

## Seasonal Influenza Vaccine Impact On Other Conditions

The effectiveness of the Flu Shot can be as high as 90% if the patient contracts the flu.

But what if the patient contracts a different disease or virus?

What effect on the immune system of the patient does the seasonal influenza vaccine have?

Attached please find the following details :

1. Jan 10th 2020 : US Department of Defence study of 10,000 personnel concludes there is a 99.9% chance that the seasonal influenza vaccine leads to worse symptoms if the patient contracts a general human coronavirus.

2. Aug 15th 2020 : Indian Pediatrics Journal. *Seasonal Influenza Vaccination and the Heightened Risk of Coronavirus and Other Pandemic Virus Infections.*

3. Bergamo in Northern Italy was the epicentre of mass death during the 2020 Spring Coronavirus wave in Europe. Half of all Italian deaths were in Bergamo's region, and half of all deaths in that particular region were in Bergamo Town; whilst the capital Milan was affected to a much lower degree.

This unprecedented tight concentration of Coronavirus cases in a small region is an invaluable opportunity to learn what factors worsen the dangers of the disease.

Which unique single factor is common only to Bergamo and no other part of Italy.

So far there is only one suggestion : a unique vaccine was given to residents in Bergamo in Jan 2020, with the uptake of at least 34,000 residents. The vaccine was for Meningitis, following the deaths of 4 people in Bergamo from the disease on and after 2nd Dec 2019.

The meningitis outbreak was unique to Bergamo, and the vaccination was unique to Bergamo.

Giulio Taro, top Italian virologist (Nobel prize nominated) discusses Bergamo.

4. 1981-2015 Seasonal Influenza Doses USA

5. Sir Patrick Vallance, Chief Scientific Advisor to the UK Government



## Elsevier Public Health Emergency Collection

Public Health Emergency COVID-19 Initiative

Vaccine. 2020 Jan 10; 38(2): 350–354.

PMCID: PMC7126676

# Influenza vaccination and respiratory virus interference among Department of Defense personnel during the 2017–2018 influenza season

Greg G. Wolff

## Abstract

---

### Purpose

Receiving influenza vaccination may increase the risk of other respiratory viruses, a phenomenon known as virus interference. Test-negative study designs are often utilized to calculate influenza vaccine effectiveness. The virus interference phenomenon goes against the basic assumption of the test-negative vaccine effectiveness study that vaccination does not change the risk of infection with other respiratory illness, thus potentially biasing vaccine effectiveness results in the positive direction. This study aimed to investigate virus interference by comparing respiratory virus status among Department of Defense personnel based

### Results

We compared vaccination status of 2880 people with non-influenza respiratory viruses to 3240 people with pan-negative results. Comparing vaccinated to non-vaccinated patients, the adjusted odds ratio for non-flu viruses was 0.97 (95% confidence interval (CI): 0.86, 1.09;  $p = 0.60$ ). Additionally, the vaccination status of 3349 cases of influenza were compared to three different control groups: all controls ( $N = 6120$ ), non-influenza positive controls ( $N = 2880$ ), and pan-negative controls ( $N = 3240$ ). The adjusted ORs for the comparisons among the three control groups did not vary much (range: 0.46–0.51).





## Conclusions

Receipt of influenza vaccination was not associated with virus interference among our population. Examining virus interference by specific respiratory viruses showed mixed results. Vaccine derived virus interference was significantly associated with coronavirus and human metapneumovirus; however, significant protection with vaccination was associated not only with most influenza viruses, but also parainfluenza, RSV, and non-influenza virus coinfections.

**Keywords:** Influenza vaccine, Virus interference, Department of Defense, Respiratory illness

**Abbreviations:** DoD, Department of Defense; DoDGRS, The Department of

Table 5

Respiratory viruses and odds ratios by vaccination status.

| Virus                 | Vaccinated (%) | Not Vaccinated (%) | OR (95% CI)       | P-Value |
|-----------------------|----------------|--------------------|-------------------|---------|
| Influenza B Victoria  | 7 (0.1)        | 8 (0.3)            | 0.39 (0.14, 1.08) | 0.07    |
| Influenza B Yamagata  | 85 (1.3)       | 77 (2.6)           | 0.49 (0.36, 0.67) | <0.01   |
| Influenza Coinfection | 9 (0.1)        | 9 (0.3)            | 0.45 (0.18, 1.13) | 0.09    |
| Non-Influenza Virus   | 2050 (31.3)    | 830 (28.3)         | 1.15 (1.05, 1.27) | <0.01   |
| Adenovirus            | 144 (2.2)      | 78 (2.7)           | 0.82 (0.62, 1.09) | 0.17    |
| Coronavirus           | 507 (7.8)      | 170 (5.8)          | 1.36 (1.14, 1.63) | <0.01   |
| Human Bocavirus       | 69 (1.1)       | 34 (1.2)           | 0.91 (0.60, 1.38) | 0.64    |


ISSN 0019-2726

Volume 57 Number 12 December 2012



# Indian Pediatrics

Official Publication of the  
Indian Academy of Pediatrics

 Springer

# Seasonal Influenza Vaccination and the Heightened Risk of Coronavirus and Other Pandemic Virus Infections: Fact or Fiction?

During this ongoing severe acute respiratory illness coronavirus 2 (SARS-CoV-2) pandemic, few speculative reports on significant association of influenza vaccines with an increased risk of

## CORRESPONDENCE

infected by an 'evolved' strain with a new dominant antigen, slightly different from the 'original' strain against which the person has been vaccinated, the immune system produces antibodies against the 'original' strain through preformed high-affinity memory B cells that inhibit activation of naïve B cells resulting in a weak immune response against the new 'dominant' strain. Hence, the risk of infection paradoxically increased in vaccinated individuals as compared to unvaccinated individuals [2].

Besides, viruses are known to interfere with the circulation of other viruses. For example, there is evidence that the circulation of rhinovirus in the community interferes and decreases the spread of seasonal and pandemic influenza viruses [3,4]. Viral interference is also well-known to interfere with "take" of oral polio vaccine. However, more recently a new phenomenon, 'vaccine-associated virus interference' has been suggested whereby a vaccine can paradoxically increase the circulation of other viruses. That is, vaccinated individuals may be at increased risk for other respiratory viruses because they do not receive the non-specific immunity associated with natural infection [5,6]. Rikin, *et al.* [5] found an increased incidence of acute respiratory infection in children by non-influenza respiratory viruses among 999 participants (out of which 68.8% were children) following influenza vaccination compared to unvaccinated children during the same period. In a study of 115 children [6], a significantly increased risk of virologically confirmed non-influenza respiratory virus infections was found to be associated with receipt of inactivated influenza vaccine. Coronavirus was one of the non-influenza respiratory viruses [6]. Wolff, *et al.* [7] recently performed a large study among defence personnel to investigate respiratory virus interference during the 2017-2018 influenza season by comparing respiratory virus status with their influenza vaccination status. They concluded that overall, receipt of influenza vaccination was not associated with virus interference among the study population. However, vaccine-derived virus interference by specific respiratory viruses was significantly associated with coronavirus and human metapneumovirus [7]. However, studies that have looked into the interference of influenza vaccine with specific non-influenza viral infections are scarce.

It is hypothesized that a respiratory virus infection confers immunity against the same and other respiratory viruses for a short time, perhaps a few weeks. This immune protection is associated with activation of the innate immune response to viral infection mediated by the release of type I interferons and other cytokines that have broad protective effects against a range of viruses [8]. This immunologic mechanism, known as heterosubtypic 'temporary non-specific immunity', has been proposed as the biological mechanism behind the paradoxical findings. Natural influenza infection that could have provided the host with some temporary immunity against other respiratory viruses is prevented by influenza vaccination.

coronavirus infection appeared both in media and academic circles. The speculation of vaccines paradoxically increasing the risk of infections possibly originated first following 2009 influenza A (H1N1pdm09) pandemic when four Canadian studies suggested that receipt of seasonal influenza vaccine increased the risk of laboratory-confirmed 2009 pandemic influenza A (H1N1pdm09) virus infection [1]. This led to five additional studies, each of which substantiated these initial findings. One proposed mechanism behind this phenomenon is 'original antigenic sin' which was first used to describe how first exposure to influenza virus shapes the outcome of subsequent exposures to antigenically related strains. When an individual is

Hence, the risk of infection by non-influenza viruses (including the coronaviruses) is paradoxically increased [6].

The contentious issue of higher risk of non-influenza respiratory viruses to influenza vaccinated individuals has gained traction during the ongoing SARS-CoV-2 pandemic, which is also a coronavirus infection. Currently, we do not have sufficient data to establish or refute the association between influenza vaccination and higher susceptibility to coronavirus infection. We need to perform systematic studies urgently to find an answer to this question with regard to SARS-CoV-2. This is of vital importance since it is going to have far-reaching implications.

Published online: June 09, 2020; PII: S097475591600190

VIPIN M VASHISHTHA<sup>1\*</sup> AND PUNEET KUMAR<sup>2</sup>

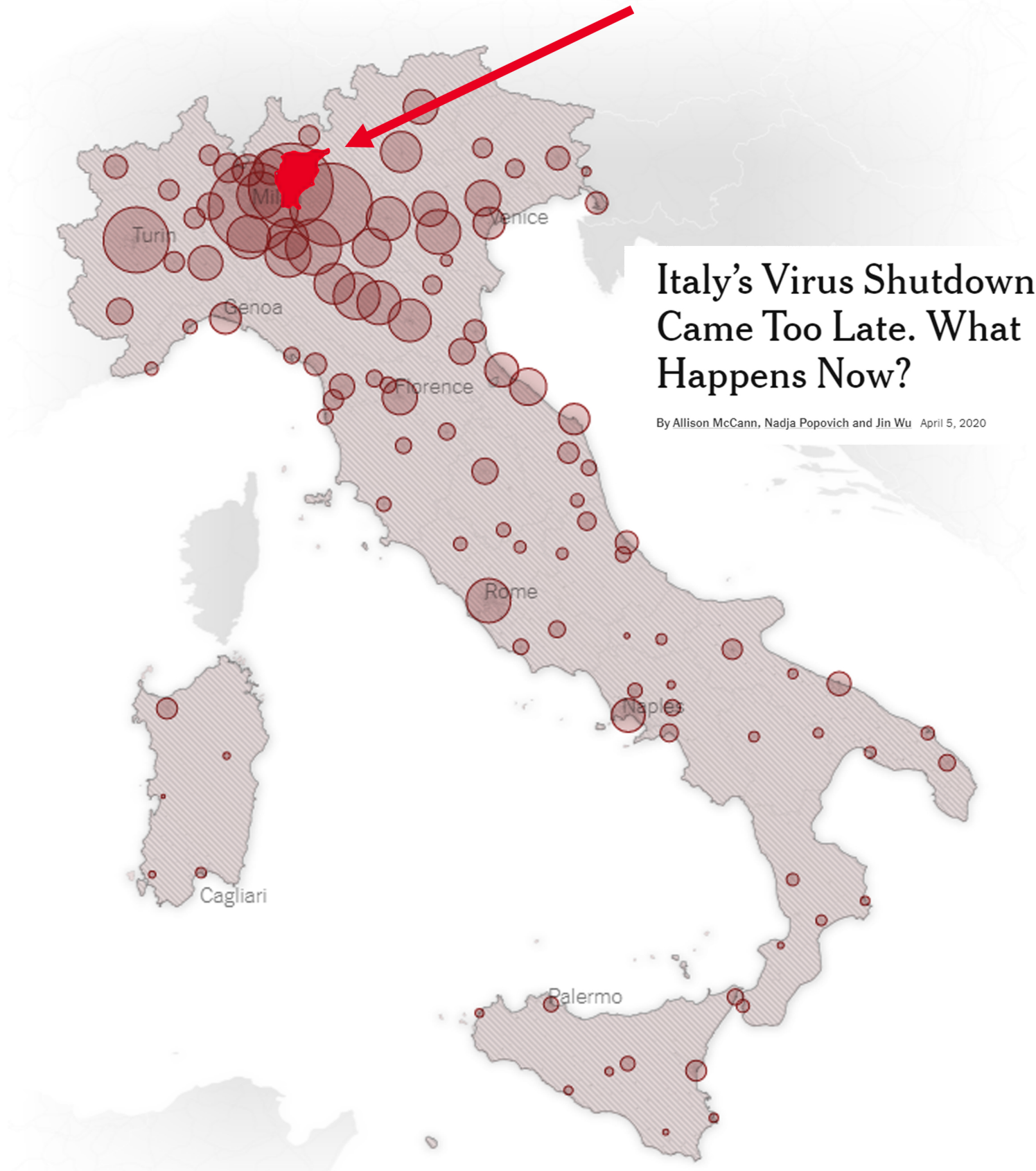
<sup>1</sup>Mangla Hospital and Research Center, Shakti Chowk, Bijnor, Uttar Pradesh; and <sup>2</sup>Kumar Child Clinic, KM Chowk, Dwarka, New Delhi; India.

\*vipinipsita@gmail.com

## REFERENCES

1. Skowronski DM, De Serres G, Crowcroft NS, Janjua NZ, Boulianne N, Hottes TS, *et al.* Association between the 2008-09 seasonal influenza vaccine and pandemic H1N1 illness during spring-summer 2009: Four observational studies from Canada. *PLoS Med* 2010; 7: e1000258.
2. Zhang A, Stacey HD, Mullarkey CE, Miller MS. Original antigenic sin: How first exposure shapes lifelong anti-influenza virus immune responses. *J Immunol.* 2019; 202:335-340.
3. Linde A, Rotzén-Östlund M, Zwegberg-Wirgart B, Rubinova S, Brytting M. Does viral interference affect spread of influenza? *Euro Surveill.* 2009;14:19354.
4. Anestada G, Nordbo SA. Virus interference. Did rhinoviruses activity hamper the progress of the 2009 influenza A (H1N1) pandemic in Norway? *Med Hypotheses.* 2011;77:1132-4.
5. Rikin S, Jia H, Vargas CY, Castellanos de Belliard Y, Reed C, LaRossa P, *et al.* Assessment of temporally-related acute respiratory illness following influenza vaccination. *Vaccine.* 2018;36:1958-64.
6. Cowling BJ, Fang VJ, Peiris JSM, Nishiura H, Chan KH, Ng S, *et al.* Increased risk of non-influenza respiratory virus infections associated with receipt of inactivated influenza vaccine. *Clin Infect Dis.* 2012;54:1778-83.
7. Wolff GG. Influenza vaccination and respiratory virus interference among Department of Defence personnel during the 2017-2018 influenza season. *Vaccine.* 2020;38:350-54.
8. Khaitov MR, Laza-Stanca V, Edwards MR, Walton RP, Gohde G, Contoli M, *et al.* Respiratory virus induction of alpha-, beta- and lambda-interferons in bronchial epithelial cells and peripheral blood mononuclear cells. *Allergy.* 2009;64:375-86.

**Bergamo Region**



News / World / Italy's coronavirus epicentre Bergamo grapples with huge toll, some hidden

## Italy's coronavirus epicentre Bergamo grapples with huge toll, some hidden

*Bergamo is the epicenter of the hardest-hit province of Italy's hardest-hit region, Lombardy, the site of hundreds of coronavirus deaths. Families here are deprived of a bedside farewell with virus-stricken loved ones, or even a traditional funeral.*



Associated Press

Bergamo

March 20, 2020 UPDATED: March 20, 2020 14:53 IST



Newspapers in Lombardy filled with obituaries of those who died in coronavirus pandemic. (AP)

**T**he priest gave a final benediction. There were no flowers, no embraces. Francesca Steffanoni and her mother hurried away from Bergamo's main cemetery, their furtive farewell lasting no more than 5 minutes.

Bergamo is the epicenter of the hardest-hit province of Italy's hardest-hit region, Lombardy, the site of hundreds of coronavirus deaths. Families here are deprived of a bedside farewell with virus-stricken loved ones, or even a traditional funeral, and the cemetery is so overwhelmed by the number of dead that military trucks transported 65 bodies to a neighboring region for cremation this week.

Follow LIVE updates on novel coronavirus cases

Steffanoni had taken her mother to watch as the coffin containing an 82-year-old relative a widower with a heart condition, struck down with the virus was driven inside the imposing gates. They wore masks and gloves; they kept their distance.



# Coronavirus: Inside Bergamo - the epicentre of the worst COVID-19 outbreak in the world



**T** Why you can trust Sky News >

The bridge takes you across the Po river and into Lombardy, another hour or so through the now deserted streets of the fashion and industry power house of Milan, and on to the medieval city of Bergamo.

It is an easy drive on deserted roads.

Just one thing niggles on your brain and makes you twitch as you touch your face or sanitise your hands - you are driving in to the epicentre of the worst coronavirus outbreak in the world at the moment where more people have died than anywhere else, even in China.

The initial outbreak here wasn't understood and wasn't controlled.

What is less clear is why so many people are dying. It is probably because they have an old population and a culture of close contact.

But as a punter driving into the storm that isn't exactly science. It's more a feeling. It's definitely not awfully comforting.

I've been tasked with trying to see how this country, this region, this city is dealing with this deadly pandemic.

ITALY | MONDAY 13 JANUARY 2020

# Cases of meningitis in the province of Bergamo

They caused two deaths and some psychosis on New Year's days, but things are looking good



📷 People queuing for the meningitis vaccine in Iseo (province of Brescia), 7 January 2020 (ANSA / FILIPPO VENEZIA)

In recent weeks in various municipalities in the area between Bergamo and Brescia, in Lombardy, four cases of meningitis have been found, which have caused the death of two people. The risk of further infections has been reduced thanks to the intervention of the local health authorities and at the moment there is no epidemic, as **confirmed by** the regional government. The news circulated in the early days had, however, generated considerable alarmism, in turn amplified by social networks and intense newspaper coverage.

The **meningitis** is a disease of the central nervous system that leads to a strong inflammation of the meninges, the membranes that form the enclosure to the brain (brain) and the spinal cord. The causes of meningitis can be of various types, but the most common ones are due to infections from particular viruses and bacteria. If not treated in time, meningitis can cause permanent neurological damage and in severe cases even death. In Italy there are about two hundred cases of meningitis every year, and the most common are due to type B and C of the disease. For both there are vaccines that prevent the risk of contracting the disease, but **they are not mandatory**.

The cases found between Brescia and Bergamo concerned type C meningitis. According to the Higher Institute of Health, the technical-scientific body of the **National Health Service**, there were four registered cases between 2 December 2019 and 2 January 2020. The first three **in Villongo**, a town in the province of Bergamo very close to Lake Iseo, they involved two girls aged 19 and 16 and a man aged 36. The third case, in particular, occurred around Christmas, which caused some excitement during the holiday season.

## Invasive bacterial diseases (sepsis and meningitis)

Home | EpiCenter

Authors



## Meningitis and sepsis

|                         |   |
|-------------------------|---|
| News                    | + |
| Epidemiological aspects | + |
| Vaccination covers      | + |
| Documentation           | + |
| Tools                   | + |
| Link                    | + |

## See also

Vaccinations

## Meningococcal C outbreak in Lombardy (2019-2020)

Vaccination remains the main form of prevention against meningococcus and the best way to circumscribe and limit its circulation in the population. Strongly recommended for children and adolescents (as indicated in the National Vaccine Prevention Plan 2017-2019, PNPV), the meningococcal vaccine can still be administered to all ages. It is in fact in this direction, expanding the vaccination offer against meningococcus, that the Lombard local authorities have skilfully moved (in agreement with the Istituto Superiore di Sanità, ISS, and the Ministry of Health) to respond promptly to cases of disease invasive from meningococcus serogroup C reported in the Province of Bergamo between December 2019 and early 2020.

## The outbreak

To take stock of the situation and share the activities undertaken, on 7 January 2020 in Bergamo, a meeting of the *task force* activated by the Ministry of Health was held to respond to the Lombard outbreak. In addition to the Ministry itself, the ISS, the AGENAS (National Agency for Regional Health Services) and the State-Regions Conference and the local and regional health authorities are also part of the task force.

- The first reported case showed the first symptoms on 2 December 2019 and died the next day from meningococcal sepsis. The person affected by the infection was not vaccinated against meningococcus type C (Men C). Local health authorities sent the strain to the ISS National Reference Laboratory for Meningococcus for genotyping and as the coordinating center for national surveillance of invasive bacterial diseases.
- Also the second case, non-lethal, is not vaccinated for Men C. After having verified the belonging to the same genotype of the first case, by sending the sample to the ISS, the Bergamo Health Protection Agency (ATS) in addition to chemoprophylaxis for close patient contacts, it has launched a mass vaccination campaign to offer free vaccination against Men C to the population of the affected area aged between 11 and 60 years.
- The third case was reported on 21 December 2019 and tested positive for meningococcus C and the same strain as the first two cases.
- The fourth case showed the first symptoms on January 2, 2020 and died on January 3. Again it is a Men C infection.
- The fifth case recorded, on the other hand, is not related to the first four since it was caused by serogroup B meningococcus.

All the cases occurred in the same geographical area within a month but since the health authorities are intervening quickly and massively, the outbreak can be limited thus avoiding a large-scale epidemic. However, it should be emphasized that since the vaccine begins to be effective 15-20 days after its administration, new cases may occur until the vaccination of the local population begins to have its effects. It is also important to consider that in the case of meningococcus vaccination is particularly indicated as a form of prevention since in the case of infection the time between the onset of symptoms and the development of the disease is very rapid.

## Circulation in our country

The data from the national surveillance of invasive meningococcal diseases show that both meningococcus type C and meningococcus type B (Men B) normally circulate in Italy. In fact, about 200 cases of meningococcus are registered in our country every year. Men B (which mostly affects children and adolescents) is the most common followed by Men C (which mainly affects young adults and adults). Therefore, although the physiological circulation of bacteria is known, when - as in the Lombard outbreak - we are faced with cases concentrated in time and space, it is essential that targeted and specific public health interventions are initiated.

## The commitment of the ISS

Attention must therefore remain high both in the specific case of the Bergamo outbreak and in the case of any isolated cases that could occur. To support the monitoring and management of cases and *outbreaks*, the national coordination of the surveillance system of invasive bacterial diseases from *N. meningitidis*, *S. pneumoniae* and *H. influenzae* and bacterial meningitis is active at the Infectious Diseases Department of the ISS. Furthermore, thanks to the work of the National Reference Laboratory for Meningococcus, the ISS supports the diagnosis and genotyping of samples and public health initiatives including the strategy for vaccination.

## Useful resources

- the pages of the ISS website dedicated to the [national surveillance](#) of invasive meningococcal, pneumococcal and haemophilic diseases and bacterial meningitis in Italy and to [national reference laboratories](#)
- on the Bergamo ATS website the information brochures:
  - [Meningococcal disease: what it is and how it is transmitted](#)
  - [Meningococcal disease: recommendations](#)
  -

Page creation date : January 9, 2020

Authors : Paola Stefanelli and the meningococcal working group (Cecilia Fazio, Arianna Neri, Paola Vacca, Annapina Palmieri, Luigina Ambrosio, Anna Carannante) - Department of Infectious Diseases, ISS

## EpiCenter

home page  
Who we are  
Topics A to Z  
Archive  
Privacy Policy  
Disclaimer

Subscribe to the newsletter

Visit the canal  
Mail editorial staff

Share:

EpiCentro is certified by WHO as a member of the  
Vaccine Safety Net

EpiCentro collaborates with the UN Information  
Office for Italy

Scientific coordination by the National Center for  
Disease Prevention and Health Promotion,  
CNAPPS - ISS





# ● Meningitis emergency, 34 thousand people vaccinated between Brescia and Bergamo

*In Brescia 9,200 people were vaccinated through special clinics, plus 1,700 people treated by doctors and paediatricians, 1,000 students and 300 workers*

Of **BsNews.it** editorial staff - January 18, 2020

1



Vaccinations, generic photo from Pixabay

Almost 34 thousand people have been vaccinated against Meningococcus C in a few weeks, with peaks of 70% of the expected target. Therefore, the first phase of the regional action plan can end with the end of the activities of most of the 14 extraordinary clinics.

This was stated by the Councilor for Welfare of the Lombardy Region Giulio Gallera, commenting on the results of the first step of the vaccination safety belt that the Lombardy Region, together with the Bergamo and Brescia ATSS and the reference ASSTs, activated in the Basso Sebino area and Grumello where, in the last month, there have been 5 cases of meningococcal C sepsis, two of which are fatal.

"We will not let our guard down - continued the commissioner - and from Monday 20 January it will still be possible to get vaccinated for free through general practitioners and pediatricians of free choice in their professional offices. Furthermore, the vaccinations scheduled in schools and companies that have expressed their willingness to host them according to the already defined calendar will continue. The extraordinary outpatient clinic in Villongo will remain open and the usual activity of the vaccination centers of Sarnico, Grumello del Monte and Iseo will continue".

## VACCINE DATA

"In the municipalities of the province of Bergamo affected by the extraordinary plan - added Gallera - 21,331 citizens have vaccinated, of which 1680 students directly in schools and 2414 workers in their companies. As many as 40 general practitioners in the area have



CYBERMED  
news

HOME NEWS COURSES & CONFERENCES SCIENTIFIC STUDIES & LITERATURE JOURNALS VIDEOS ARCHIVE CYBERMED NETWORK CONTACT

'THE BEST PREVENTION IS INFORMATION' - 'EXTEND YOUR LIFE'

SEARCH



## CYBERMED NEWS

# Giulio Tarro most important virologist of the year and nominated for the Nobel award, receives the "Salus Divinae"

Published: 10 June 2019 Written by CYBERMED NEWS

Share on Facebook



**Giulio Tarro, MD, Ph.D.**, Chairman of the committee on Biotechnologies of Virussphere World Academy of Biomedical Technologies (WABT), Unesco, Paris, was yesterday awarded by **Dr. Michael Alexander Barnes** CEO of Cybermed Europe, with the International Award "**Salus Divinae**" 2019, for outstanding scientific achievement and promotion of science.

This special award established by "**Cybermed Europe**" Institute for Higher Medical Scientific Information and Research stands out based on professional achievements, academic achievements, leadership skills, proper information and communication, years of experience in the field, other affiliations and contributions to the community.

The ceremony took place in the prestigious "**Sala Baracca**" at Casa dell'Aviatore, Rome Air Force Officers Club during the "**Una medicina per la Gente**" event organized by the "**Norman Academy**" non-profit association, incorporated in the State of Florida USA, association of which Prof. Tarro is the President.

With over five decades of professional experience in Medicine and Education, Prof. Giulio Tarro has certainly proved to be a most skilled and experienced professional in the field. As a leader he has proven to be successful not only as a doctor, but also as a professor, scientist and lieutenant colonel of the Italian Navy.

His impressive repertoire of roles covered include the Research Associate for the Division of Virology and Cancer Research of the Children's Hospital Research Foundation, Assistant Professor of Pediatrics at the University of Cincinnati College of Medicine, First Researcher of the Italian National Research Council, Professor of Oncological Virology University of Naples, Project Director for the National Cancer Institute, Professor of Microbiology and Immunology at the School of Specialization in Medical Nephrology, University of Naples, Senior Scientist of the Frederick Cancer Research Center, Contract Professor at the Department of Biology, scientific director of Temple University's Center for Biotechnology College of Science and Technology, Honorary Magnificent Rector of the Ruggero II University Florida USA.

His areas of expertise include: murine virology, antiviral chemotherapy, effects of inhibitors on viral replication, studies on the





Beyond TV » Giulio Tarro: « possible association between deaths in Lombardy and vaccinations »

# Giulio Tarro: "possible association between deaths in Lombardy and vaccinations"



Editing Oltre Tv · 15 April 2020



Last night on *Radio 11.11* an interesting episode entitled *Virus 2020* was broadcast which had many guests as protagonists, including the world-famous virologist Giulio Tarro.

The guests, doctors and scientists, gave birth to a comparison on various aspects related to the coronavirus and answered the questions of the listening audience.

Giulio Tarro, a world-renowned virologist, whom we interviewed some time ago, also intervened in the debate between experts .

One of the first topics discussed was the correlation that can exist between climate and coronavirus : *«I think it is important to evaluate the behavior of the virus at different latitudes. In Africa, fortunately, it is only an endemic. There are no large numbers of contagion, thanks to the climate ».*

# Speech by Professor Giulio Tarro

Professor Giulio Tarro then spoke of the numbers and data that affect our country: « *The Imperial College of London which had already calculated 6 million infected this end of March. Even a study by the University of Oxford said that practically we were faced with 64% of Italians infected* ».

*"The communication of the Corriere della Sera journalists of the studies done on the Diamond Princess is very important - continues Professor Tarro - because in that ship they carried out a complete study on the sick, the infected and the very few victims".*

In fact, the professor specified that, thanks to that study, the Corsera journalists were able to report, based on the model of the Diamond Princess ship, that at the end of March the Italians infected were 11 million and 200 thousand in total.

« *At this point - adds Giulio Tarro - all the dead that are there fall within the famous 1% mortality that had analyzed the Chinese data. So we have a completely different view of things* ».

He continues: *"There is also the famous work of the US military which indicates an increase in the risk of contracting the coronavirus by 36% in subjects who have had the flu vaccine".*

Professor Giulio Tarro brings to the attention of radio listeners an interesting study by the Dutch school, published in 2008, on a pneumococcal and meningococcal epidemic activated by the influenza virus and the respiratory syncytial virus.

*«So the situation is very complex and must be analyzed and resolved on a scientific level, not with the numbers that are given to us. And not even based on people who said at the beginning of February that there would be no cases in Italy and then talk about a vaccine that must be tested without the normal steps that are usually taken on an ethical level ».*

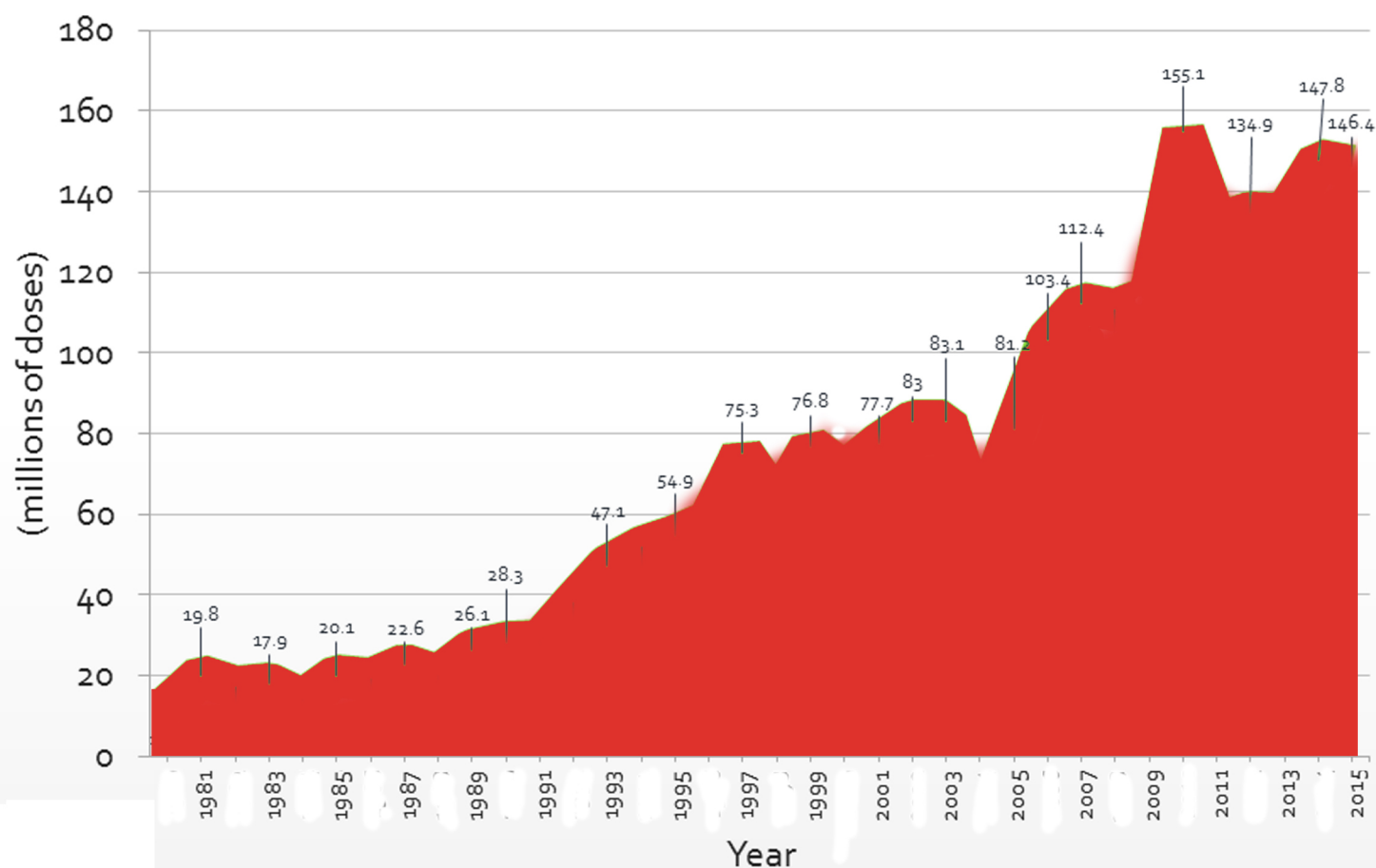
## Bergamo and Brescia

The question they ask the professor is how it is possible that, from these two cities, such a highly contagious virus did not arrive in Milan, causing many victims.

*«I refer to what was said previously. There was a request for 185,000 doses of flu shot in Bergamo. There was concomitant meningococcal endemia for which 34,000 doses were required. All of these events are certainly important, especially when compared to that study on the US Army and the Dutch one on respiratory syncytial virus. So there are associations to study, regardless of the cause and effect relationship ».*

Speaking of the deaths of patients with Covid-19, Professor Giulio Tarro is asked if it is possible that

## Influenza Vaccine Doses Distributed in the United States, By Season



Graphic by CDC, data reported by influenza vaccine manufacturers and selected influenza vaccine distributors.

# Revealed: Sir Patrick Vallance has £600,000 shareholding in firm contracted to develop vaccines

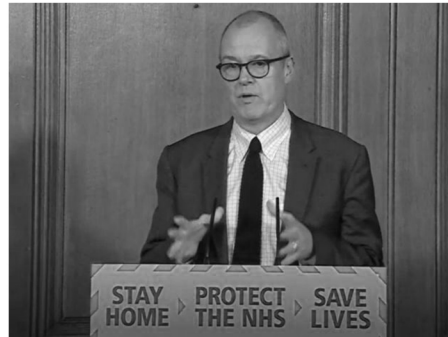
Government denies claims of potential conflict of interest, maintaining he is not involved in commercial decisions on coronavirus vaccines

By Charles Hymas, HOME AFFAIRS EDITOR and Gareth Walsh

23 September 2020 • 9:00pm



Sir Patrick Vallance, the chief scientific adviser, has already cashed in more than £5 million worth of shares he received from GSK during his tenure from 2012 until March 2018 | CREDIT: Simon Dawson/Reuters



The UK's chief scientific adviser has a £600,000 shareholding in a drugs giant contracted to develop a Covid-19 vaccine for the Government, prompting claims of a potential conflict of interest.

Sir Patrick Vallance, who also chairs the Government's expert advisory panel on vaccines, holds a deferred bonus of 43,111 shares in GlaxoSmithKline (GSK) worth £600,000 from his time as president of the multinational drug company, The Telegraph can reveal.

He has already cashed in more than £5 million worth of shares he received from the company during his tenure from 2012 until March 2018, when he became the Government's chief scientific adviser.

Accounts show he held 404,201 GSK shares when he left, worth £6.1 million at current values.

In July, GSK and drugs multinational Sanofi agreed a deal with the UK Government to supply it with up to 60 million doses of Covid-19 vaccine, subject to final contract. It has a similar deal