of hypertension – global comparison (both sexes)[a]

Of the 24 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 5500 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	66%	55%	27%
♂	59%	47%	19%
♀	74%	65%	36%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **340 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	27	15	2019
Cardiovascular disease deaths	230	120	110	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	63	60	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	21	35	7	2019
Obesity, adults aged 18+ years (%)	14	8	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	18	5	2019
Physical inactivity, adults aged 18+ years (%)	19	18	20	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
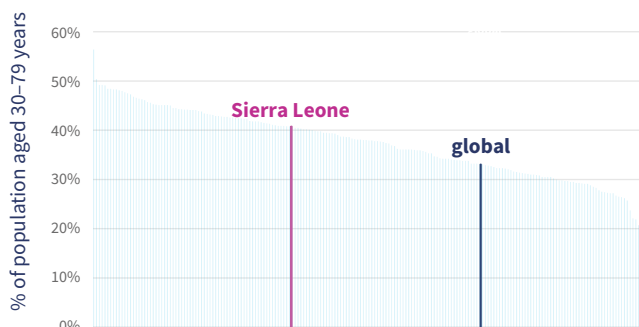
Sierra Leone

Hypertension profile

Total population (2019): 8 047 000
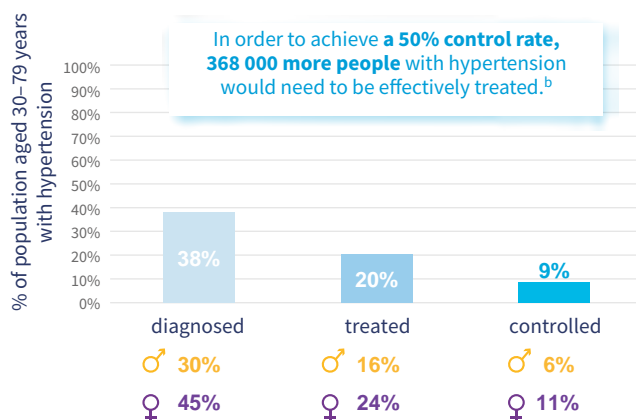**Total deaths (2019):** 67 200

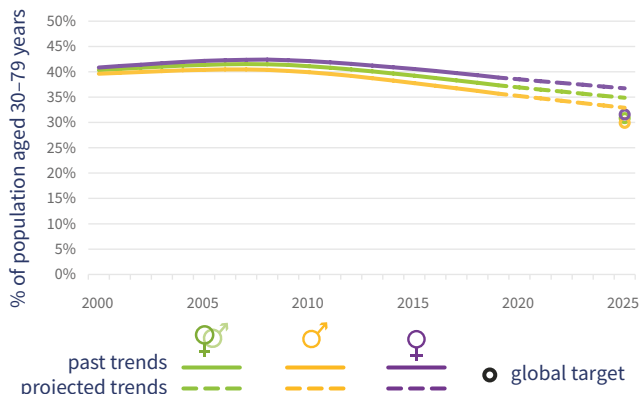**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ 41%   ♂ 38%   ♀ 43%

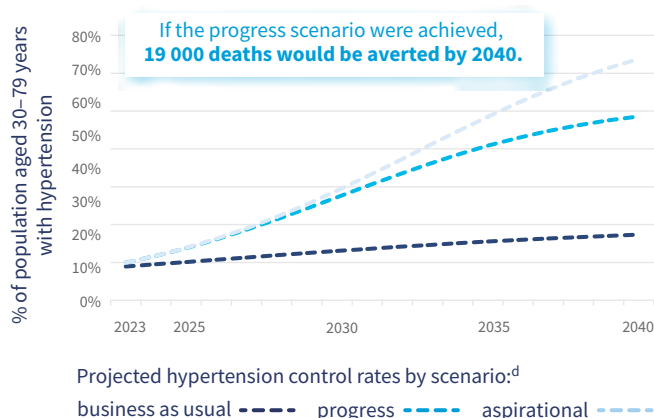### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **878 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 368 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	38%	20%	9%
♂	30%	16%	6%
♀	45%	24%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -
◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **19 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	22	25	2019
Cardiovascular disease deaths	9400	3900	5400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	65	63	66	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	14	22	7	2019
Obesity, adults aged 18+ years (%)	9	4	13	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	14	10	18	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
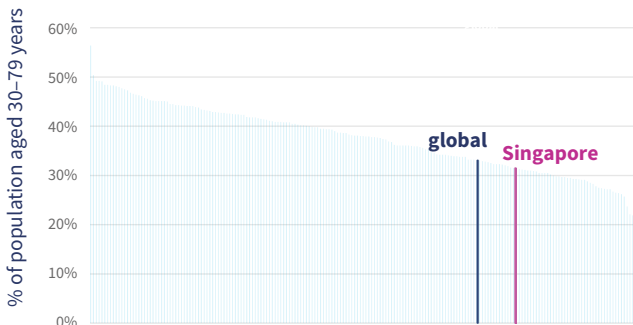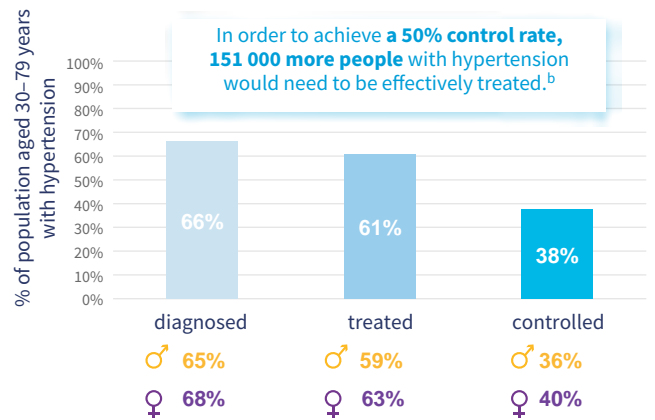
Singapore

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **32%**   ♂ **35%**   ♀ **27%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 151 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	66%	61%	38%
♂	65%	59%	36%
♀	68%	63%	40%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ◯ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **7400 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	9	12	7	2019
Cardiovascular disease deaths	8400	5100	3300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	45	47	42	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	11	12	10	2019
Current tobacco use, adults aged 15+ years (%)[f]	17	28	5	2019
Obesity, adults aged 18+ years (%)	6	6	6	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	37	34	39	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Slovakia

Hypertension profile

Total population (2019): 5 454 000

Total deaths (2019): 50 500

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **43%** ♂ **47%** ♀ **38%**
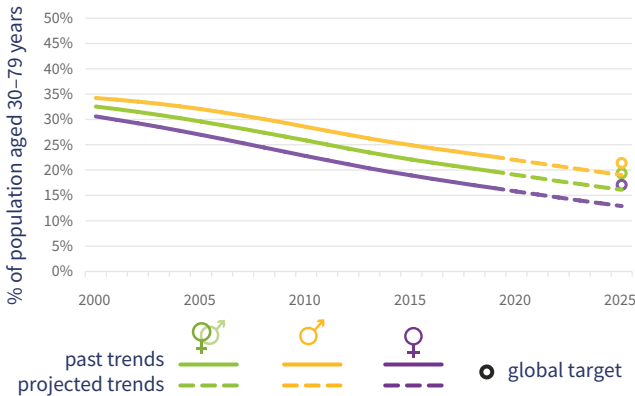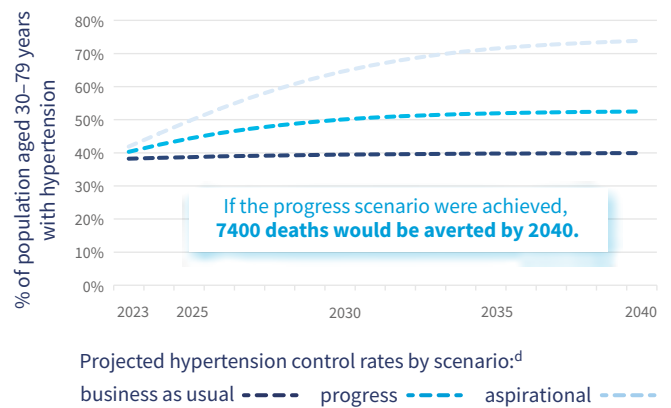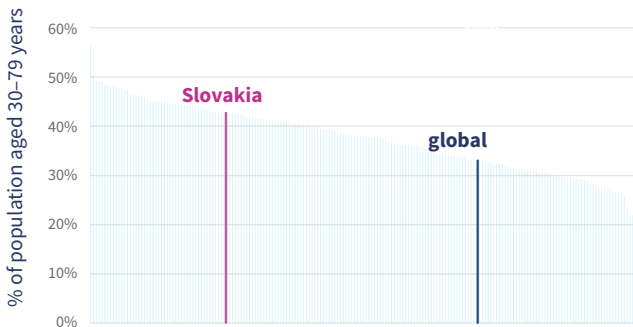

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.7 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 230 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	72%	64%	35%
♂	68%	59%	30%
♀	78%	70%	41%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **13 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

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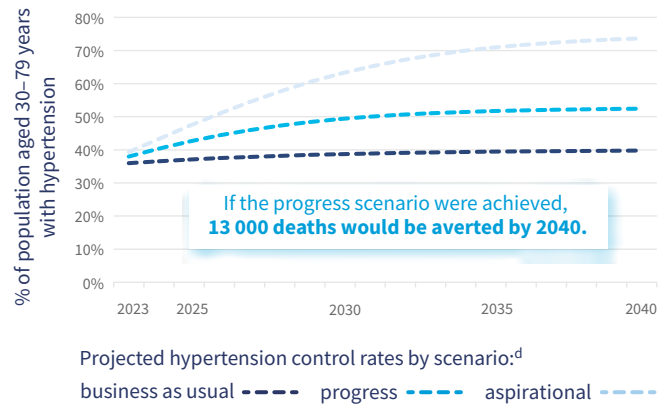
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	15	21	10	2019
Cardiovascular disease deaths	16 800	8600	8200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	58	59	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	32	38	25	2019
Obesity, adults aged 18+ years (%)	21	21	20	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	17	5	2019
Physical inactivity, adults aged 18+ years (%)	35	31	38	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Treatment

Guidelines for management of hypertension ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Slovenia

Hypertension profile

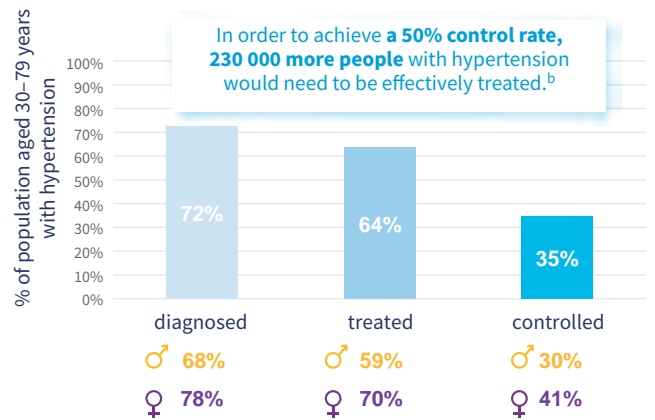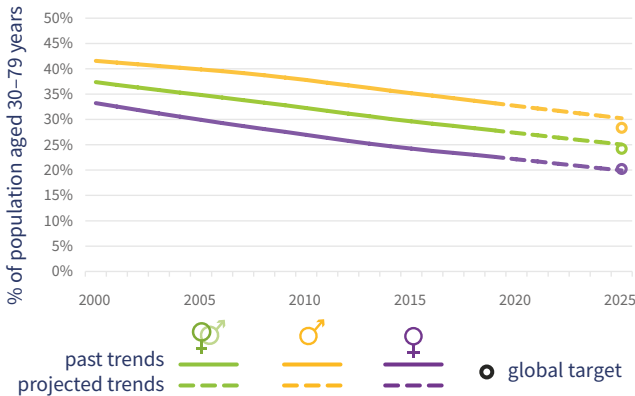**Total population (2019):** 2 113 000
Total deaths (2019): 20 500

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **45%** ♂ **50%** ♀ **41%**

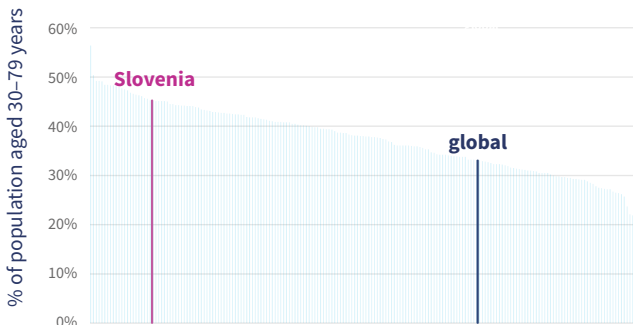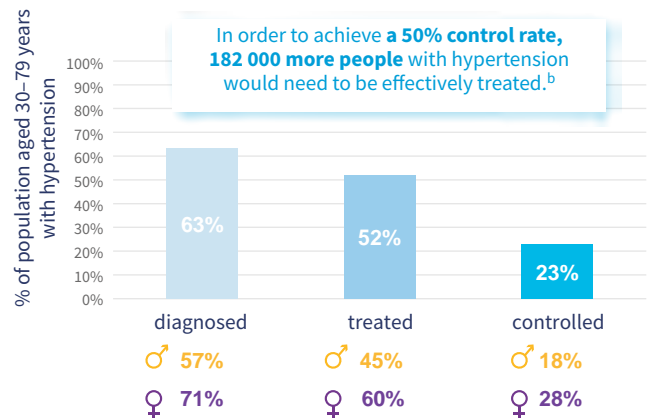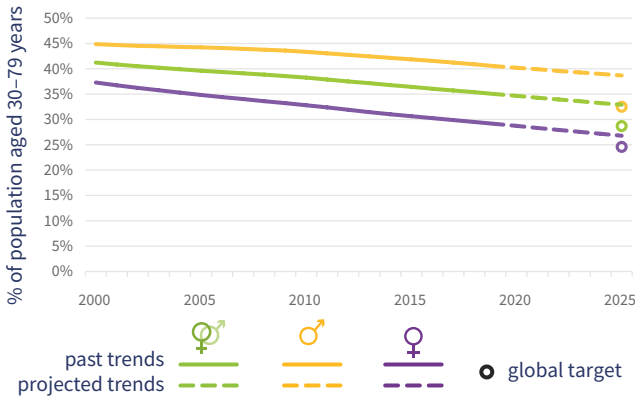### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **699 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 182 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	63%	52%	23%
♂	57%	45%	18%
♀	71%	60%	28%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **12 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	11	15	8	2019
Cardiovascular disease deaths	8000	3200	4800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	56	57	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	13	15	11	2019
Current tobacco use, adults aged 15+ years (%)[f]	22	25	20	2019
Obesity, adults aged 18+ years (%)	20	19	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	17	5	2019
Physical inactivity, adults aged 18+ years (%)	32	28	37	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Solomon Islands

Hypertension profile

Total population (2019): 675 000
Total deaths (2019): 4780

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 30%   ♂ 25%   ♀ 35%

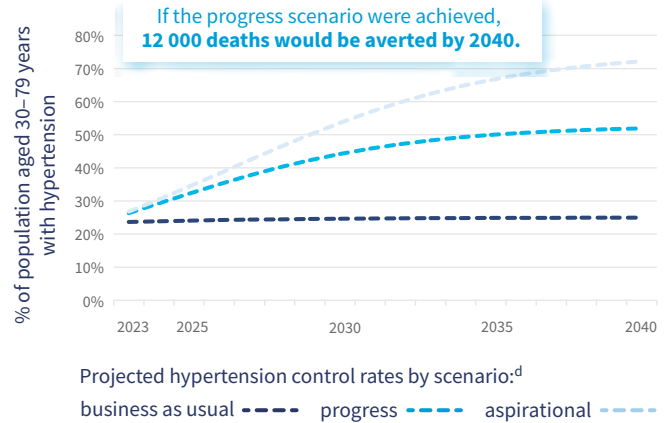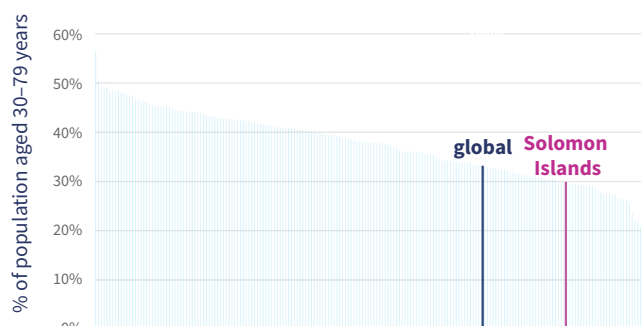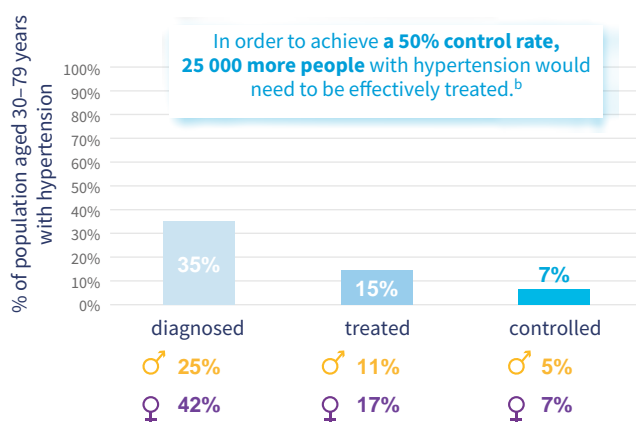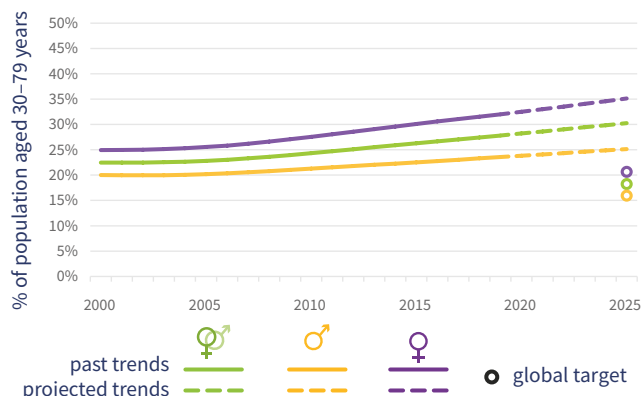### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 58 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 25 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	35%	15%	7%
♂	25%	11%	5%
♀	42%	17%	7%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **2300 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual – – –   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	39	44	34	2019
Cardiovascular disease deaths	1800	1100	780	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	40	38	43	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	37	54	20	2019
Obesity, adults aged 18+ years (%)	23	18	27	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	18	13	23	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Somalia

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 36% ♂ 33% ♀ 39%

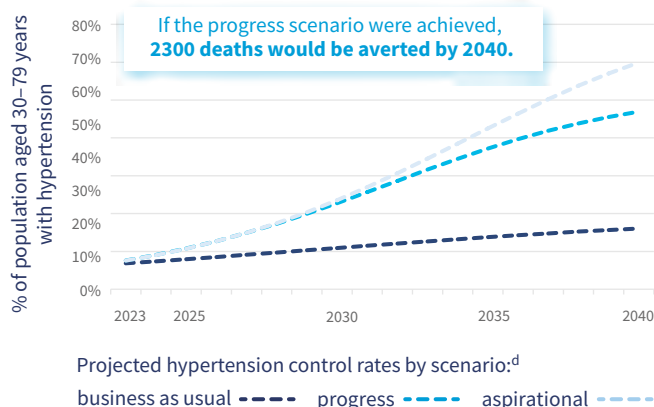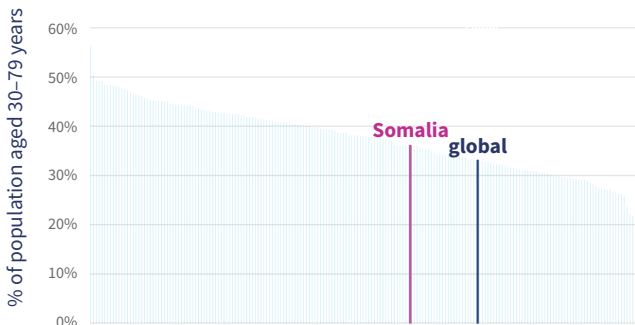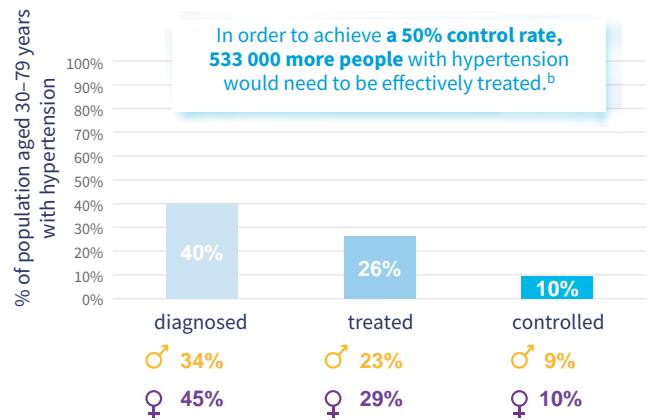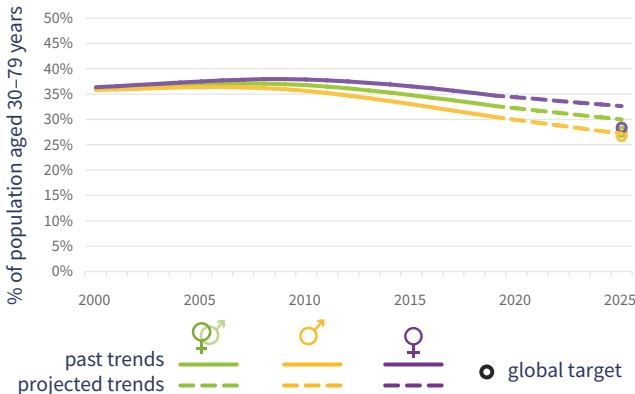### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 533 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	40%	26%	10%
♂	34%	23%	9%
♀	45%	29%	10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **55 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	30	34	27	2019
Cardiovascular disease deaths	20 300	11 800	8 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	56	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	8	4	12	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

South Africa

Hypertension profile

Total population (2019): 58 087 000

Total deaths (2019): 496 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 44%　♂ 44%　♀ 44%

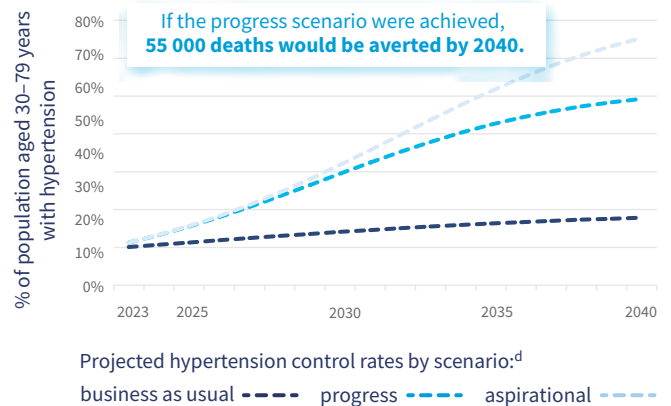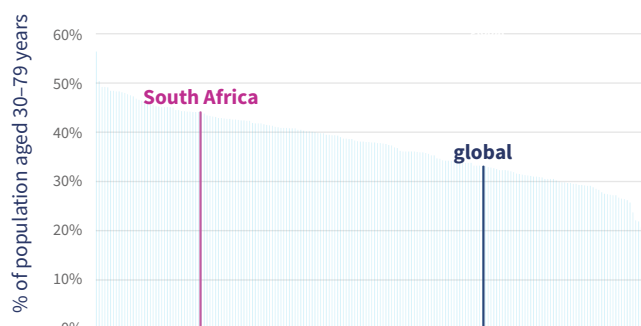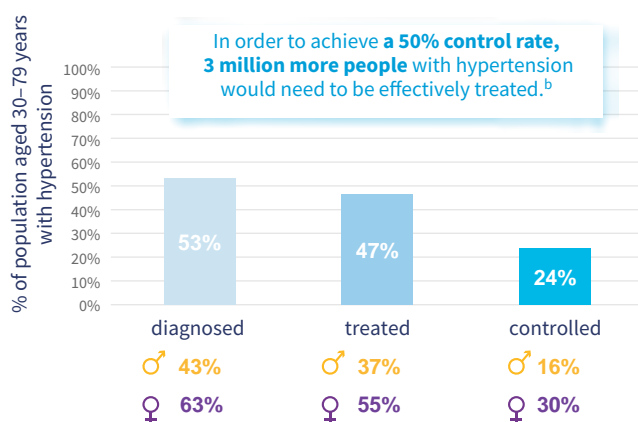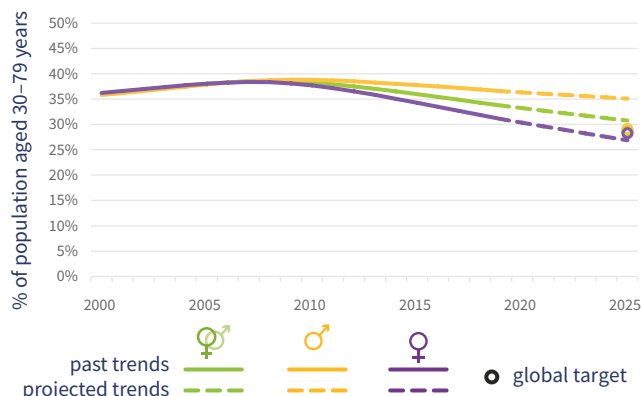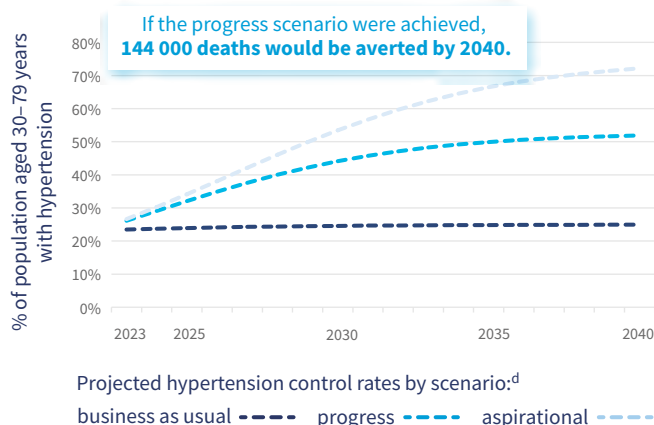### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **10.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 3 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	53%	47%	24%
♂	43%	37%	16%
♀	63%	55%	30%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends　⚥　♂　♀
projected trends ⚥　♂　♀　○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **144 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----　progress ----　aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	28	20	2019
Cardiovascular disease deaths	87 800	42 600	45 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	64	63	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	20	34	7	2019
Obesity, adults aged 18+ years (%)	28	15	40	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	15	3	2019
Physical inactivity, adults aged 18+ years (%)	38	28	47	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
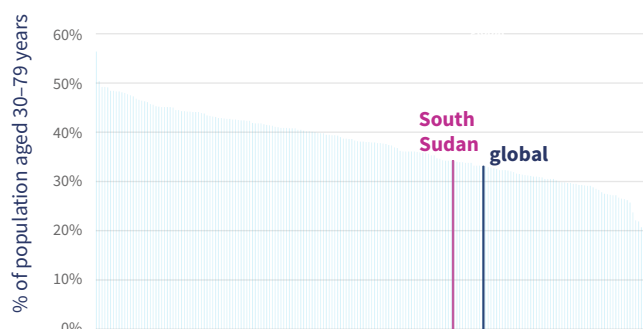
South Sudan

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **34%** ♂ **32%** ♀ **36%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 404 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	41%	25%	11%
♂	33%	21%	9%
♀	47%	29%	13%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

Data not available
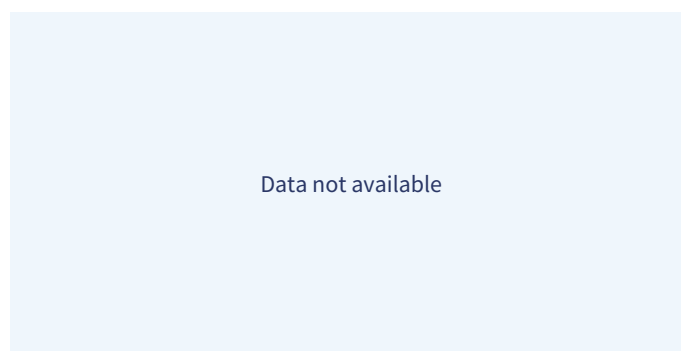
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	18	16	2019
Cardiovascular disease deaths	8400	4200	4300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	58	60	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	8	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	no data	no data	no data	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	no data	no data	no data	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake.

Spain

Hypertension profile

Total population (2019): 47 131 000
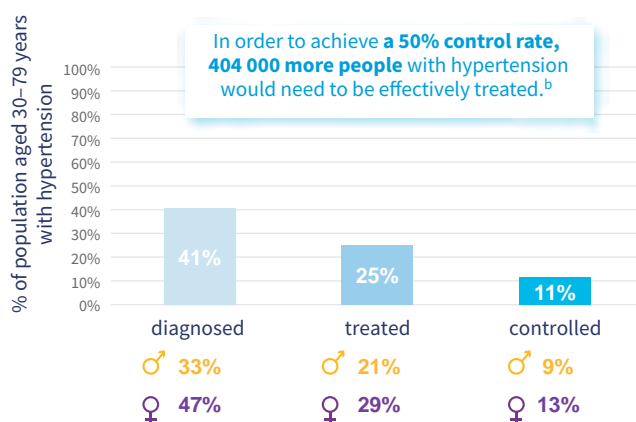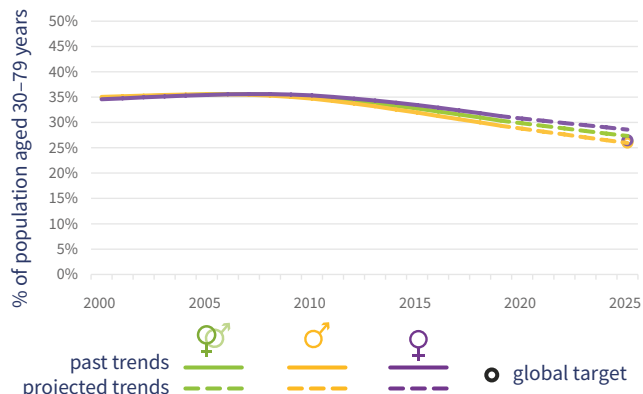
Total deaths (2019): 427 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 27%   ♂ 34%   ♀ 21%

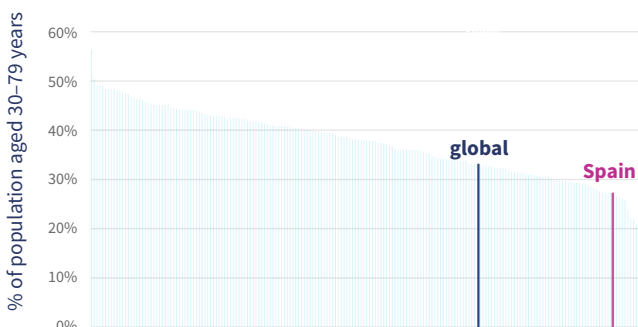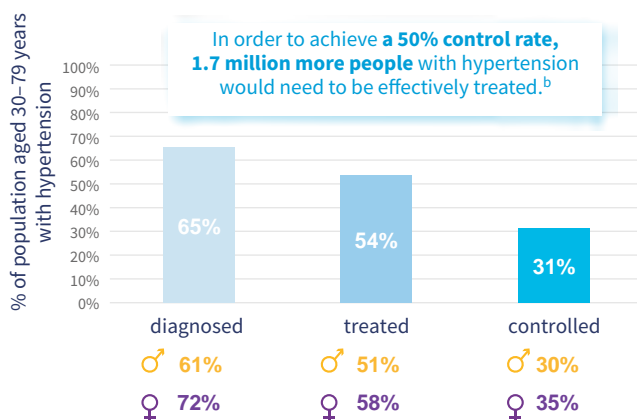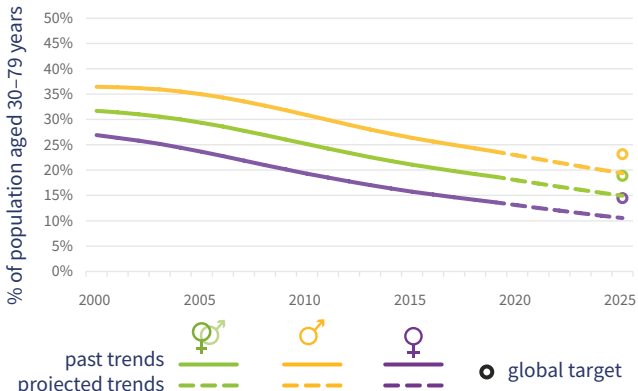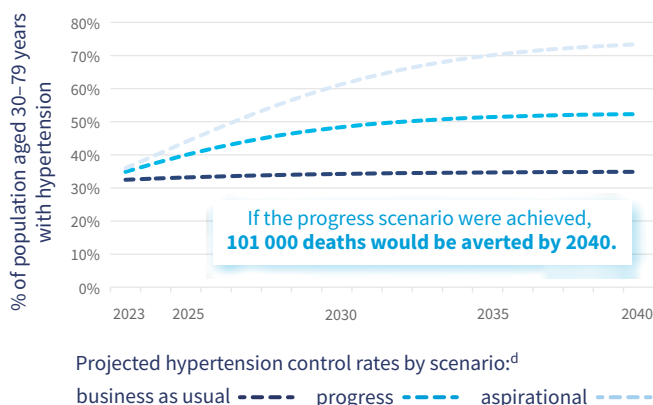### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **9.9 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.7 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	65%	54%	31%
♂	61%	51%	30%
♀	72%	58%	35%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends —— ⚥ ♂ ♀
projected trends – – –   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **101 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual – – –   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	13	6	2019
Cardiovascular disease deaths	118 000	55 100	62 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	47	49	46	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	28	29	27	2019
Obesity, adults aged 18+ years (%)	24	25	23	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	17	5	2019
Physical inactivity, adults aged 18+ years (%)	27	23	31	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
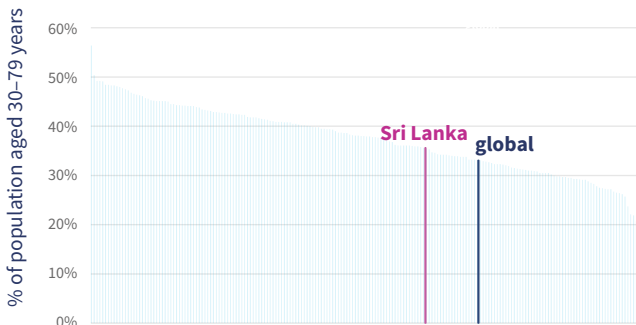
Sri Lanka

Hypertension profile

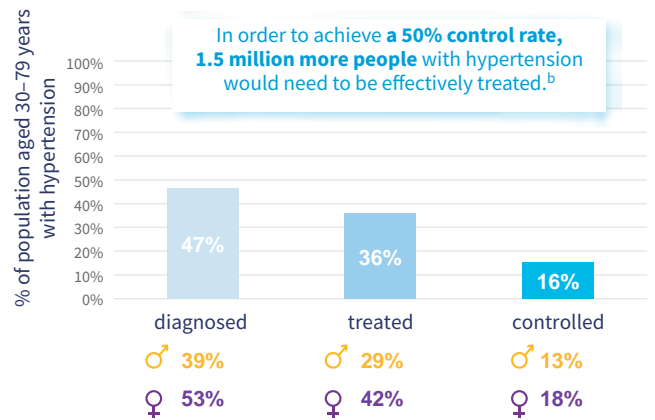**Total population (2019):** 21 650 000

Total deaths (2019): 146 000

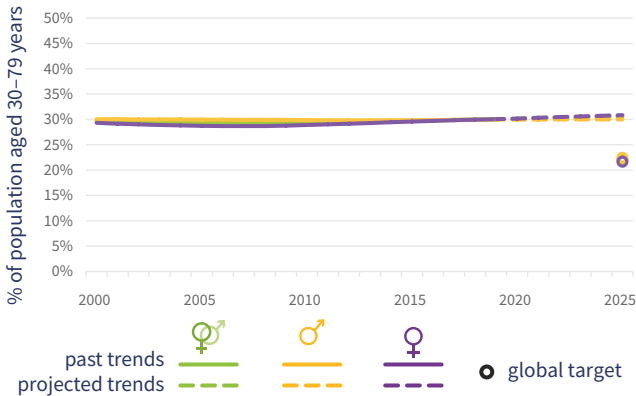Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **36%**   ♂ **34%**   ♀ **37%**
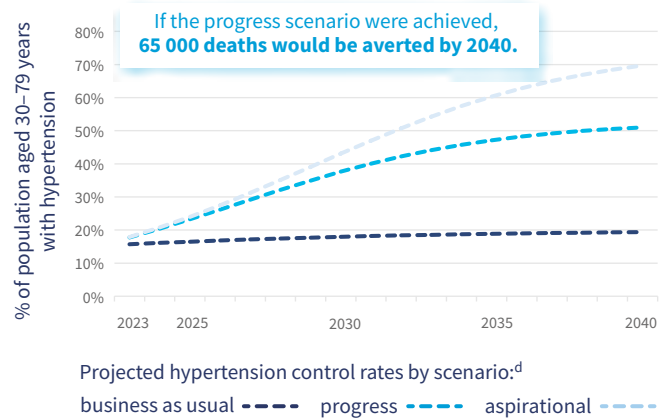
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **4.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.5 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
47%	36%	16%
♂ 39%	♂ 29%	♂ 13%
♀ 53%	♀ 42%	♀ 18%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **65 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual – – – –   progress – – –   aspirational – – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	13	17	9	2019
Cardiovascular disease deaths	35 900	19 600	16 300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	56	56	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	11	11	10	2019
Current tobacco use, adults aged 15+ years (%)	22	42	3	2019
Obesity, adults aged 18+ years (%)	5	3	7	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	29	20	37	2016

National response

Targets

National target for blood pressure	✔
National target for salt consumption	✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✔
Conducted recent, national survey on salt/sodium intake	✔
Functioning system for generating reliable cause-specific mortality data on a routine basis	✘

Treatment

Guidelines for management of hypertension	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
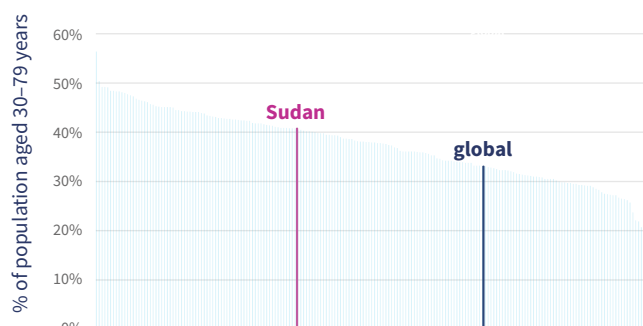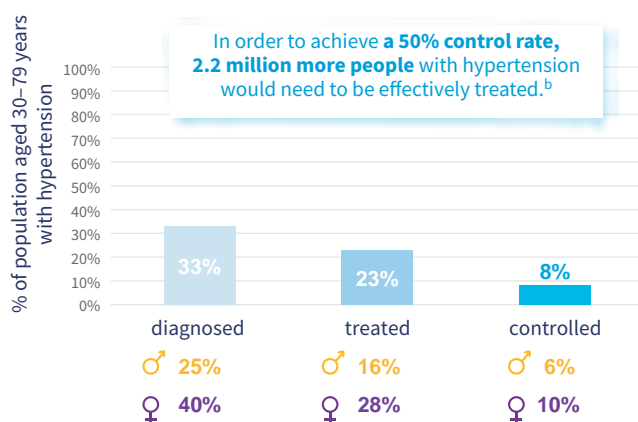
Sudan

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **41%**   ♂ **38%**   ♀ **44%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **5.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.2 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
33%	23%	8%
♂ 25%	♂ 16%	♂ 6%
♀ 40%	♀ 28%	♀ 10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **133 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - -   progress – – –   aspirational – – –
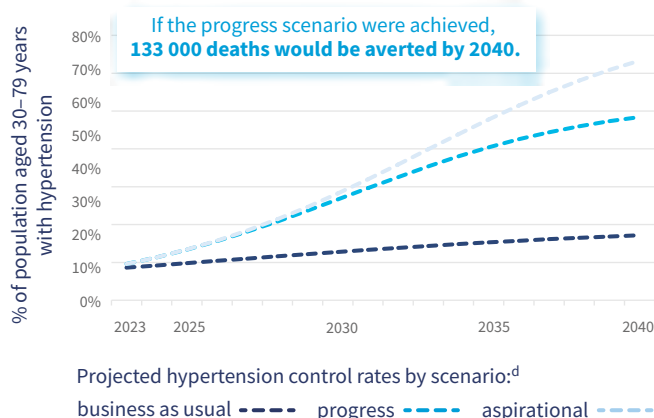
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	24	21	2019
Cardiovascular disease deaths	76 800	38 500	38 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	64	62	66	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	no data	no data	no data	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Suriname

Hypertension profile

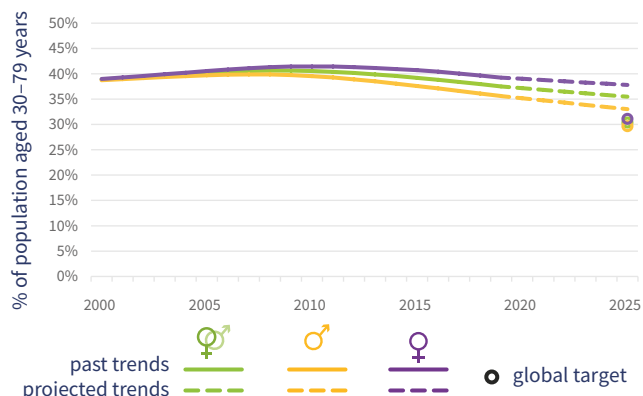**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ **43%**   ♂ **42%**   ♀ **43%**
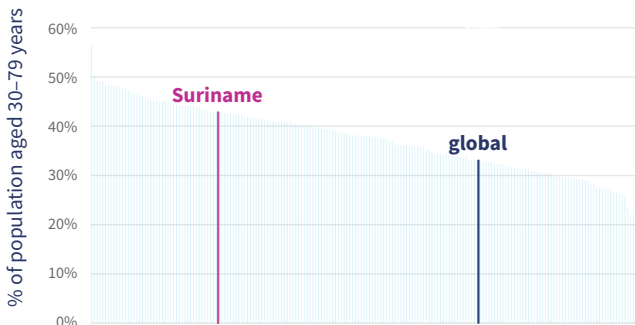
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **116 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 34 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	64%	**50%**	**21%**
♂	**55%**	**42%**	**18%**
♀	**73%**	**57%**	**24%**

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **3000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- progress -·-·- aspirational ······

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	23	28	18	2019
Cardiovascular disease deaths	1500	810	710	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	49	49	48	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	26	19	34	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	7	11	3	2019
Physical inactivity, adults aged 18+ years (%)	44	38	51	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Sweden

Hypertension profile

Total population (2019): 10 268 000
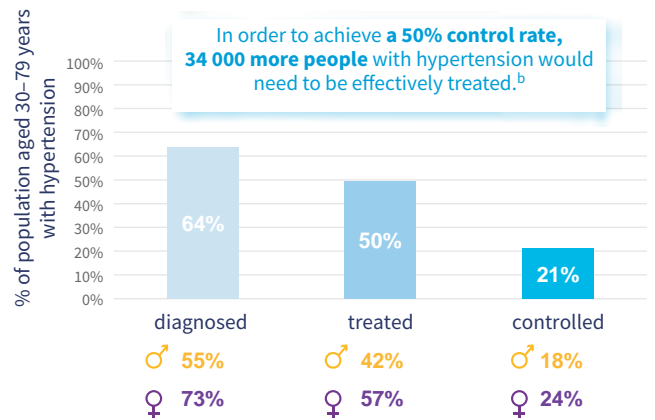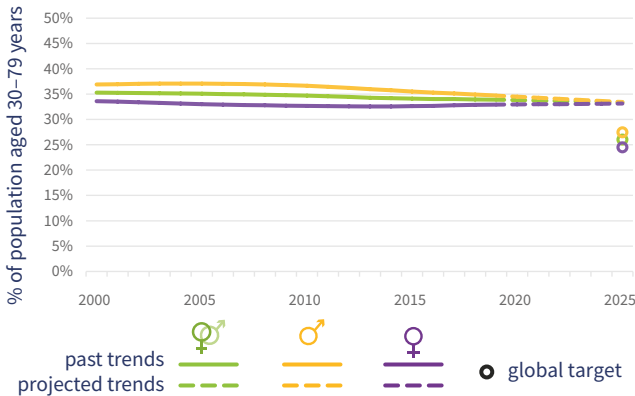**Total deaths (2019):** 92 200

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 30% ♂ 36% ♀ 25%

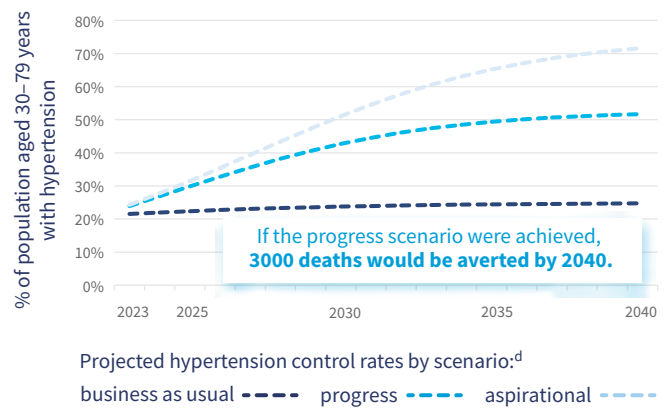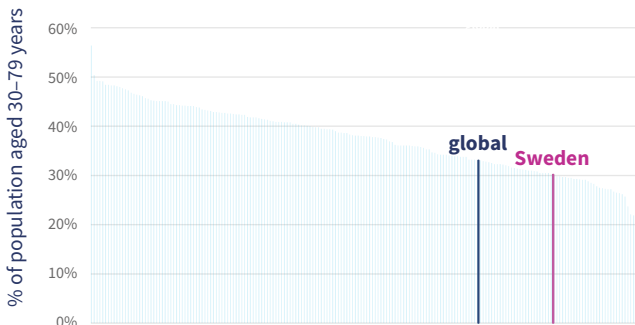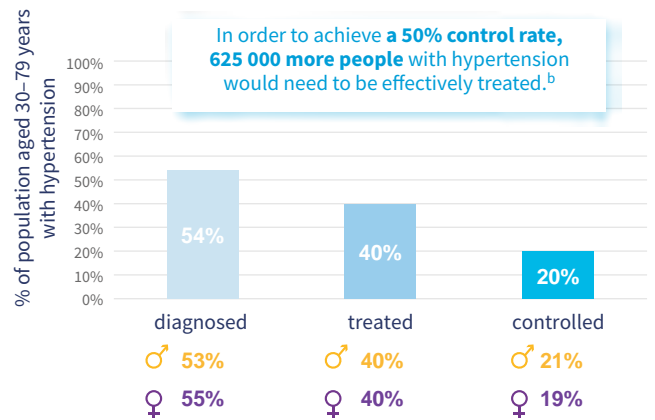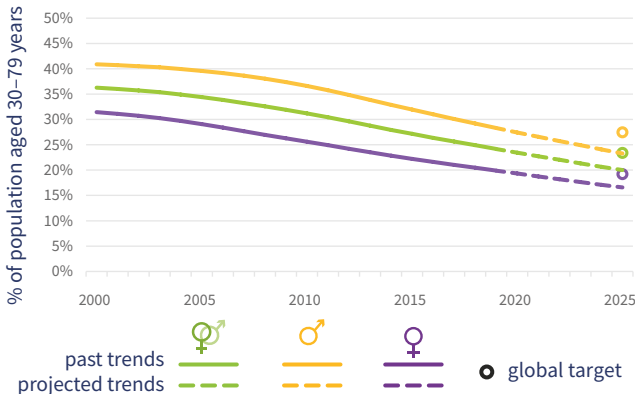### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 625 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
54%	40%	20%
♂ 53%	♂ 40%	♂ 21%
♀ 55%	♀ 40%	♀ 19%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **38 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	8	10	7	2019
Cardiovascular disease deaths	29 700	14 600	15 100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	50	51	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)	25	31	19	2019
Obesity, adults aged 18+ years (%)	21	23	18	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	14	4	2019
Physical inactivity, adults aged 18+ years (%)	23	22	25	2016

National response

Targets
National target for blood pressure ✘
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake — no data
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Switzerland

Hypertension profile

Total population (2019): 8 576 000
Total deaths (2019): 69 100

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 22%   ♂ 26%   ♀ 18%

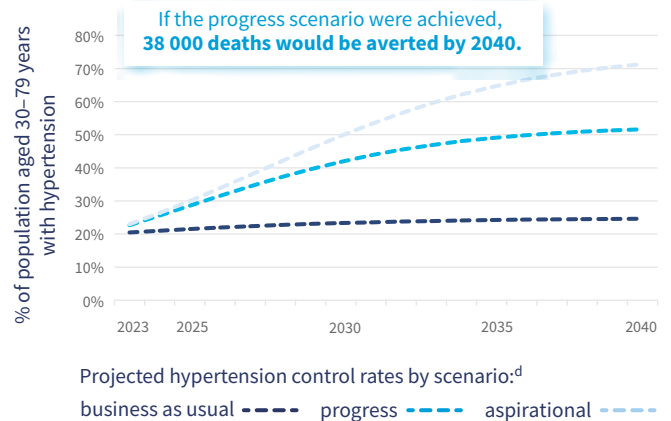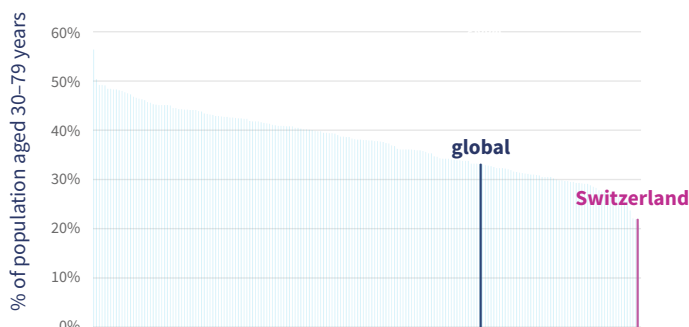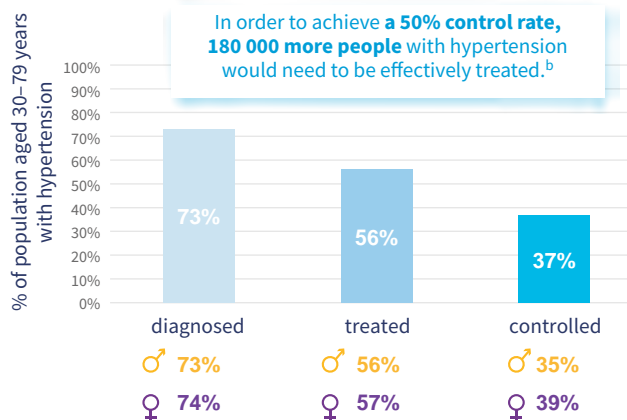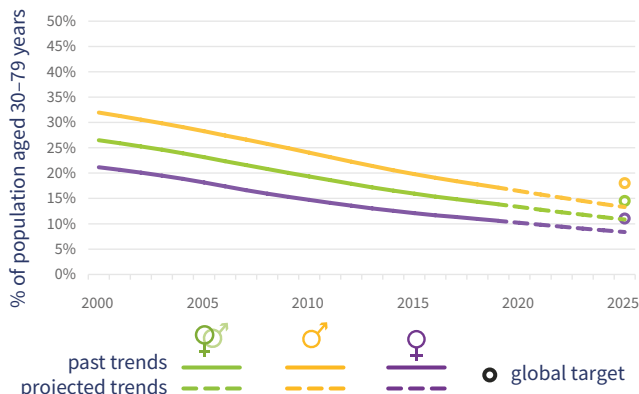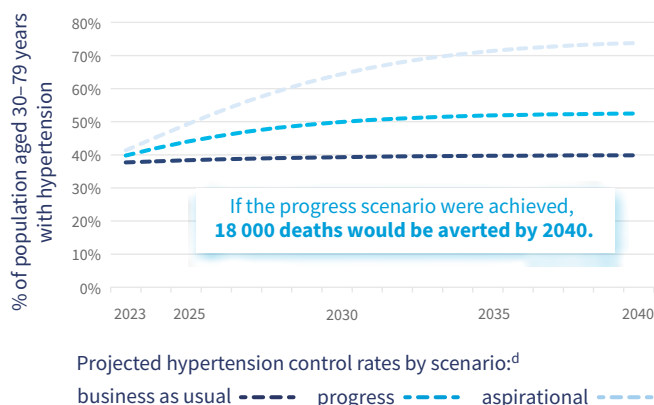### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 180 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
73%	56%	37%
♂ 73%	♂ 56%	♂ 35%
♀ 74%	♀ 57%	♀ 39%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **18 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---   progress ---   aspirational ---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	8	10	6	2019
Cardiovascular disease deaths	21 300	9700	11 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	46	47	46	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	9	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	26	28	23	2019
Obesity, adults aged 18+ years (%)	20	22	17	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	16	5	2019
Physical inactivity, adults aged 18+ years (%)	24	22	26	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
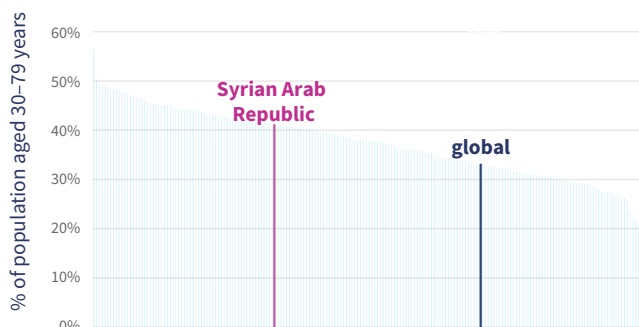
Syrian Arab Republic

Hypertension profile

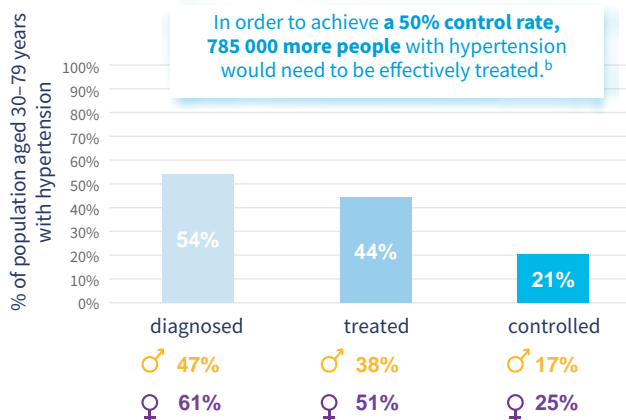**Total population (2019):** 20 098 000
Total deaths (2019): 89 300

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **41%**   ♂ **42%**   ♀ **40%**
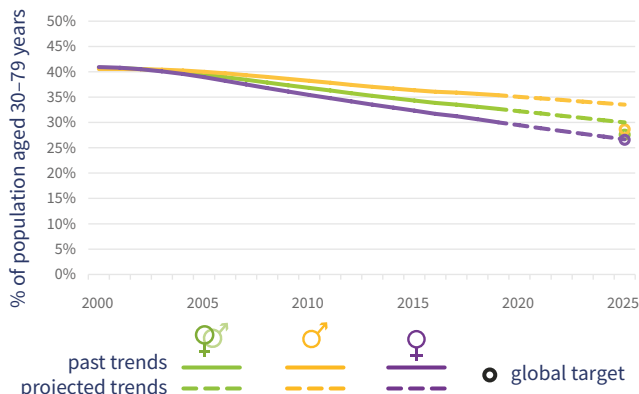
Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 785 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	54%	44%	21%
♂	47%	38%	17%
♀	61%	51%	25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ◯ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **55 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - - -   progress - - - -   aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	22	26	18	2019
Cardiovascular disease deaths	39 000	19 200	19 800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	52	53	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	28	21	35	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Tajikistan

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 47%   ♂ 51%   ♀ 43%

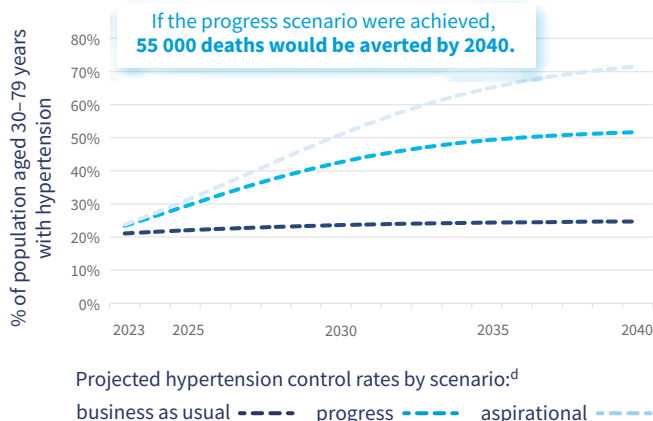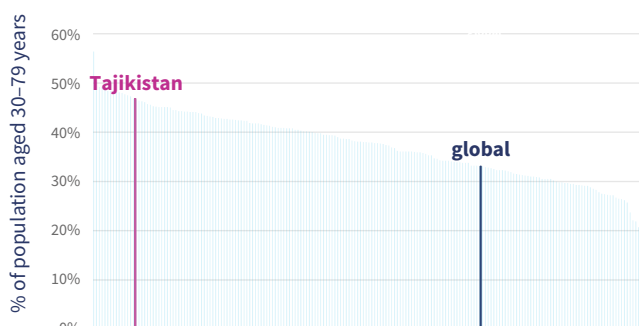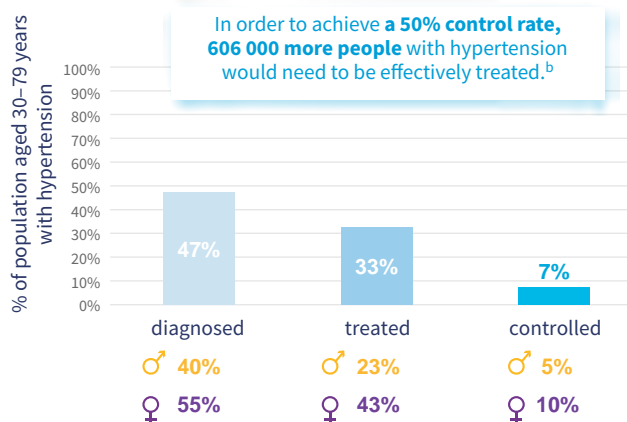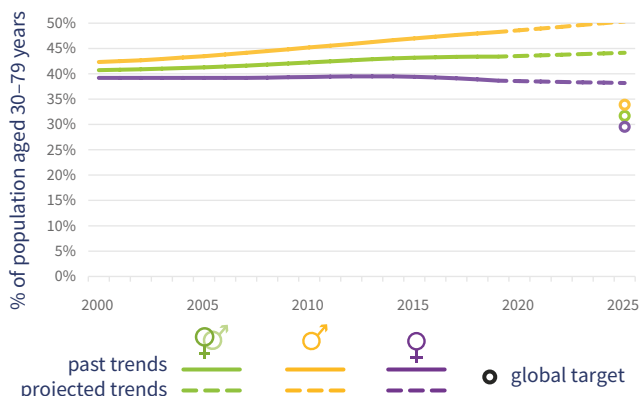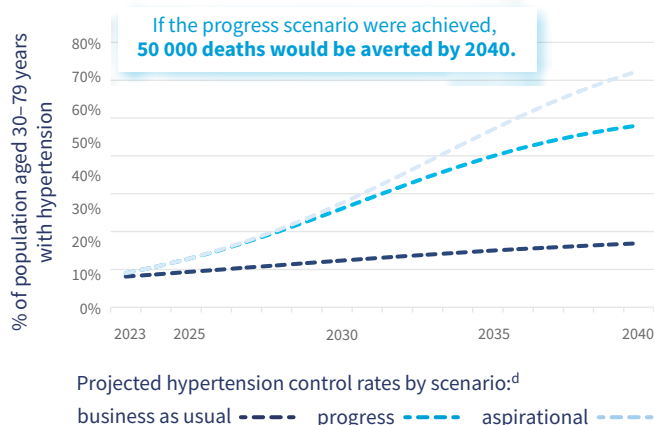### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.4 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 606 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
47%	33%	7%
♂ 40%	♂ 23%	♂ 5%
♀ 55%	♀ 43%	♀ 10%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **50 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	28	32	25	2019
Cardiovascular disease deaths	23 100	12 400	10 700	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	60	58	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	14	12	17	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	0	2019
Physical inactivity, adults aged 18+ years (%)	29	20	39	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
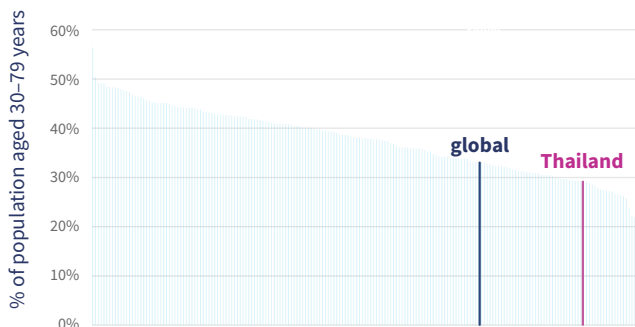
Thailand

Hypertension profile

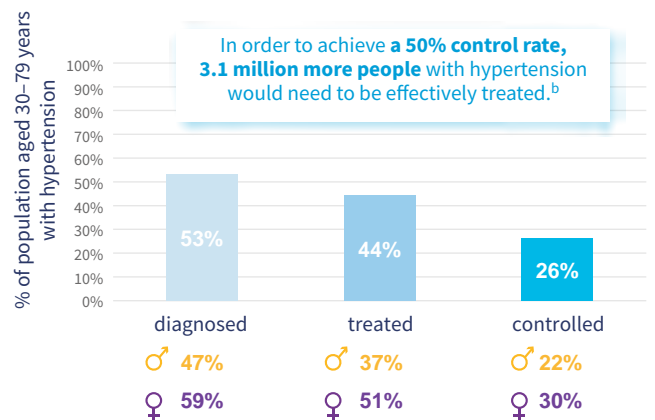**Total population (2019):** 71 308 000
Total deaths (2019): 497 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **29%** ♂ **29%** ♀ **29%**
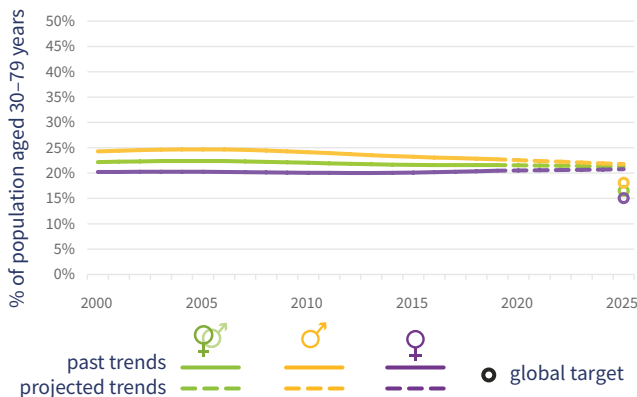

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **13.5 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 3.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	53%	44%	26%
♂	47%	37%	22%
♀	59%	51%	30%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀ ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **234 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ▪▪▪▪   progress ▬ ▬   aspirational ▬ ▬
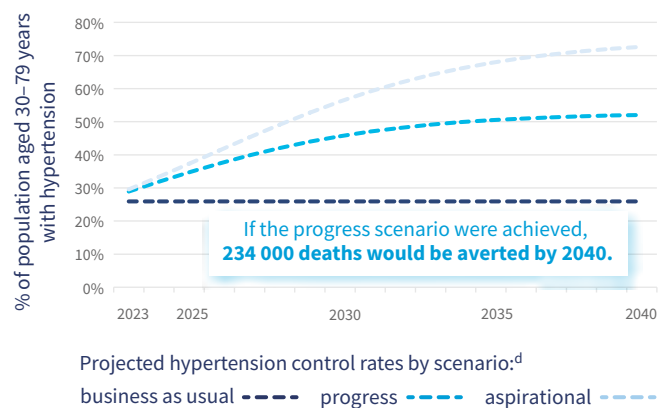
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	14	17	11	2019
Cardiovascular disease deaths	115 000	59 800	55 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	44	46	42	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	11	11	10	2019
Current tobacco use, adults aged 15+ years (%)	23	42	3	2019
Obesity, adults aged 18+ years (%)	10	7	13	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	8	13	3	2019
Physical inactivity, adults aged 18+ years (%)	25	22	27	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Timor-Leste

Hypertension profile

Total population (2019): 1 280 000
Total deaths (2019): 7550

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **35%**   ♂ **34%**   ♀ **37%**

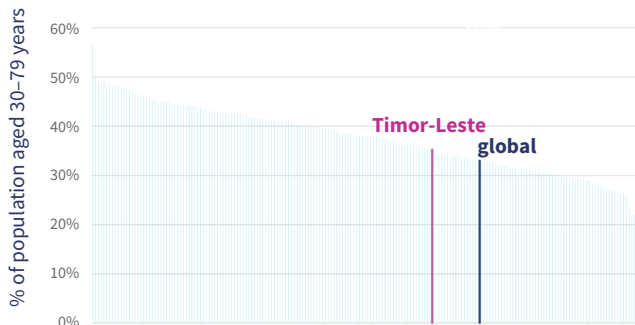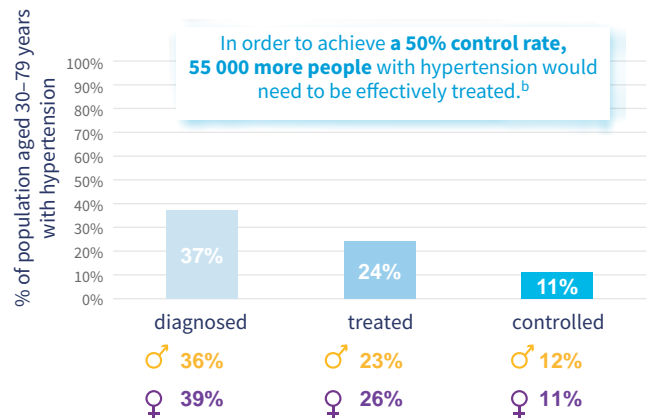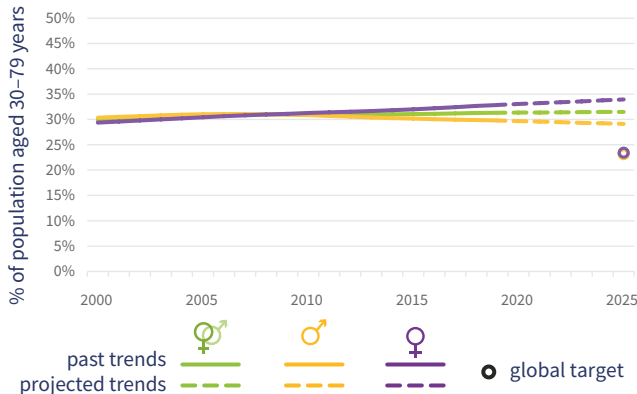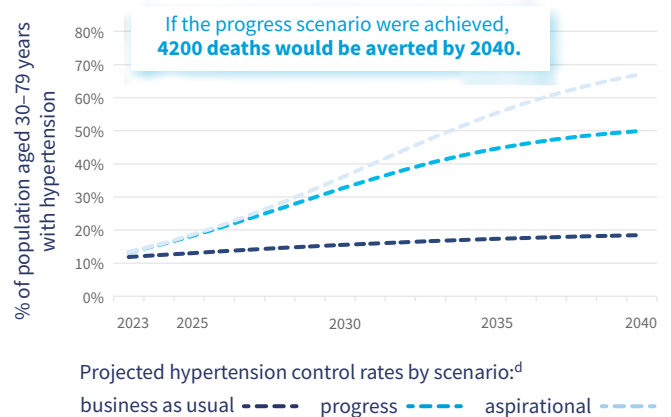### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 141 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 55 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	37%	24%	11%
♂	36%	23%	12%
♀	39%	26%	11%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **4200 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	20	21	18	2019
Cardiovascular disease deaths	2000	970	1000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	62	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)	40	68	11	2019
Obesity, adults aged 18+ years (%)	4	3	5	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	18	10	25	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
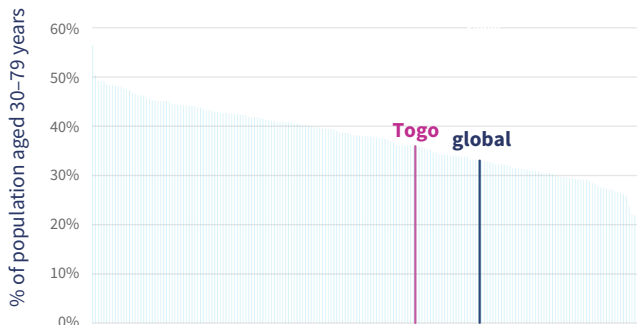
Togo

Hypertension profile

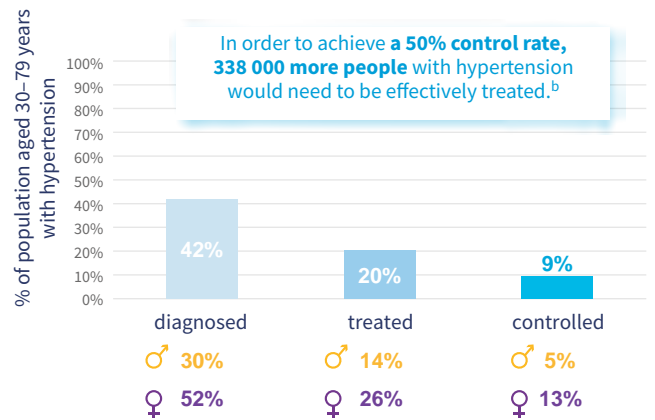**Total population (2019):** 8 243 000
Total deaths (2019): 55 200

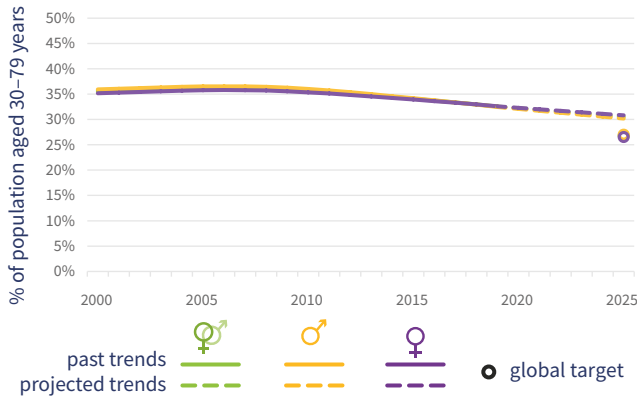**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]** ⚥ **36%** ♂ **34%** ♀ **38%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the 822 000 adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 338 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	42%	**20%**	**9%**
♂	**30%**	**14%**	**5%**
♀	**52%**	**26%**	**13%**

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀
○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **20 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	24	27	21	2019
Cardiovascular disease deaths	9300	5100	4200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	59	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)	7	13	1	2019
Obesity, adults aged 18+ years (%)	8	4	13	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	1	2019
Physical inactivity, adults aged 18+ years (%)	10	9	10	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Tonga

Hypertension profile

Total population (2019): 105 000
Total deaths (2019): 620

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 43%   ♂ 40%   ♀ 47%

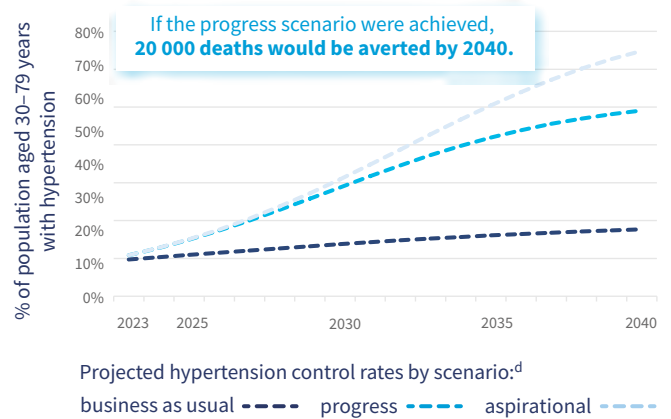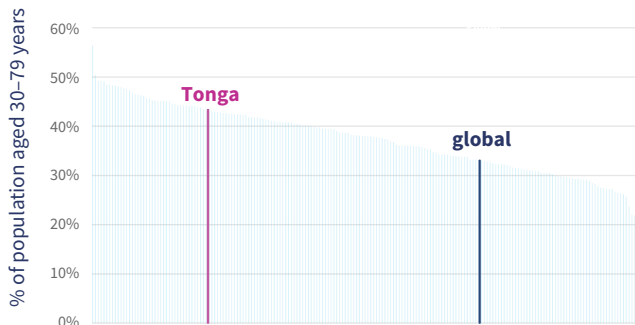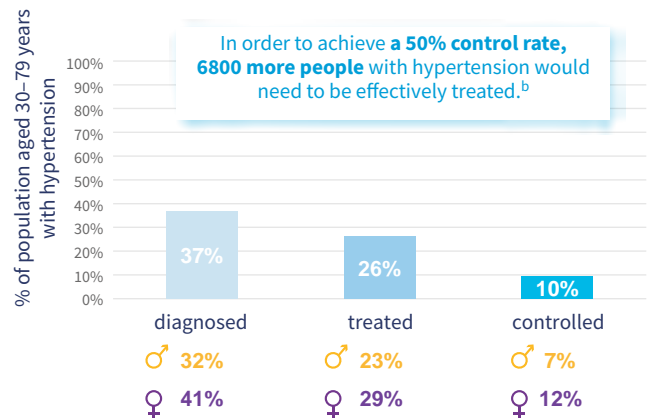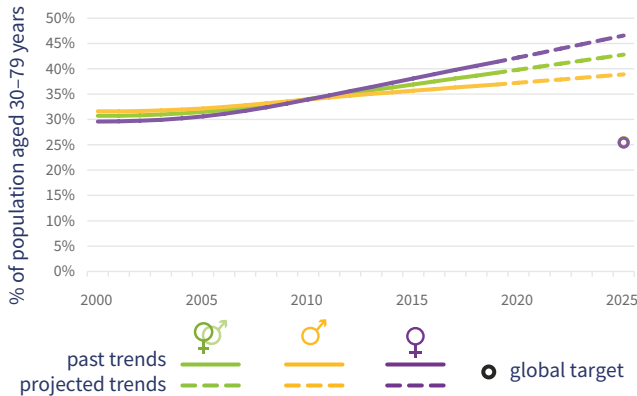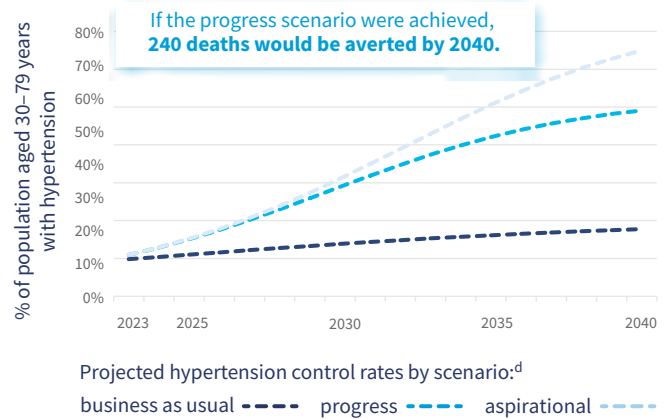### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **17 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 6800 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	37%	26%	10%
♂	32%	23%	7%
♀	41%	29%	12%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **240 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ------   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	30	20	2019
Cardiovascular disease deaths	150	90	60	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	54	55	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	31	47	15	2019
Obesity, adults aged 18+ years (%)	48	41	55	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	1	0	2019
Physical inactivity, adults aged 18+ years (%)	17	8	26	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
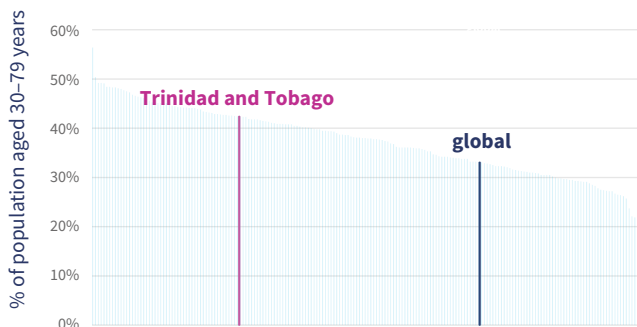
Trinidad and Tobago

Hypertension profile

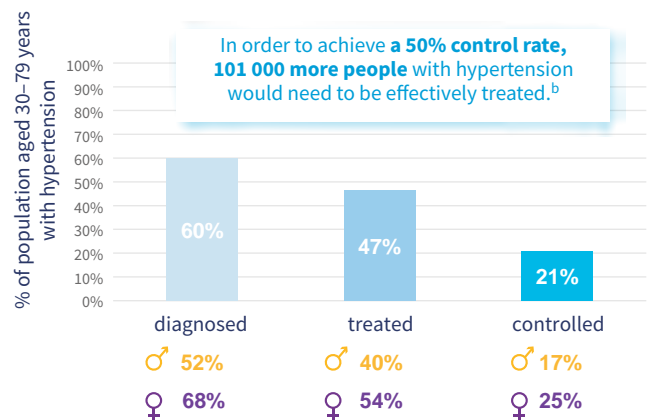**Total population (2019):** 1 520 000
Total deaths (2019): 9440

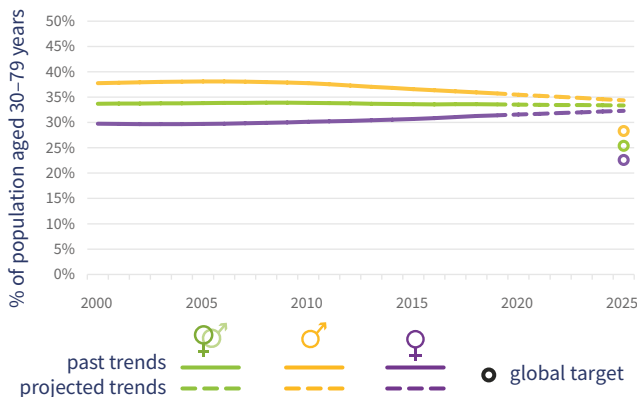**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ **42%**   ♂ **43%**   ♀ **42%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **354 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 101 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	60%	47%	21%
♂	52%	40%	17%
♀	68%	54%	25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥   ♂   ♀
projected trends   - - -   - - -   - - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **5000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	20	14	2019
Cardiovascular disease deaths	2800	1600	1200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	64	50	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	19	11	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	6	10	2	2019
Physical inactivity, adults aged 18+ years (%)	38	27	49	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Tunisia

Hypertension profile

Total population (2019): 12 049 000
Total deaths (2019): 67 600

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 35%   ♂ 35%   ♀ 35%

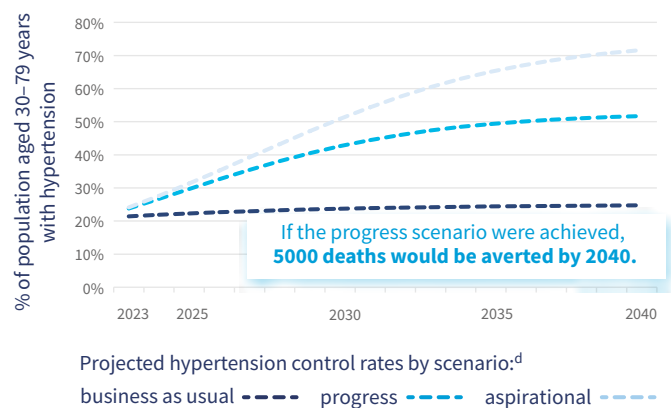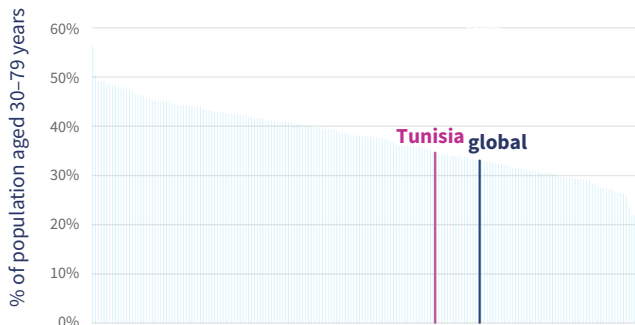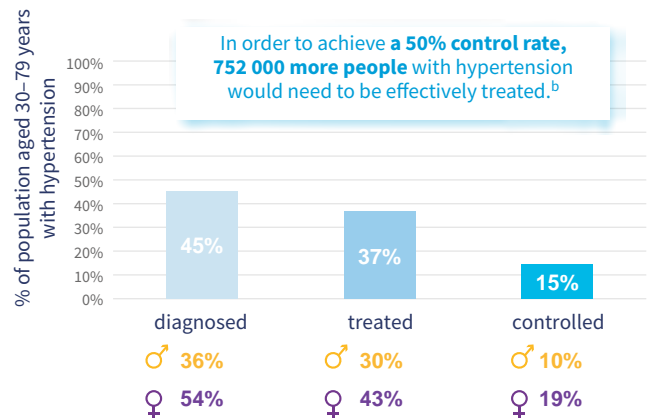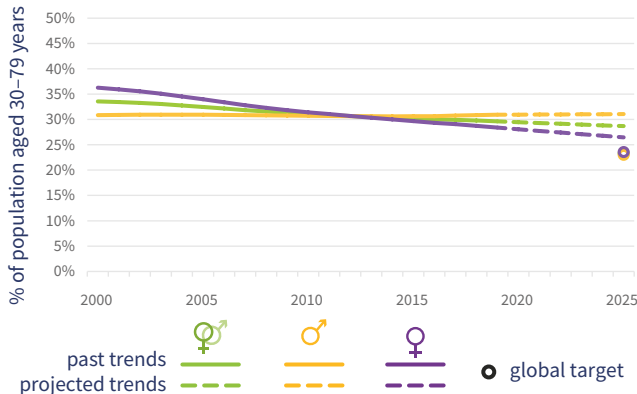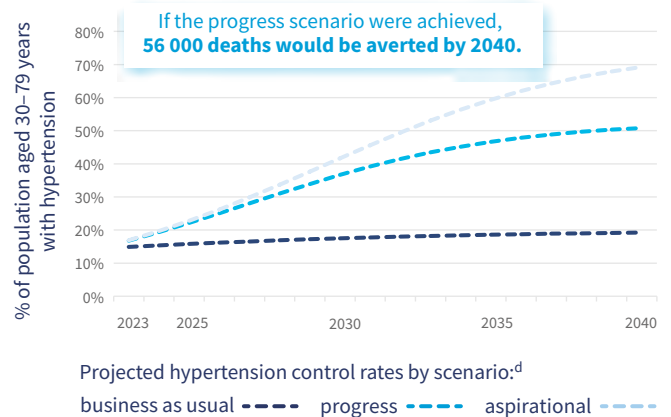### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.1 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 752 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	45%	37%	15%
♂	36%	30%	10%
♀	54%	43%	19%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends
⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **56 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual – – –   progress – – –   aspirational – – –

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	19	12	2019
Cardiovascular disease deaths	33 900	17 300	16 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	51	50	53	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	25	48	2	2019
Obesity, adults aged 18+ years (%)	27	19	34	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	4	0	2019
Physical inactivity, adults aged 18+ years (%)	30	26	34	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
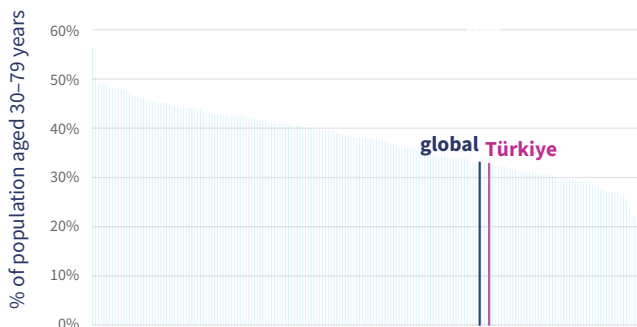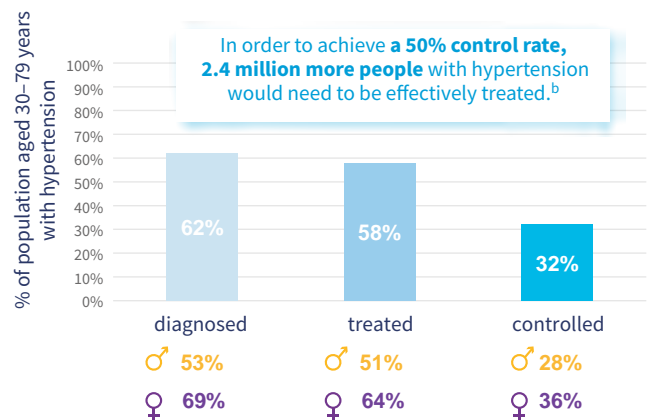
Türkiye

Hypertension profile

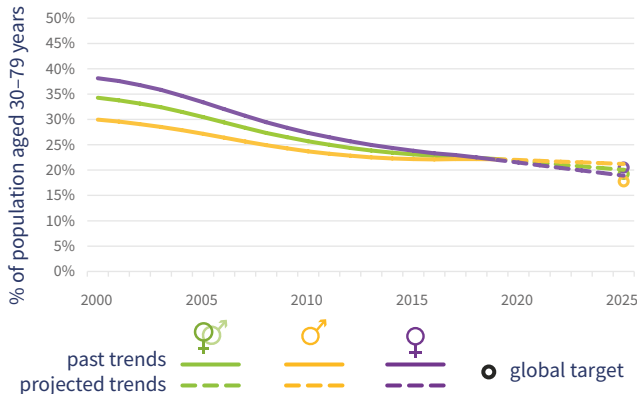**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ 33%   ♂ 31%   ♀ 34%

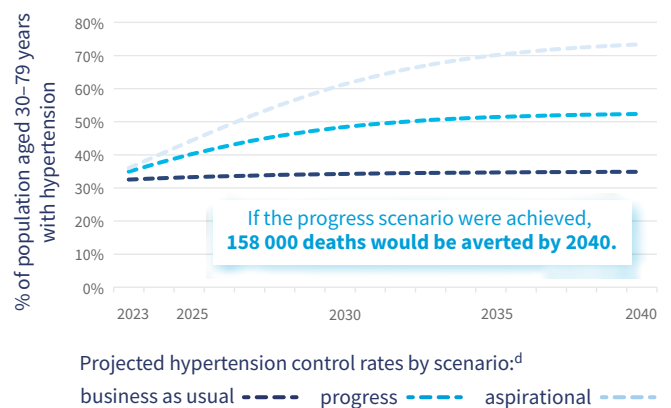## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **13.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.4 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	62%	58%	32%
♂	53%	51%	28%
♀	69%	64%	36%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends

⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **158 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	21	11	2019
Cardiovascular disease deaths	155 000	67 000	88 500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	55	53	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	5	6	4	2019
Current tobacco use, adults aged 15+ years (%)	31	43	19	2019
Obesity, adults aged 18+ years (%)	32	24	39	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	0	2019
Physical inactivity, adults aged 18+ years (%)	31	22	39	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
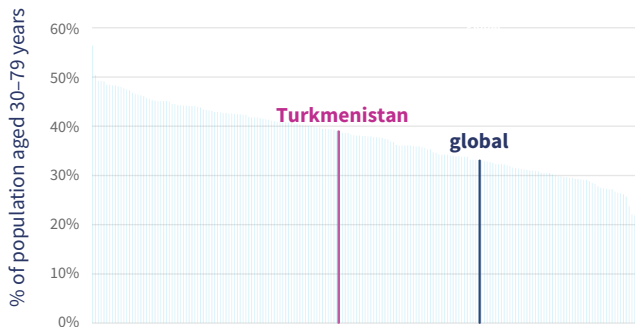
Turkmenistan

Hypertension profile

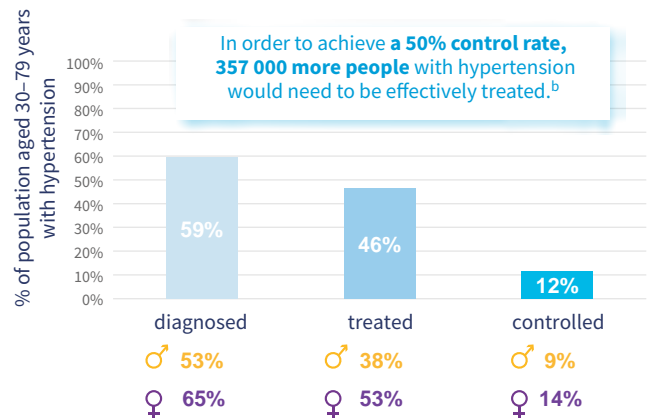**Total population (2019):** 6 158 000
Total deaths (2019): 36 900

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **39%**   ♂ **38%**   ♀ **40%**
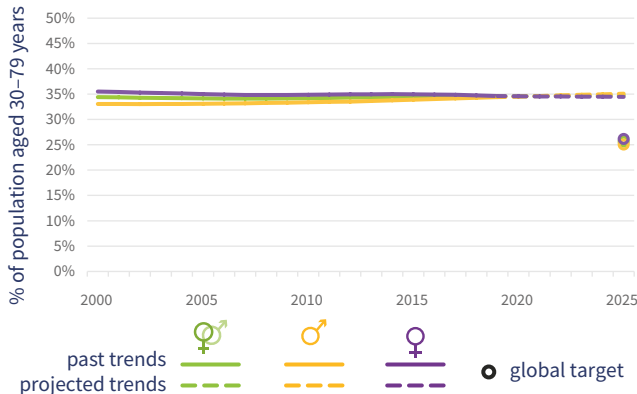

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **917 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 357 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	59%	46%	12%
♂	53%	38%	9%
♀	65%	53%	14%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ◉ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **32 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	28	34	22	2019
Cardiovascular disease deaths	16 300	8500	7800	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	61	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	6	11	1	2019
Obesity, adults aged 18+ years (%)	19	16	21	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Tuvalu

Hypertension profile

Total population (2019): 11 000
Total deaths (2019): no data

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 50%   ♂ 49%   ♀ 51%

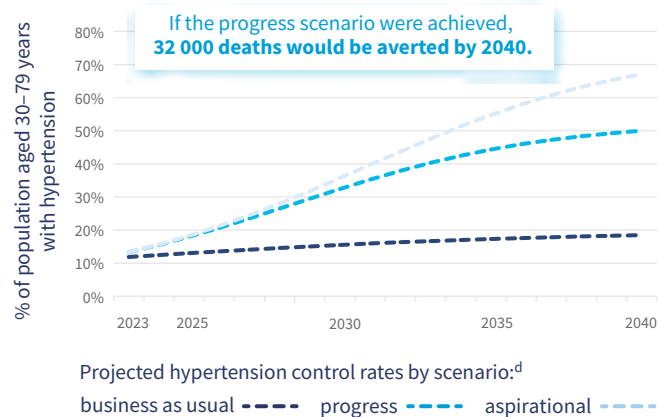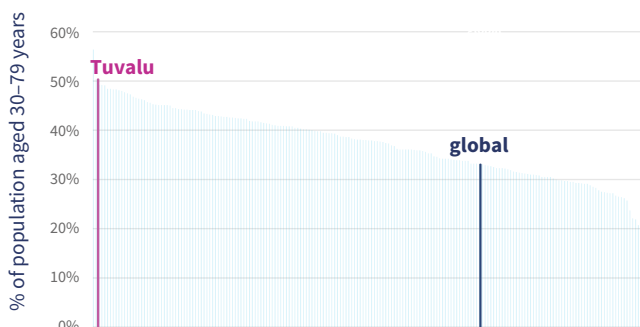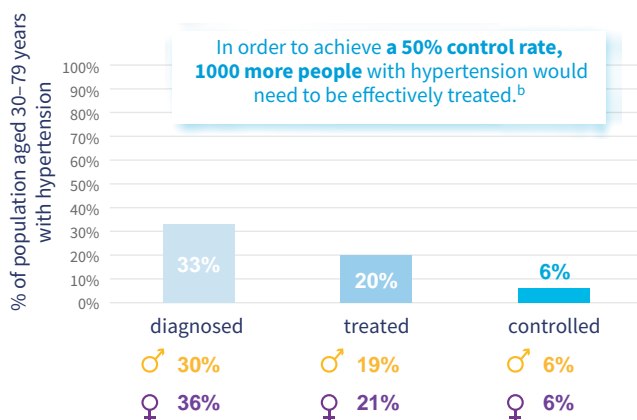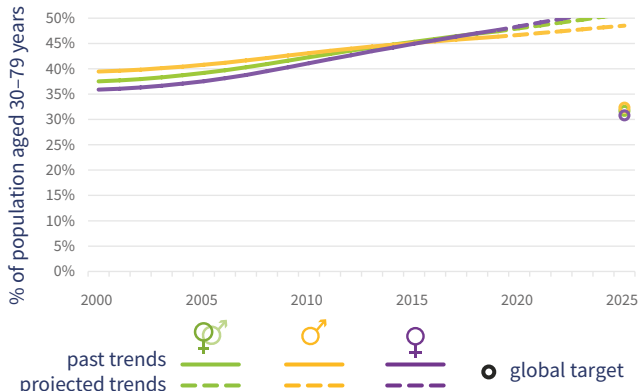### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2300** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	33%	20%	6%
♂	30%	19%	6%
♀	36%	21%	6%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends
○ global target

Hypertension control rate scenarios

Data not available

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	no data	no data	no data	2019
Cardiovascular disease deaths	no data	no data	no data	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	53	52	2019

Risk factors[d]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	7	2019
Current tobacco use, adults aged 15+ years (%)[e]	36	50	22	2019
Obesity, adults aged 18+ years (%)	52	47	56	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	1	2	0	2019
Physical inactivity, adults aged 18+ years (%)	27	18	37	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✘

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✘
Conducted recent, national survey on salt/sodium intake ✘
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Age-standardized estimates are presented for all indicators except salt intake. e. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Uganda

Hypertension profile

Total population (2019): 42 949 000

Total deaths (2019): 228 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 33%   ♂ 31%   ♀ 34%

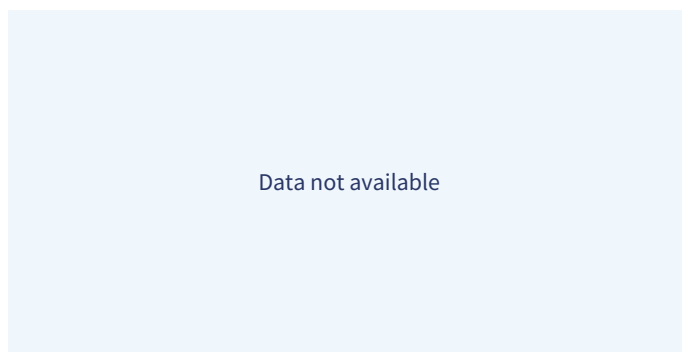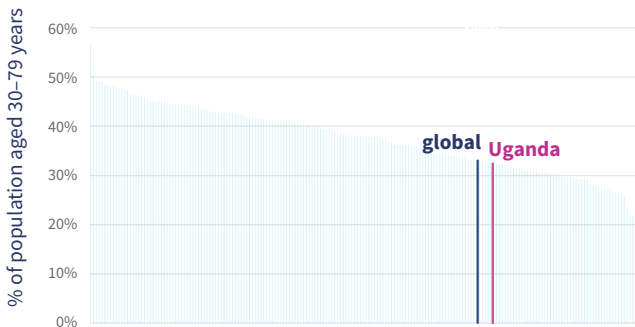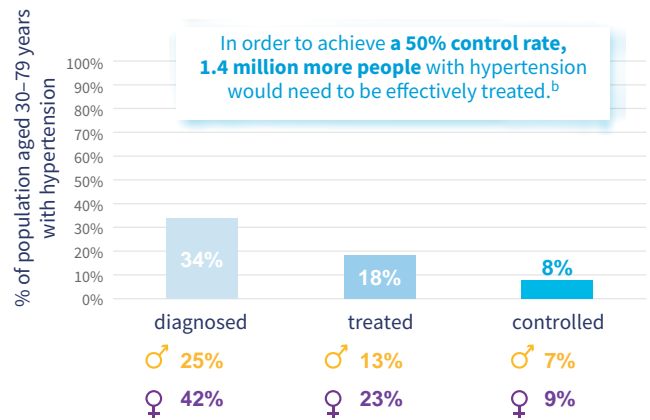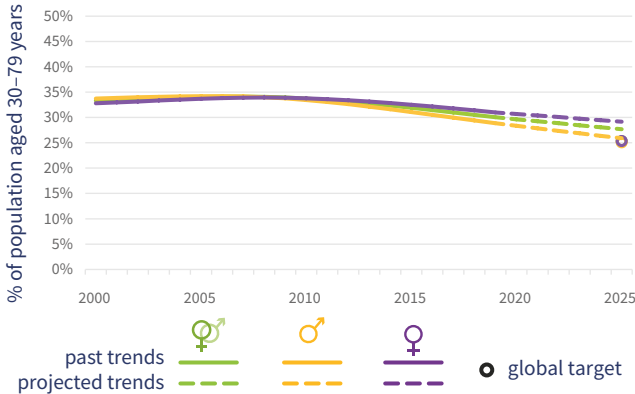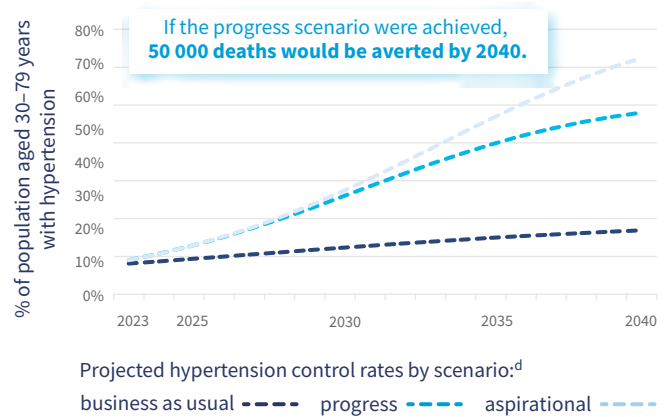## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **3.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 1.4 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	34%	18%	8%
♂	25%	13%	7%
♀	42%	23%	9%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - -   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **50 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	25	18	2019
Cardiovascular disease deaths	25 900	13 300	12 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	59	55	63	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	9	14	4	2019
Obesity, adults aged 18+ years (%)	5	2	9	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	12	20	5	2019
Physical inactivity, adults aged 18+ years (%)	6	5	6	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✘

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
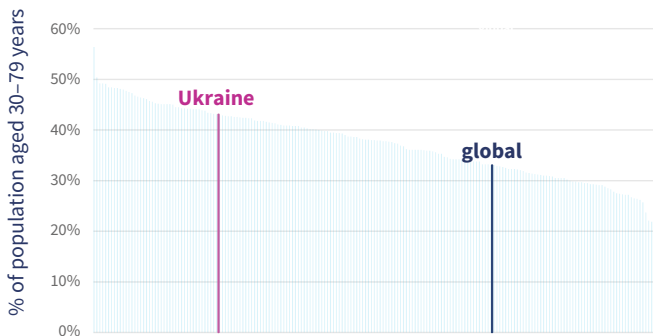
Ukraine

Hypertension profile

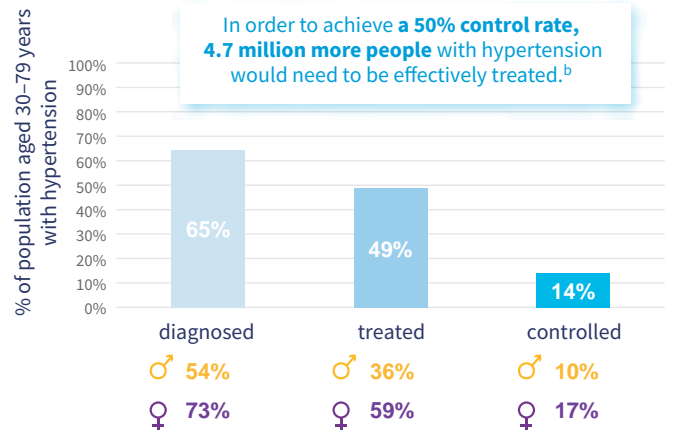**Total population (2019): 44 211 000**

Total deaths (2019): 594 000

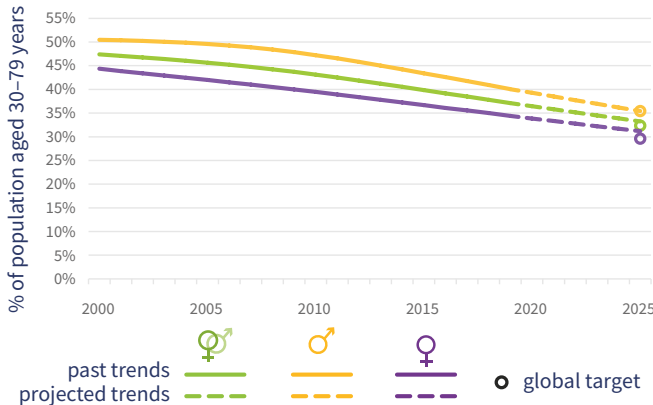**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ **43%**   ♂ **45%**   ♀ **42%**

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **13.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 4.7 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	65%	49%	14%
♂	54%	36%	10%
♀	73%	59%	17%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends
projected trends   ⚥   ♂   ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **457 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -
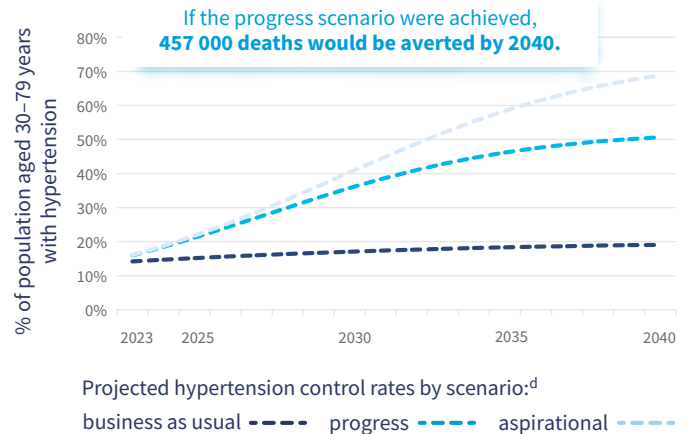
Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	26	37	16	2019
Cardiovascular disease deaths	383 000	168 000	214 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	53	55	51	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)	26	41	12	2019
Obesity, adults aged 18+ years (%)	24	22	26	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	15	4	2019
Physical inactivity, adults aged 18+ years (%)	20	19	20	2016

National response

Targets
National target for blood pressure   ✘
National target for salt consumption   ✔

Treatment
Guidelines for management of hypertension   ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension   ✔
Conducted recent, national survey on salt/sodium intake   ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis   ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

United Arab Emirates

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **41%** ♂ **44%** ♀ **35%**

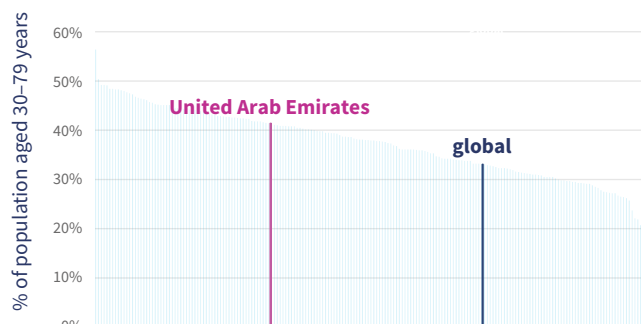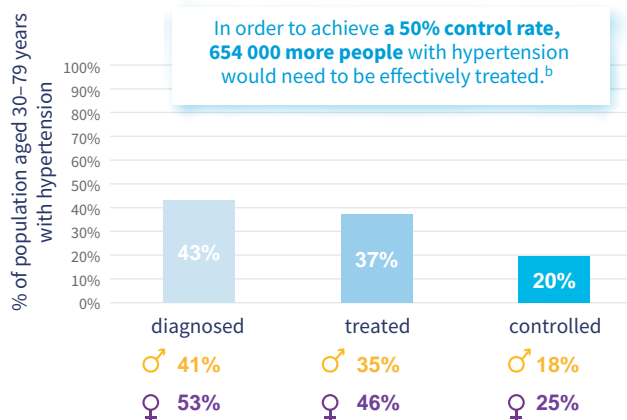### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.8 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 654 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	43%	37%	20%
♂	41%	35%	18%
♀	53%	46%	25%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends / projected trends — ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **26 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ---- · progress ---- · aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	19	20	15	2019
Cardiovascular disease deaths	7600	6100	1500	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	61	61	59	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	5	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	32	28	41	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	0	2019
Physical inactivity, adults aged 18+ years (%)	41	39	49	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

United Kingdom of Great Britain and Northern Ireland

Hypertension profile

Total population (2019): 66 779 000

Total deaths (2019): 615 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **26%** ♂ **30%** ♀ **23%**
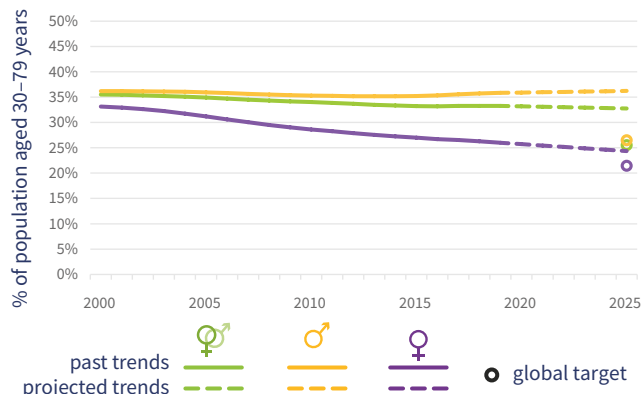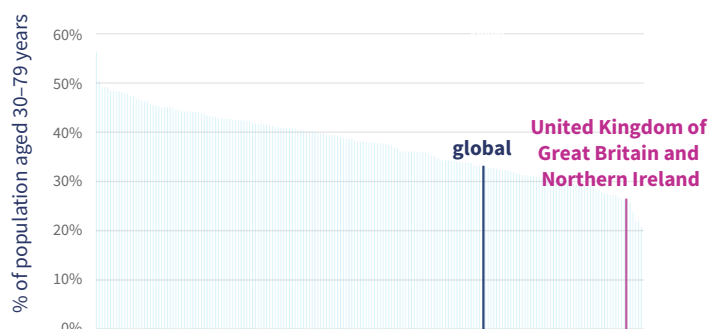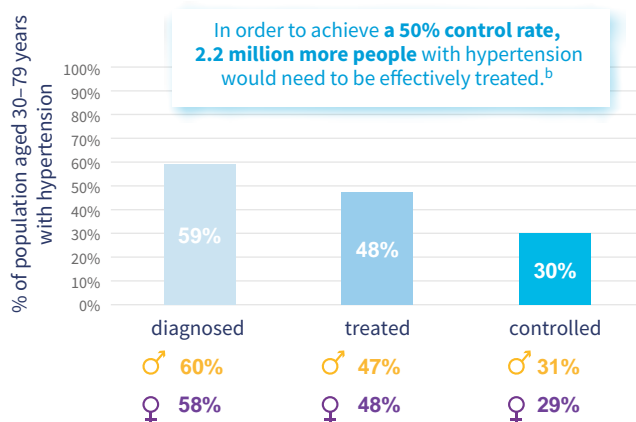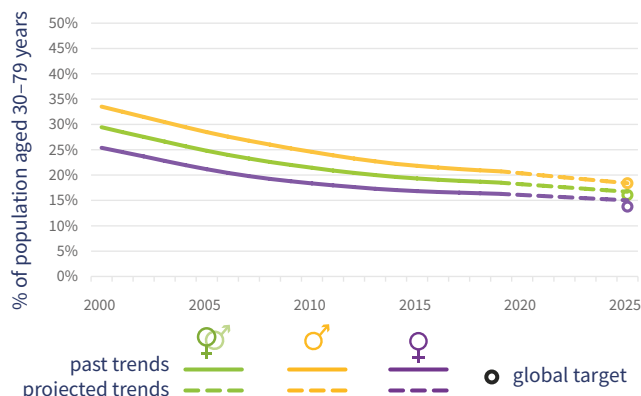
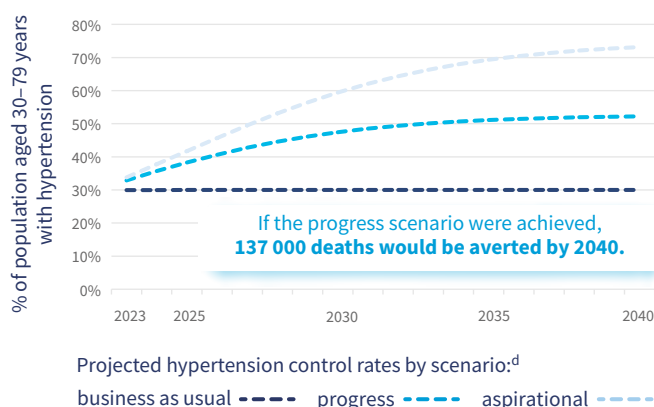### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **12.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.2 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	59%	48%	30%
♂	60%	47%	31%
♀	58%	48%	29%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **137 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress - - - aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	10	12	9	2019
Cardiovascular disease deaths	146 000	76 600	69 300	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	44	45	43	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	8	6	2019
Current tobacco use, adults aged 15+ years (%)[f]	16	18	14	2019
Obesity, adults aged 18+ years (%)	28	27	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	11	17	5	2019
Physical inactivity, adults aged 18+ years (%)	36	32	40	2016

National response

Targets

National target for blood pressure	✖
National target for salt consumption	✔

Treatment

Guidelines for management of hypertension	✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension	✖
Conducted recent, national survey on salt/sodium intake	✔
Functioning system for generating reliable cause-specific mortality data on a routine basis	✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.
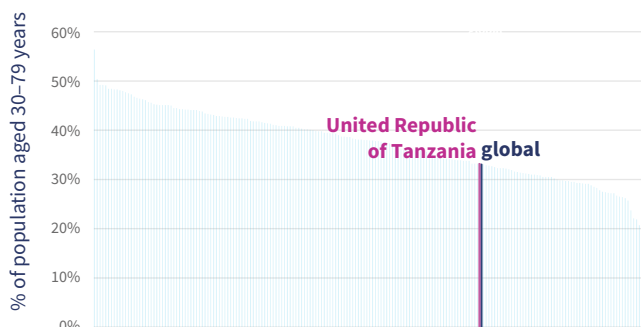
United Republic of Tanzania

Hypertension profile

Total population (2019): **59 873 000**
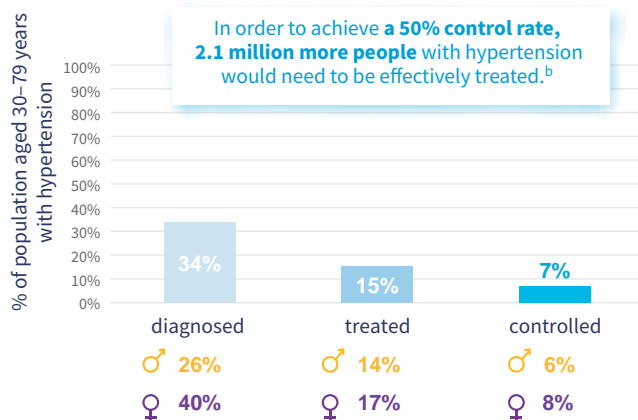
Total deaths (2019): **322 000**

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **33%** ♂ **31%** ♀ **35%**

Prevalence of hypertension – global comparison (both sexes)[a]

United Republic of Tanzania | *global*

Of the **4.9 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	34%	**15%**	**7%**
♂	**26%**	**14%**	**6%**
♀	**40%**	**17%**	**8%**

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀

projected trends — — — ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **75 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual **- - -** progress **- - -** aspirational **- - -**

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	17	18	17	2019
Cardiovascular disease deaths	39 500	19 100	20 400	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	65	71	58	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	8	2019
Current tobacco use, adults aged 15+ years (%)	9	15	4	2019
Obesity, adults aged 18+ years (%)	8	4	13	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	18	4	2019
Physical inactivity, adults aged 18+ years (%)	6	6	7	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

United States of America

Hypertension profile

Total population (2019): 334 300 000

Total deaths (2019): 2 949 000

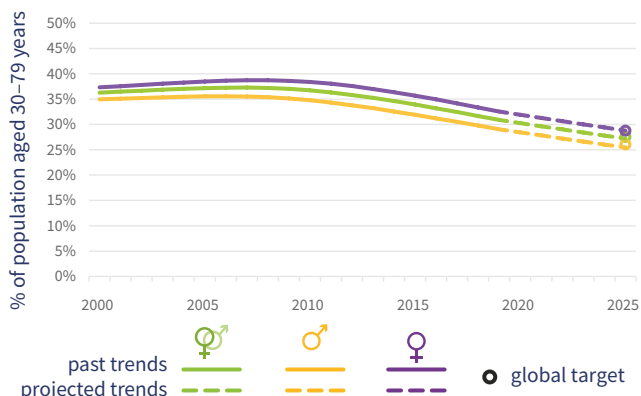Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]   ⚥ **32%**   ♂ **34%**   ♀ **29%**

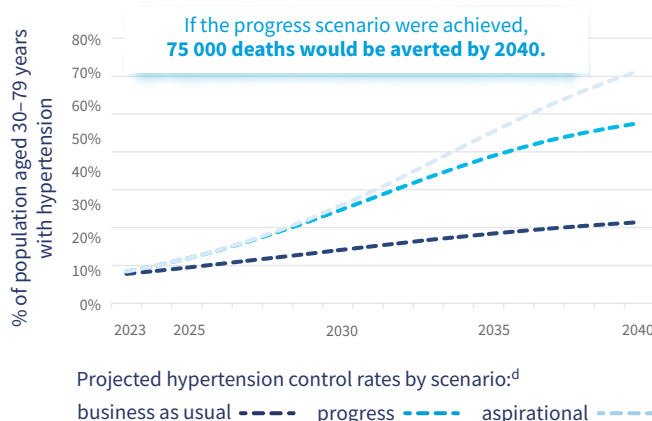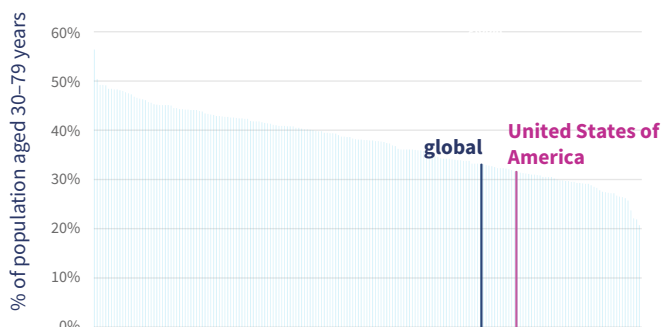## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **69.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 693 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	80%	70%	48%
♂	78%	66%	45%
♀	83%	73%	51%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends   ⚥ ♂ ♀
projected trends   ○ global target

Hypertension control rate scenarios

If the aspirational scenario were achieved, **1.2 million deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ----   progress ----   aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	14	16	11	2019
Cardiovascular disease deaths	873 000	449 000	425 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	44	43	46	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)	23	29	18	2019
Obesity, adults aged 18+ years (%)	36	36	37	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	10	15	4	2019
Physical inactivity, adults aged 18+ years (%)	40	32	48	2016

National response

Targets

National target for blood pressure   ✔

National target for salt consumption   ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension   ✔

Conducted recent, national survey on salt/sodium intake   ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis   ✔

Treatment

Guidelines for management of hypertension   ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
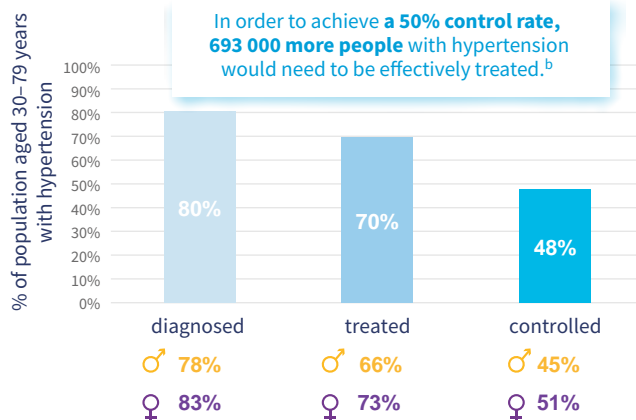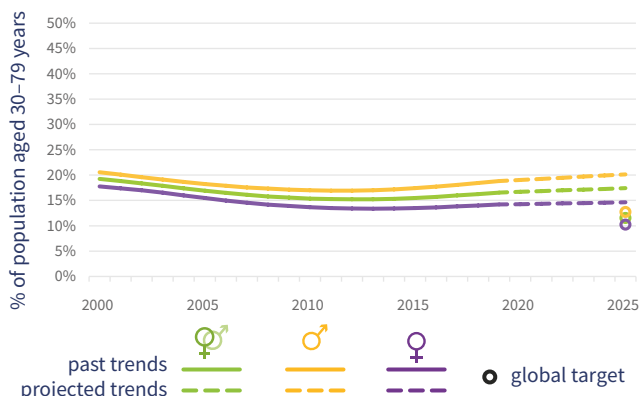
Uruguay

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 42%   ♂ 46%   ♀ 39%

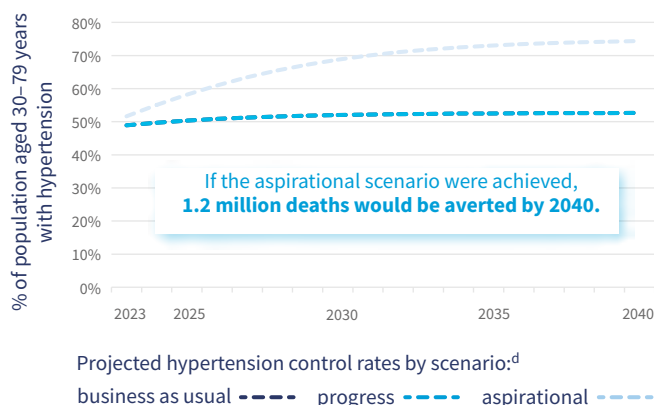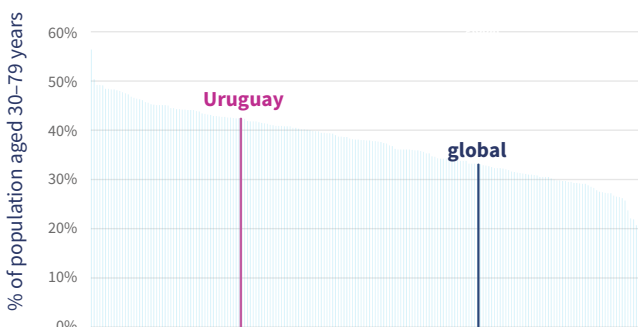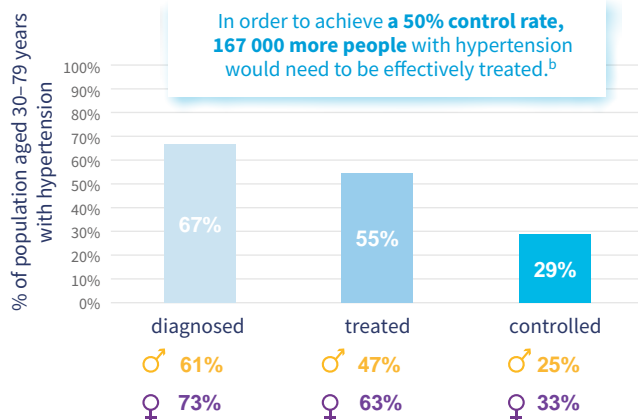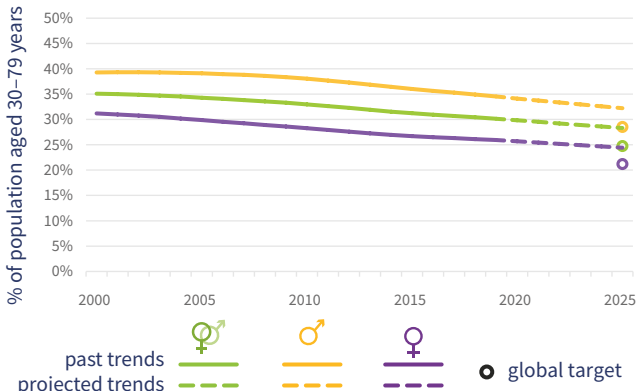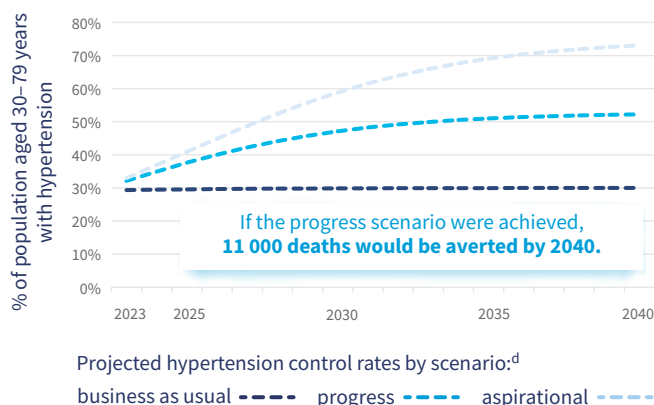### Prevalence of hypertension – global comparison (both sexes)[a]

Of the 857 000 adults aged 30–79 years with hypertension:

In order to achieve a 50% control rate, 167 000 more people with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
67%	55%	29%
♂ 61%	♂ 47%	♂ 25%
♀ 73%	♀ 63%	♀ 33%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends   ◯ global target

Hypertension control rate scenarios

If the progress scenario were achieved, 11 000 deaths would be averted by 2040.

Projected hypertension control rates by scenario:[d]
business as usual ---   progress ---   aspirational ---

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	16	21	13	2019
Cardiovascular disease deaths	9500	4400	5000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	48	49	48	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	8	2019
Current tobacco use, adults aged 15+ years (%)	22	25	19	2019
Obesity, adults aged 18+ years (%)	28	25	31	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	5	9	2	2019
Physical inactivity, adults aged 18+ years (%)	22	19	26	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
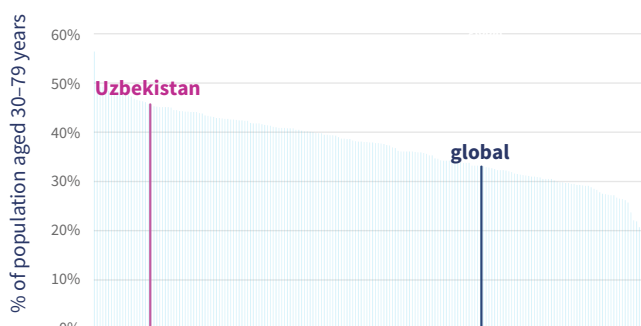
Uzbekistan

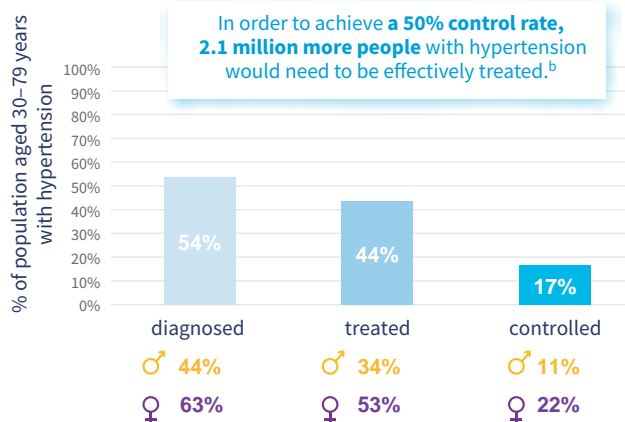## Hypertension profile

Total population (2019): 32 977 000
Total deaths (2019): 170 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 46%   ♂ 47%   ♀ 45%
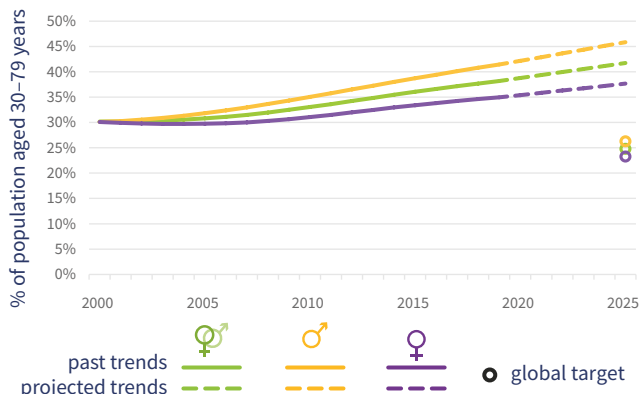
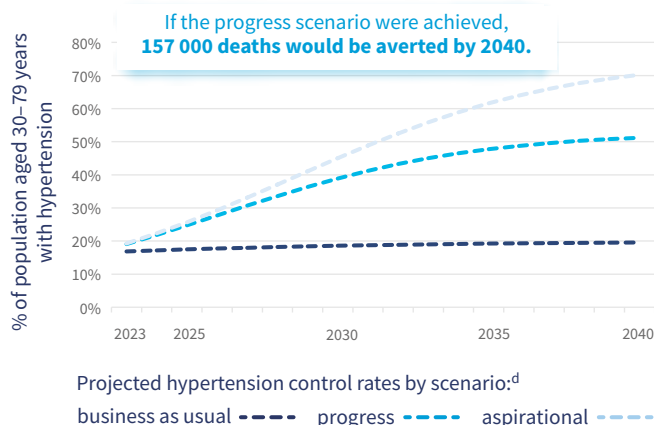### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **6.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 2.1 million more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both sexes	54%	44%	17%
♂	44%	34%	11%
♀	63%	53%	22%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends — — —   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **157 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual - - -   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	30	21	2019
Cardiovascular disease deaths	97 100	51 000	46 200	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	57	58	55	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	9	10	7	2019
Current tobacco use, adults aged 15+ years (%)	18	35	1	2019
Obesity, adults aged 18+ years (%)	17	14	19	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	19	13	24	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
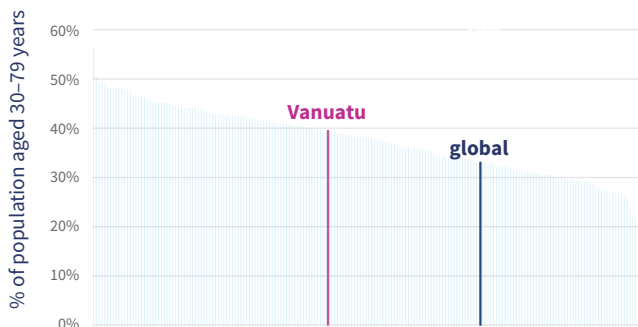
Annex 2. Hypertension profiles and explanatory notes   263
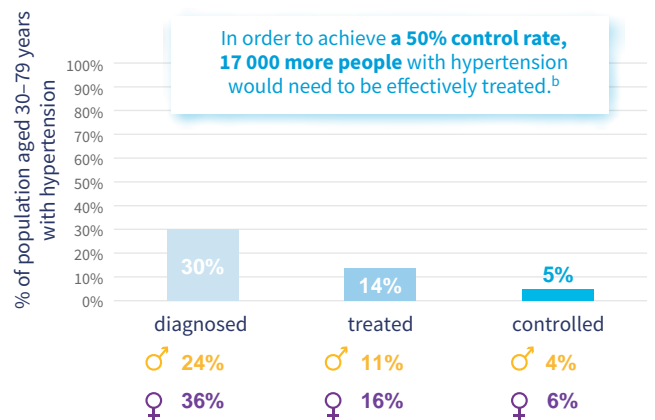
Vanuatu

Hypertension profile

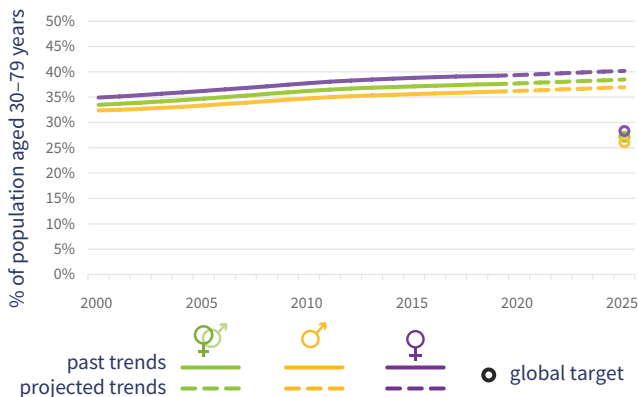**Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a]**   ⚥ 40%   ♂ 37%   ♀ 42%

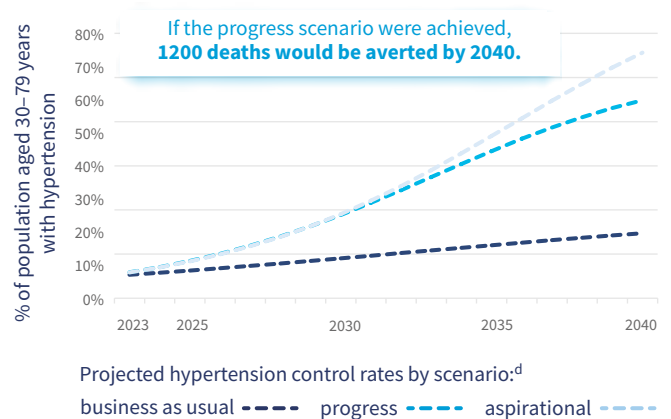### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **37 000** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 17 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	30%	14%	5%
♂	24%	11%	4%
♀	36%	16%	6%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **1200 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	40	45	34	2019
Cardiovascular disease deaths	860	530	330	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	63	62	65	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	7	7	2019
Current tobacco use, adults aged 15+ years (%)[f]	18	34	3	2019
Obesity, adults aged 18+ years (%)	25	20	30	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	2	3	1	2019
Physical inactivity, adults aged 18+ years (%)	8	7	9	2016

National response

Targets
National target for blood pressure ✔
National target for salt consumption ✔

Treatment
Guidelines for management of hypertension ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake. f. Data refer to tobacco smoking only, in the absence of sufficient data on all tobacco use.

Venezuela (Bolivarian Republic of)

Hypertension profile

Total population (2019): 28 972 000

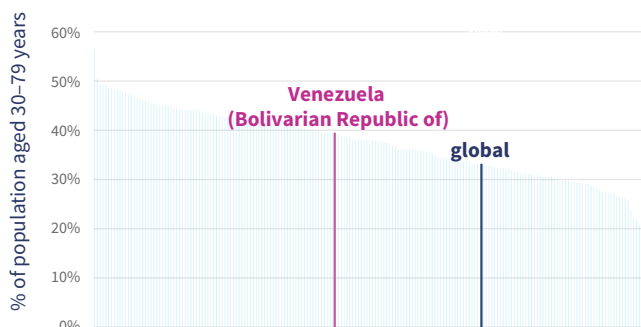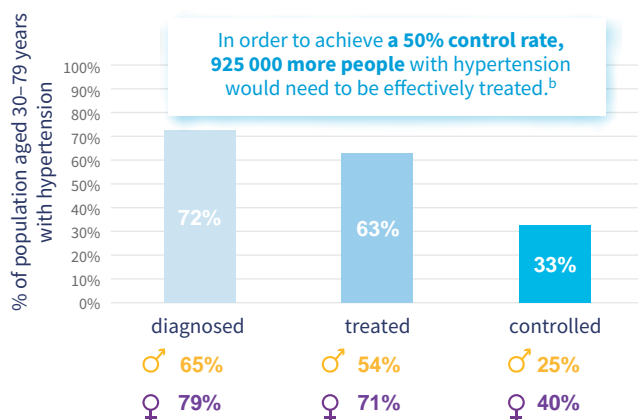**Total deaths (2019):** 172 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 39%   ♂ 40%   ♀ 39%

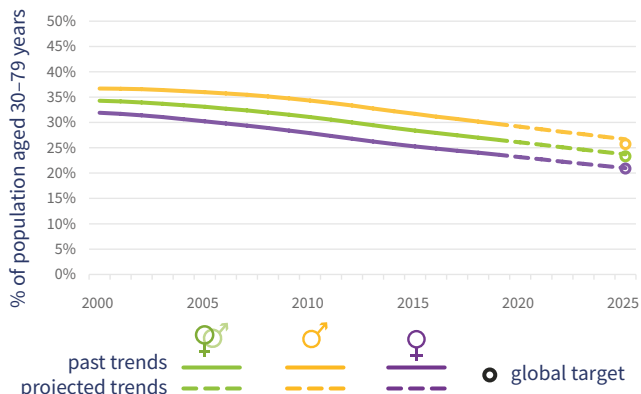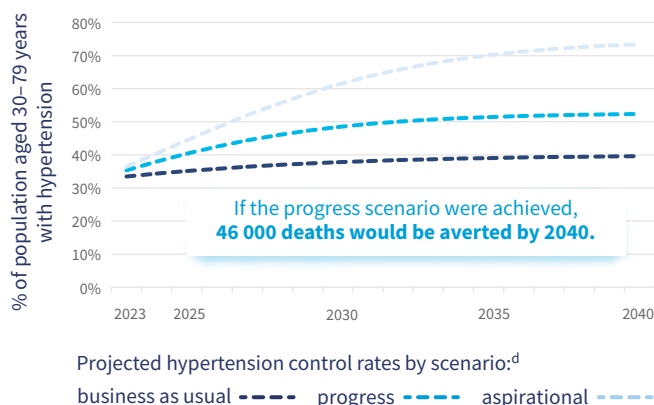### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **5.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 925 000 more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
72%	63%	33%
♂ 65%	♂ 54%	♂ 25%
♀ 79%	♀ 71%	♀ 40%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends --- 　○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **46 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- 　progress ---- 　aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	15	17	13	2019
Cardiovascular disease deaths	47 000	24 900	22 100	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	62	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	9	2019
Current tobacco use, adults aged 15+ years (%)	no data	no data	no data	2019
Obesity, adults aged 18+ years (%)	26	22	29	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	3	5	1	2019
Physical inactivity, adults aged 18+ years (%)	31	29	33	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✔

Treatment
Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
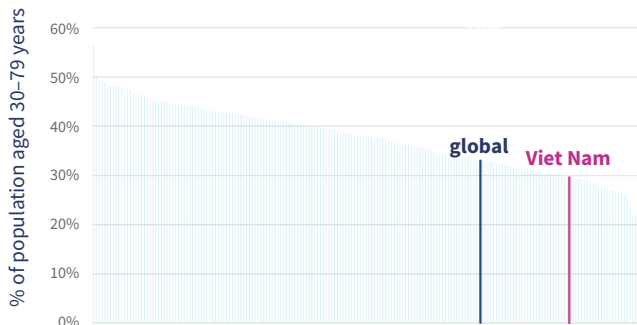
Viet Nam

Hypertension profile

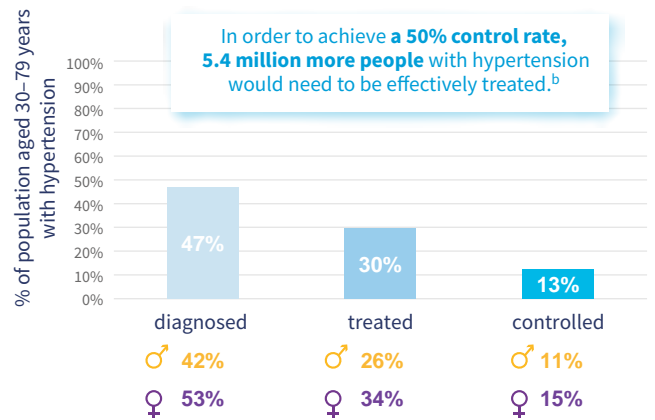**Total population (2019):** 95 777 000

Total deaths (2019): 728 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **30%** ♂ **33%** ♀ **26%**

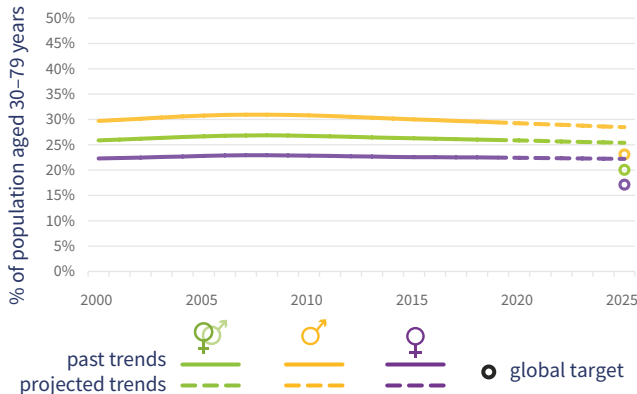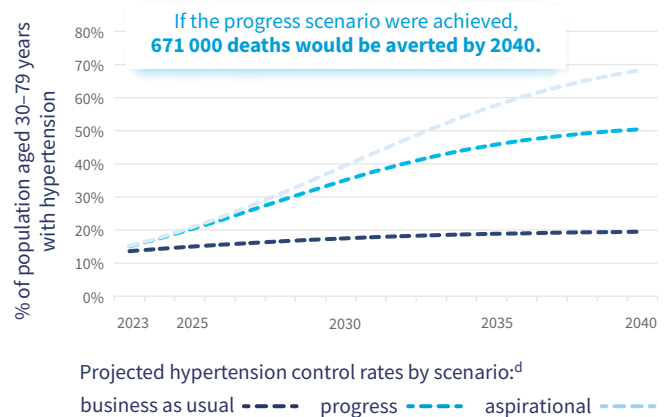## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **14.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 5.4 million more people** with hypertension would need to be effectively treated.[b]

diagnosed	treated	controlled
47%	30%	13%
♂ 42%	♂ 26%	♂ 11%
♀ 53%	♀ 34%	♀ 15%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends

○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **671 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual ---- progress ---- aspirational ----

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	21	29	14	2019
Cardiovascular disease deaths	287 000	154 000	133 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	62	57	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	10	11	10	2019
Current tobacco use, adults aged 15+ years (%)	25	48	2	2019
Obesity, adults aged 18+ years (%)	2	2	3	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	9	15	4	2019
Physical inactivity, adults aged 18+ years (%)	25	20	31	2016

National response

Targets

National target for blood pressure ✔

National target for salt consumption ✔

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✔

Conducted recent, national survey on salt/sodium intake ✔

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Global report on hypertension: the race against a silent killer

Yemen

Hypertension profile

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ 29%   ♂ 29%   ♀ 30%

Prevalence of hypertension – global comparison (both sexes)[a]

Of the **2.2 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 751 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	45%	37%	17%
♂	41%	34%	13%
♀	49%	39%	20%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends ⚥ ♂ ♀   ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **115 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]
business as usual ------   progress - - -   aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	28	31	25	2019
Cardiovascular disease deaths	52 600	27 100	25 600	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	49	56	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	6	7	5	2019
Current tobacco use, adults aged 15+ years (%)	21	33	8	2019
Obesity, adults aged 18+ years (%)	17	12	22	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	0	0	0	2019
Physical inactivity, adults aged 18+ years (%)	no data	no data	no data	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✖
Conducted recent, national survey on salt/sodium intake ✖
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment
Guidelines for management of hypertension ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
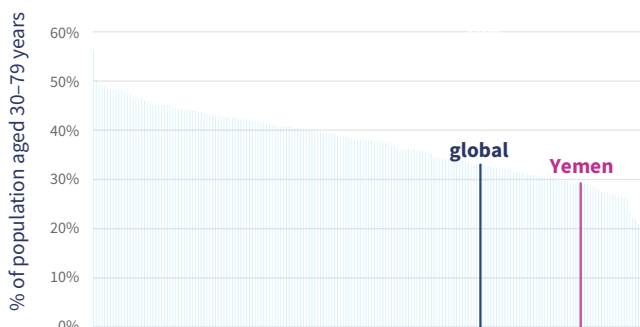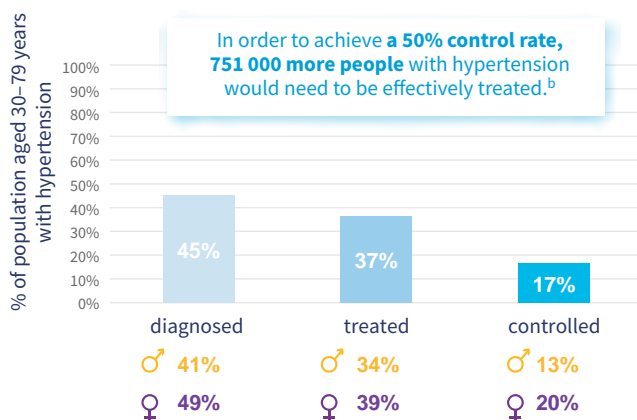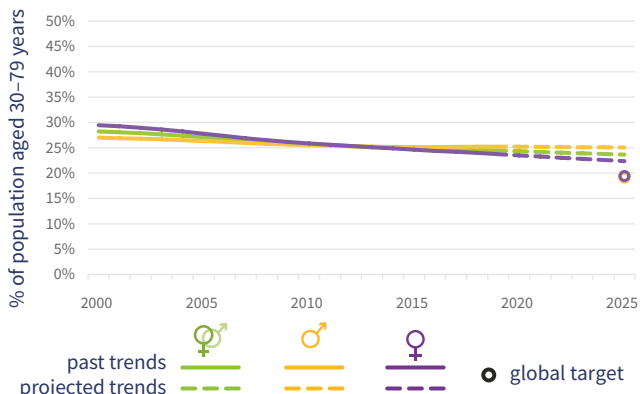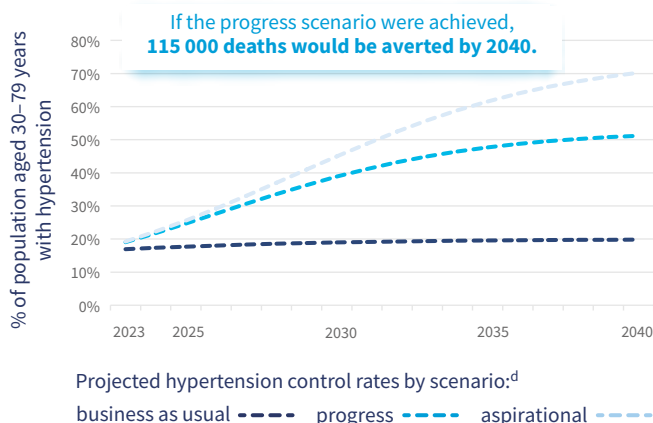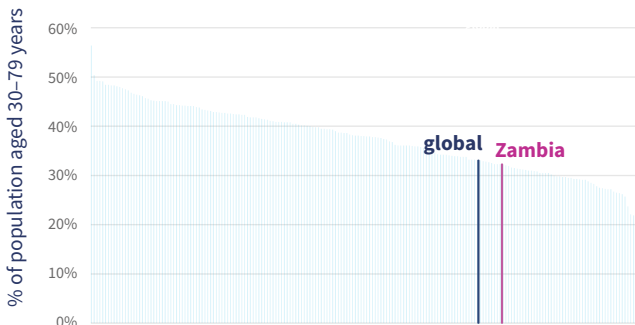
Zambia

Hypertension profile

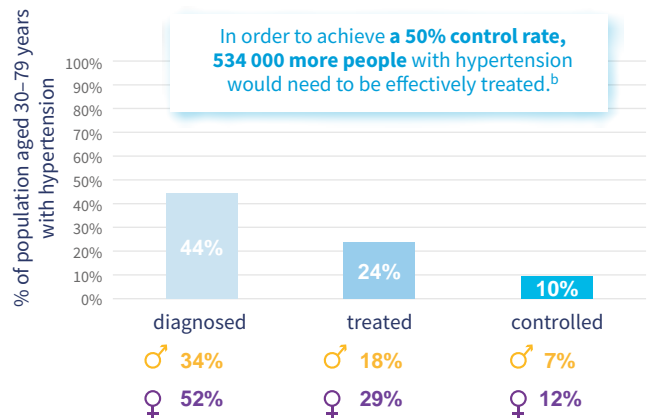Total population (2019): **18 380 000**

Total deaths (2019): **121 000**

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **32%** ♂ **30%** ♀ **34%**

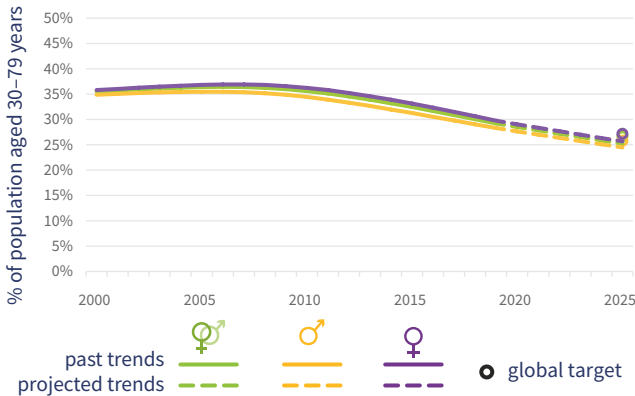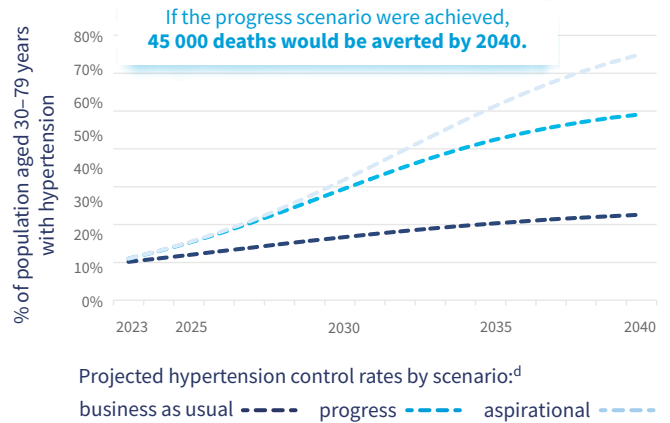### Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.3 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 534 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
	44%	24%	10%
♂	34%	18%	7%
♀	52%	29%	12%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends ⚥ ♂ ♀
projected trends - - -   ⊙ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **45 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - - progress - - - - aspirational - - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	25	29	21	2019
Cardiovascular disease deaths	16 700	8800	7900	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	52	52	52	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	7	6	8	2019
Current tobacco use, adults aged 15+ years (%)	15	25	4	2019
Obesity, adults aged 18+ years (%)	8	4	12	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	6	1	2019
Physical inactivity, adults aged 18+ years (%)	22	19	25	2016

National response

Targets
National target for blood pressure ✖
National target for salt consumption ✖

Treatment
Guidelines for management of hypertension ✔

Surveillance
Conducted recent, national survey measuring raised blood pressure/hypertension ✔
Conducted recent, national survey on salt/sodium intake ✔
Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.
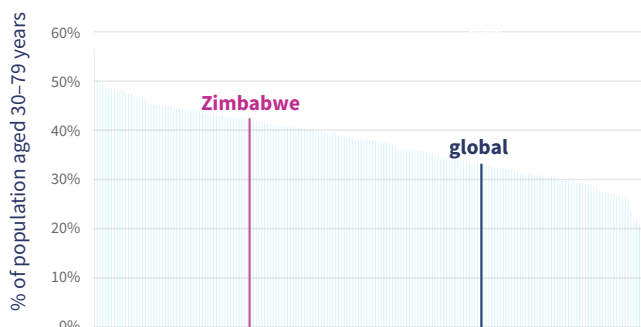
Zimbabwe

Hypertension profile

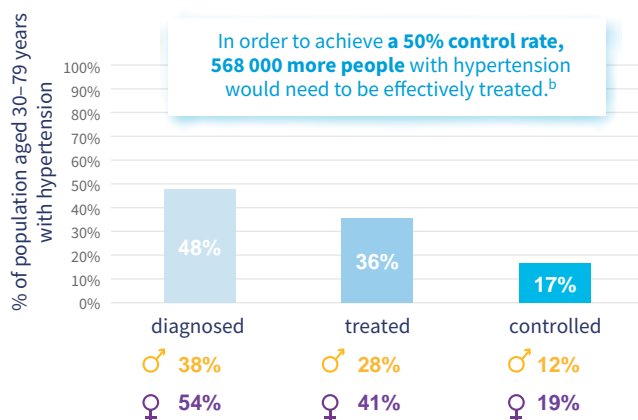**Total population (2019):** 15 355 000

Total deaths (2019): 118 000

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019)[a] ⚥ **42%** ♂ **37%** ♀ **46%**

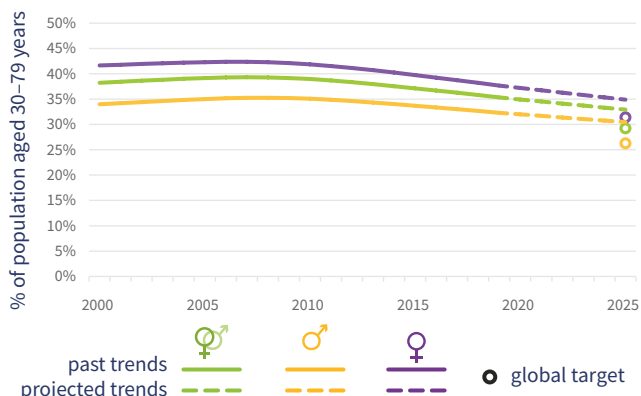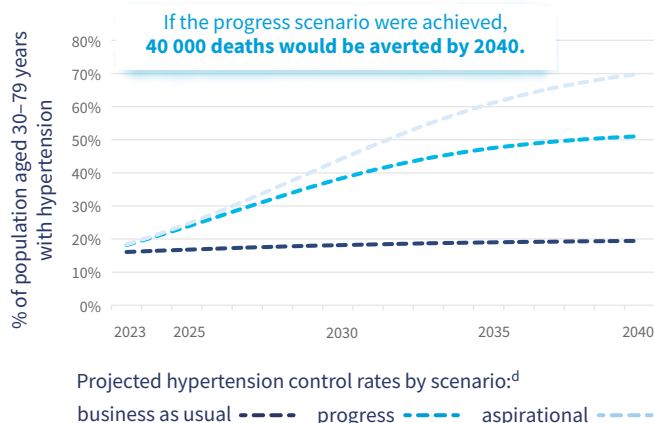## Prevalence of hypertension – global comparison (both sexes)[a]

Of the **1.6 million** adults aged 30–79 years with hypertension:

In order to achieve **a 50% control rate, 568 000 more people** with hypertension would need to be effectively treated.[b]

	diagnosed	treated	controlled
both	48%	36%	17%
♂	38%	28%	12%
♀	54%	41%	19%

Trends in uncontrolled hypertension in adults aged 30–79 years[c]

past trends — ⚥ ♂ ♀
projected trends - - - ○ global target

Hypertension control rate scenarios

If the progress scenario were achieved, **40 000 deaths would be averted by 2040.**

Projected hypertension control rates by scenario:[d]

business as usual - - - progress - - - aspirational - - -

Mortality

	both sexes	males	females	year
Probability of premature mortality from NCDs (%)	28	30	27	2019
Cardiovascular disease deaths	17 300	7300	10 000	2019
Cardiovascular disease deaths attributable to high systolic blood pressure (%)	60	55	64	2019

Risk factors[e]

	both sexes	males	females	year
Mean population salt intake, adults aged 25+ years (g/day)	8	8	8	2019
Current tobacco use, adults aged 15+ years (%)	12	23	2	2019
Obesity, adults aged 18+ years (%)	16	5	25	2016
Total alcohol per capita consumption, adults aged 15+ years (litres)	4	7	1	2019
Physical inactivity, adults aged 18+ years (%)	27	23	31	2016

National response

Targets

National target for blood pressure ✖

National target for salt consumption ✖

Surveillance

Conducted recent, national survey measuring raised blood pressure/hypertension ✖

Conducted recent, national survey on salt/sodium intake ✖

Functioning system for generating reliable cause-specific mortality data on a routine basis ✖

Treatment

Guidelines for management of hypertension ✔

Footnotes: a. SBP ≥140 mmHg or DBP ≥90 mmHg or taking medication for hypertension. b. Control rate: adults aged 30–79 years receiving treatment, with blood pressure SBP <140 mmHg and DBP <90 mmHg. c. SBP ≥140 mmHg or DBP ≥90 mmHg. d. Progress and aspirational scenarios reflect a theoretical scaling up of treatment and control. e. Age-standardized estimates are presented for all indicators except salt intake.

Explanatory notes

Profile header

Total population (2019): The total population estimates for the year 2019 were taken from the most recent United Nations Population Division World Population Prospects *(1)*. Data were rounded to two to four significant digits depending on the value.

Total deaths (2019): Mortality estimates for all deaths were taken from the WHO Global Health Estimates 2019 *(2)*. Values were rounded to two to four significant digits depending on the value.

Hypertension prevalence and related graphs and statements

Age-standardized prevalence of hypertension among adults aged 30–79 years (2019): Prevalence of hypertension (defined as having systolic blood pressure (SBP) ≥140 mmHg, diastolic blood pressure (DBP) ≥90 mmHg, or taking medication for hypertension) among adults aged 30–79. A total of 1201 population-based studies that included measured blood pressure and data on blood pressure treatment in 104 million individuals aged 30–79 years were used to estimate trends in hypertension and hypertension diagnosis, treatment and control from 1990 to 2019. Full details of input and data methods are available in the related publication *(3)*. Age-standardized estimates were produced by applying the age-specific estimates to the WHO Standard Population.

Number of adults aged 30–79 years with hypertension (2019): The number of adults aged 30–79 with hypertension was computed by multiplying the crude prevalence of hypertension by the number of adults aged 30–79 from the 2019 United Nations Population Division World Population Prospects *(4)*.

Coverage of previous diagnosis, treatment and control of hypertension among adults aged 30–79 years with hypertension (2019): Coverage of previous diagnosis, treatment (taking medication) and control (or effective treatment, defined as taking medication for hypertension and having SBP <140mmHg and DBP <90mmHg) among adults aged 30–79 years with hypertension (as defined above). Full details of input and data methods are available in the related publication *(3)*. Age-standardized estimates were computed by weighting age-specific coverage by the product of the WHO Standard Population weight and the prevalence of hypertension for the age group as defined above.

Additional people with hypertension needing treatment to achieve 50% control rate (2019): For countries who have not yet attained a 50% control rate, these figures were calculated by subtracting the crude estimates of the proportion of people aged 30–79 years with hypertension whose hypertension was controlled from 0.5. This difference was then multiplied by the number of people with hypertension in the country (calculated as described above) to arrive at the number of people who would need to be effectively treated (i.e. have their hypertension controlled) to attain a 50% control rate. Values were rounded to two to four significant digits depending on value.

Trends in uncontrolled hypertension in adults aged 30–79 years (2019): Uncontrolled hypertension, also referred to as raised blood pressure, is defined as having systolic blood pressure ≥140 mmHg or diastolic blood pressure ≥90 mmHg, regardless of diagnosis or treatment status, among adults aged 30–79 years. It was computed by subtracting the prevalence of controlled hypertension (out of all adults aged 30–79) from the prevalence of hypertension. Full details of input and data methods used to estimate the prevalence of hypertension and proportion of hypertension that is controlled are available in the related publication *(3)*. Age-standardized estimates were produced using the WHO Standard Population. Uncontrolled hypertension was projected to 2025 assuming that rates of change 2010-2019 continue to 2025, using methods described elsewhere *(5)*. A 2025 global voluntary target on blood pressure, endorsed by the World Health Assembly in 2013, envisages a 25% reduction in uncontrolled hypertension by 2025 against a 2010 baseline *(6)*. For each country, the global target is depicted as a 25% relative reduction from the country's 2010 baseline prevalence.

Hypertension control rate scenarios (2023–2040): Three hypertension control scenarios from a related publication are shown *(7)*. These were designed to reflect realistic scale-up patterns for hypertension care. The assumptions underlying the scenarios were informed by rates of change in blood pressure treatment and control observed in high-performing countries, as well as recent experiences implementing the HEARTS technical package in several countries. Specifically:

- Business as usual scenario: the proportion of adults with hypertension who were treated and whose hypertension was controlled continues to increase at the rate of change observed in the recent past;

- Progress scenario: increases in hypertension treatment and control accelerate to rates historically observed in high-performing countries, until around 50% effective coverage is reached;

- Aspirational scenario: hypertension treatment and control rates increase more rapidly than observed in best-performing countries, but similar to increases observed in specific settings and for other interventions, until around 75% effective coverage is reached.

For all scenarios, annual increases in hypertension coverage were modeled using a parabolic function, which implies that improvements in hypertension coverage occur faster at intermediate coverage levels as compared to low or high coverage levels. This approach is intended to represent the slowing of progress that countries inevitably experience as they expand health care to harder-to-reach populations.

Deaths averted if progress or aspirational scenario achieved by 2040: Holding all else equal, expected deaths from ischaemic heart disease (IHD), hypertensive heart disease (HHD), ischaemic stroke, and haemorrhagic stroke in each year 2023–2040 under each of the three scenarios above were computed. Methods for computing expected deaths are described in Annex 1. Averted deaths are the expected deaths (summed over the years 2023–2040) under the business as usual scenario less the expected deaths under the progress/aspirational scenario (summed over the years 2023–2040).

Mortality

Probability of premature mortality from NCDs (2019): Percentage of 30-year-old-people who would die before their 70th birthday from any of cardiovascular diseases, cancer, diabetes or chronic respiratory diseases, assuming that s/he would experience current mortality rates at every age and s/he would not die from any other cause of death (e.g. injuries or HIV/AIDS). Probability of death between exact age 30 and exact age 70 was calculated using cause-specific mortality rates in each five-year age group and standard life table methods. The estimates were derived from the WHO Global Health Estimates 2019 *(2)*.

Cardiovascular disease deaths (2019): Mortality estimates for cardiovascular diseases were taken from the WHO Global Health Estimates 2019 *(2)*. Values were rounded to two to four significant digits depending on the value.

Cardiovascular disease deaths attributable to high systolic blood pressure (2019): Percentage of cardiovascular deaths that would have been averted in 2019 if all adults had theoretical minimum risk level of systolic blood pressure, estimated to be in the range 110–115 mmHg. Estimates are from the Global Burden of Disease 2019 study *(8)*, and additional details on methods can be found in a related publication *(9)*.

Risk factors

Mean population salt intake, adults aged 25+ years (g/day): Mean daily population salt intake, in grams/day, among adults aged 25+ years. Estimates for mean population sodium intake were calculated by the Institute for Health Metrics and Evaluation (IHME). More information is available on their website: https://www.healthdata.org/results/gbd_summaries/2019/diet-high-sodium-level-3-risk Estimates were converted to salt intake by multiplying by 2.5.

Current tobacco use, adults aged 15+ (2019): Age-standardized estimates for tobacco use prevalence for the population aged 15 years or older. Estimates were based on a modelling process published elsewhere *(10)*. Estimates were produced only for countries who had at least two nationally representative population-based surveys with prevalence rates broken down by age and sex, completed from 1990–2020 (and if only two, they were at least two years apart), one of which was in the field since 2013. Twenty-nine countries did not meet these criteria and thus do not have any estimates. For 56 countries, the estimate only reflects tobacco smoking as there was insufficient survey data on all tobacco use. These are noted with a footnote on these countries' profiles *(11)*.

Obesity, adults aged 18+ years (2016): Age-standardized prevalence of obesity (defined as having a body mass index ≥30 kg/m^2) among adults aged 18+ years. Based on measured height and weight. Input data and methods are described in the related publication *(12)*. Age-standardized estimates were produced by applying the crude estimates to the WHO Standard Population.

Total alcohol per capita consumption, adults aged 15+ years (litres) (2019): Total alcohol per capita consumption (APC) is defined as the total (sum of three-year average recorded and three-year average unrecorded APC, adjusted for three-year average tourist consumption) amount of alcohol consumed per adult (15+ years) over a calendar year, in litres of pure alcohol. Recorded alcohol consumption refers to official statistics (production, import, export, and sales or taxation data), while the unrecorded alcohol consumption refers to alcohol which is not taxed and is outside the usual system of governmental control. Tourist consumption accounts for tourists visiting the country and inhabitants visiting other countries. Positive figures denote alcohol consumption of outbound tourists being greater than alcohol consumption by inbound tourists, negative numbers the opposite. Tourist consumption is based on UN tourist statistics. Recorded alcohol per capita (15+) consumption of pure alcohol is calculated as the sum of beverage-specific alcohol consumption of pure alcohol (beer, wine, spirits, other) from different sources: the first priority in the decision tree is given to government statistics; second are country-specific alcohol industry statistics in the public domain based on interviews or field work (GlobalData, formerly Canadean; IWSR-International Wine and Spirit Research; Wine Institute, historically World Drink Trends), or data from the International Organisation of Vine and Wine (OIV); third is the Food and Agriculture Organization of the United Nations' statistical database (FAOSTAT); and fourth is data from alcohol industry statistics in the public domain based on desk review. For countries, where the data source is FAOSTAT the unrecorded consumption may be included in the recorded consumption. As from the introduction of the "Other" beverage-specific category, beer includes malt beers, wine includes wine made from grapes, spirits include all distilled beverages, and other includes one or several other alcoholic beverages, such as fermented beverages made from sorghum, maize, millet, rice, or cider, fruit wine, fortified wine.

Physical inactivity, adults aged 18+ (2016): Percentage of adults aged 18+ years attaining less than 150 minutes of moderate-intensity physical activity per week, or less than 75 minutes of vigorous-intensity physical activity per week, or equivalent. Full details of methods have been previously published *(13)*. The estimates were based on self-reported physical activity captured using the GPAQ (Global Physical Activity Questionnaire), the IPAQ (International Physical Activity Questionnaire) or a similar questionnaire covering activity at work/in the household, for transport, and during leisure time. Where necessary, adjustments were made for the reported definition (in case it was different to the indicator definition), for known over-reporting of activity of the IPAQ, for survey coverage (in case a survey only covered urban areas), and for age coverage (in case the survey age range was narrower than 18+ years). No estimates were produced for countries with no data. Age-standardized estimates were produced by applying the crude estimates to the WHO Standard Population.

National response

National targets for salt, blood pressure (2021): Data were drawn from country responses to the WHO 2021 NCD country capacity survey (NCD CCS) *(14)*. The NCD CCS is a web-based survey of NCD focal points or designated colleagues within the ministry of health or a national institute or agency in all WHO Member States. While all Member States responded to the 2021 NCD CCS, it is possible for countries to leave questions blank or respond "don't know", resulting in "no data" or "don't know" values on the profiles. For the question on national targets, respondents were asked to provide documentation of national targets which are based on the WHO Global monitoring framework for NCDs *(15)*. Countries reported as having national targets for either salt or blood pressure on their profiles have submitted evidence of these targets to WHO.

National guidelines on hypertension management (2021): Data were drawn from country responses to the WHO 2021 NCD country capacity survey *(14)*. Respondents indicated whether evidence-based national guidelines/protocols/ standards are available for the management (diagnosis and treatment) of cardiovascular diseases through a primary care approach recognized/ approved by government or competent authorities and could submit multiple guidelines addressing cardiovascular diseases. Supporting documents submitted by countries for this question were reviewed for evidence of guidelines specifically addressing hypertension.

Conducted recent, national survey measuring raised blood pressure/hypertension, salt/sodium intake (2021): Data were drawn from country responses to the WHO 2021 NCD Country Capacity Survey *(14)*. Countries with a positive value on their profile had to have indicated that they have conducted a recent (i.e. in the past five years since the 2021 NCD country capacity survey), national adult risk factor survey covering the risk factor and provided documentation of

the survey. Data for those countries who have implemented an NCD risk factor survey covering blood pressure or salt under WHO's technical guidance since 2021 have been updated accordingly.

Functioning system for generating reliable cause-specific mortality data on a routine basis (2023): Countries with a functioning system for generating reliable cause-specific mortality data on a routine basis ensure that the International Form of Medical Certificate of the Cause of Death is completed by certifiers, the International Classification of Diseases (ICD) is used to code the causes of death, and that data compiled are made available to policy-makers and researchers. The WHO collects mortality data, including cause of death, from civil registration systems in the WHO mortality database through a routine annual call for data. Data are considered to generate reliable cause-specific mortality data on a routine basis if: 1. Data from the five most recent reporting years are, on average, at least 70% usable (usability is calculated as: (Completeness (%))*(1- Proportion Garbage)), 2. At least five years of cause-of-death data have been reported to the WHO in the last 10 years, and 3. The most recent year of data reported to the WHO is no more than five years old.

Annex 2 references

1. World Population Prospects 2022 . New York: United Nations Population Division; 2022. (https://population.un.org/wpp/, accessed 12 September 2023).

2. Global Health Estimates 2019: Deaths by cause, age, sex, by country and by region, 2000–2019. Geneva, World Health Organization; 2020 (https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death, accessed 2 August 2023).

3. NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. Lancet. 2021;398(10304):957-980. doi: 10.1016/S0140-6736(21)01330-1.

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5. WHO NCD Accountability Framework, including Global Monitoring Framework for NCD prevention and control (2021 update) in alignment with the extension of the NCD Global Action Plan to 2030. Geneva: World Health Organization; 2021 (https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/who-ncd-accountability-framework-for-ncd-implementation-roadmap.pdf, accessed 2 August 2023).

6. Global action plan for the prevention and control of noncommunicable diseases 2013-2020. Geneva: World Health Organization; 2013:55 (https://apps.who.int/iris/handle/10665/94384).

7. Pickersgill SJ, Msemburi WT, Cobb L, Ide N, Moran AE, Su Y, et al. Modeling global 80-80-80 blood pressure targets and cardiovascular outcomes. Nat Med. 2022;28(8):1693-9.

8. Global Burden of Disease Collaborative Network. Global Burden of Disease study results. Seattle: Institute for Health Metrics and Evaluation; 2020. doi: 10.1038/s41591-022-01890-4 (http://ghdx.healthdata.org/gbd-results-tool).

9. GBD 2019 Risk Factors Collaborators. Global burden of 87 risk factors in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2020 Oct 17;396(10258):1223–1249. DOI: 10.1016/S1040-6736(02)30752-2.

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