

# Vision 2020: A Global Public Health Initiative

Efforts and Barriers to Better Vision for All  
Oregon Academy of Ophthalmology  
Conference 2019  
Miles Greenwald, MD

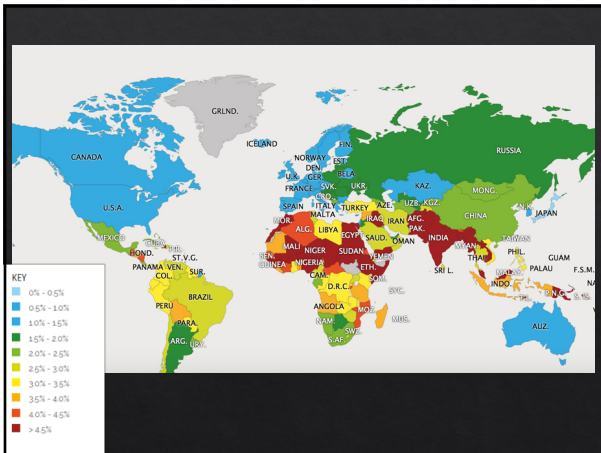
## Overview

The problem:

- Visual impairment and blindness around the world

The solution:

- Vision 2020 and efforts to eliminate avoidable blindness



### Visual impairment and blindness around the world

Problem is LARGE:

- 36 million blind (better eye <20/400)
- 217 million with moderate or severe vision impairment (better eye 20/60- 20/400)

Problem is AVOIDABLE:

80% of visual impairment is avoidable

Source: Bourne et al 2017 and Flaxman et al 2017

### Vision impairment and blindness around the world

Problem is DEVASTATING:

- 90% can no longer work
- 50% report loss of social standing and decision-making authority
- 1/3 decrease in life expectancy
- 80% of all women noted a loss of authority within their family

Source: World Health Organization

### Major causes

Blindness

- Cataract 13 million
- Uncorrected refractive error 7 million
- Glaucoma 3 million

Vision impairment

- Uncorrected refractive error 116 million
- Cataract 53 million
- Age-related macular degeneration 8 million

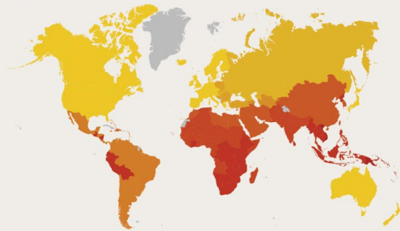
Other major causes

- Diabetic retinopathy, corneal opacity, trachoma

Source: Bourne et al 2017 and Flaxman et al 2017

## Global cataract burden

Percentage of Blindness Caused by Cataract



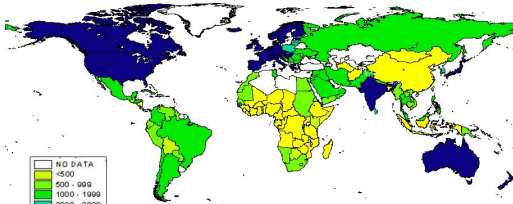
5% 28.5% 40% 48.5-49% 58.5% NO DATA  
 24% 35.5% 45% 50-51% 65%

## Current barriers: health care inequality and limited care

Access to care

- ◆ Geographic, economic, social barriers to eye care
- ◆ Strong correlation between cataract surgery rate and per capita GDP (Wang et al 2016)

Global Cataract Surgical Rates 2004



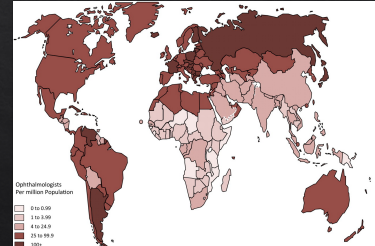
NO DATA  
 <500  
 500 - 999  
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 2000 - 2999  
 3000 - 3999  
 4000 +

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

World Health Organization

## Current barriers: people gap

- ◆ Training Gap Not enough eye health care workers
- ◆ Distribution gap Not enough workers where needed most



Ophthalmologists  
 per million population

0 to 0.99  
 1 to 1.99  
 2 to 2.99  
 3 to 3.99  
 4 to 4.99

## Vision 2020

- ◆ Launched in 1999 by World Health Organization (WHO) and International Agency for the Prevention of Blindness (IAPB)
- ◆ Goal: "A world in which nobody is needlessly visually impaired, where those with unavoidable vision loss can achieve their full potential."
- ◆ Eliminate avoidable blindness by 2020



## Vision 2020

- ◆ Partnering with national organizations for surveillance, training and providing care
- ◆ Identifying areas of needed growth and providing resources and leadership for addressing needs



## Ongoing efforts

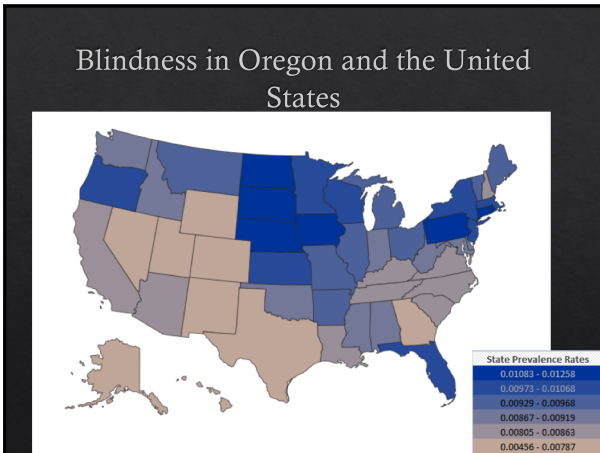
- Goals
- Indicators to watch
- Update on progress



## Next steps: global engagement

Learning from those succeeding

- ◊ Aravind
- ◊ Himalayan Cataract Project

## LOCAL ENGAGEMENT

- ◊ Casey Eye Van
- ◊ Respectacle
- ◊ Other local efforts




## Casey joins Vision 2020 USA

OHSU Casey Eye Institute joins Vision 2020/USA in urging U.S. Surgeon General to issue Call to Action to improve eye health

*"Vision problems can affect anyone at any age, impacting everything from learning to the ability to work and be independent." Mitchell V. Brinks, M.D., M.P.H., assistant professor of ophthalmology, OHSU School of Medicine and chair of Vision 2020/USA.*



“I’d argue curing blindness is about the most primary thing you can do to improve people’s lives.”  
~Geoff Tabin, co-founder of the Himalayan Cataract Project



## REFERENCES

- Bauer NN, Brubaker RW. Community-based approaches to reduce the burden of glaucoma. *Am J Ophthalmol*. 2015;159(1):14-21. doi:10.1016/j.ajo.2014.10.037
- Flynn SM, Bourne RR, Remickoff A, et al. Community-based approaches to reduce the burden of glaucoma, 1999-2020: a systematic review and meta-analysis. *PLoS One*. 2017;12(11):e182134. doi:10.1371/journal.pone.0182134
- Remickoff S, Feldman CL, Gassner L, et al. Community-based approaches to reduce the burden of glaucoma in the United States: a review of programs in more than 200,000 practitioners. *Br J Ophthalmol*. 2015;99(6):755-7.
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### Figures:

- <http://www.who.int/mediacentre/factsheets/fs104/en/>
- <http://www.who.int/mediacentre/factsheets/fs104/en/#:~:text=eye/about-us/qaey-community-outreach/qaey-vision-screening/who/fs104.dfm>
- <http://npep.cdc.gov/>
- <http://www.aphis.gov/vision-2020/>
- <https://www.ama-assn.org/>
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- <http://www.aphis.gov/press-releases/2015/05/qaey-vision-2020-usa.dfm>
- <http://www.aphis.gov/press-releases/2015/05/qaey-vision-2020-usa.dfm>
- <http://data.aphis.gov/gd-maps/#/AllAges>

## Questions?