GLOBAL HEALTH

JOHNATHON LOWE, DO, MS-GH, FAAEM

- I HAVE NO DISCLOSURES

OBJECTIVES

- What is Global Health/Changing mindsets in global health
- Social Determinants of Health
- Global Burden of disease
- How we can get involved

CHANGING MINDSETS IN GLOBAL HEALTH

- Global health 1.0 was called tropical medicine and was primarily concerned with keeping white men alive in the tropics
- Global health 2.0 was called international health and comprised of clever people in rich countries doing something to help people in poor countries
- Global health 3.0, which is still the main manifestation of global health, is about researchers from rich countries leading research programs in poor countries
- Global health 4.0, increasingly the present and certainly the future, is research and other activities being led by researchers from low and middle income countries.

Towards a common definition of global health

*Jeffrey P Koplan, T Christopher Bond, Michael H Merson, K Srinath Reddy, Mario Henry Rodriguez, Nelson K Sewankambo, Judith N Wasserheit, for the Consortium of Universities for Global Health Executive Board**

definition: global health is an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide.

	Global health	International health	Public health
Geographical reach	Focuses on issues that directly or indirectly affect health but that can transcend national boundaries	Focuses on health issues of countries other than one's own, especially those of low-income and middle-income	Focuses on issues that affect the health of the population of a particular community or country
Level of cooperation	Development and implementation of solutions often requires global cooperation	Development and implementation of solutions usually requires binational cooperation	Development and implementation of solutions does not usually require global cooperation
Individuals or populations	Embraces both prevention in populations and clinical care of individuals	Embraces both prevention in populations and clinical care of individuals	Mainly focused on prevention programmes for populations
Access to health	Health equity among nations and for all people is a major objective	Seeks to help people of other nations	Health equity within a nation or community is a major objective
Range of disciplines	Highly interdisciplinary and multidisciplinary within and beyond health sciences	Embraces a few disciplines but has not emphasised multidisciplinarity	Encourages multidisciplinary approaches, particularly within health sciences and with social sciences

Table: Comparison of global, international, and public health

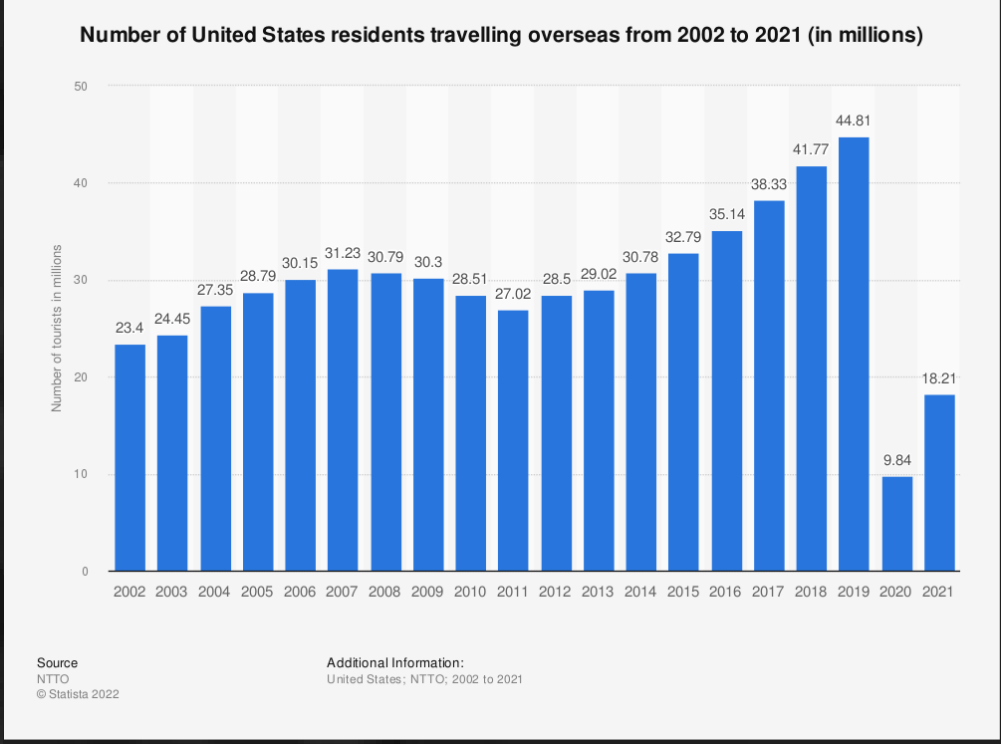
Lancet 2009

“GLOBAL HEALTH, WHILE A MARKED IMPROVEMENT ON ITS FOREBEAR “INTERNATIONAL HEALTH,” REMAINS A COLLECTION OF PROBLEMS RATHER THAN A DISCIPLINE. THE COLLECTION OF PROBLEMS… ALL TURN ON THE QUEST FOR EQUITY.”

- PAUL FARMER

WHY IS GLOBAL HEALTH IMPORTANT?

- First and foremost, the Globalization of Disease
  - Expansion of rapid travel and trade has increased the transmission and spread of infectious diseases



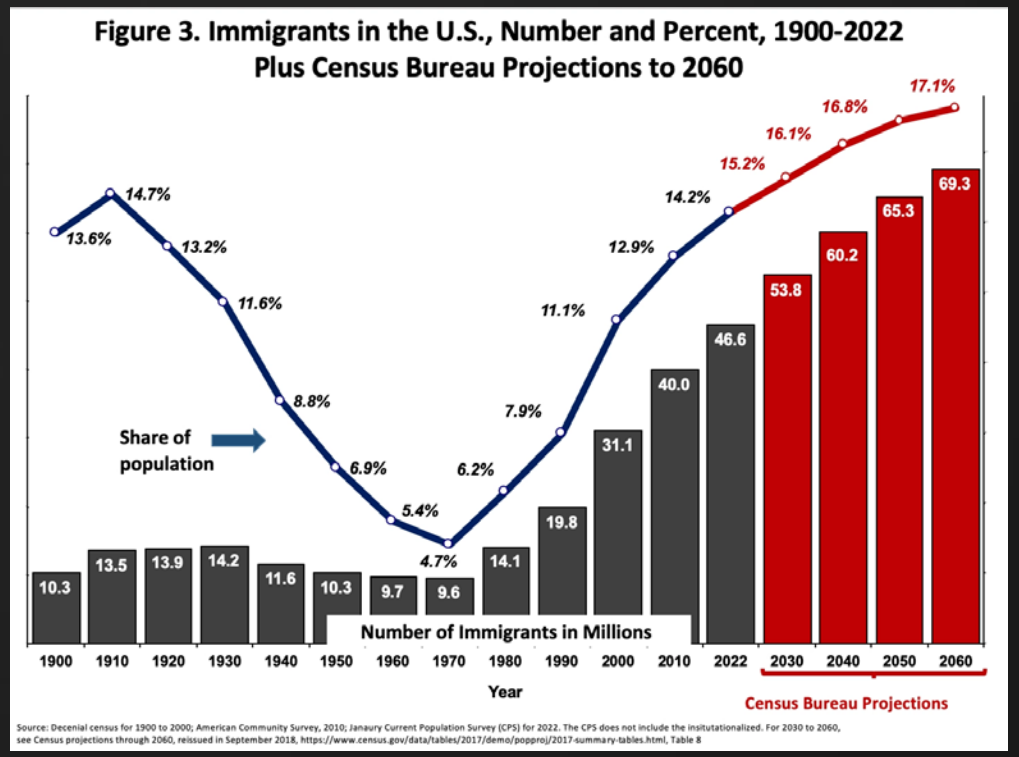
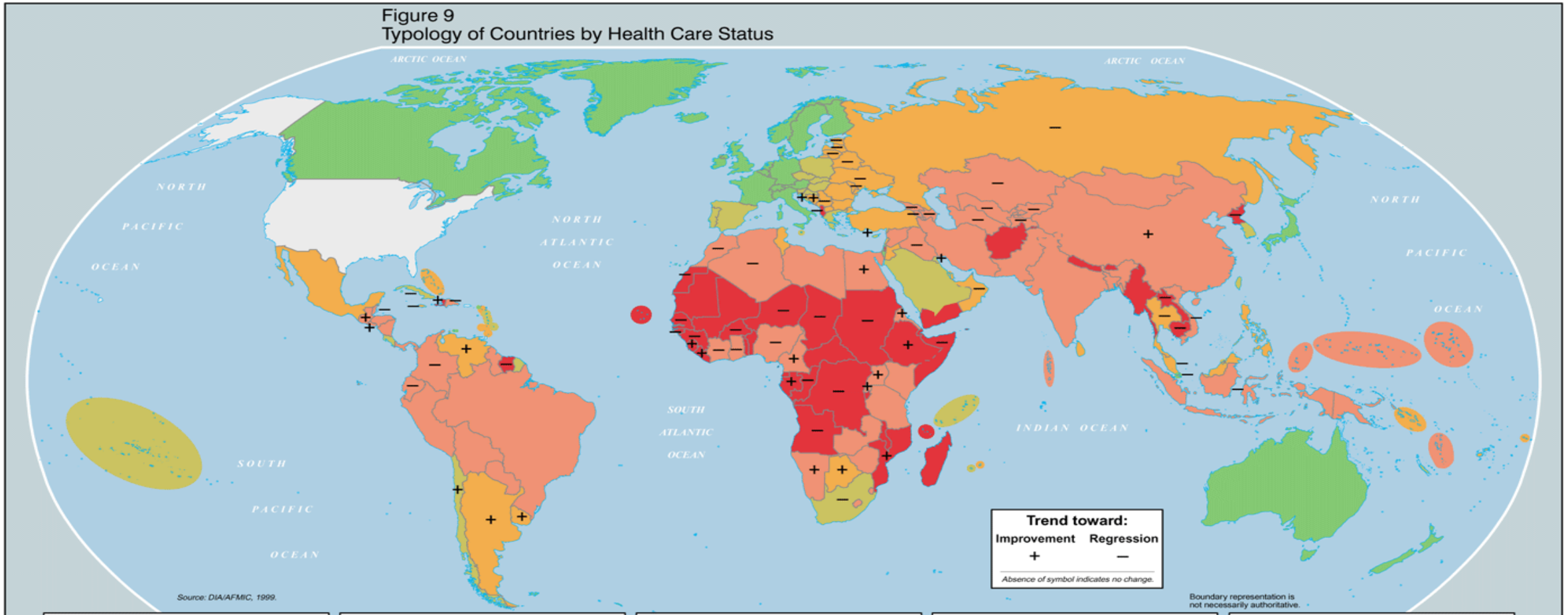


Figure 9
Typology of Countries by Health Care Status



Category 1: Countries with highly developed health care infrastructures*

- National system of epidemiological surveillance, response, and prevention capacity throughout the country.
- High-quality care available to 90-100 percent of the population.
- Modern primary, secondary, and tertiary health care delivery capability.
- Excellent pharmaceutical availability and production capability.
- Budgetary resources present and programmed effectively; high-income economies.
- Health care and public health education are higher national priorities.

Category 2: Countries with developed health care infrastructures*

- National system of epidemiological surveillance, response, and prevention capacity throughout most of the country.
- Medical care available to 70-90 percent of the population.
- Established primary, secondary, and tertiary health care capability.
- Pharmaceuticals generally available to population with adequate production capability.
- Budgetary resources available; upper-middle-income economies.
- Health care is a high national priority.

Category 3: Countries with developing health care infrastructures*

- System of epidemiological surveillance, response, and prevention in developed areas of the country.
- Medical care available to 50-70 percent of the population.
- Primary and secondary health care developing; tertiary care generally available.
- Pharmaceutical availability good in urban areas; limited production capabilities.
- Budgetary resources available; lower-middle-income economies.
- Health care is a national priority.

Category 4: Countries with less-developed health care infrastructures*

- Epidemiological surveillance, response, and prevention concentrated in capital; minimally present in most of the country.
- Medical care available to 40-50 percent of the population.
- Rudimentary primary and secondary health care; tertiary care minimally available.
- Pharmaceutical availability restricted to urban areas; minimally available in rural areas; limited production capabilities.
- Health expenditures dependent upon outside assistance; lower-income economies.
- Health care is a lower national priority.

Category 5: Countries with least-developed health care infrastructures*

- System of epidemiological surveillance, response, and prevention dependent on humanitarian organizations; no domestic capability.
- Medical care available to less than 40 percent of the population.
- Primary, secondary, and tertiary health care provided primarily by humanitarian organizations.
- Pharmaceutical availability dependent upon humanitarian organizations.
- Health expenditures heavily dependent upon outside assistance; lowest-income economies.
- Health care is an extremely low national priority.

***Individual countries within each category do not necessarily conform to all the criteria for that category.**

752049AI (R02531) 1-00

OXFAM REPORT IN 2023

- Billionaires have seen extraordinary increases in their wealth. During the pandemic and cost-of-living crisis years since 2020, $26 trillion (63 percent) of all new wealth was captured by the richest 1 percent, while $16 trillion (37 percent) went to the rest of the world put together. A billionaire gained roughly $1.7 million for every $1 of new global wealth earned by a person in the bottom 90 percent. Billionaire fortunes have increased by $2.7 billion a day.

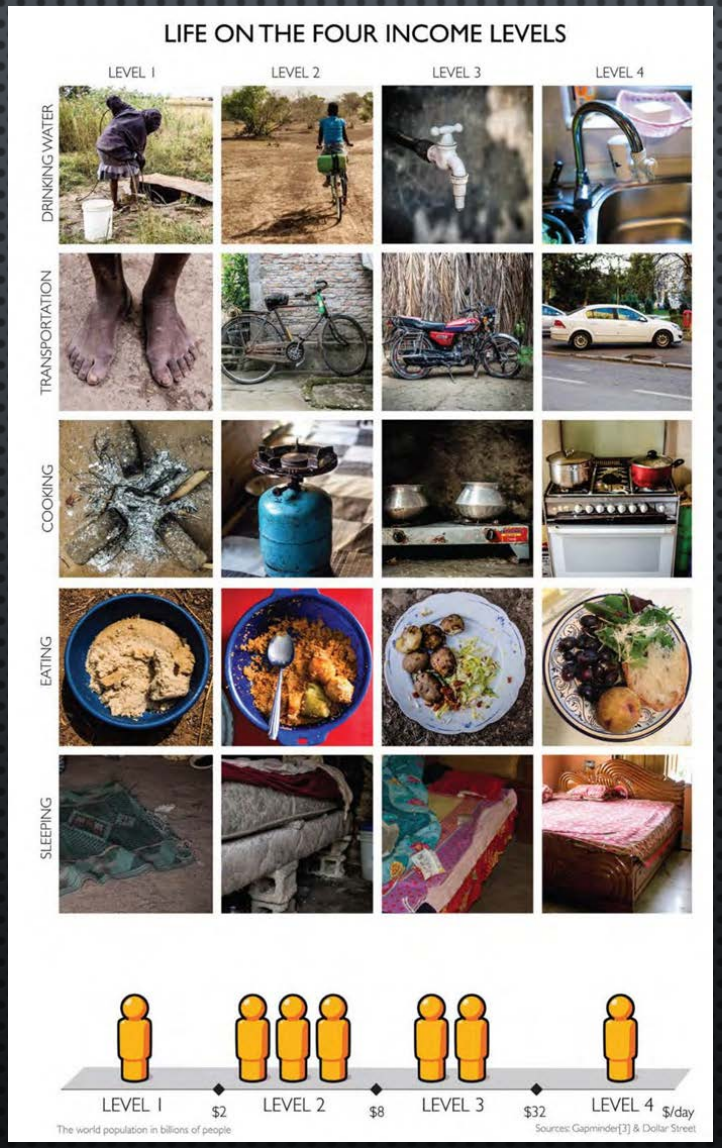
> Press releases

Richest 1% bag nearly twice as much wealth as the rest of the world put together over the past two years

Published: 16th January 2023

- *Super-rich outstrip their extraordinary grab of half of all new wealth in past decade.*
- *Billionaire fortunes are increasing by $2.7 billion a day even as at least 1.7 billion workers now live in countries where inflation is outpacing wages.*
- *A tax of up to 5 percent on the world's multi-millionaires and billionaires could raise $1.7 trillion a year, enough to lift 2 billion people out of poverty.*

SLIGHTLY DIFFERENT WAY OF LOOKING AT THINGS



Where you live will affect your health

- Example
  - Born in Alfalfa County Oklahoma – Life expectancy 77.15 years
  - Born in Kiowa County Oklahoma – Life expectancy 69.86 years

WHY CARE ABOUT GLOBAL HEALTH?

Global Health is Human Health

- Address serious inequities in health
- There is an ethical & humanitarian imperative to ensure health as a fundamental right for all
- Globalization has truly made the world flatter – "we are in this together"
- Some problems are too big/complex for countries to deal with (transnational effort is needed)

WE LIVE IN A FLAT, HIGHLY INTERCONNECTED WORLD

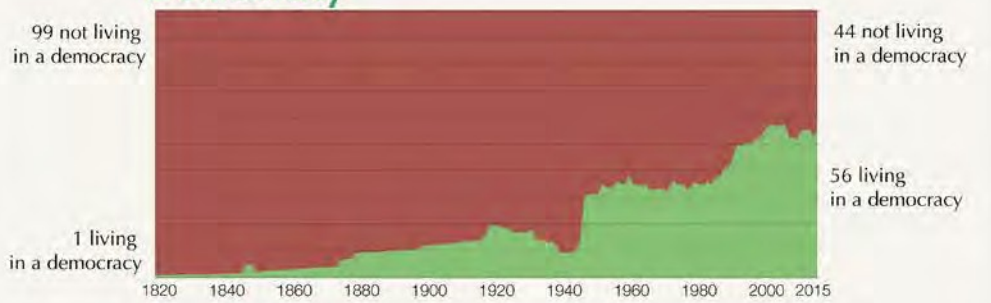
“We live in a time when the incubation period of every known human pathogen is longer than the longest intercontinental flight”

The World as 100 People
over the last two centuries

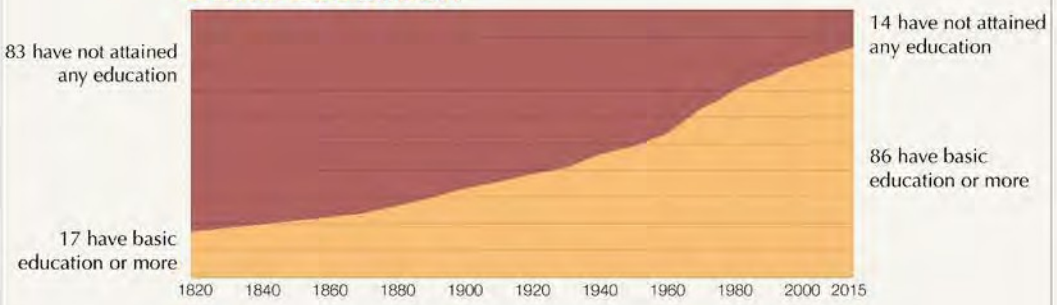
Our World in Data

Extreme Poverty

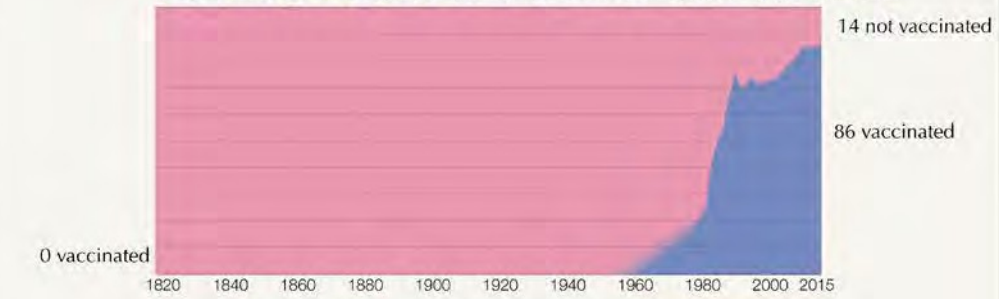
Democracy



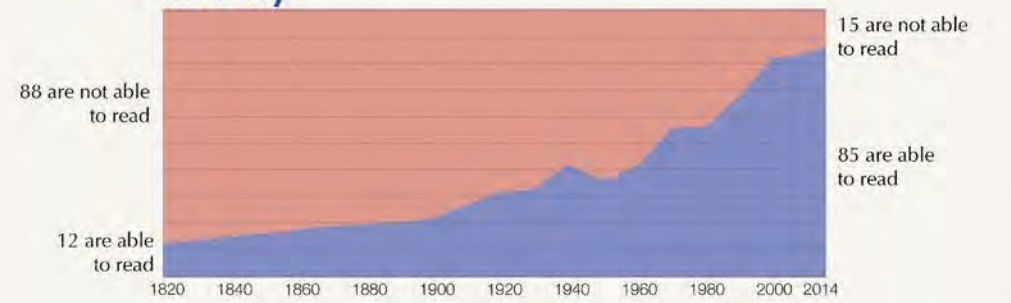
Basic Education



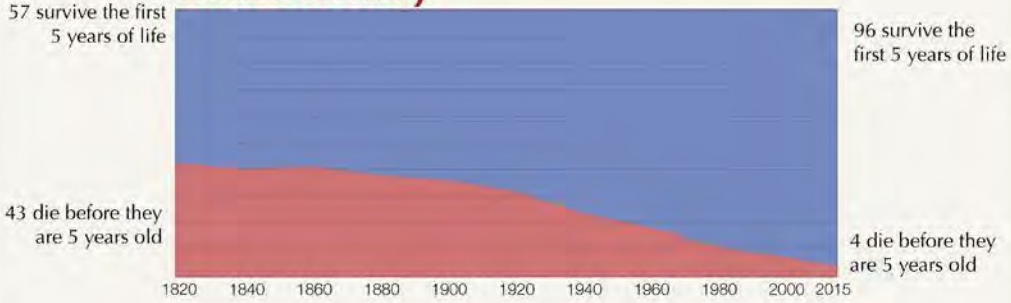
Vaccination against diphtheria, pertussis (whooping cough), and tetanus



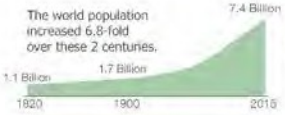
Literacy



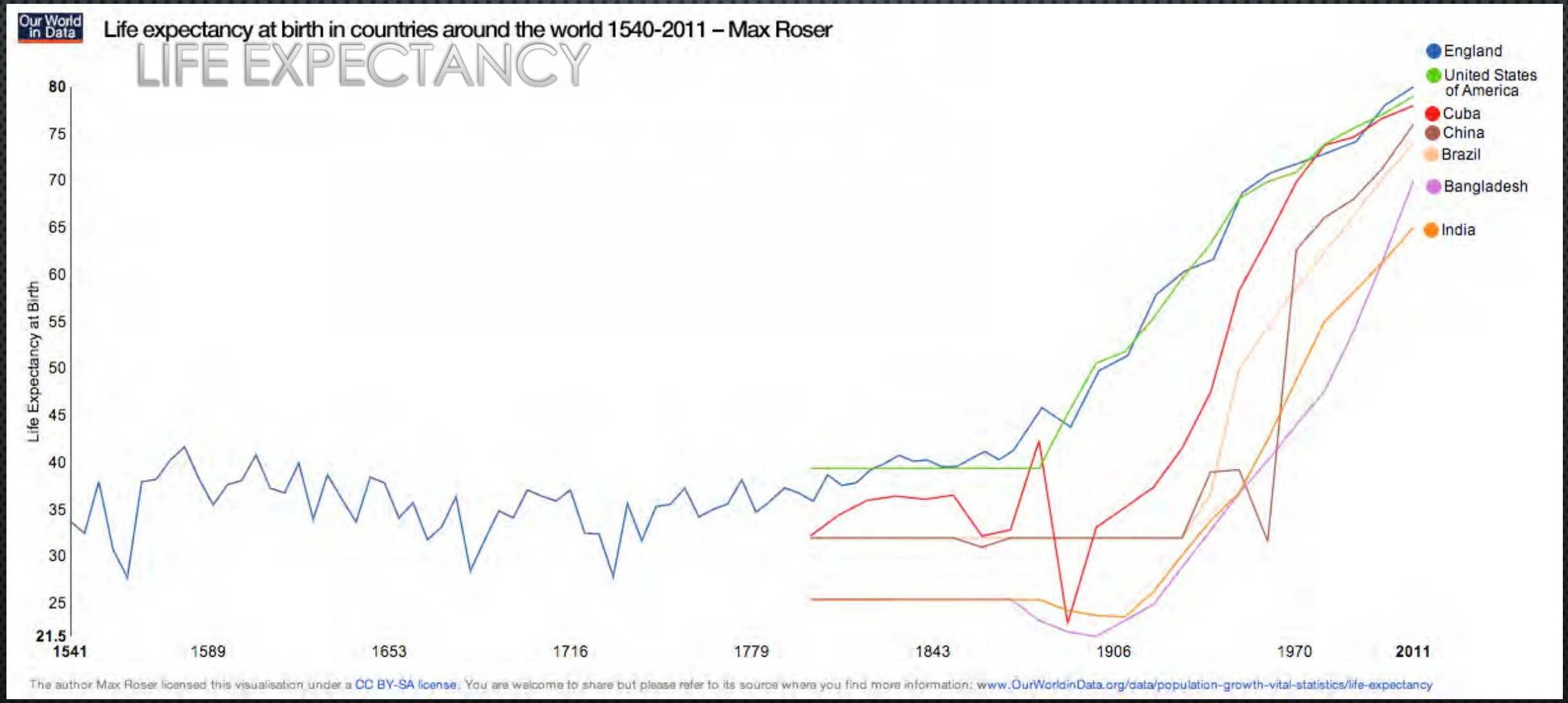
Child Mortality



Data sources:
Extreme Poverty: Bourguignon & Morrison (2002) up to 1970 – World Bank 1981 and later (2015 is a projection).
Vaccination: WHO (Global data are available for 1980 to 2015 – the DPT3 vaccination was licenced in 1949)
Education: OECD for the period 1820 to 1960. IIASA for the time thereafter.
Literacy: OECD for the period 1820 to 1990. UNESCO for 2004 and later.
Democracy: Politiy IV index (own calculation of global population share)
Colonialism: Wimmer and Min (own calculation of global population share)
Continent: HYDE database
Child mortality: up to 1960 own calculations based on Gapminder; World Bank thereafter

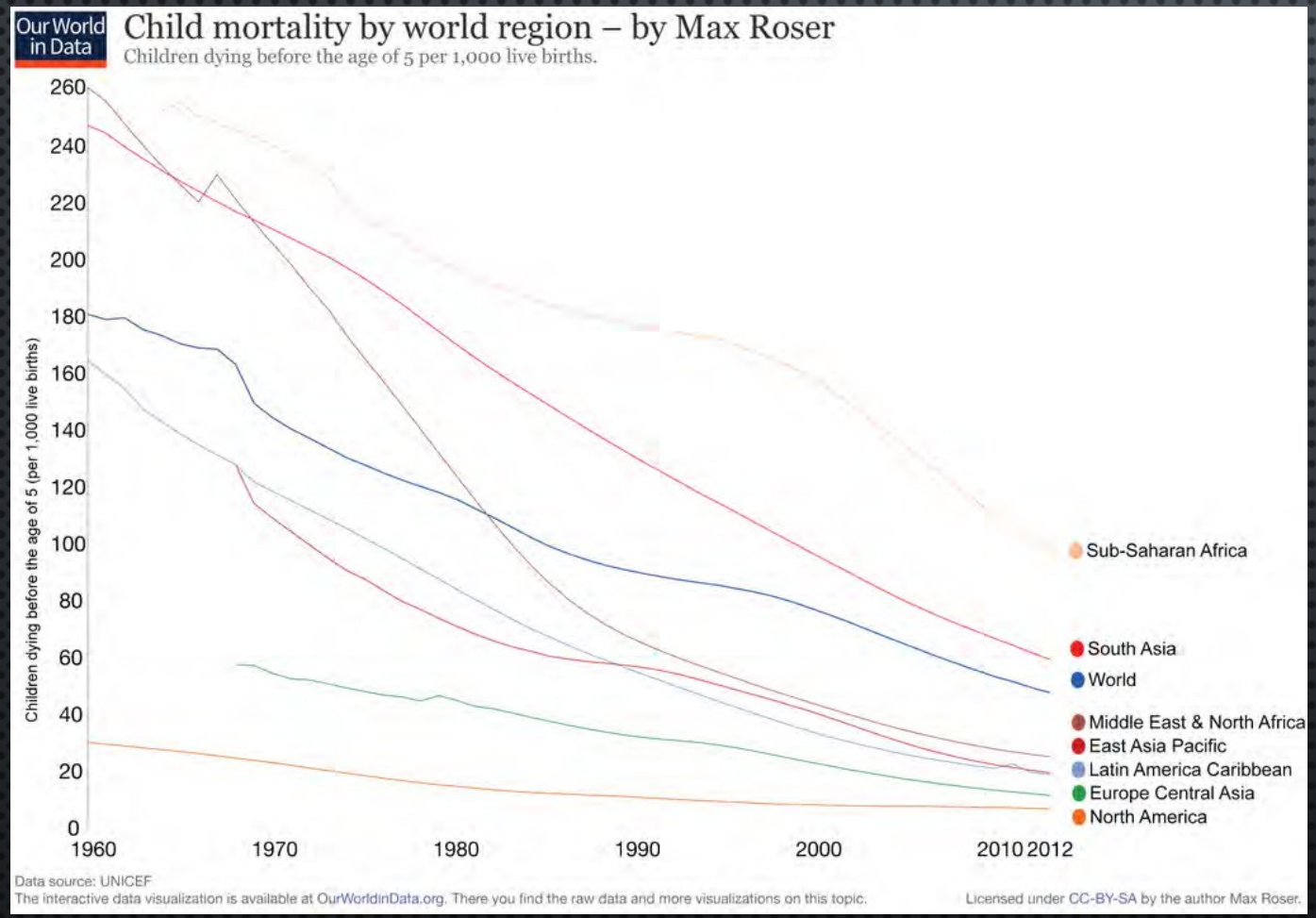


All these visualizations are from OurWorldInData.org an online publication that presents the empirical evidence on how the world is changing.



http://ourworldindata.org/

CHILD MORTALITY



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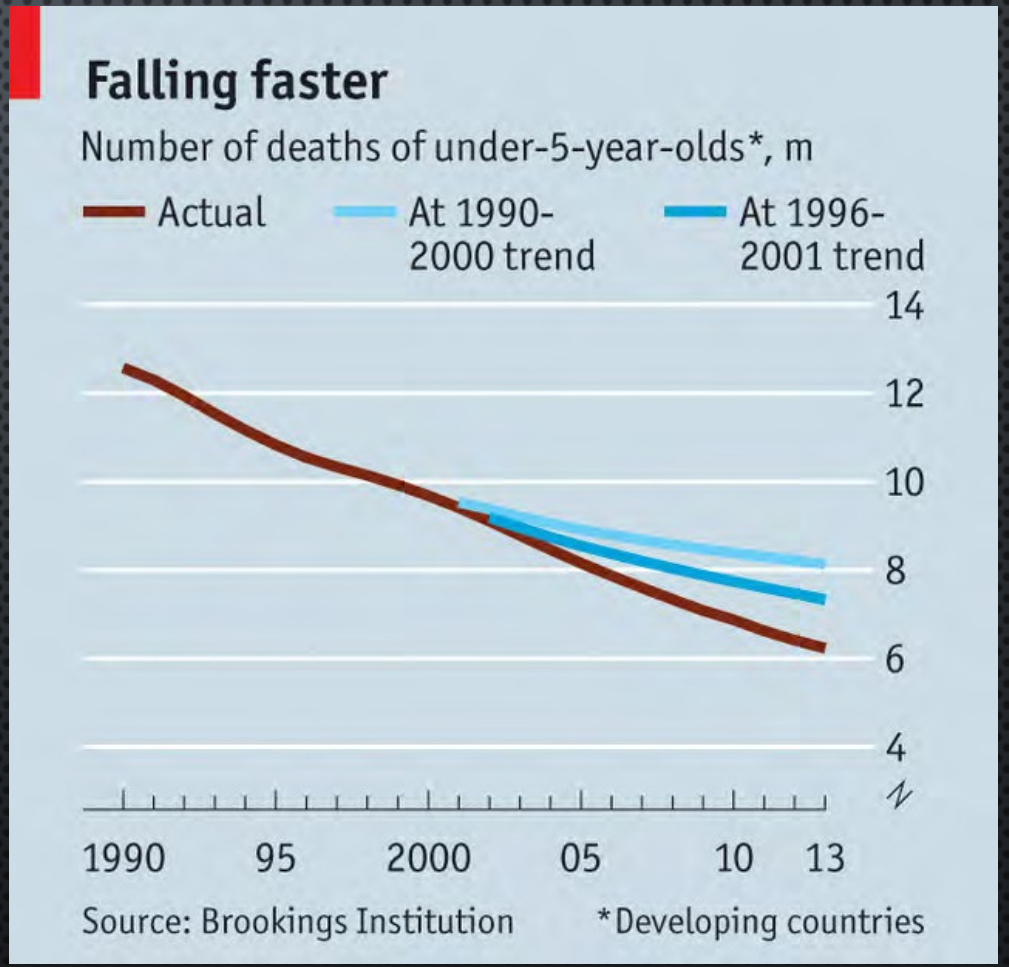
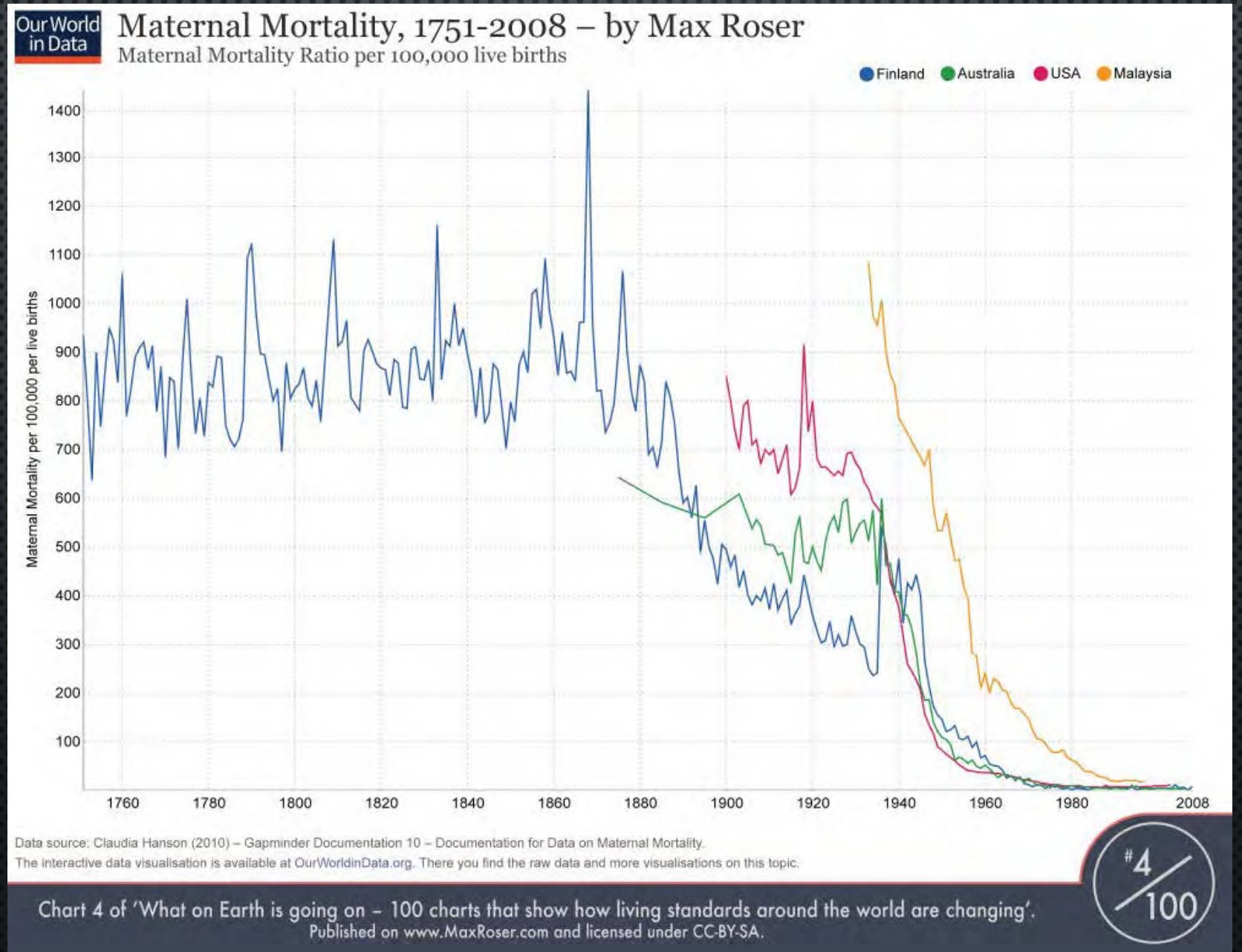


MATERNAL MORTALITY



http://ourworldindata.org/

WHY DOES INEQUALITY MATTER TO HEALTH?

Social Determinants of health

Traditional approach vs SDH approach

Traditional

- Viewed through a biomedical/epidemiological lens
- Health is determined by:
- Genetic and biological factors
  - Sex, age, genetic make up, physiological interactions
- Individual behaviors
  - Alcohol use, smoking, unprotected sex, drug use, non-adherence to treatment and medical care

Social Determinants of Health

- The circumstances into which people are born, grow up, live and age affect their health
- The systems which are put in place to deal with health, illness and wellbeing

Traditional vs SDH cont…

Traditional

- Reductionist theory
  - Focuses on specific objective factors and neglects the influence of wider social factors
  - Focuses on objectivity (male/female; black/white),
  - neglects their inherent social subjectivity (gender; race)
- Judgmental – what ‘should be’ vs. ‘what is’

SDH method

- Addresses nonmedical factors that influence health
- Includes heath related knowledge, attitudes, beliefs and behaviors
- Those in turn are shaped by wider social structures

Examples of social determinants of health

- Age
- Income
- Education
- Working and living conditions
- Early life and development
- Gender
- Race Ethnicity
- Culture

- Social environment – social
- support, capital, networks

- Physical environment – housing, community, (urban/rural) infrastructure, air quality, climate changes

- Politics and governing (social and health) policies


Policy & Law
Data & Surveillance
Equity
Social Conditions
SDOH
Structural Conditions
Infrastructure & Capacity
Evaluation & Evidence Building
Community Engagement
Partnerships & Collaboration

Social Determinants of Health

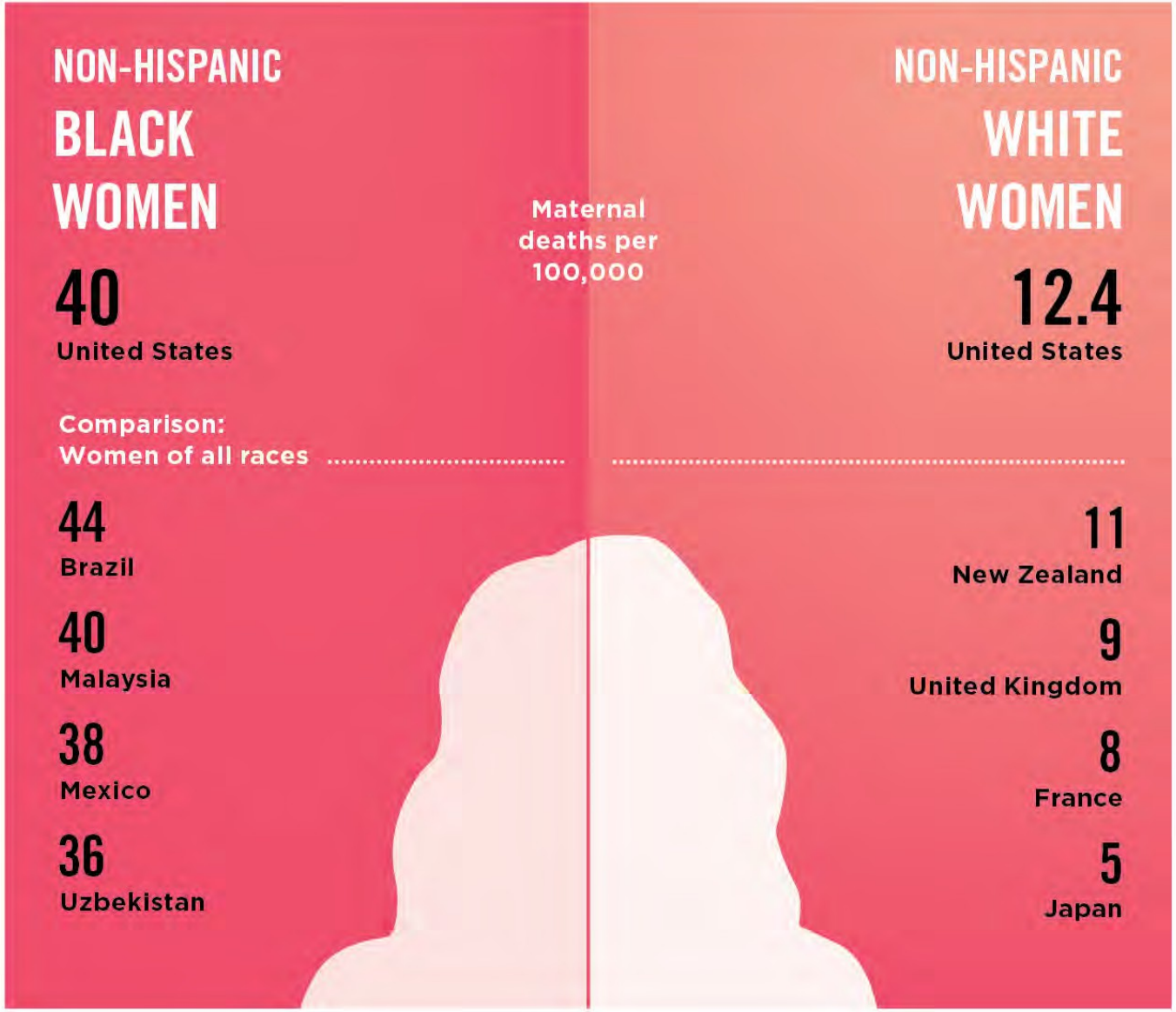
- Structural conditions and determinants of every day life, including:
- Circumstances in which we are born, grow up, live and age, and
- Systems that are put in place to deal with health, illness and wellbeing
- Shaped by wider, intersecting structural forces
- economics, social policies, and politics (social structures)
- Result in health inequities

Examples of social inequities in health

- Poor access to nutritious food → more susceptible to disease, less likely to recover
- Poor living conditions (e.g., sanitation, overcrowding) →
- more susceptible to infections
- Poor life circumstances → more susceptible to low paying, high risk work
- Poor traffic laws → road traffic injuries

MORTALITY GAP FOR U.S. MOMS

In the U.S., black women who are expecting or who are new mothers die at rates similar to those of the same women in lower-income countries, while the maternal mortality rate for white U.S. mothers more closely resembles rates in more affluent nations.



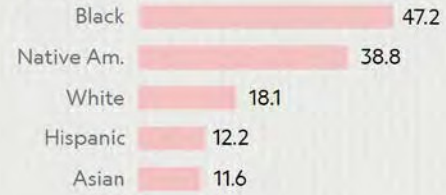
Sources: U.S. ratios (2011-2013): CDC Pregnancy Mortality Surveillance System; Global ratios (2015): UNICEF

WHICH AMERICAN WOMEN ARE DYING

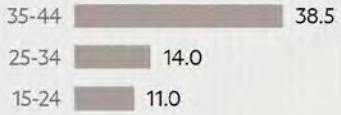
Black women are 2.6 times as likely to die due to a pregnancy-related cause as white women. Older women also face greater risk.

U.S. deaths per 100,000 live births, 2011-2015

RACE/ETHNICITY



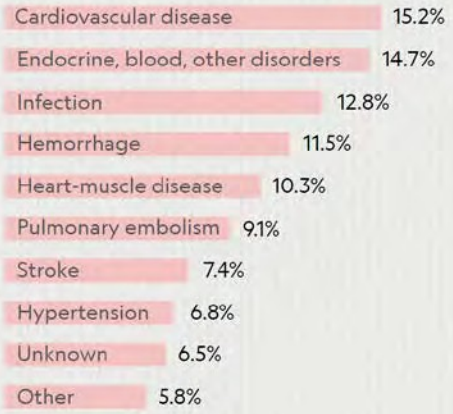
AGE



HOW THEY'RE DYING

Heart-related problems are a leading cause of maternal death; heart attack risk increases with obesity and age.

2011-2014



WHEN THEY'RE DYING

Risk doesn't end when pregnancy ends. Potentially fatal post-pregnancy complications include blood clots and hemorrhages.

38% While pregnant

45% End of pregnancy to six weeks after

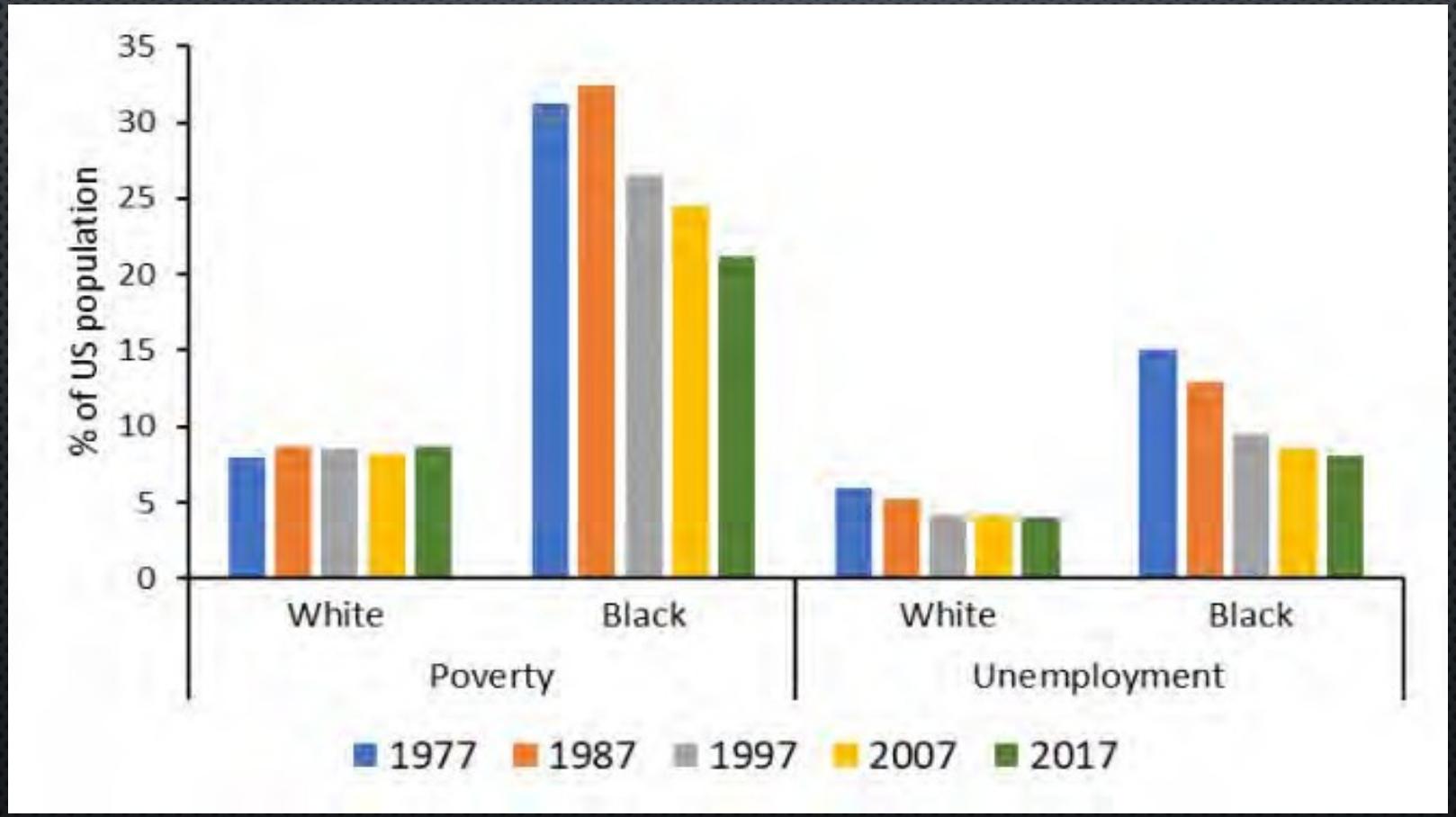
18% Six weeks to one year after

ACCESS TO PRENATAL CARE

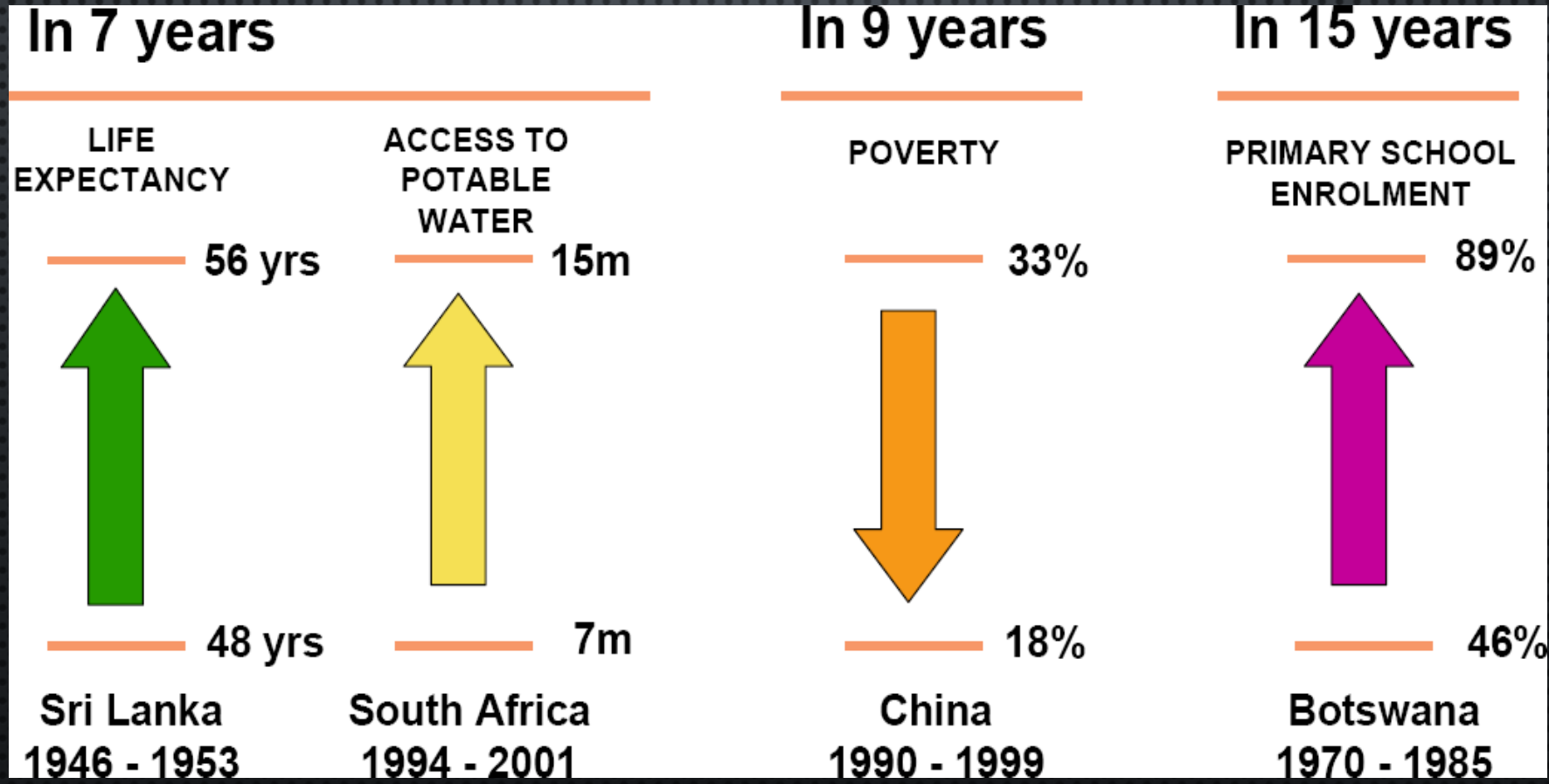
Women with no prenatal care at all are up to four times more likely to suffer a pregnancy-related death.

Women with no care or only third-trimester care

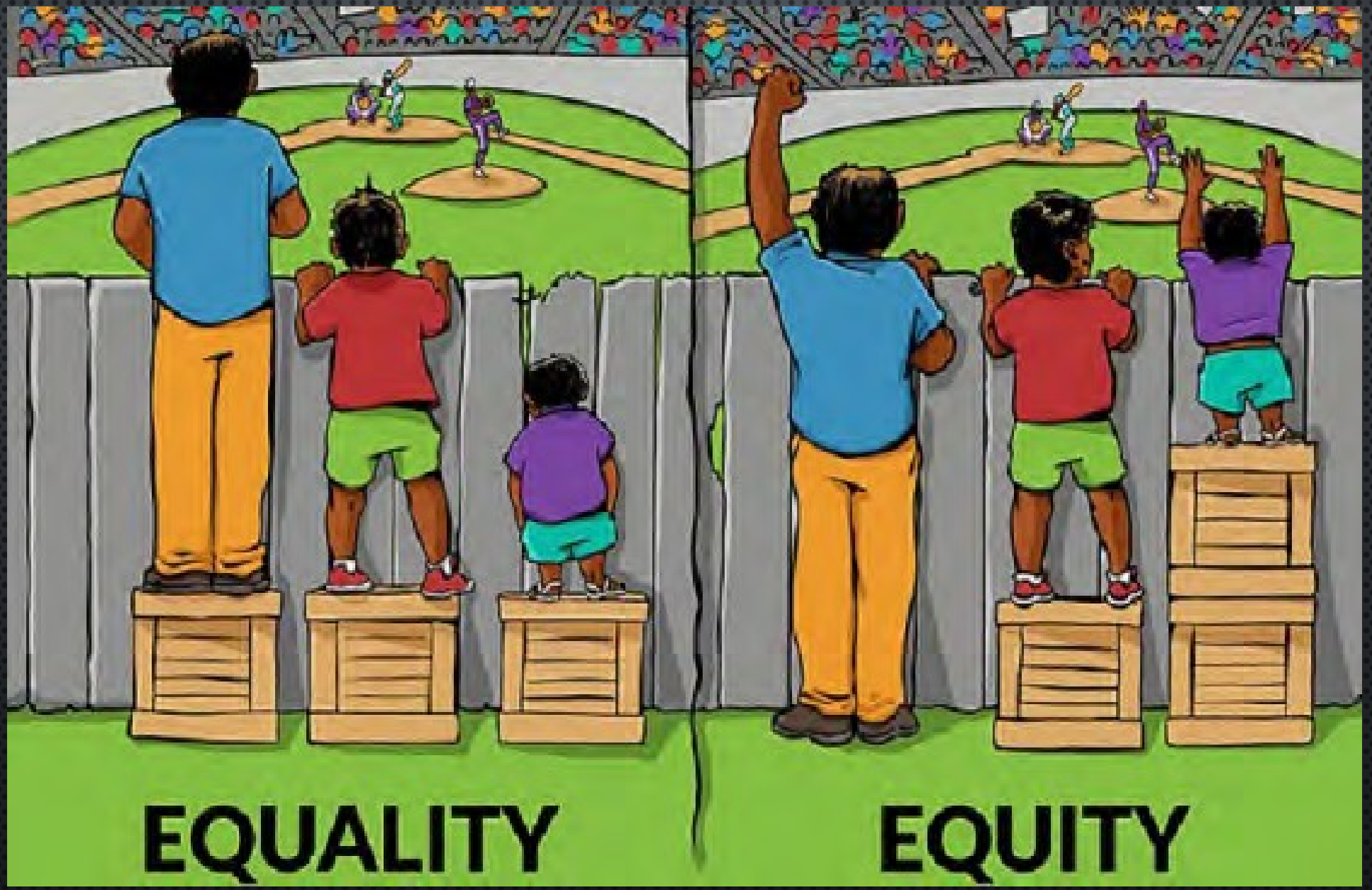
PERCENTAGE OF THE US POPULATION IN POVERTY OR UNEMPLOYED



GREAT STRIDES CAN BE MADE IN SHORT AMOUNTS OF TIME



SUSTAINABLE DEVELOPMENT GOALS

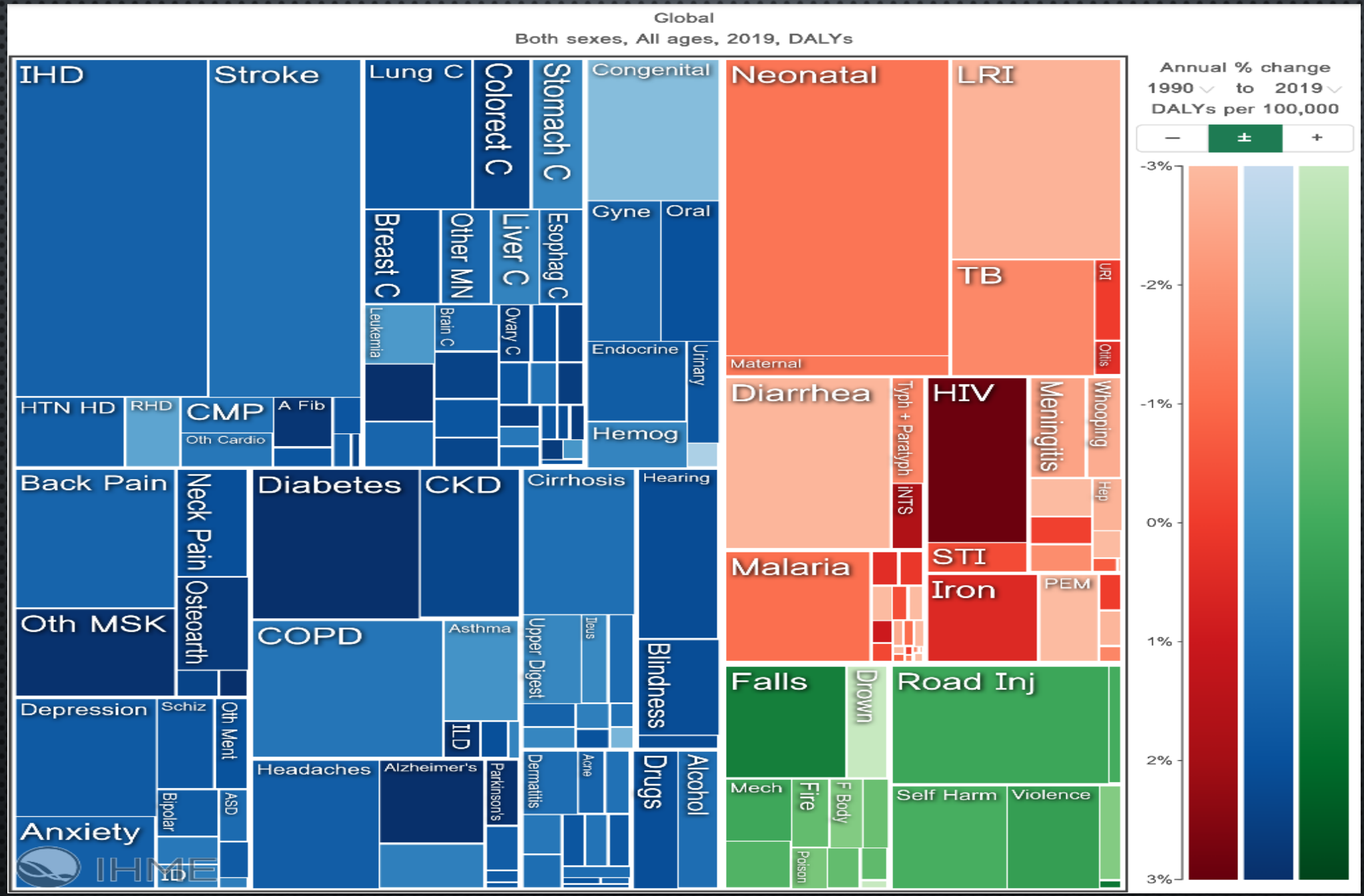

EQUALITY
EQUITY

WE NEED TO FIGHT AGAINST "SOCIALIZATION FOR SCARCITY"

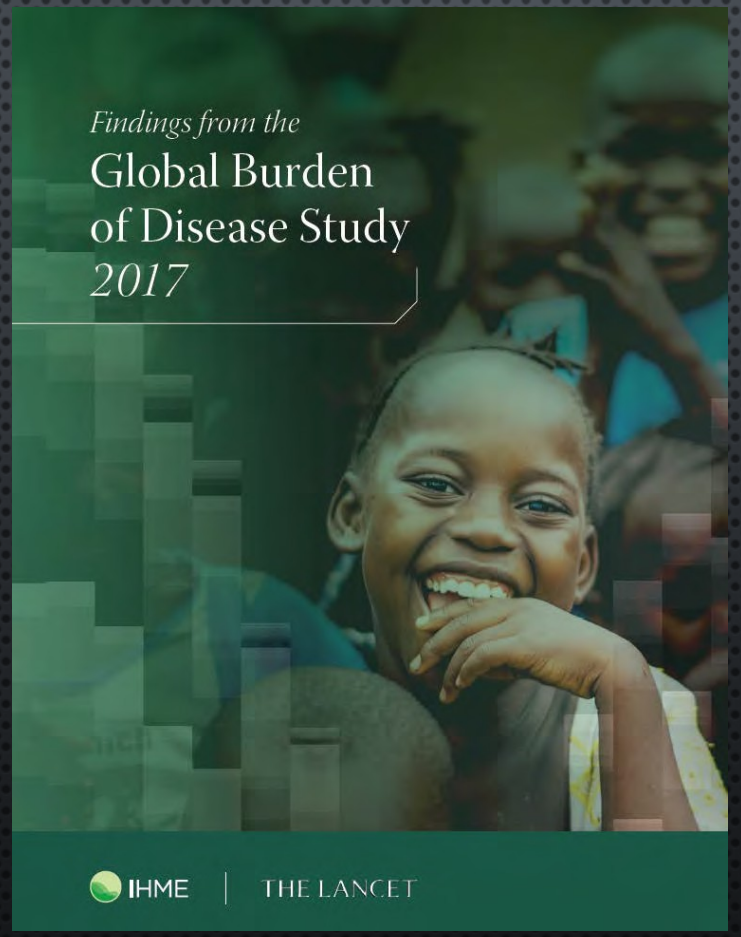
This is something I've been struggling with since I was a student: socialization for scarcity. But scarcity for ourselves? No. Scarcity for our mom? No. For our own kids? No. We're socialized for scarcity for other people, and they're usually black or brown or poor. So then we start cutting corners. Like saying we can treat drug-susceptible tuberculosis but not drug-resistant tuberculosis. We can give vaccines in Liberia but not chemotherapy. We must focus on prevention of trauma, or AIDS, in such settings, but not treatment. It might sound OK in a classroom, but such logic is lethal on the ground.

Paul Farmer, Harvard Gazette 21 May 2018

MEASURING THE GLOBAL BURDEN OF DISEASE


Global
Both sexes, All ages, 2019, DALYs
IHD
Stroke
Lung C
Colorect C
Stomach C
Congenital
Gyne
Oral
Breast C
Other MN
Liver C
Esophag C
Leukemia
Brain C
Ovary C
Endocrine
Urinary
Hemog
HTN HD
RHD
CMP
Oth Cardio
A Fib
Back Pain
Neck Pain
Osteoarth
Oth MSK
Depression
Schiz
Oth Ment
Bipolar
ASD
Anxiety
ID
Diabetes
CKD
COPD
Asthma
ILD
Headaches
Alzheimer's
Parkinson's
Cirrhosis
Upper Digest
Ileus
Dermatitis
Acne
Hearing
Blindness
Drugs
Alcohol
Neonatal
Maternal
LRI
TB
URI
Otitis
Diarrhea
Typh + Paratyph
iNTS
HIV
Meningitis
Whooping
Hep
STI
Malaria
Iron
PEM
Falls
Drown
Mech
Fire
F Body
Poison
Road Inj
Self Harm
Violence
Annual % change
1990 to 2019
DALYs per 100,000
–
±
+
-3%
-2%
-1%
0%
1%
2%
3%
IHME

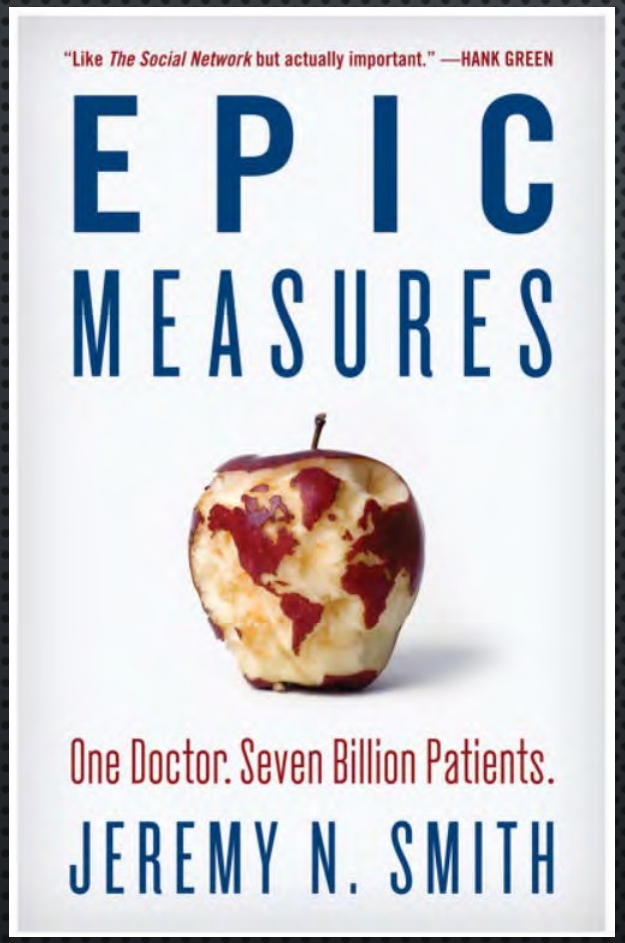
GLOBAL BURDEN OF DISEASES, INJURIES, AND RISK FACTORS STUDY: OVER 1,000 PEOPLE FROM OVER 100 COUNTRIES PUT TOGETHER ALL THE WORLD'S DATA ON MORE THAN 1,000 DIFFERENT CLINICAL OUTCOMES



http://www.healthdata.org/sites/default/files/files/policy_report/2019/GBD_2017_Booklet.pdf

MEASUREMENT IS CRITICAL FOR GLOBAL HEALTH

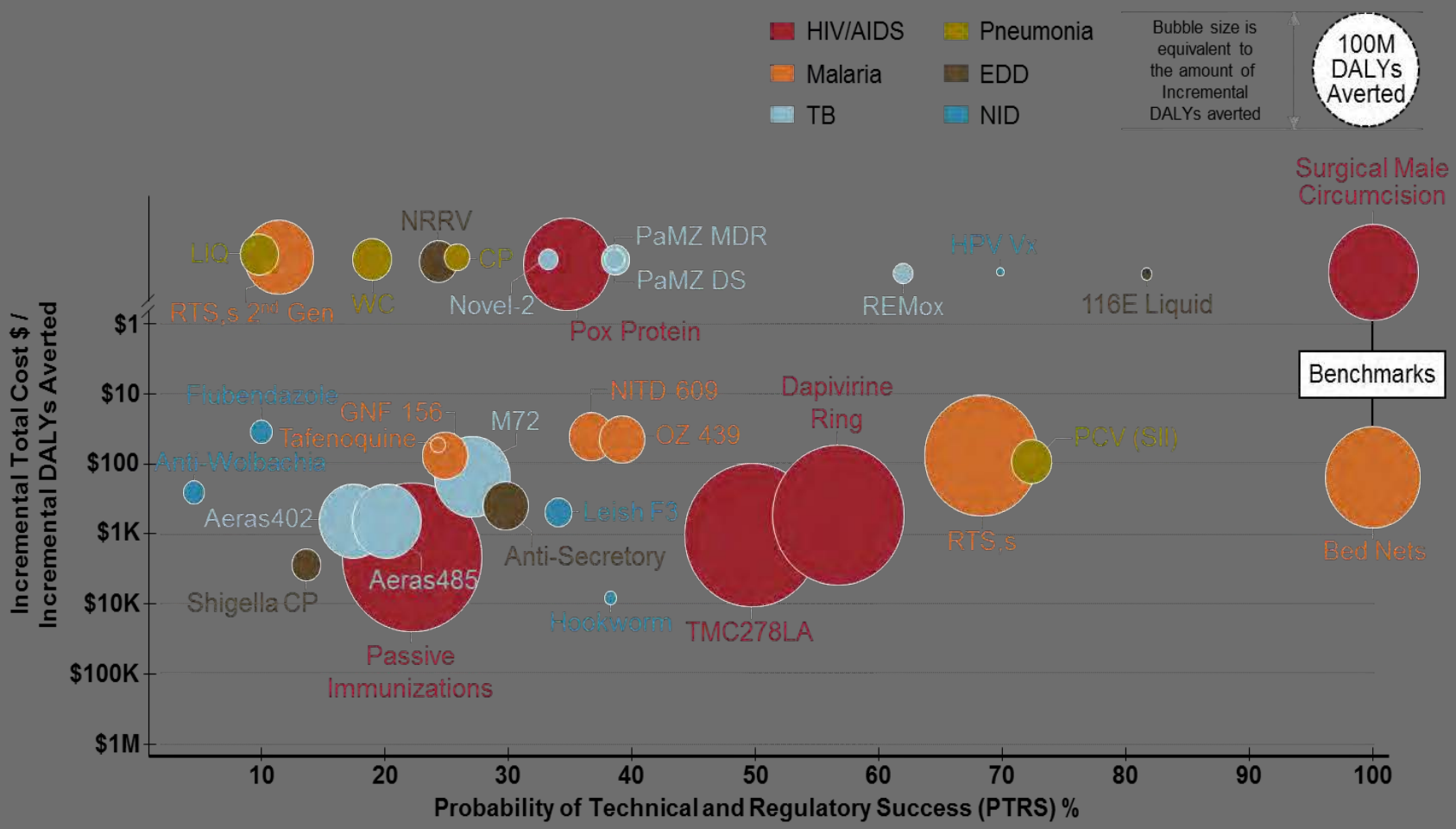
- To understand disease trends and to set priorities
- To assess progress towards elimination or other targets
- To evaluate the effectiveness of interventions
- To provide feedback to improve performance
- To advocate for resources and investments
- To measure impact of donor aid
- For granting agencies to evaluate their investments and strategies

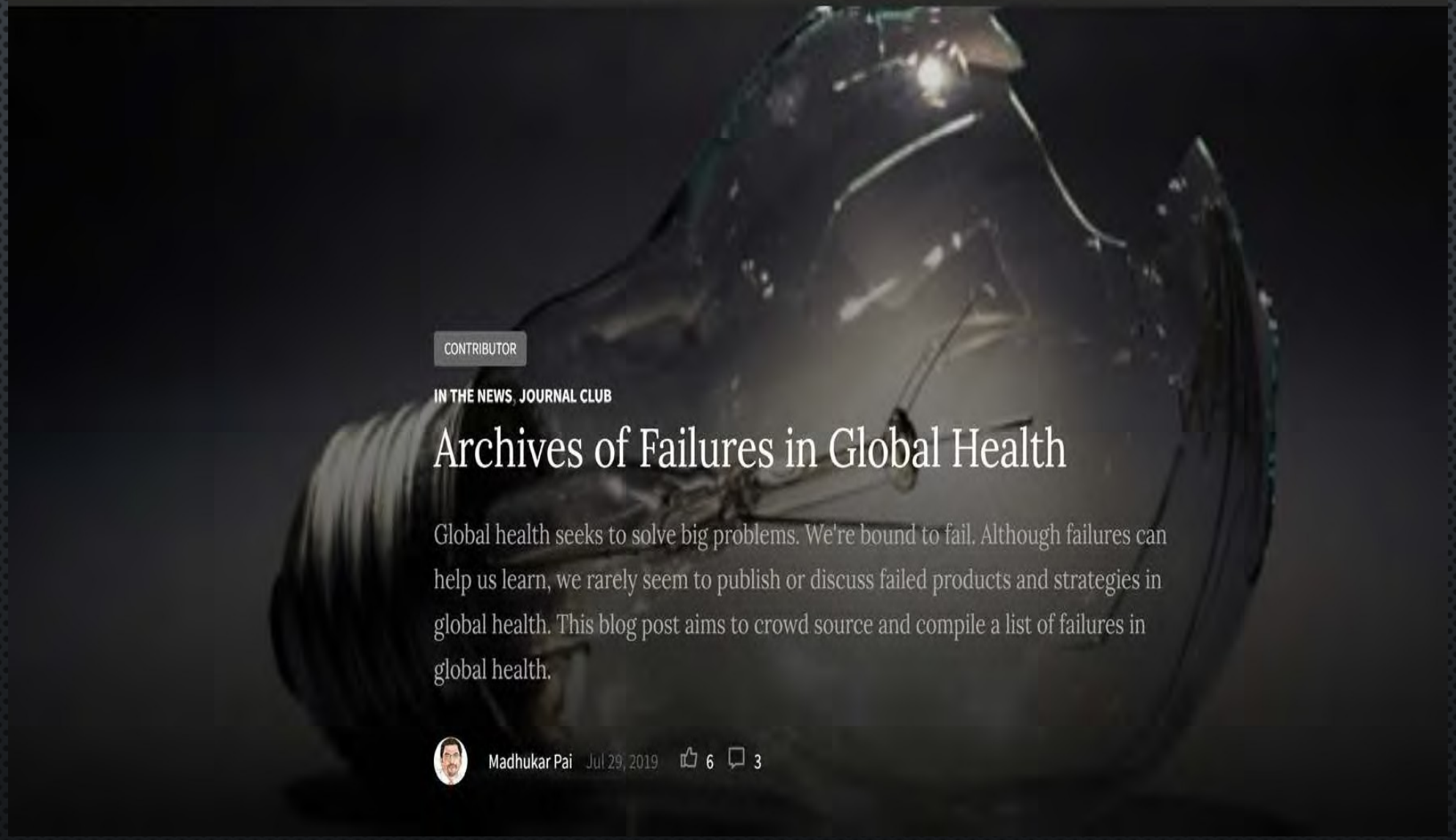


"Medical doctor and economist Christopher Murray began the Global Burden of Disease studies to gain a truer understanding of how we live and how we die. While it is one of the largest scientific projects ever attempted—as breathtaking as the first moon landing or the Human Genome Project—the questions it answers are meaningful for every one of us: What are the world's health problems? Who do they hurt? How much? Where? Why?

Murray argues that the ideal existence isn't simply the longest but the one lived well and with the least illness. Until we can accurately measure how people live and die, we cannot understand what makes us sick or do much to improve it. Challenging the accepted wisdom of the WHO and the UN, the charismatic and controversial health maverick has made enemies—and some influential friends, including Bill Gates who gave Murray a $100 million grant."

COST EFFECTIVENESS





CONTRIBUTOR

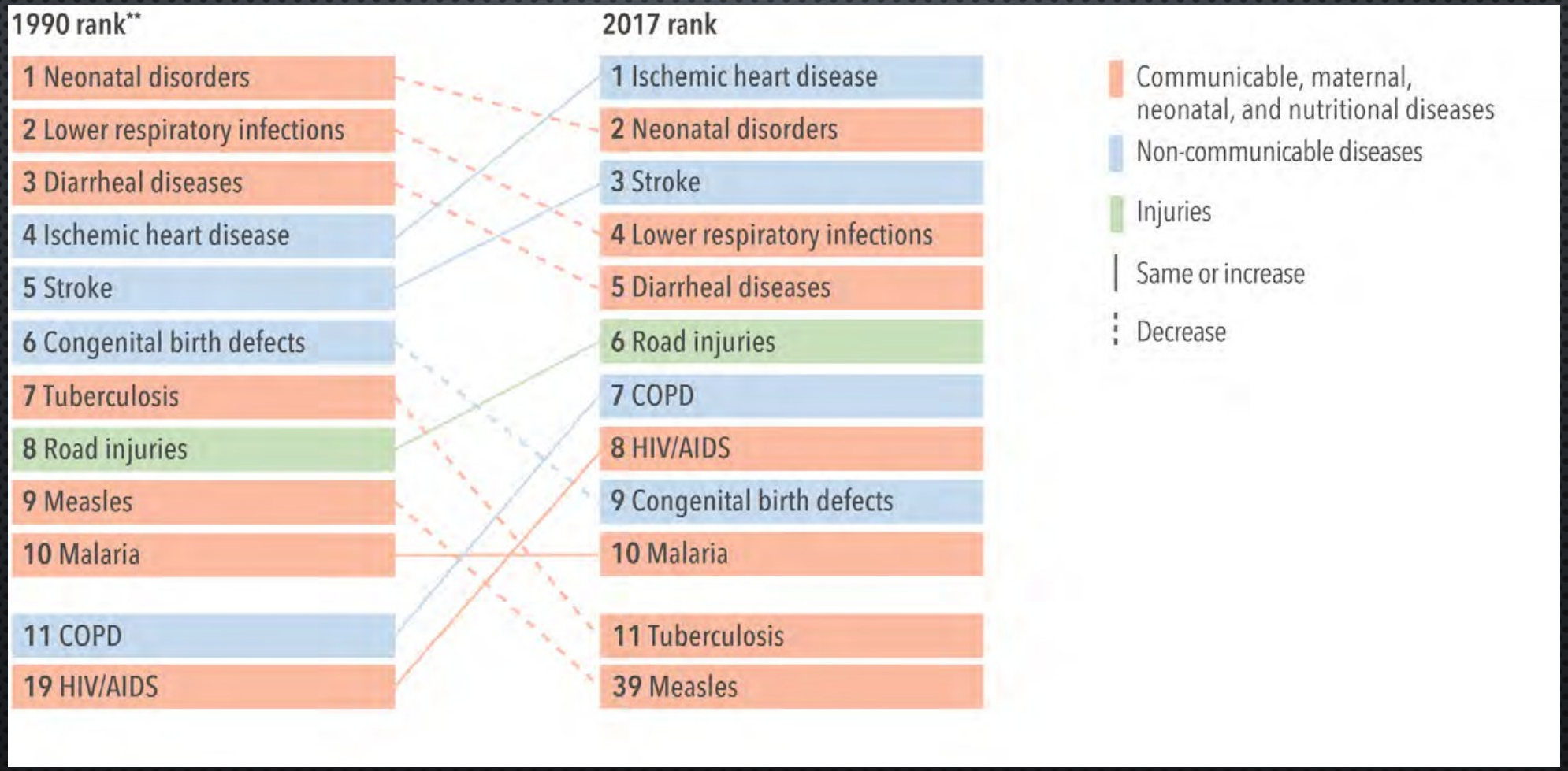
IN THE NEWS, JOURNAL CLUB

Archives of Failures in Global Health

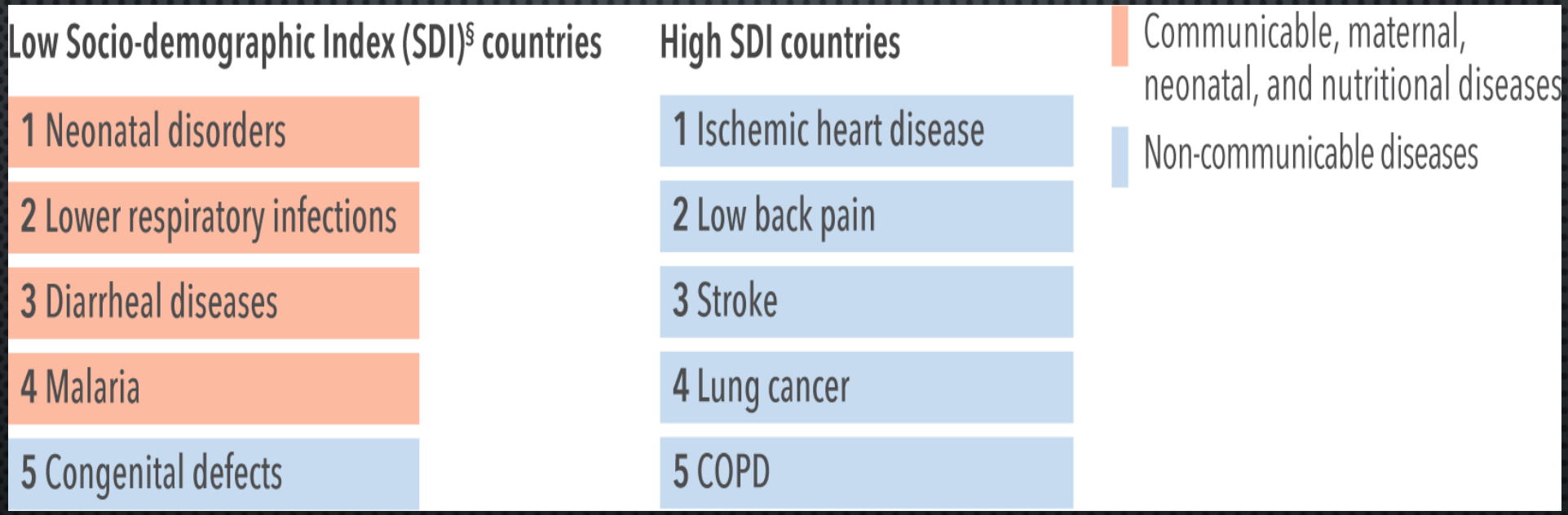
Global health seeks to solve big problems. We're bound to fail. Although failures can help us learn, we rarely seem to publish or discuss failed products and strategies in global health. This blog post aims to crowd source and compile a list of failures in global health.

Madhukar Pai Jul 29, 2019 6 3

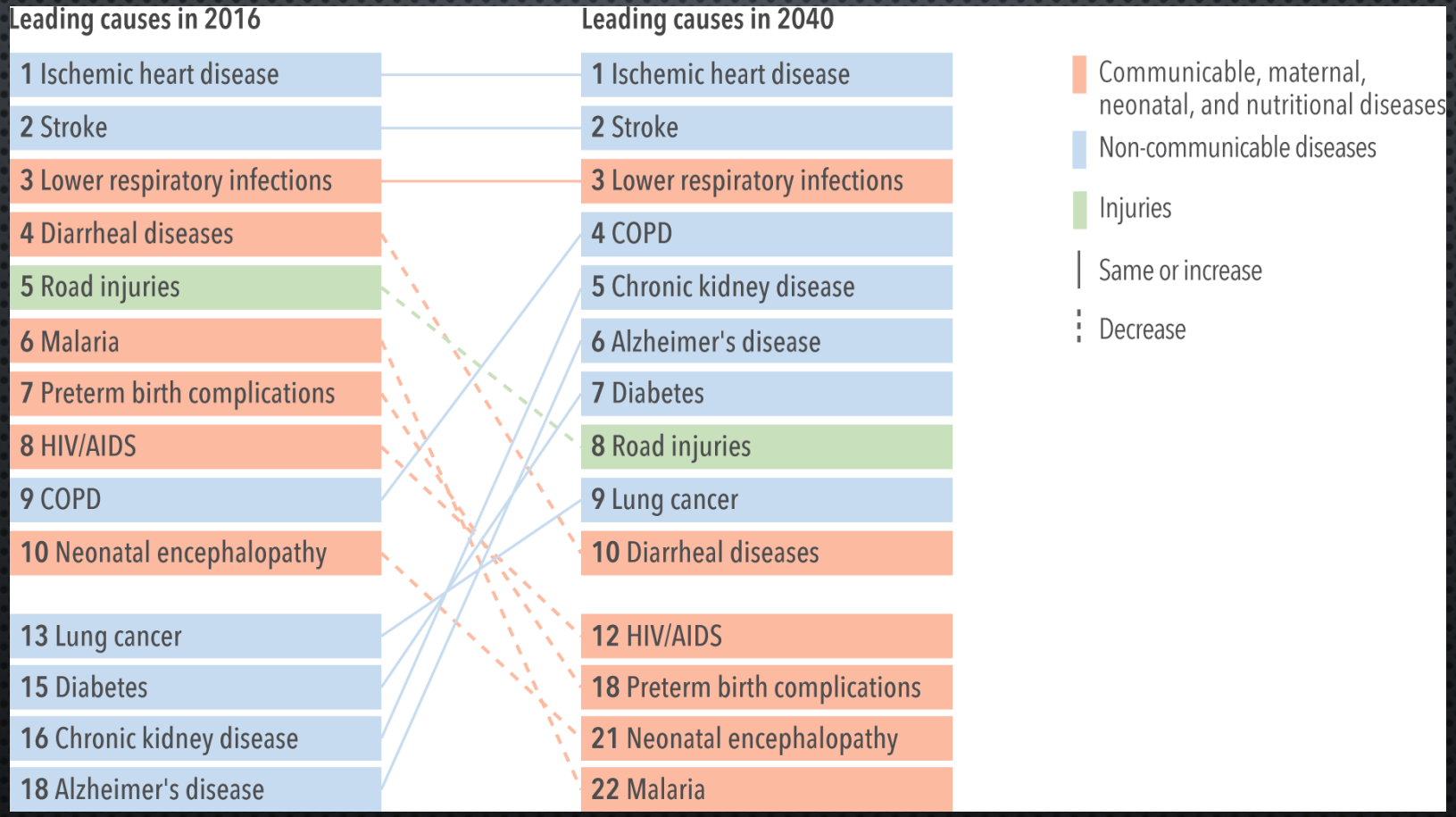
LEADING CAUSES OF EARLY DEATH, 1990 AND 2017



LEADING CAUSES OF EARLY DEATH AND DISABILITY‡ AT LOWEST AND HIGHEST LEVELS OF DEVELOPMENT, 2017



FORECAST: LEADING CAUSES OF EARLY DEATH, 2016 AND 2040

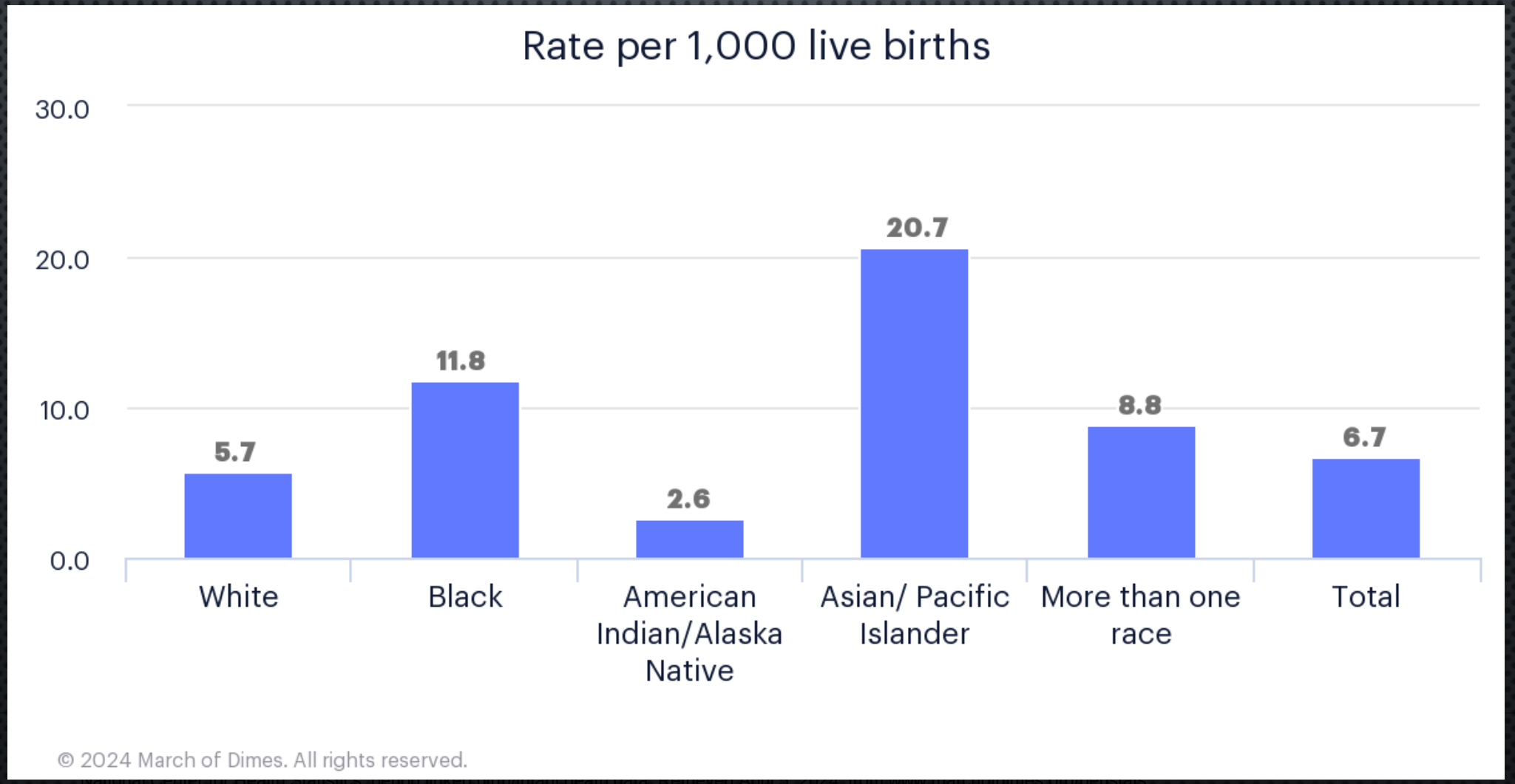


WHY IT MATTERS IN OKLAHOMA?

- When diving into the data, Oklahoma still has major healthcare disparities
  - For example:
  - Maternal Mortality rates vary greatly in our state based on socioeconomic status and race.

INFANT MORTALITY RATES BY RACE

Oklahoma, 2019-2021 Average



GIVING what we can

Give Effectively | Get Involved | Research | About | Blog | **Donate** | **My Giving**

Close ✖

Giving What We Can is fundraising for 2017

We need your support to continue to grow our community of committed, effective givers. Help us make 2017 even bigger by making a donation to our parent organisation, The Centre for Effective Altruism.

Minimum Target $3,100,000

Progress $1,942,163

Growth Target $6,440,000

More Info

Donate Now

(Image: Shutterstock / shutterstock.com)

Location

United States

This determines both your currency and your cost of living.

Income can't be blank

USD

The total income for your household after tax.

People in your household

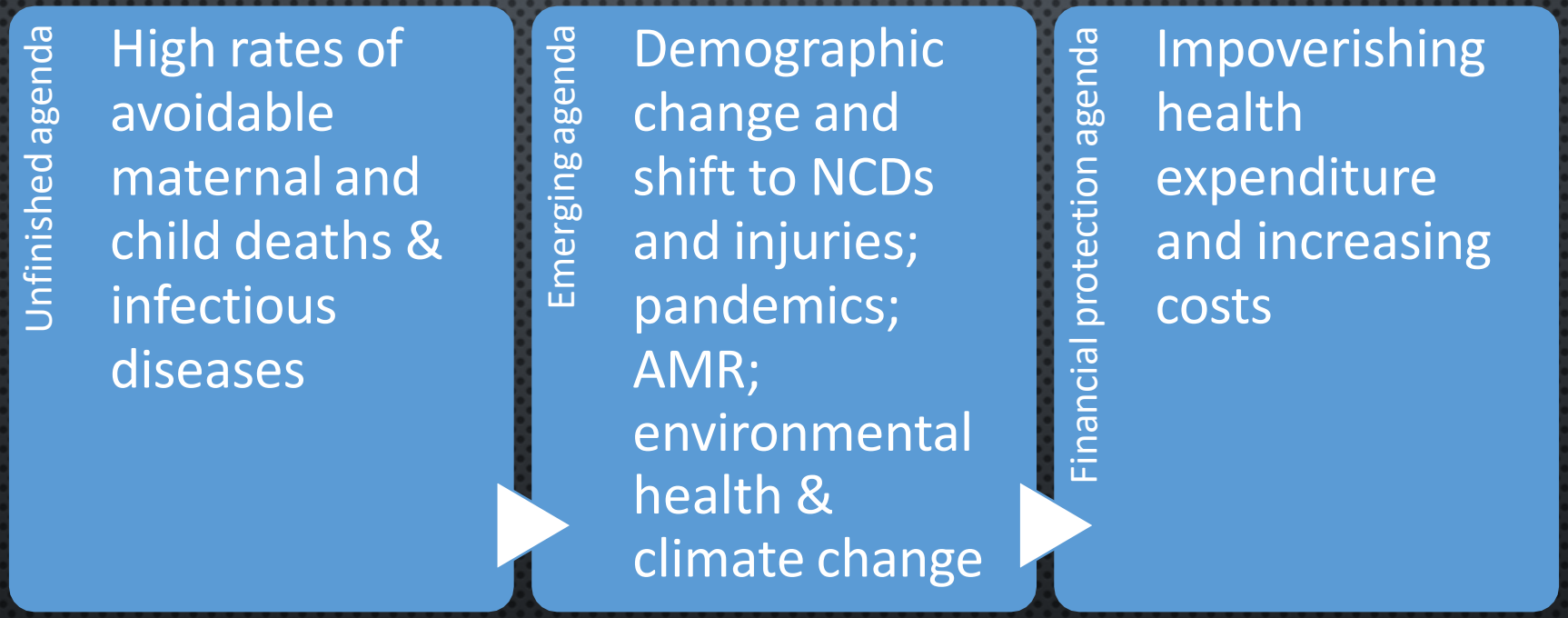
- 1 adults +

We use equivalised income.

- 0 children +

Calculate!

A LOT OF WORK STILL TO BE DONE



While globalization poses major challenges, it also offers exciting opportunities…

OSU CHS Office of Global Health

- Expanding Education in Global Health and Medicine in Oklahoma
- Partnerships in Nepal, Peru, Guatemala, Mexico, Ethiopia and Zambia
- Masters degree program in Global Health

PHOTOS/MAP OF GLOBAL HEALTH


ANY
QUESTIONS
?

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