



# Global Health: Why you really should care

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# Objectives

To develop an understanding of:

Key threats to global health

Why they are so important

How they might be addressed

How far off course the world is

**Let's start with  
key definitions**

# Global Health

The health of populations in a global context emphasizing:

Areas requiring  
cooperative action

Interdependent  
health arenas

Lessons that can be  
shared across  
countries

The health of  
people, especially  
marginalized people,  
in low-and middle-  
income countries

# Health Security

The activities required to minimize the danger and impact of acute public *health* events that endanger the collective *health* of populations living across geographical regions and international boundaries

Let's look at some **good news**  
and some **less good news**  
in global health

# The Good News

**37%**

increase in global life expectancy from 1960 to 2016

**44%**

fewer maternal deaths in 2015 than in 1990

**62%**

decrease in child deaths between 1960 and 2016

**58%**

decrease in malaria mortality among under-5 children between 1990 and 2017

**53 million**

TB deaths averted from 200–2016 through successful diagnosis and treatment

**3 billion**

children have been immunized against polio, with only 22 cases of wild poliovirus in 2017

**900,000**

fewer HIV/AIDS deaths in 2016, compared to 2005

**99.9%**

reduction of guinea worm cases, from 3.5 million in 1986 to only 30 in 2017

# The Bad News

5.6  
million

under-5 child deaths in 2016

1.3  
million

TB deaths among HIV-negative people in 2017, in addition to 374,000 people living with HIV

~50%

share of child deaths related to undernutrition

435,000

malaria deaths in 2017

940,000

deaths caused by AIDS in 2017

303,000

maternal deaths in 2015

1.8  
million

new HIV infections in 2017

~ 1  
billion

people infected with roundworm



The background features a dark blue field with several overlapping geometric shapes. In the top-left and bottom-right corners, there are triangular sections filled with a fine, repeating pattern of small orange and white squares. A large, dark blue triangle points from the top-right towards the center, partially overlapping the patterned areas.

**Let's talk about critical  
threats to health**

# The World Faces a Number of Critical Threats to Health

unfinished agenda:  
neonatal, maternal,  
nutritional, and  
communicable  
causes

environmental  
health and climate  
change

anti-microbial  
resistance

growing burden  
of non-  
communicable  
diseases

emerging and re-  
emerging infectious  
diseases

vaccine  
hesitancy

**Let me now briefly expand  
on each of these**

# The Unfinished Agenda

## Leading causes of death in low-income countries, 2017

Nutritional

Neonatal

Maternal

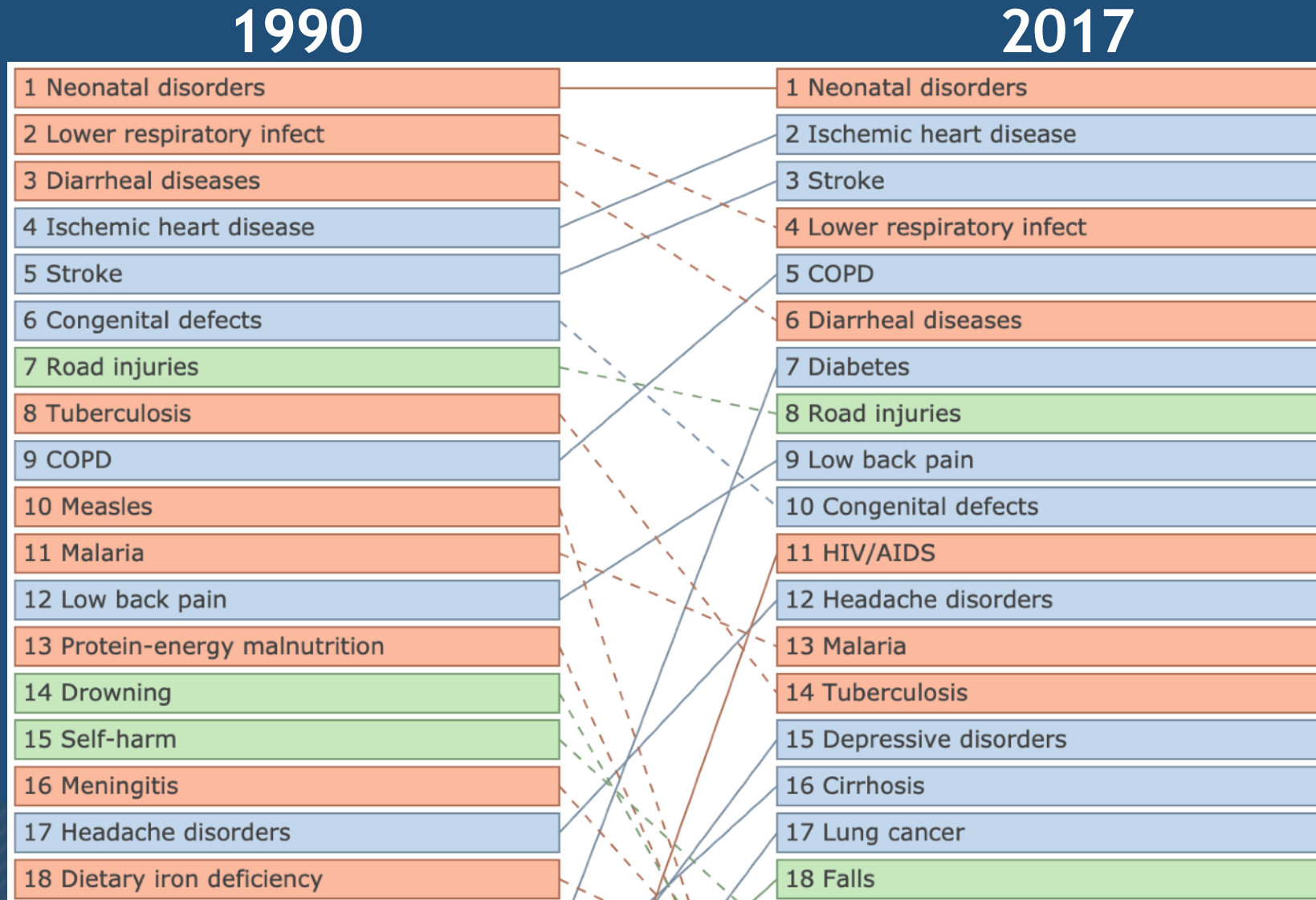
Communicable

Rank	Cause of death
1	Neonatal disorders
2	Lower respiratory infections
3	Diarrheal diseases
4	Ischemic heart disease
5	Malaria
6	Tuberculosis
7	Stroke
8	HIV/AIDS
9	Congenital defects
10	Road injuries

# The Growing Burden of NCDs

Leading causes of DALYs globally from 1990 to 2017:  
**The growing burden of non-communicable diseases**

- Non-communicable diseases
- Communicable, maternal, neonatal, and nutritional diseases
- Injuries



# The Environment and Health

Low-Income Countries		Lower Middle-Income Countries		Upper Middle-Income Countries		High-Income Countries	
Rank	Risk Factor	Rank	Risk Factor	Rank	Risk Factor	Rank	Risk Factor
1	High blood pressure	1	High blood pressure	1	High blood pressure	1	High blood pressure
2	Household air pollution	2	High fasting plasma glucose	2	Smoking	2	Smoking
3	Low birthweight and short gestation	3	Ambient particulate matter	3	High fasting plasma glucose	3	High body mass index
4	Child growth failure	4	Smoking	4	High body mass index	4	High fasting plasma glucose
5	Unsafe sex	5	High total cholesterol	5	High total cholesterol	5	High total cholesterol
6	Ambient particulate matter	6	Household air pollution	6	Ambient particulate matter	6	Alcohol use
7	High fasting plasma glucose	7	High body mass index	7	Alcohol use	7	Impaired kidney function
8	Unsafe water	8	Low birthweight and short gestation	8	High sodium	8	Low whole grains
9	Smoking	9	Impaired kidney function	9	Low whole grains	9	Ambient particulate matter
10	Unsafe sanitation	10	Low fruit	10	Impaired kidney function	10	High sodium

25-35% of the burden of disease is related to environmental conditions

# Climate Change



Heat-related illness



Reduced agricultural production



Migrants and their health



Changing patterns of disease

# Emerging and Re-emerging Diseases

**SARS:** 2,000 lives lost; cost \$30 billion

**Mad Cow:** <200 lives lost; cost \$30 billion

**Anthrax scare in U.S.:** 5 lives lost; cost \$1 billion

**Ebola in West Africa:** 15,000 lives lost; vast economic consequences

**The list continues:** Zika, Chikungunya, MERS, Dengue...



# Anti-microbial Resistance

Malaria and the  
Mekong Delta

HIV

MDR-TB  
5% DR  
4% MDR  
500,000 cases/yr

MRSA

Strep  
pneumoniae

Carbapenem-  
resistant  
Enterobacteriaceae

Candida  
Auris

Sicker  
Costlier  
Harder to treat

# Vaccine Hesitancy

## Why worry so much about measles?



Usually in pockets of unimmunized kids



Highly infectious diseases



Can be lethal

## We were actually making progress...

2.6 million measles deaths in 1963 (before vaccine)



540,000 measles deaths in 2000



110,000 measles deaths yearly now

## ...but that progress is being reversed

Cases and deaths are on the rise

Europe: 83,000 cases and 72 deaths in 2018

U.S.: 1,249 cases Jan-Oct 2019 (highest since 1992)

**So, what do we  
need to do?**

# Needed Action

## Unfinished Agenda

Strengthen health systems

Focus on the marginalized

Scale up known technical solutions

## NCDs

Tax tobacco

Take cancer vaccines to scale

Implement the obesity agenda

## Environment and Health

Improve indoor cooking

Reduce coal use and vehicle emissions

Enhance water systems, sanitation and hygiene

## Climate Change

Implement the IPCC recommended actions

## Emerging and Re-emerging Diseases

Implement the International Health Regulations

Strengthen global surveillance

## Anti-microbial resistance

Improve stewardship

Reduce use in animals

Improve surveillance

Mechanisms to create new antibiotics

## Vaccine Hesitancy

Reduce personal exemptions

Watch medical exemptions carefully

Appropriate behavior change communication

**What is getting in the way of action?**

# Key Barriers

## Unfinished Agenda

Weak capacity  
Limited financial resources  
Insufficient commitment, fragile states

## NCDs

Still looking at what works at scale  
Countries make money from selling tobacco

## Environment and Health

Substantial needs for infrastructure  
Difficulty of intersectoral regulation

## Climate Change

Politics  
Denial

## Emerging and Re-emerging Diseases

Head in the sand politics  
Weak technical capacity

## Anti-microbial resistance

Head in the sand politics  
Weak technical capacity  
Markets won't produce answers

## Vaccine Hesitancy

Politics  
Science denial  
Unscrupulous physicians

What can **we** do?  
What can **you** do?

# We Need To...

**Get better informed about global health threats and what can be done to address them in doable, sustainable, fair, and cost-efficient ways**

**Advocate for needed action to overcome political barriers**

**Push to strengthen global cooperation for increased technical capacity**

**Vote for people who know about, care about, and will act to enhance health security**



# The Takeaways

Important progress has been made in improving human health

The health of the globe faces a range of critical threats

We are very far from being ready to address some of these threats

Some scenarios are potentially disastrous if we don't do better quickly

We can encourage needed action – the gaps are largely political, not technical



**Thank You Again!**