The State of Public Health and Medicine at America 250

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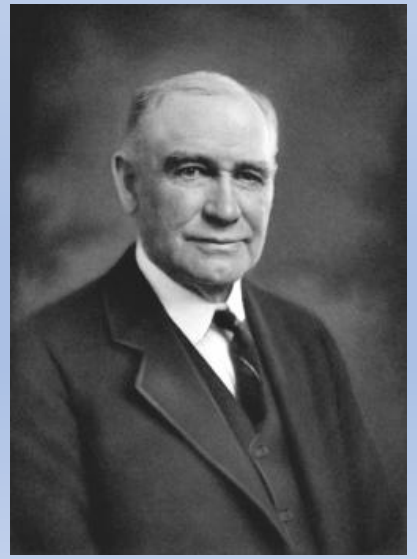
Objectives

At the end of this activity, attendees will be able to:

- Describe the historical separation and evolution of public health and medicine
- Compare American values and historical events that inform current health policy
- Recall a proposed reconciliation of public health and medical worldviews to address health challenges of the 21st century

Some Michigan Medical and Public Health History

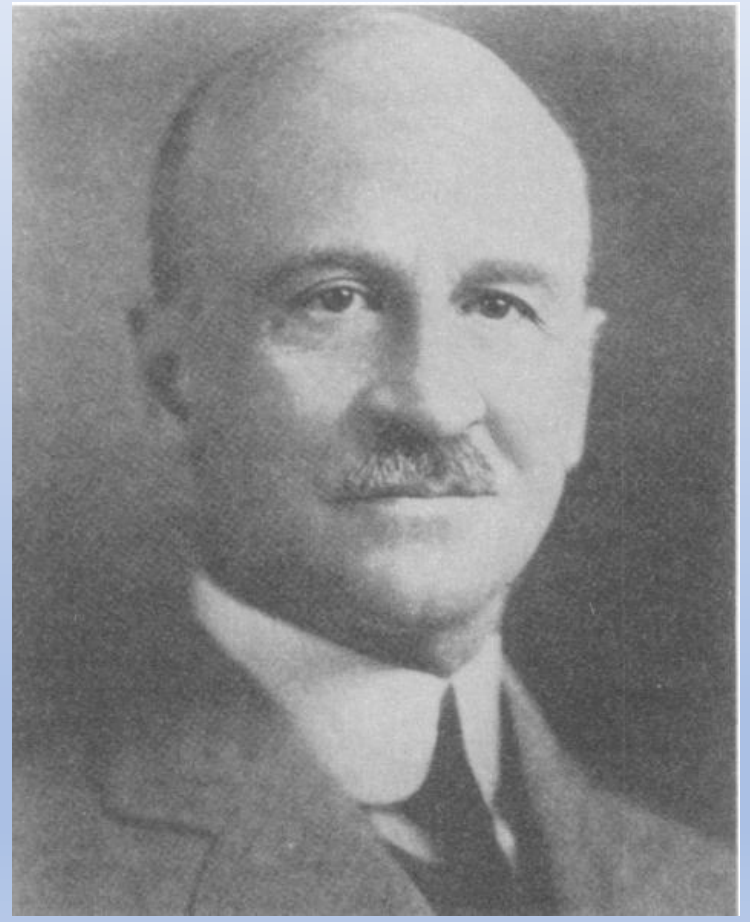
19th and 20th century focus





Michigan first in US to iodize salt and distribute to grocery stores

- Many northern Michigan men not eligible for WWI enlistment due to goiter
- MSMS and Dr. David Cowie
- Scientists, physicians, public health officials and manufacturers of salt partnered to iodize salt and distribute in grocery stores on May 1, 1924



Drs. Pearl Kendrick and Grace Eldering

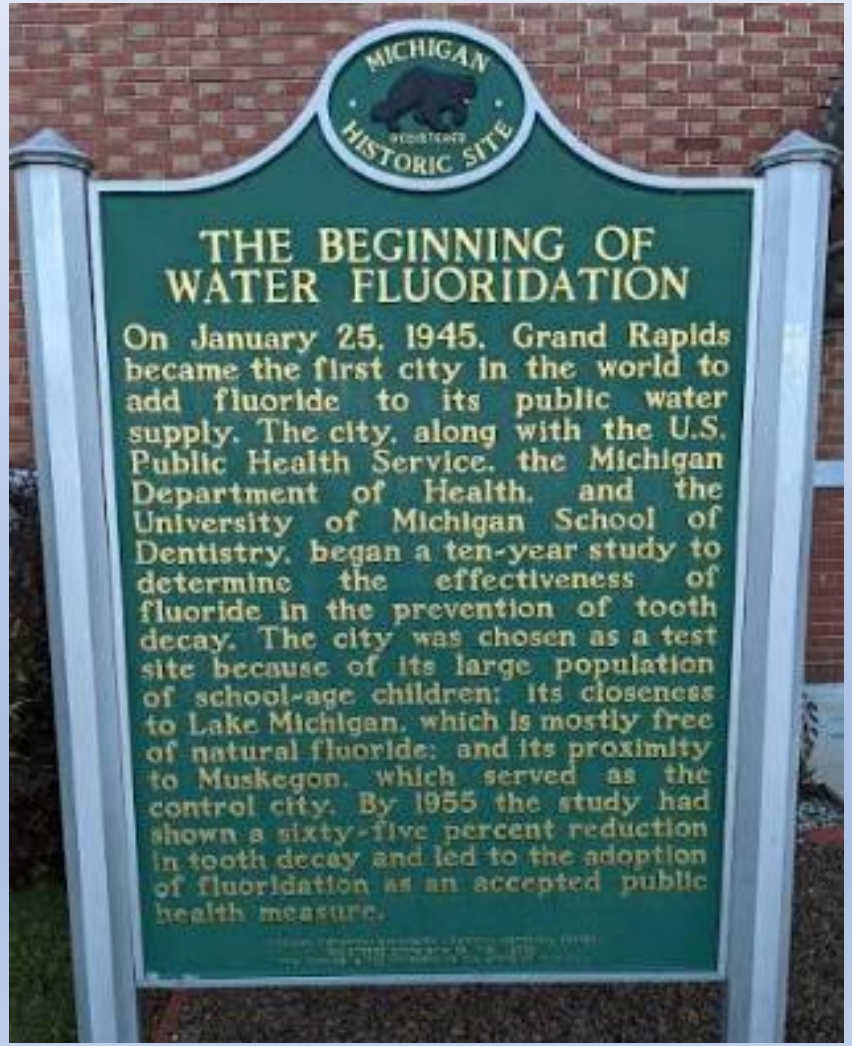
- Partnered with schools, community physicians, parents on a clinical trial
- 1930s: developed first effective whooping cough vaccine in Grand Rapids laboratory
- Worked internationally to curb pertussis and develop the diphtheria-tetanus-pertussis vaccine



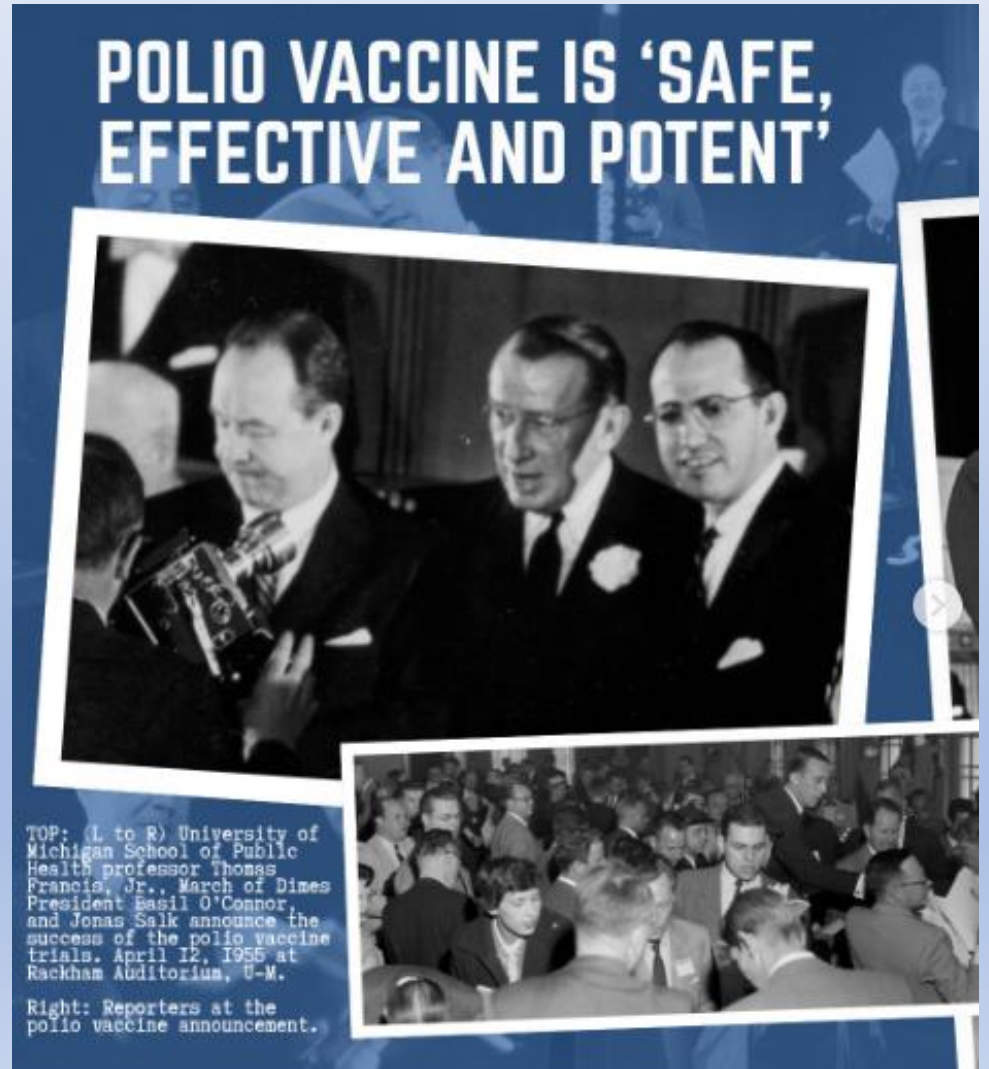


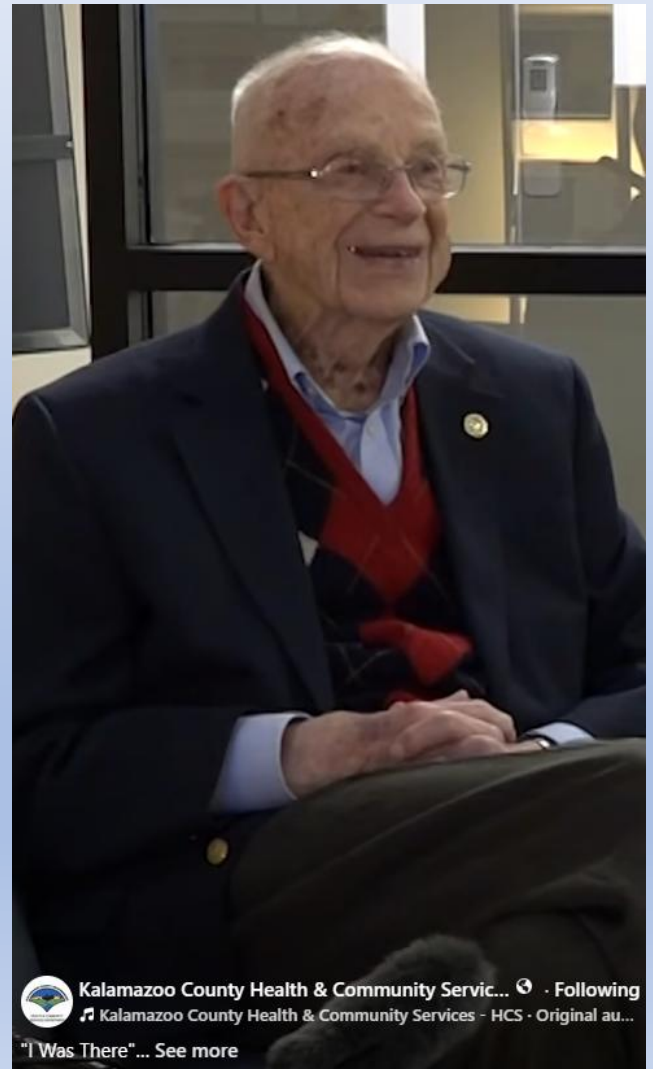
Grands Rapids first in world to fluoridate water January 25, 1945

- City, US Public Health Service, MDHHS, and U of M School of Dentistry partnered on a 10 year study on tooth decay prevention



Salk polio vaccine world announcement at the University of Michigan, April 12, 1955





Portage COVID-19 vaccine manufacturing

- Primary US hub for compounding, sterile vial filling, packaging, initial nationwide distribution
- US' largest vaccination campaign arguably began here on December 13, 2020

Residents cheer on historic shipment of COVID vaccine from outside Michigan Pfizer plant

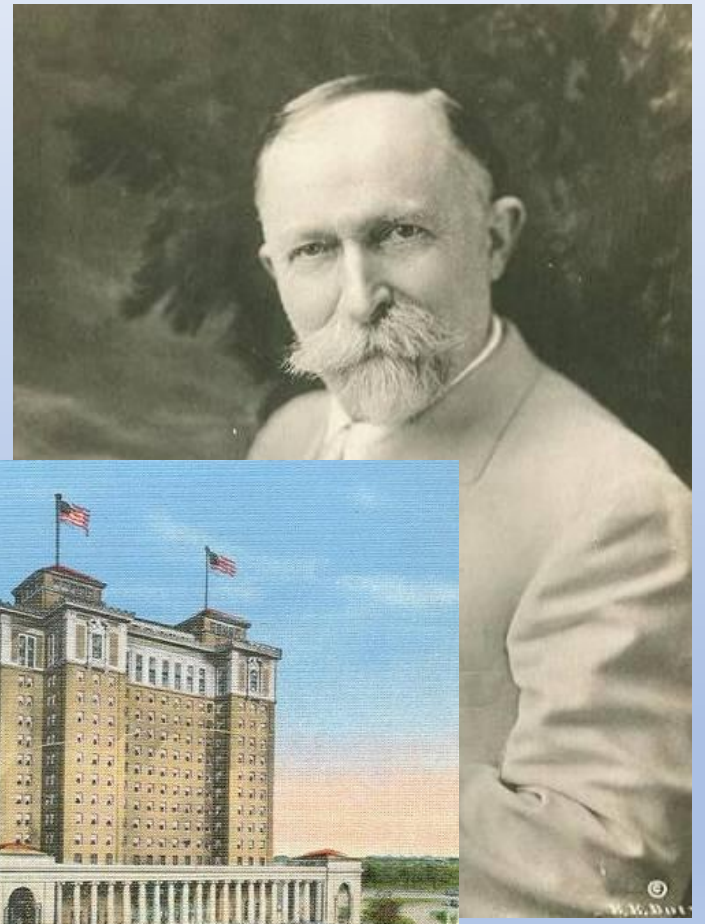
Process requires, federal waivers, dry ice, air priority and more



PORTAGE, Mich. – **The eyes of the nation are on Portage**, a city on Michigan's west side in Kalamazoo County, just west of Battle Creek.

John Harvey Kellogg: A Cautionary Tale

- Physician and Surgeon
- Founded Battle Creek Sanitarium – hundreds of thousands visited
- Believed in “biologic living”
- Right about plant-based eating, dangers of alcohol and tobacco
- But promoted eugenics, cure-alls, hydrotherapy, electrotherapy and 15-quart enemas





19th Century America

- Medical training as apprenticeship
- Physicians' view: public health offers insight into environment, sanitation, policies to control epidemics
- Public health's view: physicians offer new knowledge about disease origins, clinical observations

- 80% members of American Public Health Association in 1872 were physicians
- Partners in social and moral reform movements

Early 20th Century Divide

1. **Medical profession gains power and views public health interventions as interfering with doctor-patient relationship**

- Tuberculosis and syphilis reporting
- Public Health: public good over individual rights sometimes



Early 20th Century Divide

2. **Delivery of health services by public health agencies appeared to threaten economics of rising medical profession**

- Outpatient medical dispensaries, school-based nursing, laboratories all viewed as incursions
- Organized medicine triumphed through lobbying

20th Century Divide

3. **The rise of the hospital as the preeminent institution of modern medicine**

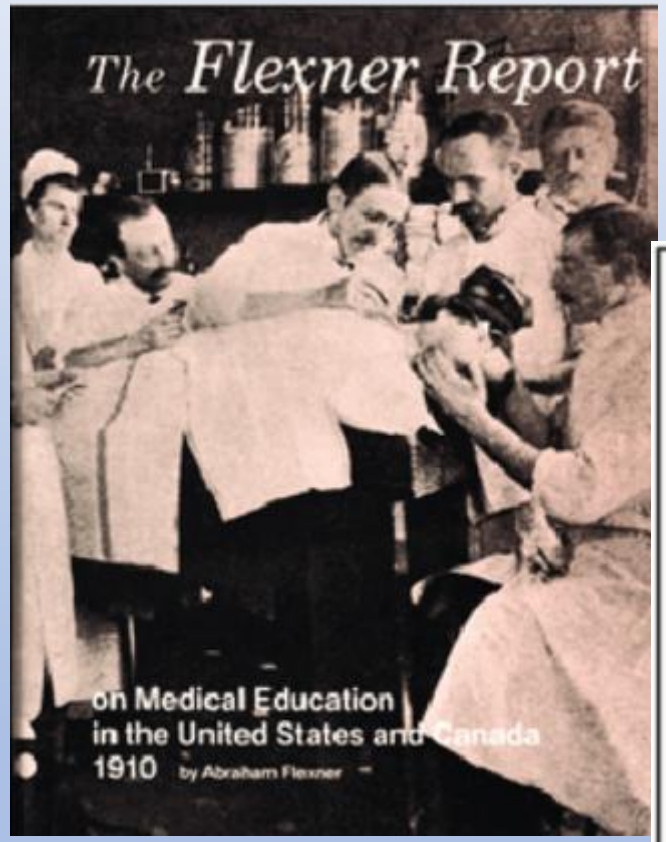


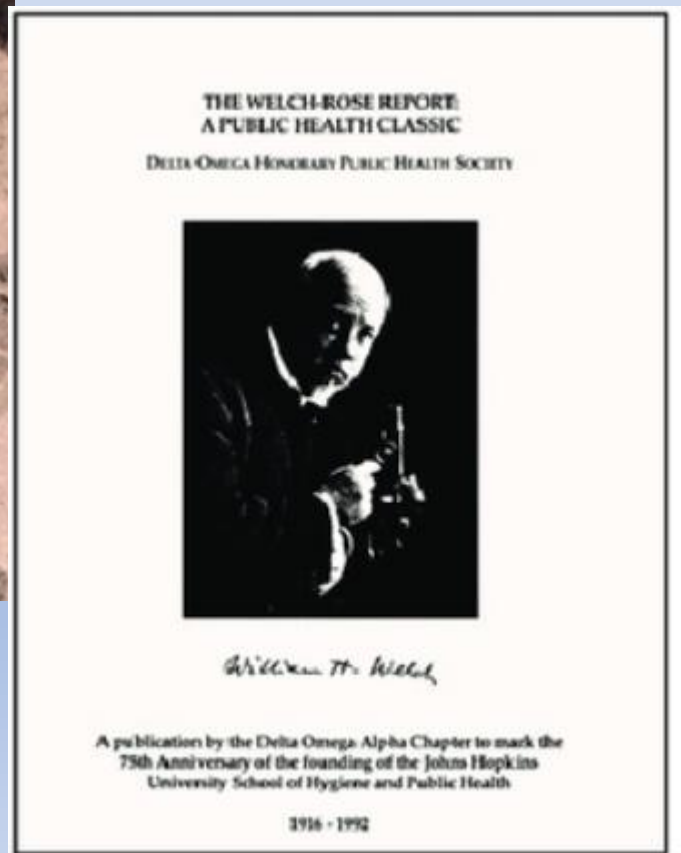
"Now the general attitude of the medical profession is part of the kind of work that they do; **the fact that a physician is generally so absorbed in what he is doing, his own work and the work with his own patients, that he does not look out and get a broad view of the situation as it exists in the state**, and his attitude, the natural attitude, is one of obstruction."- Dr. Hermman Biggs, NY Dept Public Health 1921

Early 20th Century Divide

4. **Medical and public health education separated**

- Medical training standardized
- Public health schools started with wide variation
- Physical and power separation





The catalyst: biomedical model

Toward

- Bacteriology, laboratory
- Disease research and treatment
- Individuals
- Disease specificity
- Prevention skepticism
- Medicine as more “objective”
- Scientific and technology to solve social problems

Away

- Social, behavioral, environmental forces of health and disease
- Socioeconomic status, ethnicity, race and culture, psychology, gender as significant factors in health
- Populations

Compare and contrast 1

	Medicine	Public Health
Focus	Individual	Population
Service ethic	Personal, conditioned by social responsibilities	Public, tempered by individual concerns
Intervention	Diagnosis and treatment, care for whole patient	Prevention, health promotion for whole community
Emphasis	Medical care	Spectrum aimed at environment, human behavior, lifestyle and medical care
Image	Well established profession with sharp public image	Multiple professional identities with diffuse public image

Compare and contrast 2

	Medicine	Public Health
Training certification	Uniform for specialist beyond professional medical degree	Variable for specialist beyond professional public health degree
Organization	**Organ system** (cardiology, neurology); **patient group** (obstetrics, pediatrics); **etiology and pathophysiology** (infectious diseases, oncology); **technical skill** (radiology, surgery)	**Analytic method** (epidemiology, toxicology); **setting and population** (occupational health, international health); **substantive health problem** (environmental health, nutrition)
Biologic sciences	Central, stimulated by patient needs; move between laboratory and bedside	Central, stimulated by threats to population health; move between laboratory and field

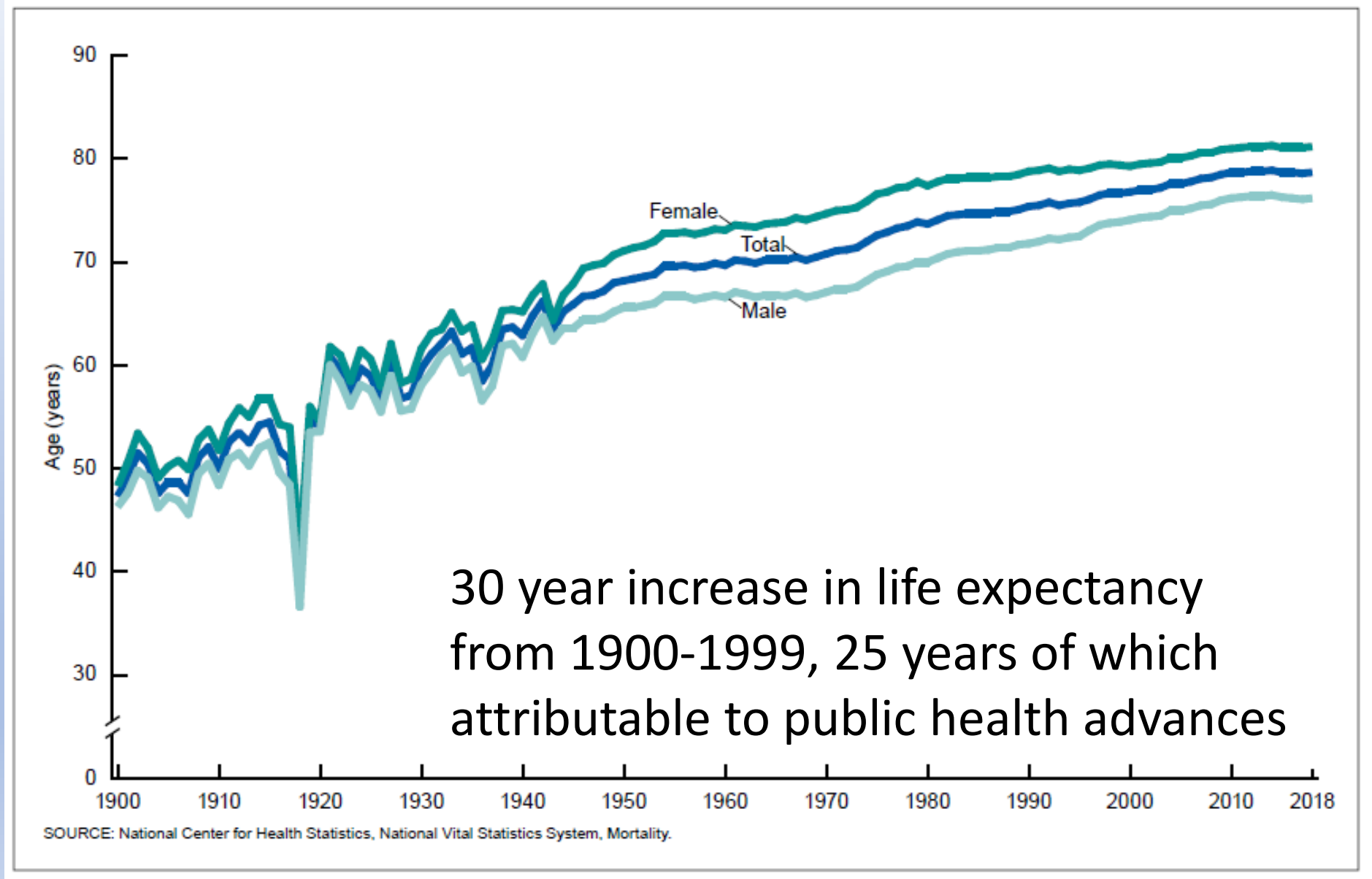
Compare and contrast 3

	Medicine	Public Health
Numeric sciences	Increasing in prominence though minor	Essential feature of training and analysis
Social sciences	Elective	Integral
Engineering sciences	Relevant, specialist materials, electronics, imaging and IT	Relevant, especially systems analysis, operations management, sanitation engineering and IT
Clinical sciences	Essential	Peripheral
Sector	Mainly private	Mainly public

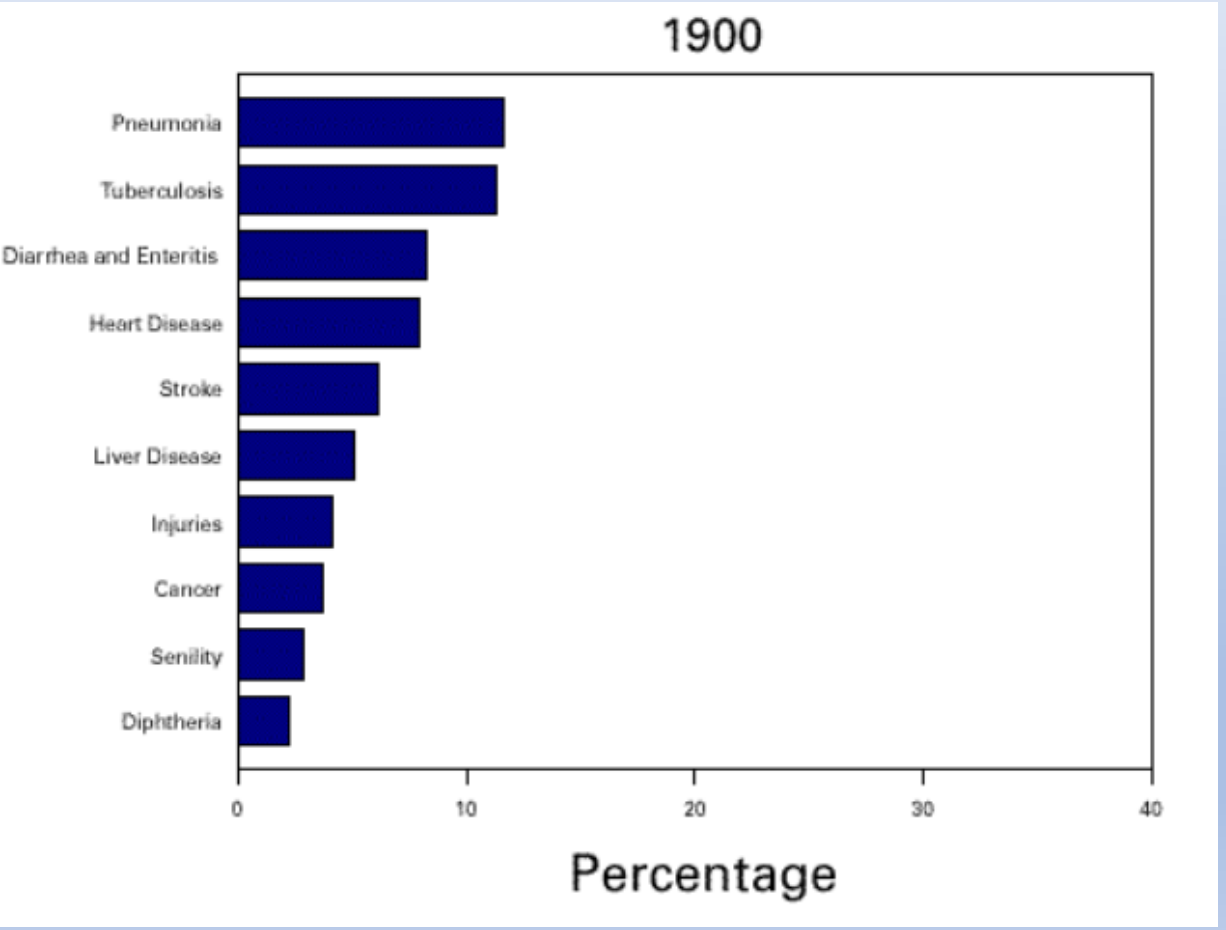
Ten Great Public Health Achievements -- United States, 1900-1999

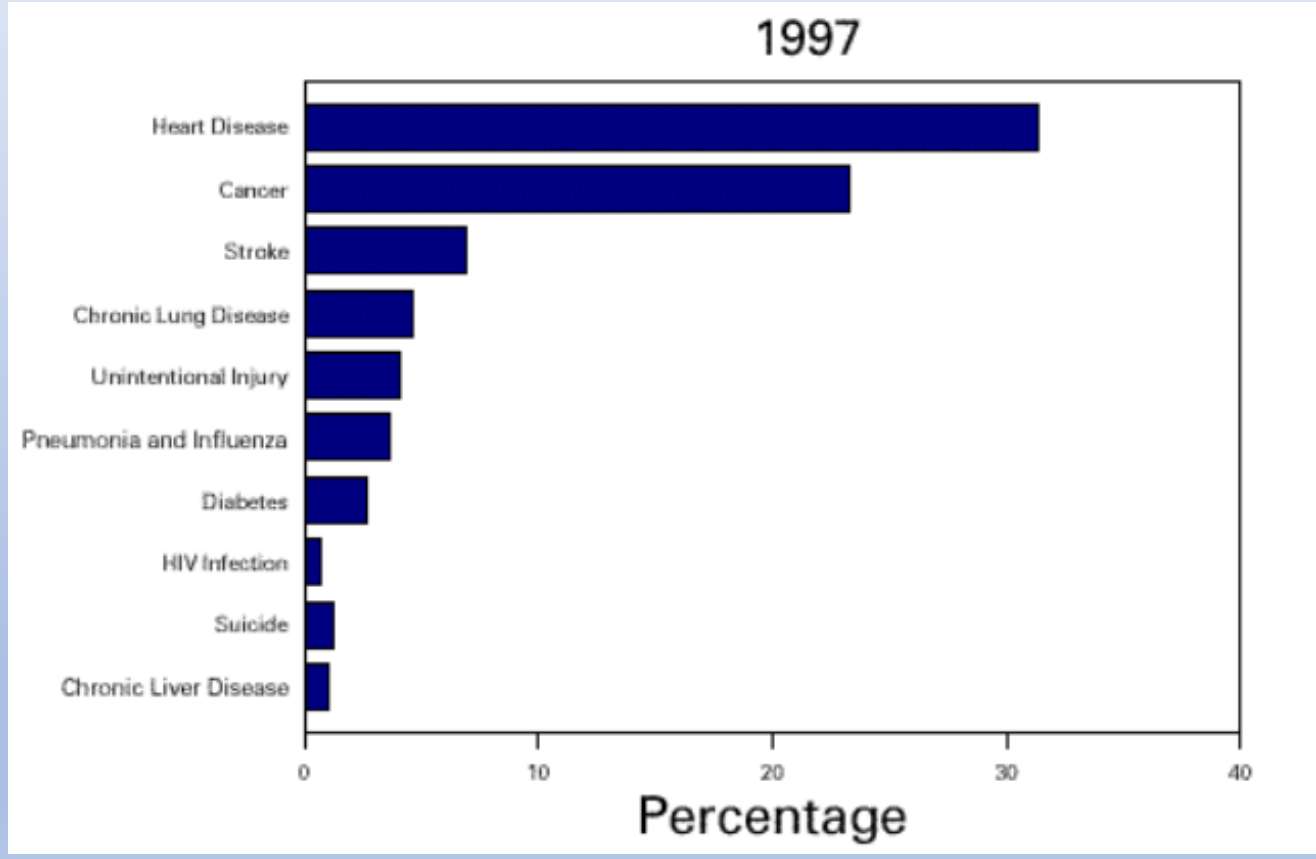
1. Vaccination
2. Motor-vehicle safety
3. Safer workplaces
4. Control of infectious diseases
5. Decline in deaths from coronary heart disease and stroke
6. Safer and healthier foods
7. Healthier mothers and babies
8. Family planning
9. Fluoridation of drinking water
10. Recognition of tobacco use as a health hazard

US Life expectancy, 1900-2018

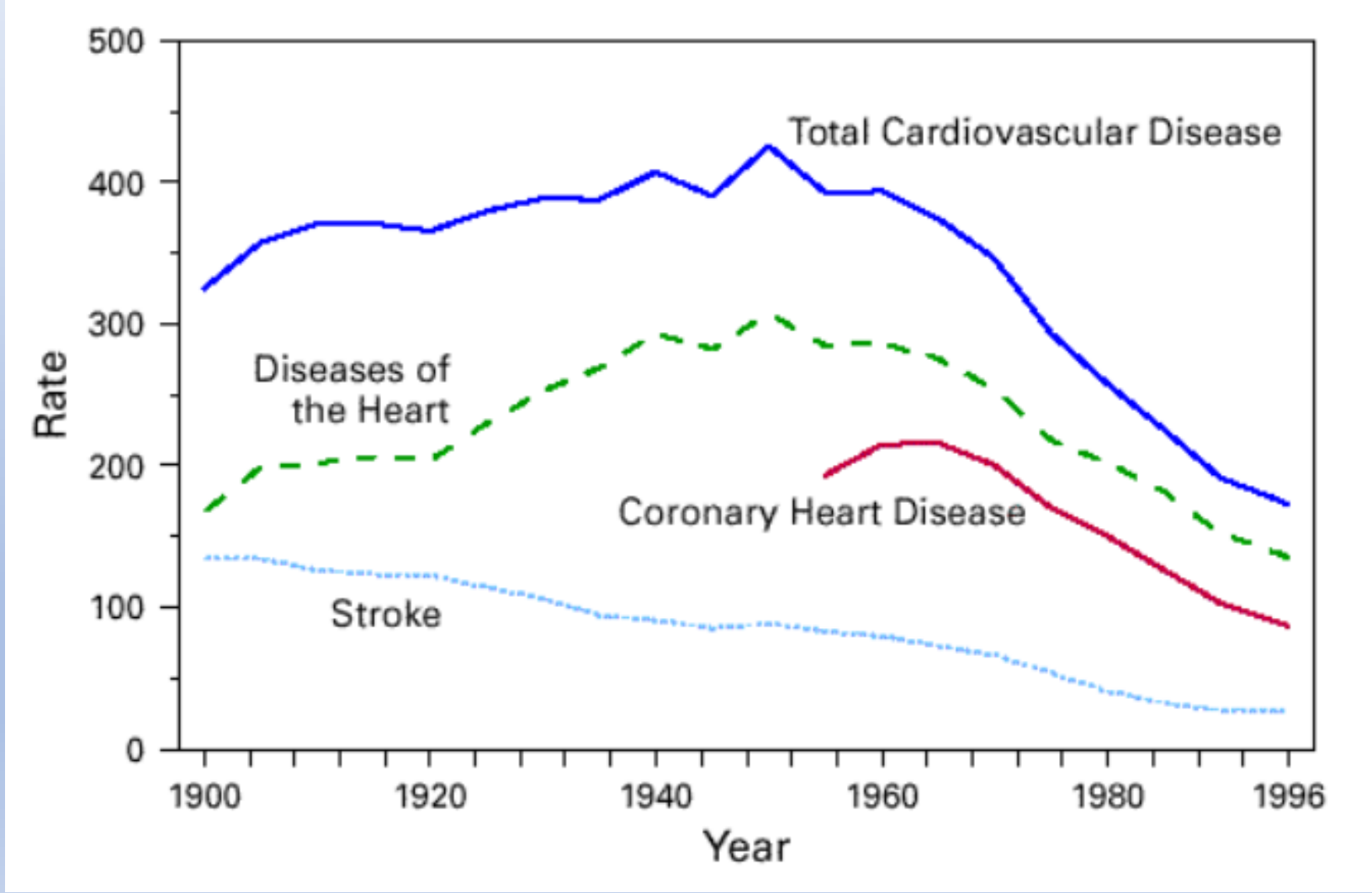


Ten leading causes of death as a percentage of all deaths in US, 1900 and 1997

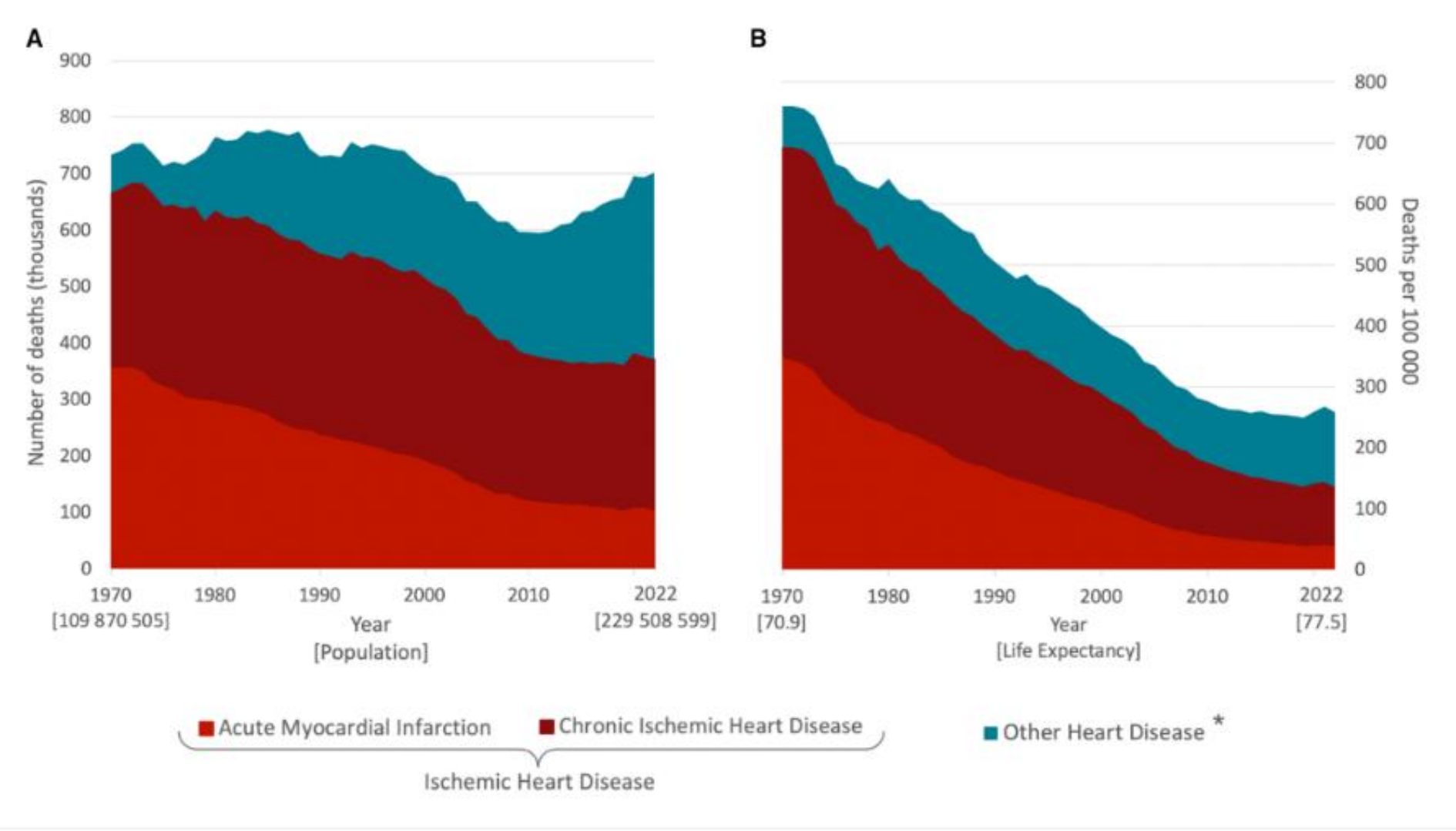




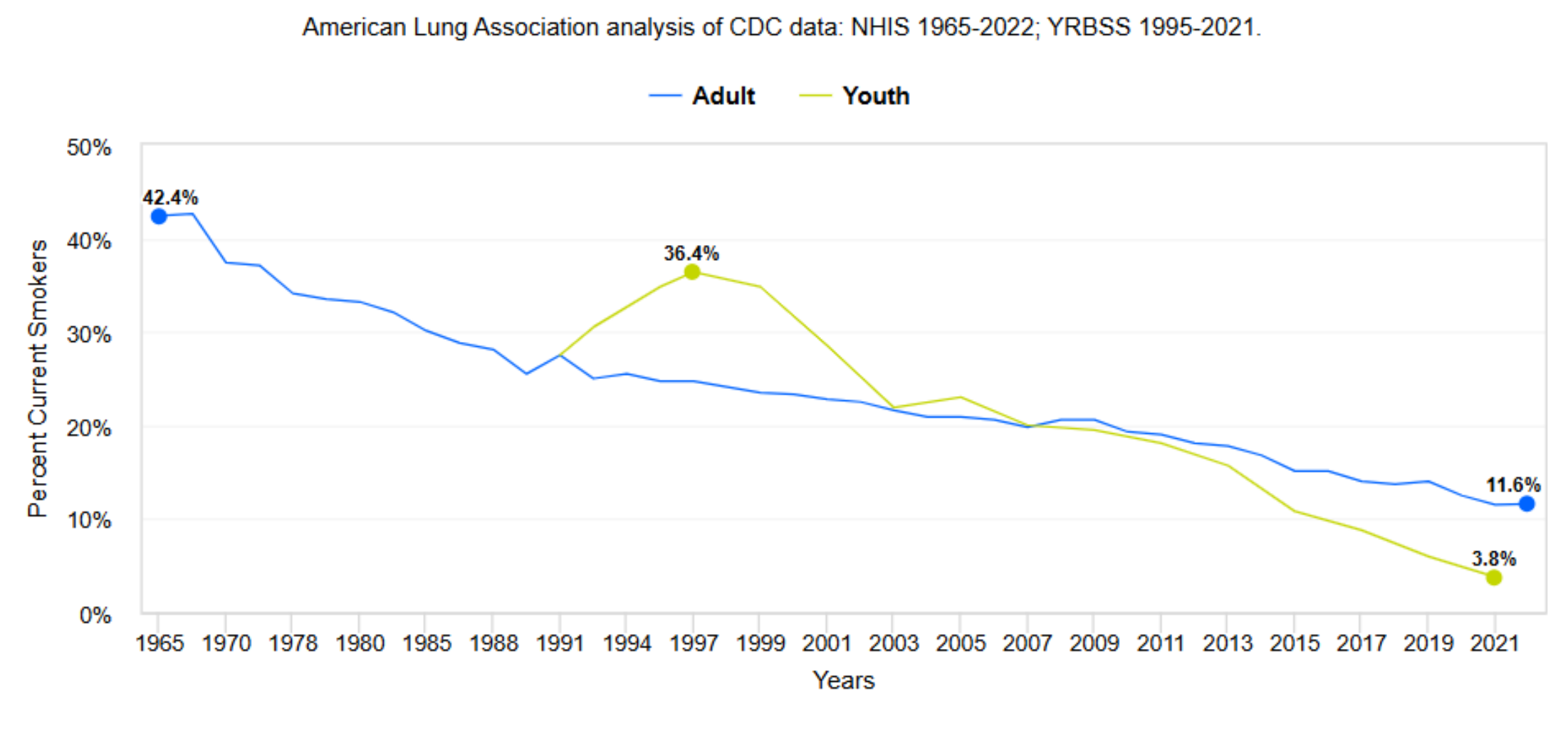
Age-adjusted rates of total CV disease in US 1900-1996



Absolute and age-adjusted mortality for heart diseases in US, 1970-2022

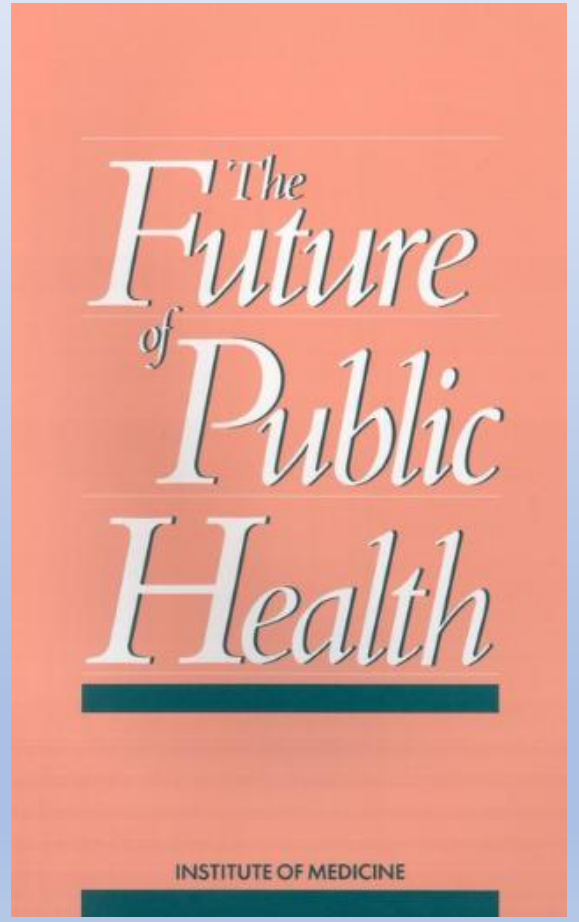


Smoking rates have fallen significantly

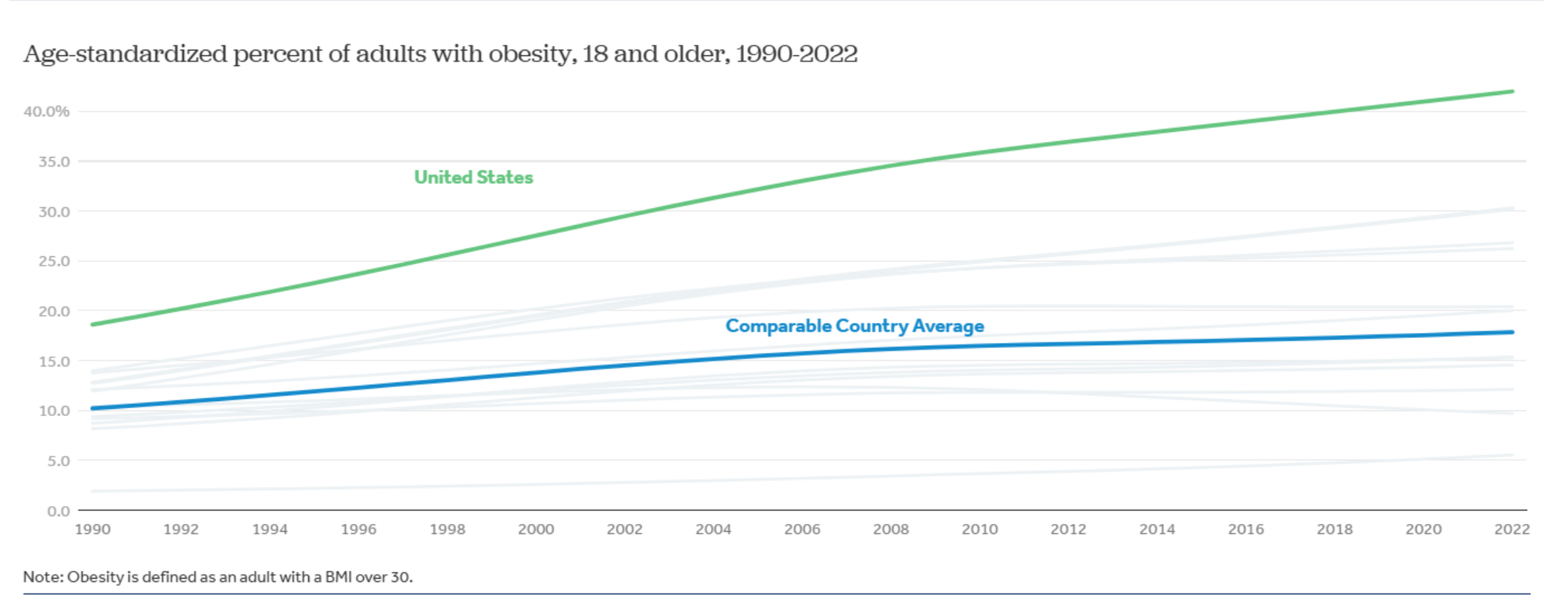


And yet…

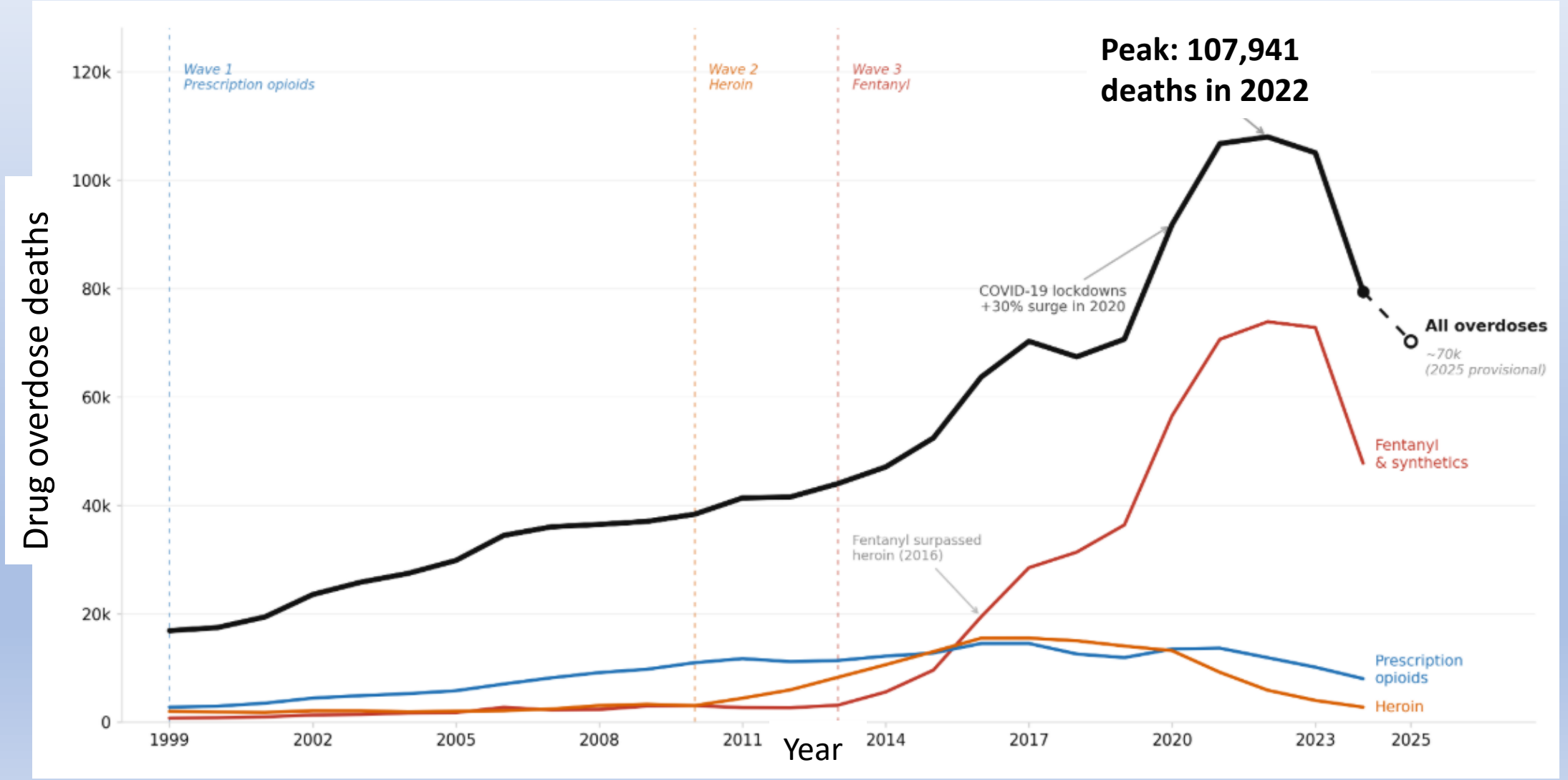
- Institute of Medicine, 1988: The Nation has lost sight of its public health goals and has allowed the system of public health to fall into 'disarray.'



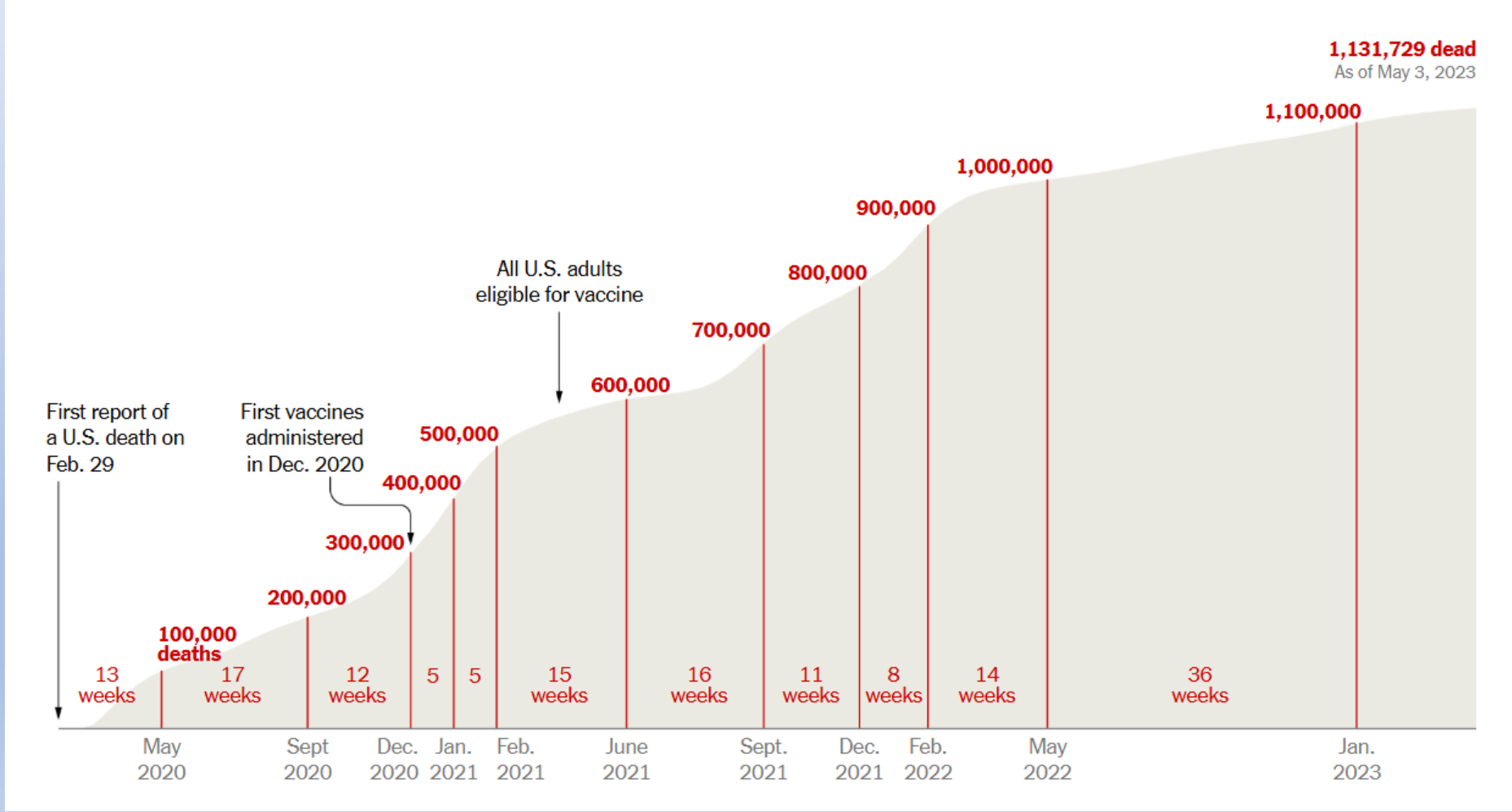
The U.S. obesity rate is twice that of peer nations



US drug overdose deaths, 1999-2025



COVID-19 deaths during 2020-2023 pandemic, USA



Estimates of COVID-19 Attributable Deaths, Hospitalizations, and Infections Averted by the U.S. Vaccination Program Between December 12, 2020, and November 30, 2022

	Averted number	95% Credible Interval*
Deaths	3,255,656	3,088,126 to 3,410,112
Hospitalizations	18,585,131	17,780,337 to 19,355,830
Infections	119,851,779	112,698,238 to 127,129,565

Lives that could have been saved between January 2021-April 2022 if everyone who was eligible received COVID-19 vaccine

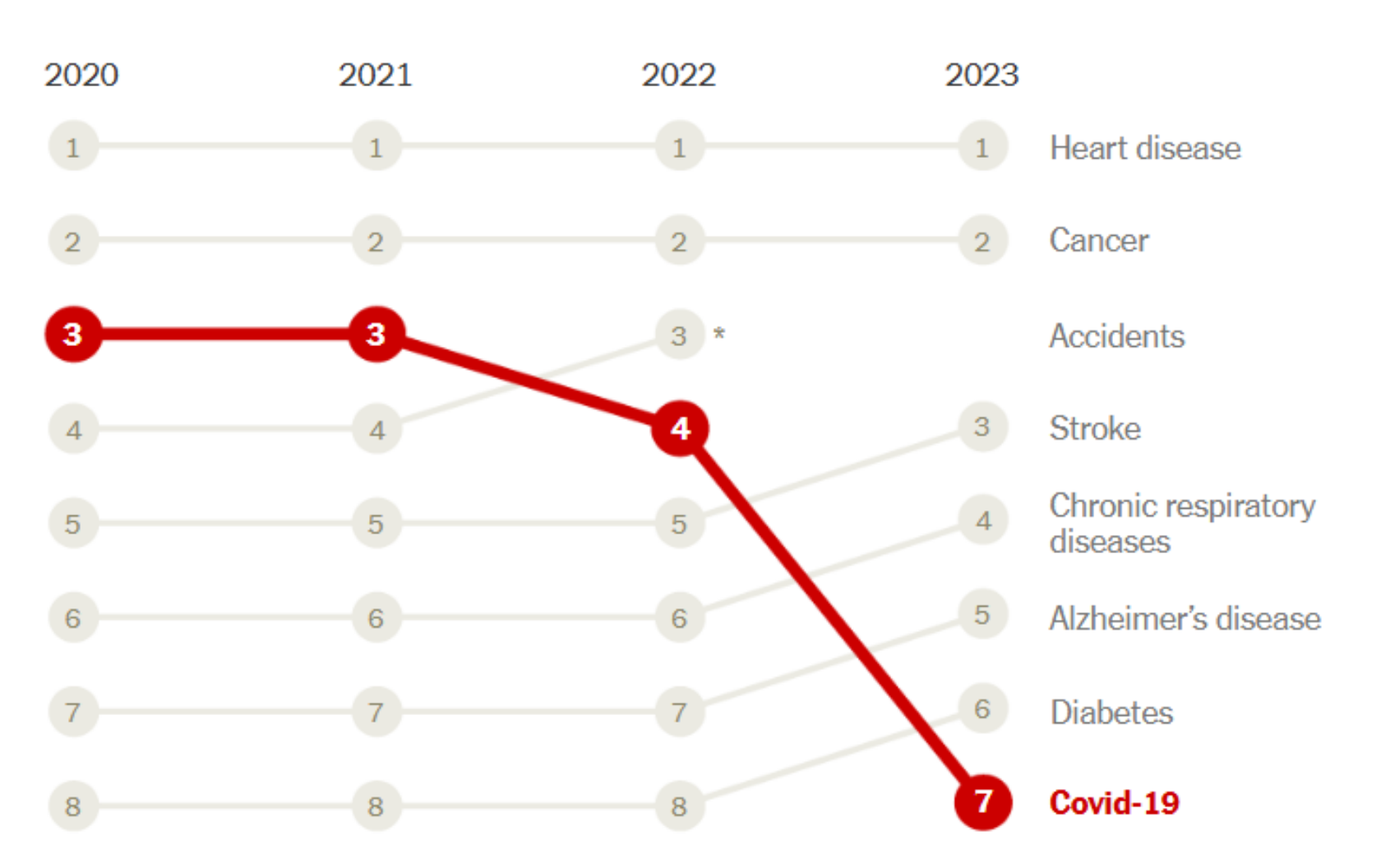
USA

- 318,000

Michigan

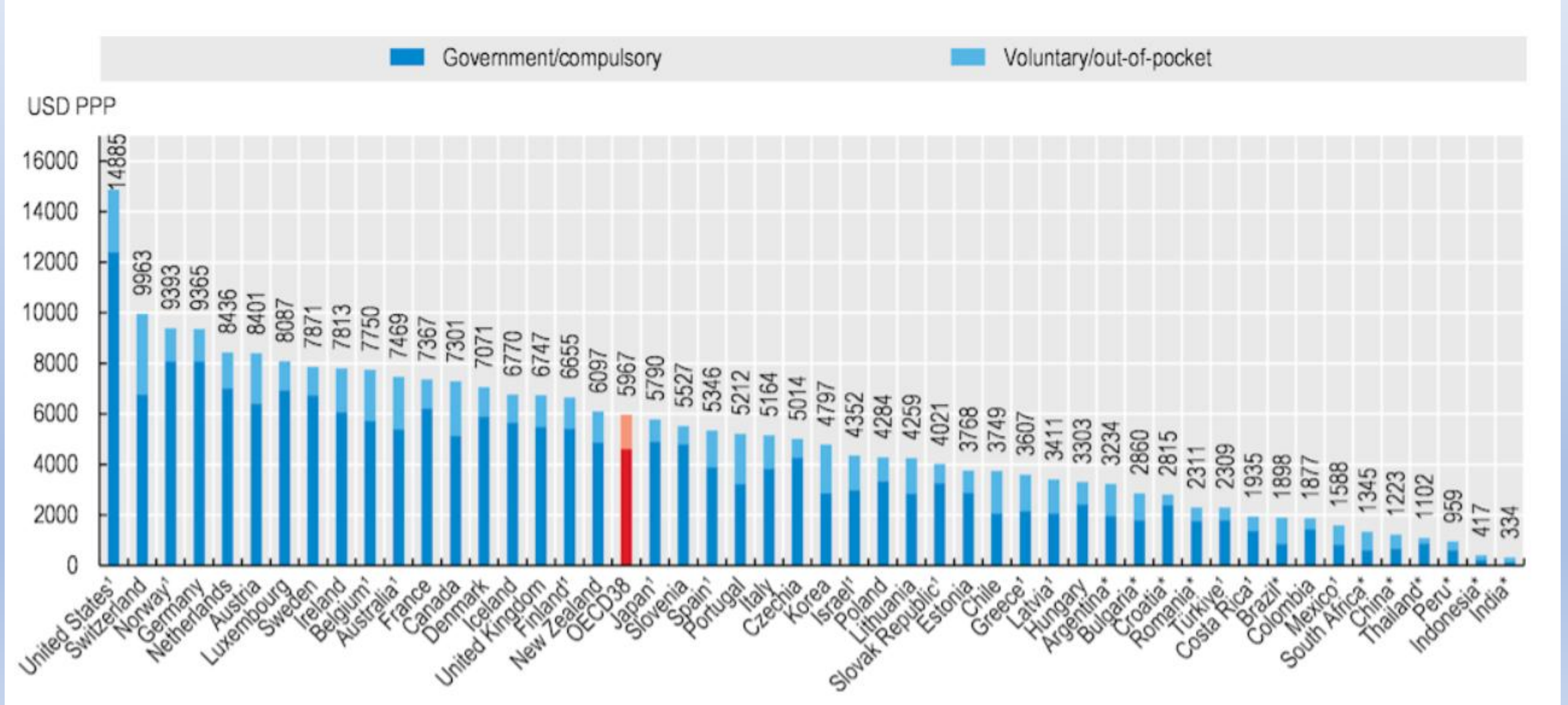
- 12,950

Top ten leading causes of death - 2020-2023, USA



So how is US allocating resources to improve health?

Health expenditure per capita, 2024 in OECD countries



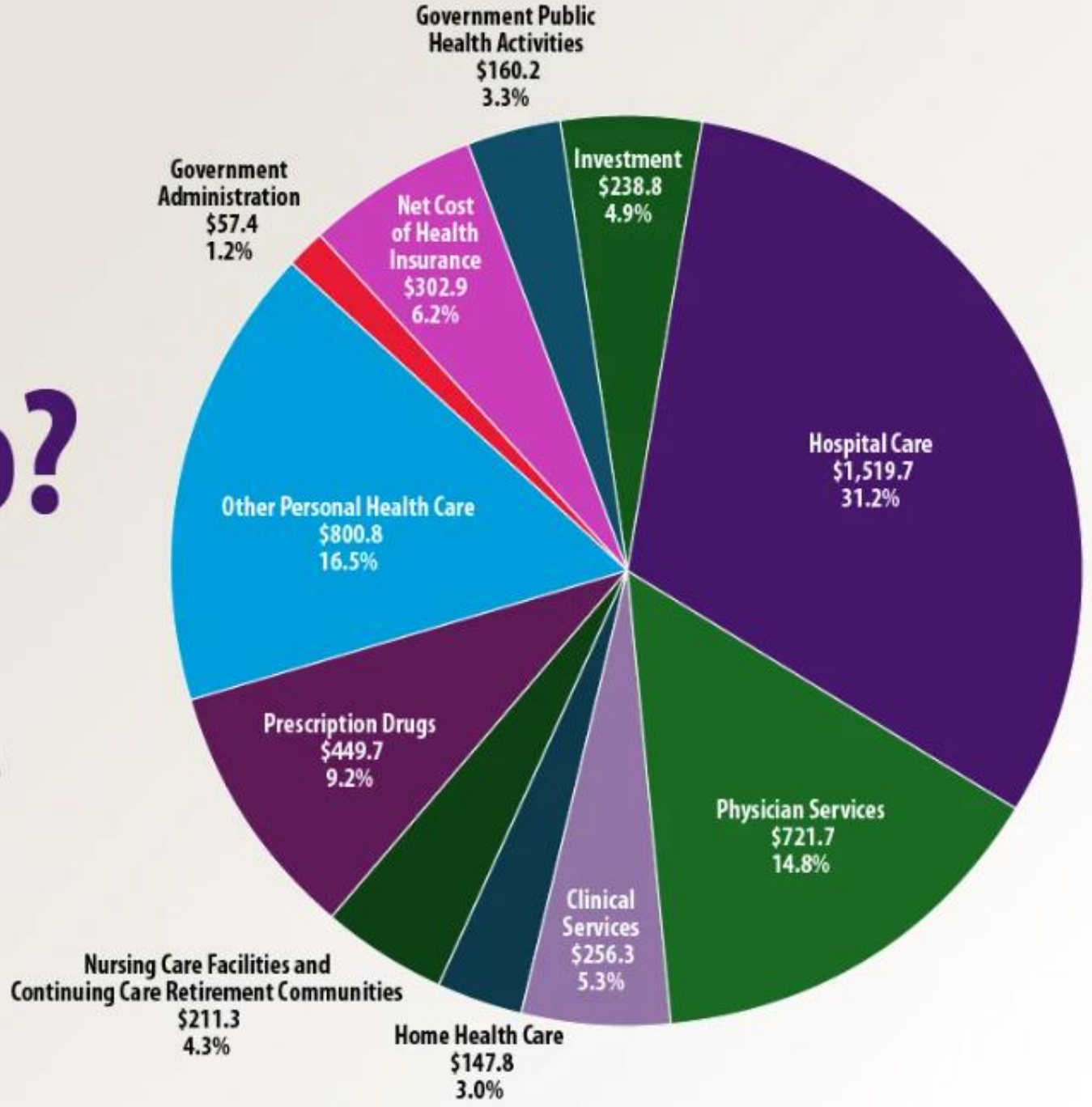
US healthcare expenditures per year (2023)

- $4.8 trillion

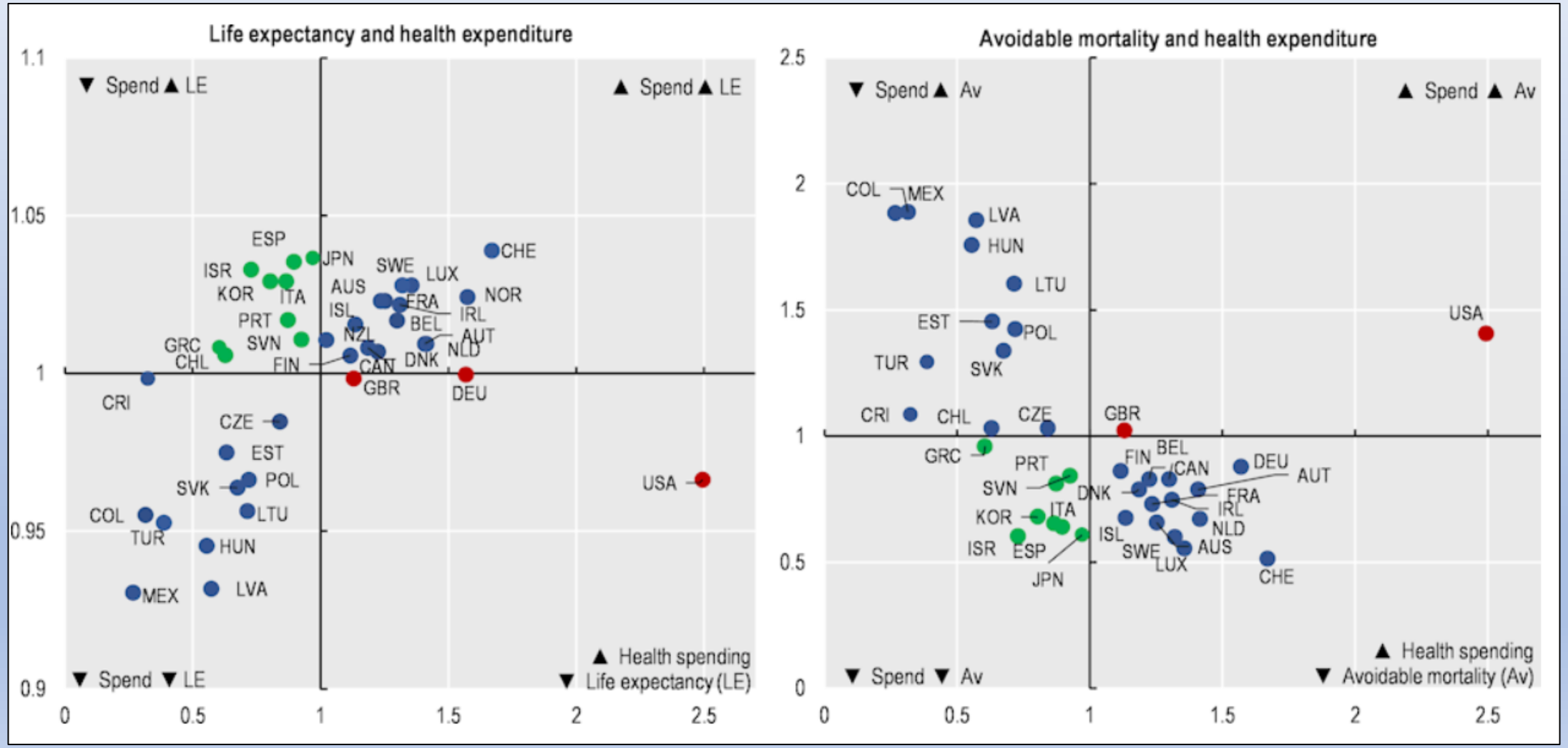
  $4,866,500,000,000

Where did it go?

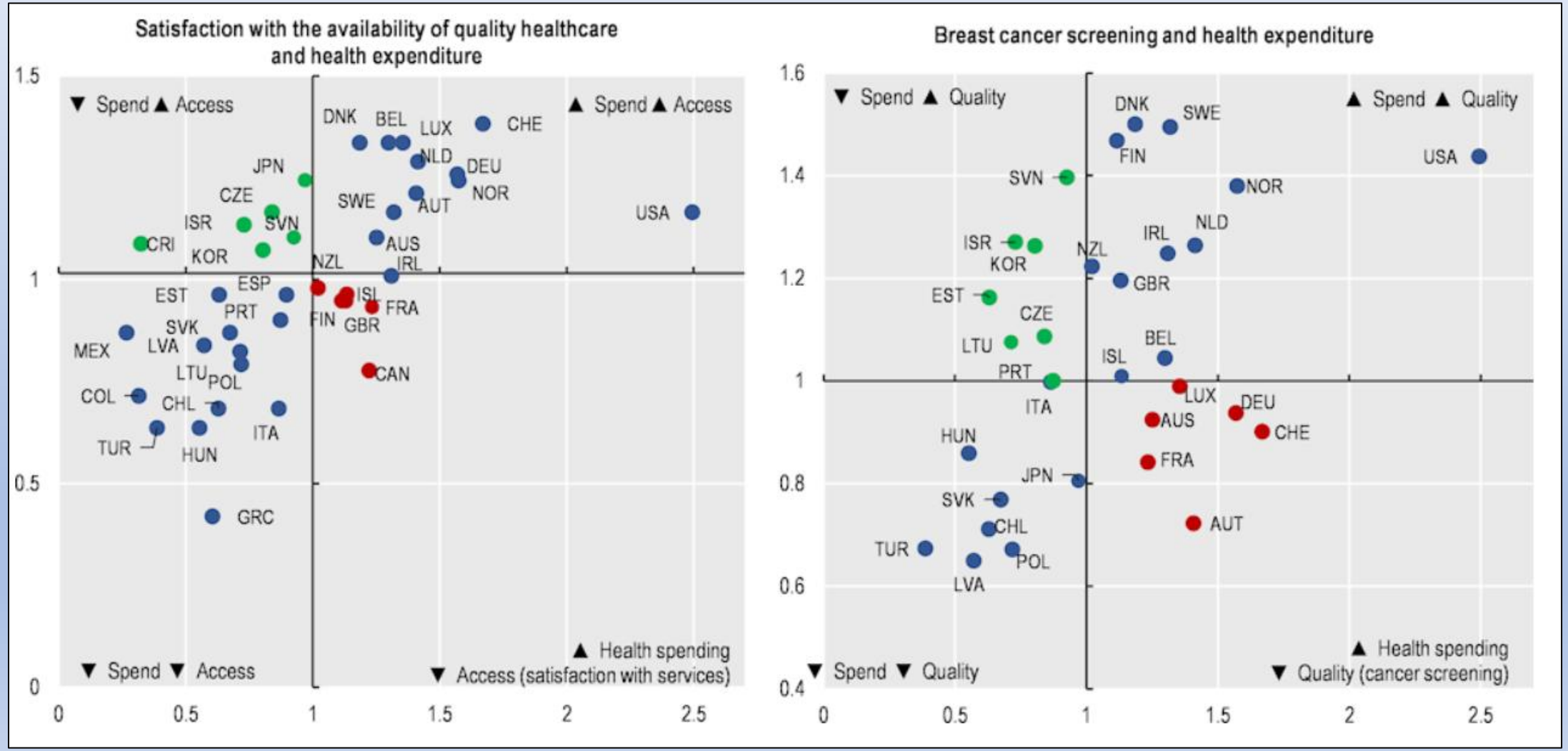
The U.S. spent $4,866.5 billion on health care in 2023



Association between health spending and health outcome in OECD countries



Association between health spending and access and quality in OECD countries

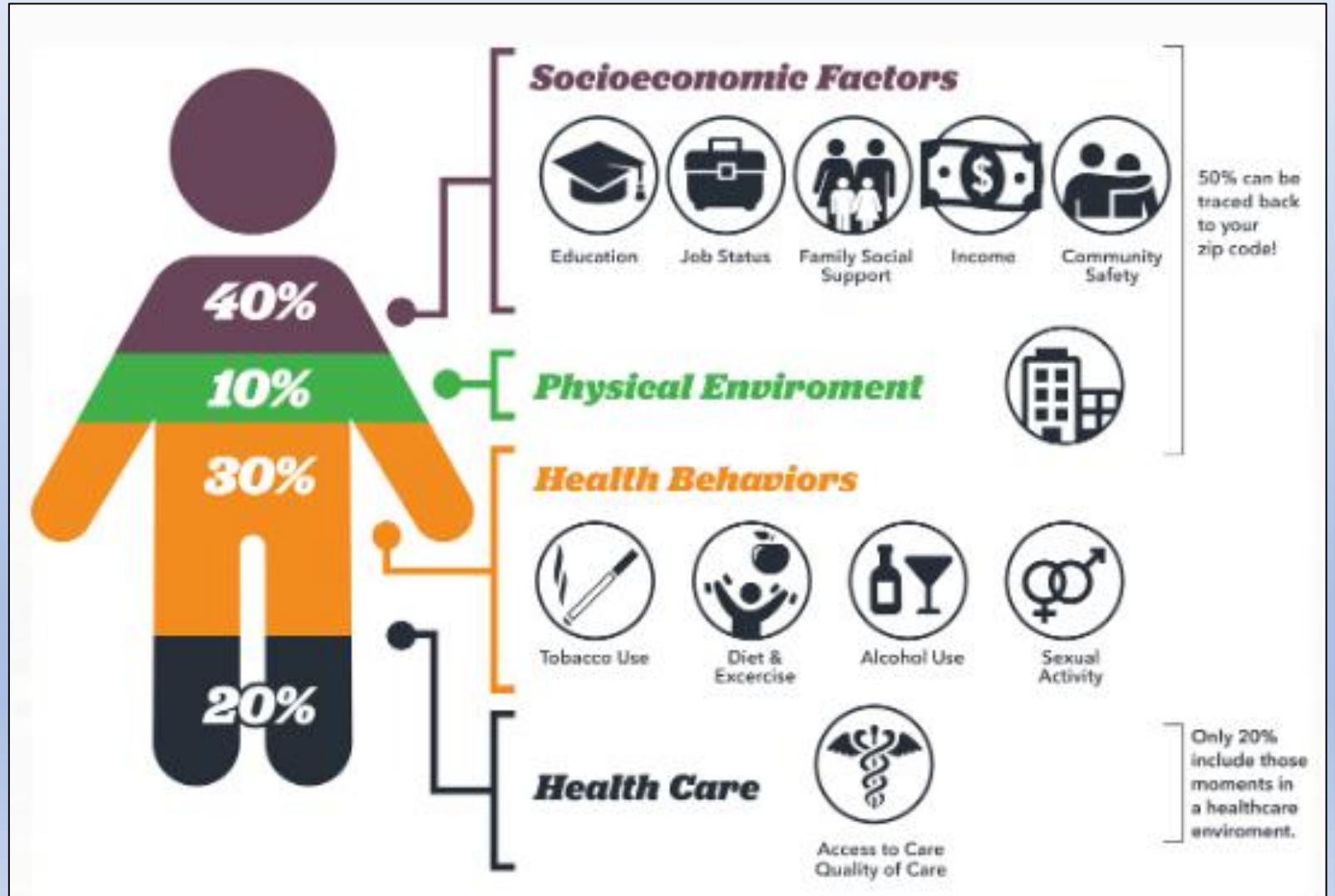


Aside: If healthcare, need primary care…

- National Academies: primary care is the only health care component where an increased supply is associated with better population health and more equitable outcomes.

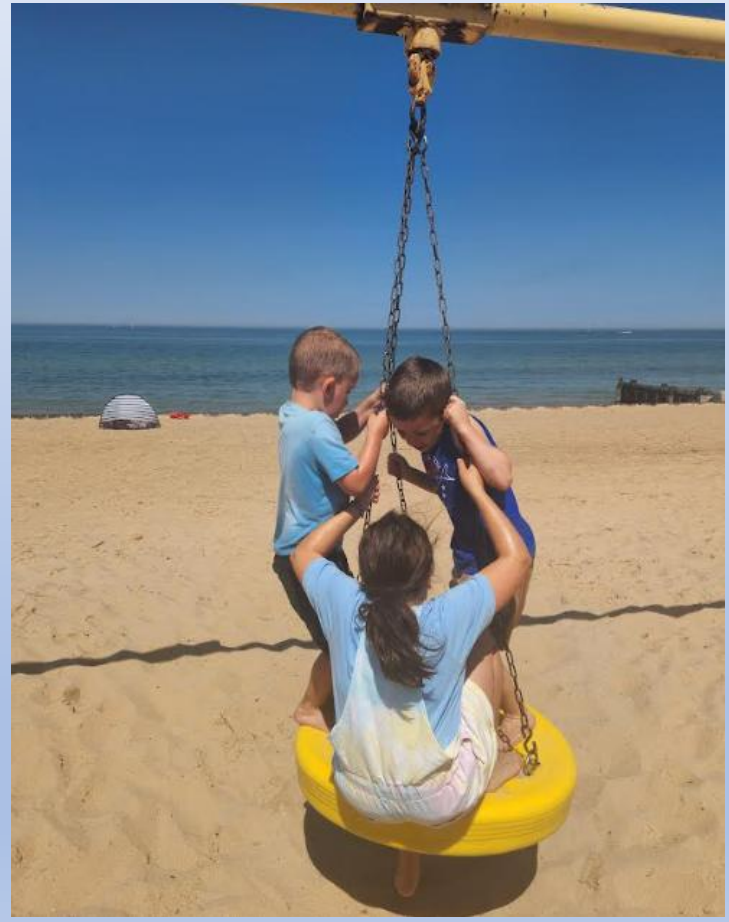


So what actually influences health the most?

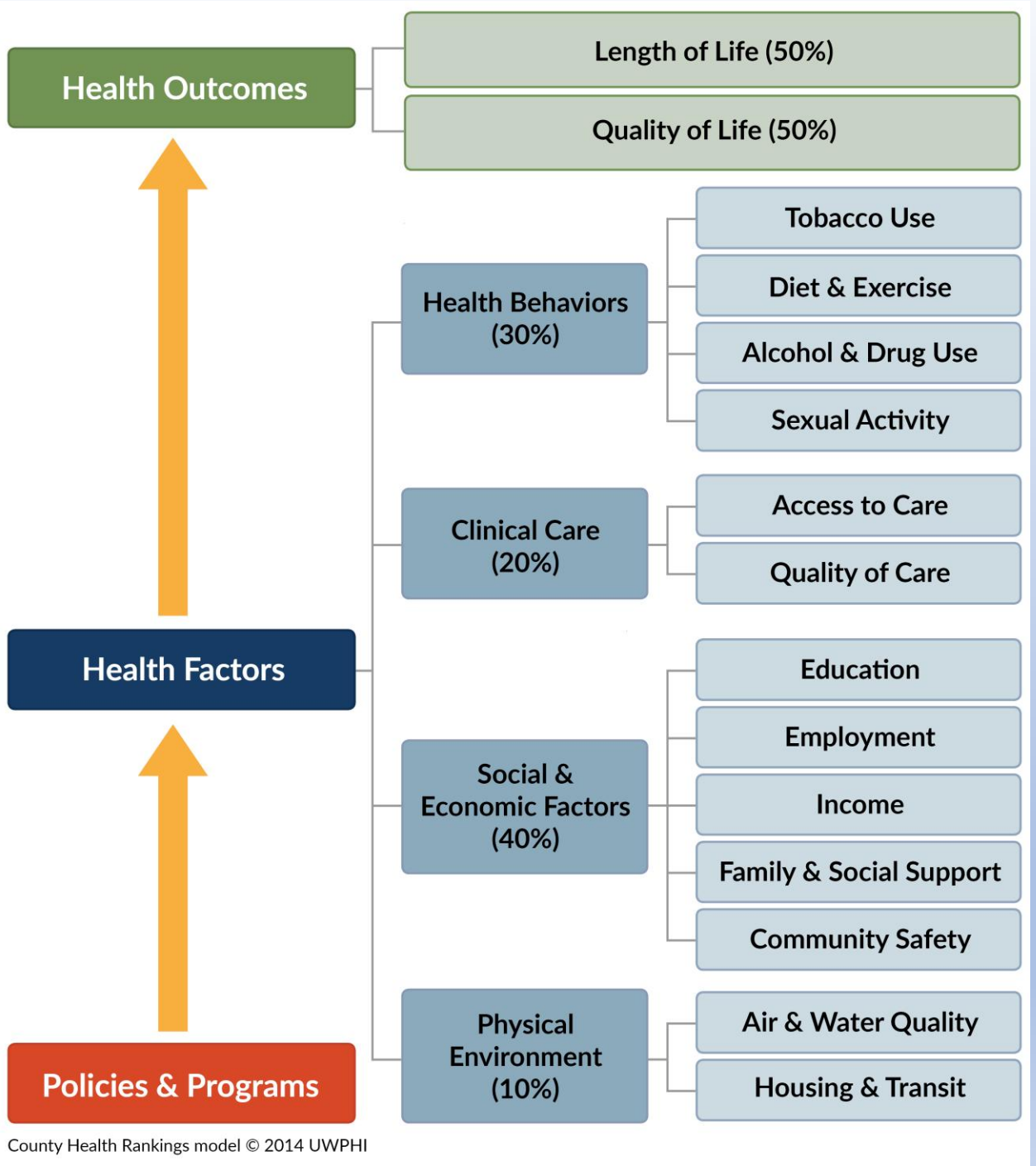


Social Determinants of Health (SDOH)

- Income
- Education
- Unsafe or unhealthy housing
- Opportunities to exercise, walk
- Proximity to highways, factories
- Access to primary care
- Unreliable public transit
- Residential segregation



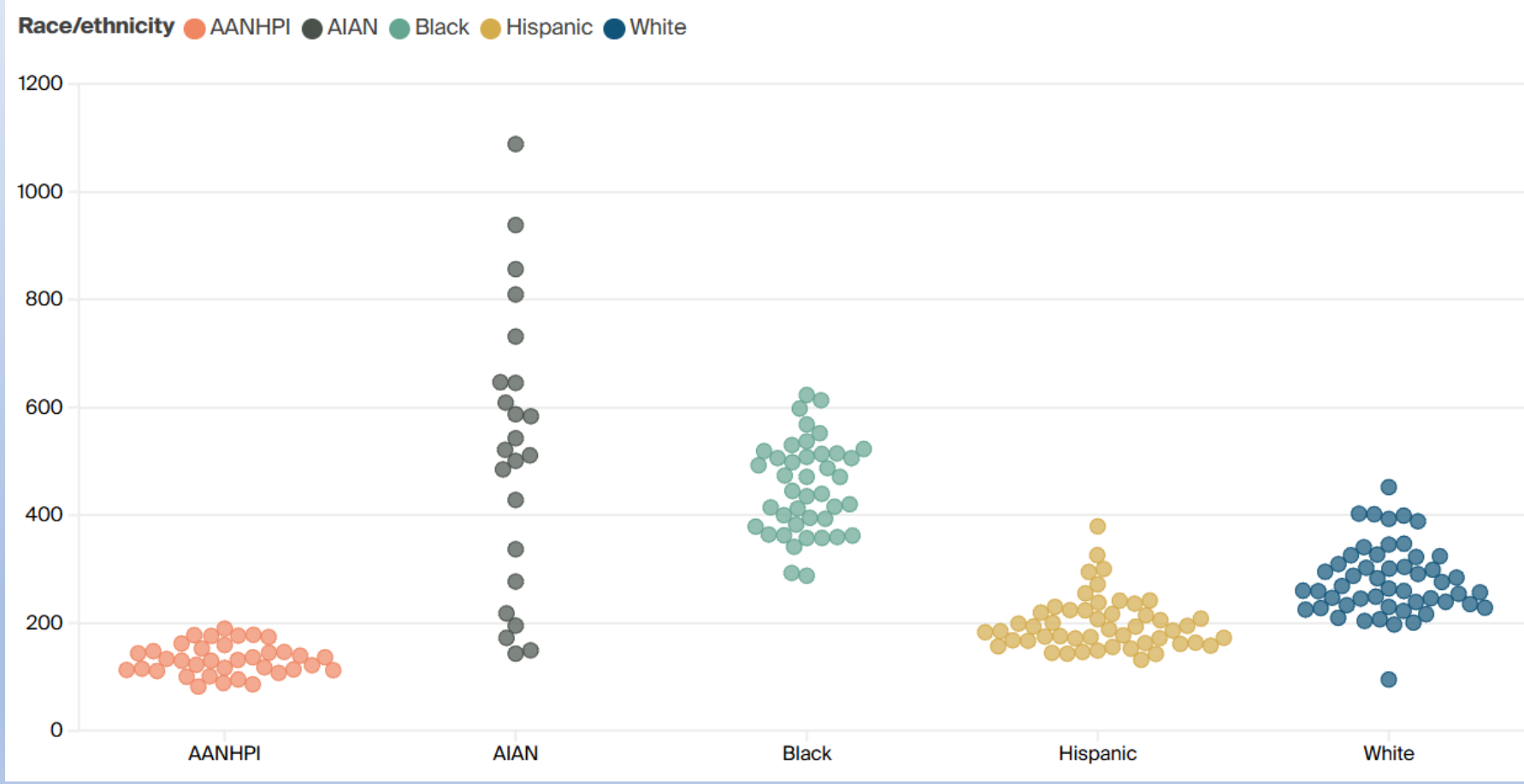
What actually influences health



Health disparities

- A type of **preventable health difference** that is closely linked with social, political, economic, and environmental disadvantage.
- Health disparities may occur because of race, ethnicity, sex, gender identity, sexual orientation, age, religion, disability, education, income, where people live, or other characteristics.

Premature deaths from avoidable causes occur at a higher rate among AIAN and Black people compared to other racial and ethnic groups.



Premature deaths from avoidable causes per 100,000 population, by US state and race/ethnicity (2022–2023)

Cardiovascular disease mortality rates are higher in US rural than urban areas

	AAMR per 100,000			2010-2022			
	2010 (95% CI)	2019 (95% CI)	2022 (95% CI)	Overall Change[a] (95% CI)	*P* Value for Differential Change[b]	APC (95% CI)	*P* Value for Differential Change[c]
Overall							
Rural	431.6 (429.5-433.8)	401.6 (399.7-403.6)	435 (432.9-437.1)	3.4 (0.4-6.4)	<0.001	0.1 (−0.3 to 0.6)	0.16
Small/ medium	381 (379.5-382.5)	356.7 (355.3-358)	385.8 (384.4-387.2)	4.8 (2.8-6.9)	<0.001	0.2 (−0.2 to 0.5)	0.08
Urban	369.3 (368.1-370.5)	333.4 (332.4-334.4)	345.5 (344.5-346.5)	−23.8 (−25.3 to −22.2)	Ref	−0.2 (−0.5 to 0.0)	Ref

AAMR=annual age-adjusted cardiovascular mortality rate

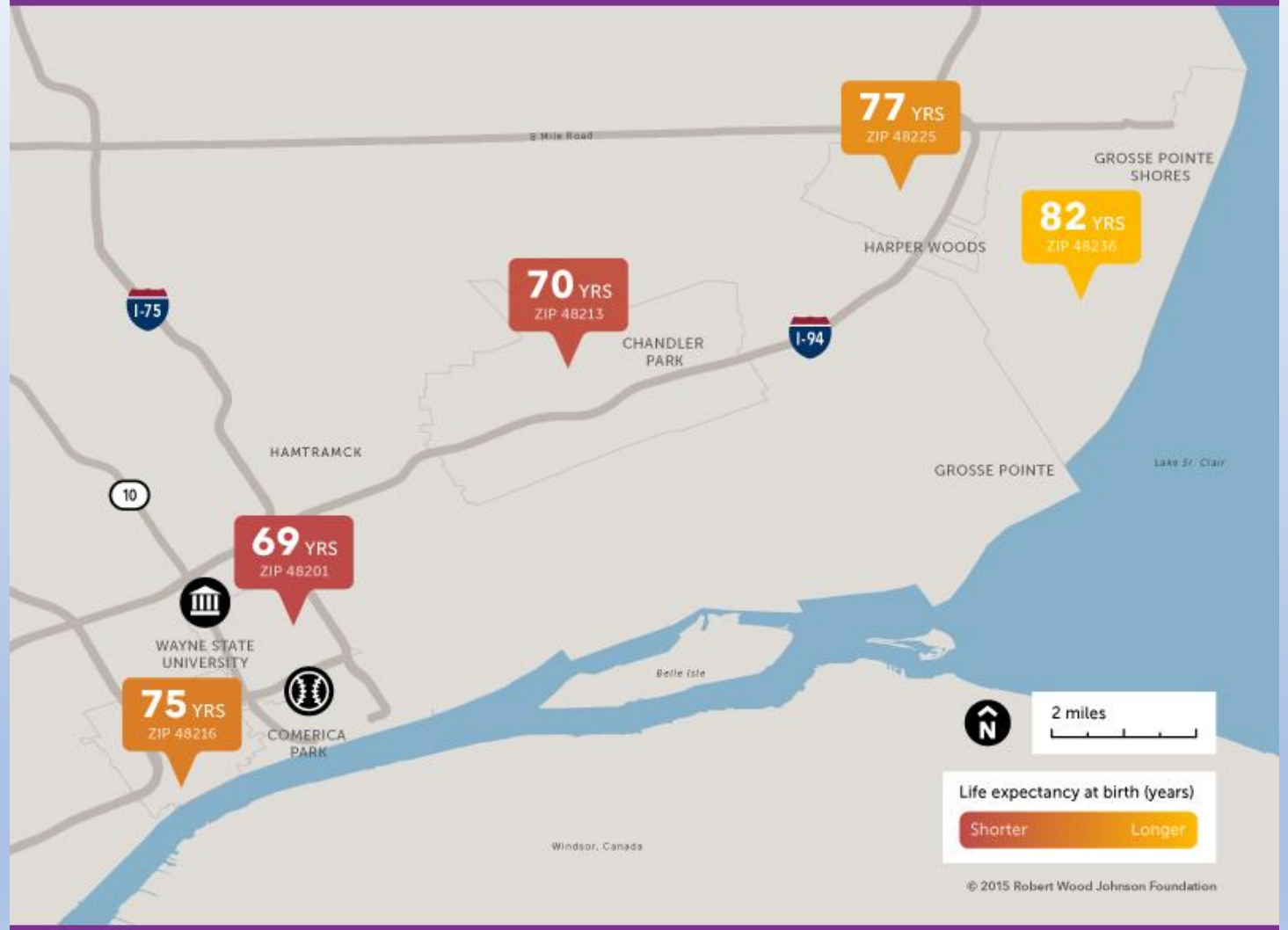
Marinacci, L, Zheng, Z, Mein, S. et al. Rural-Urban Differences in Cardiovascular Mortality in the United States, 2010-2022. JACC. 2025 Jan, 85 (1) 93–97. https://doi.org/10.1016/j.jacc.2024.09.1215

DETROIT, MICHIGAN

Short Distances to Large Gaps in Health

Follow the discussion

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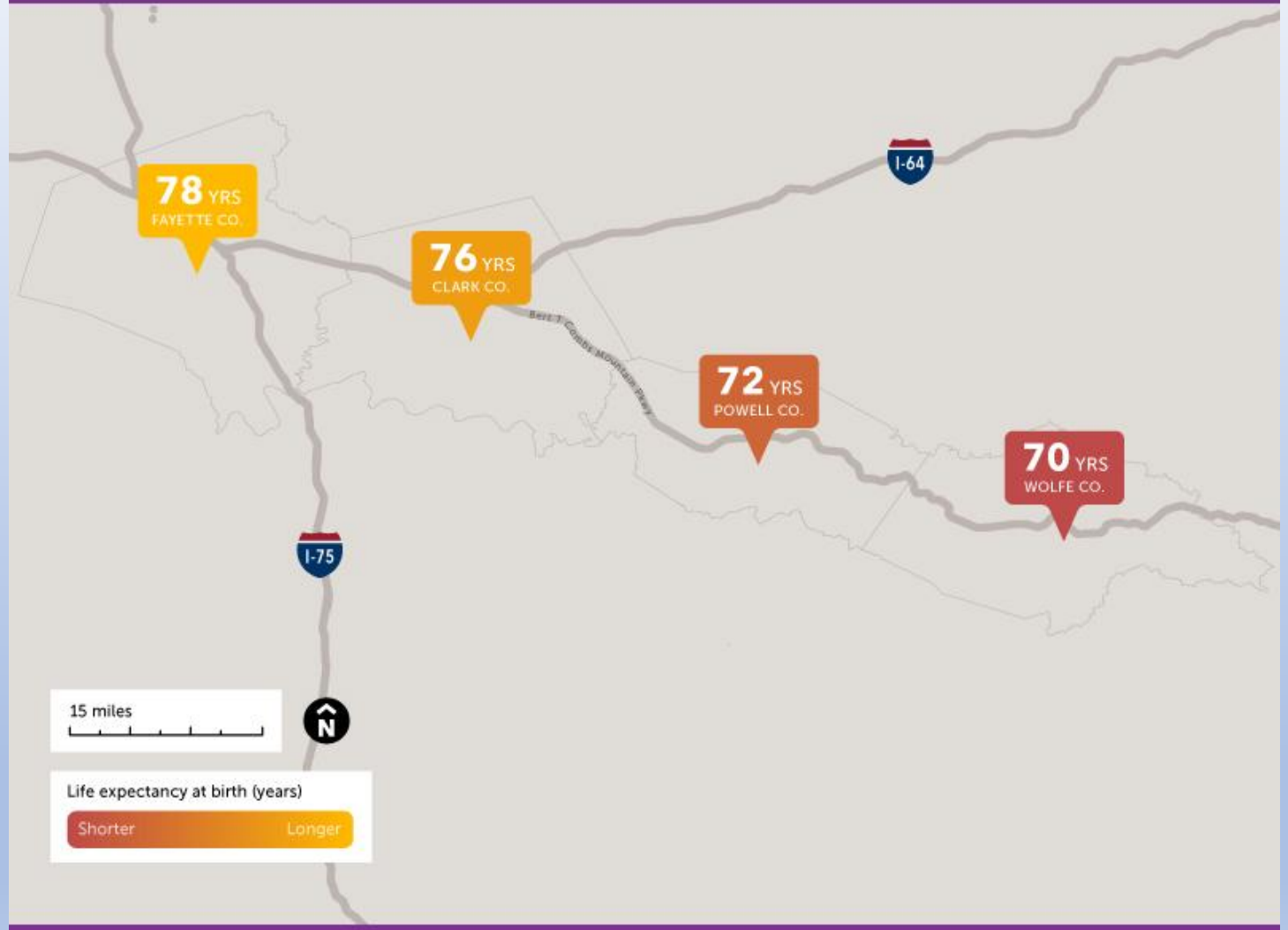
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Short Distances to Large Gaps in Health

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Core Medical Ethics

- Autonomy (respect wishes of the patient)
- Nonmaleficence (do no harm)
- Beneficence (do good on behalf of the patient)
- Justice



Justice as the core public health ethic

- Justice: the fair and equitable distribution of health benefits, burdens, and **opportunities** across all populations





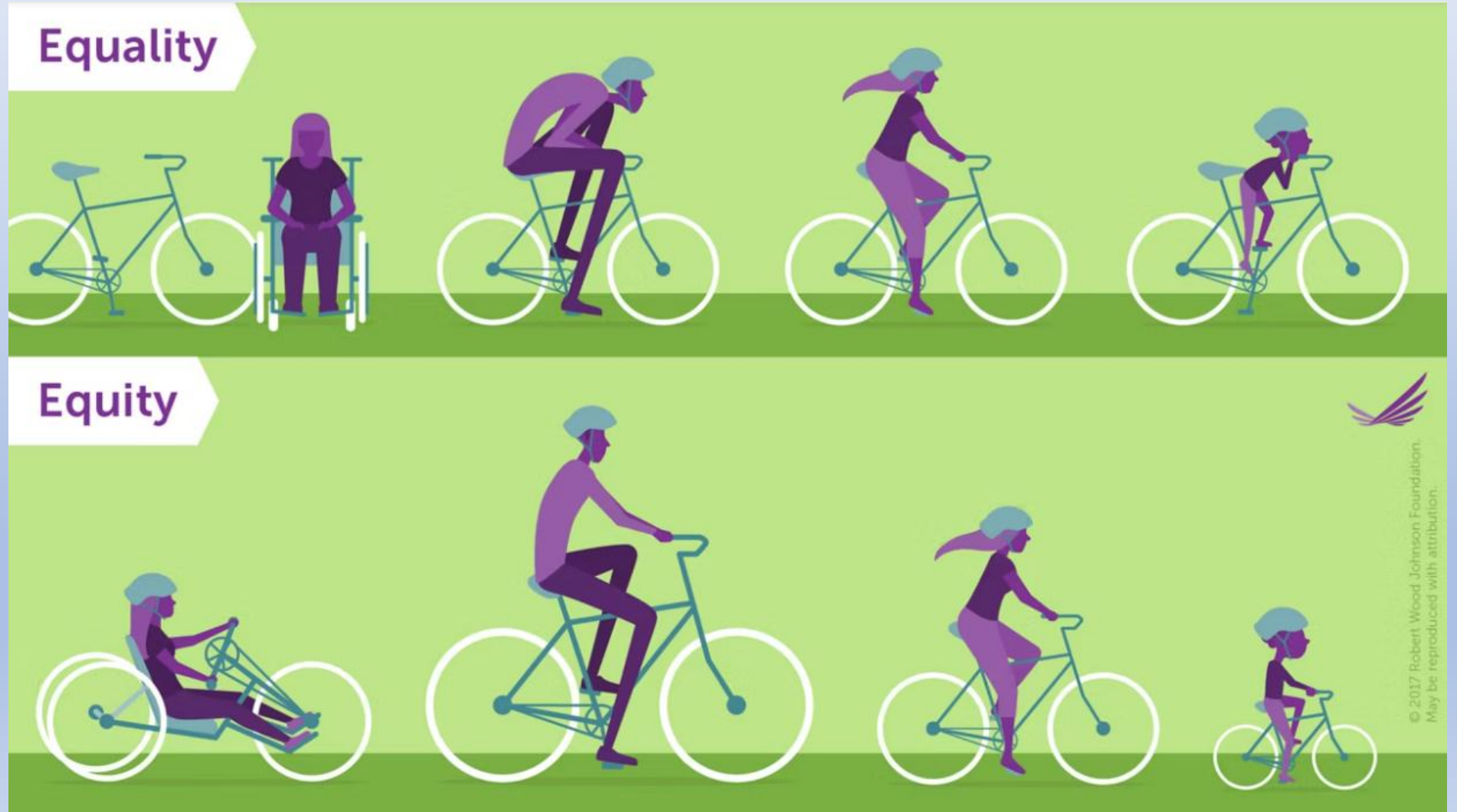
"Since I do not believe there should be different recommendations for people living in the Bronx and people living in Manhattan, I am uncomfortable making different recommendations for my patients in Boston and in Haiti." – Dr. Paul Farmer

Health equity as public health's goal

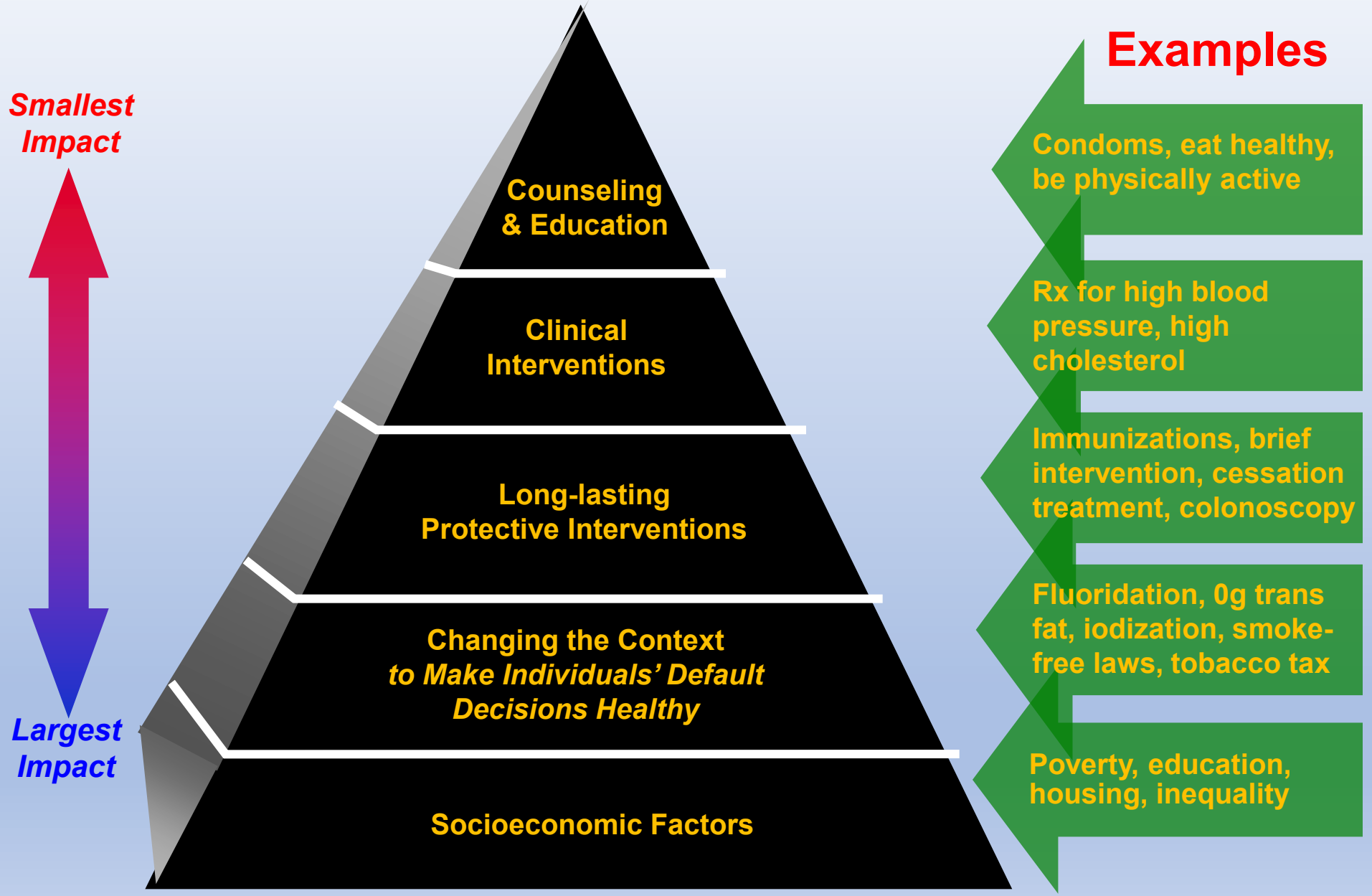
- Ensuring everyone has the same **opportunity** to achieve optimal health



Equality vs equity



Factors and Interventions That Affect Health



Frieden TR. A framework for public health action. *Am J Public Health*. 2010;100(4):590–595.

So where are we now?



COVID-19 pandemic and social cohesion

- Politicization
- Era of false, misleading and inaccurate information
- Individual or group isolation
- Erosion in trust in neighbors
- Erosion of trust in institutions
- Uncertainty



Attack on CDC August 2025

- 500 rounds fired from gunman
- Officer David Rose killed
- Shooter died of self-inflicted wounds
- CDC employees trapped for hours







Federal Health Leadership as of September 2026

- DHHS policies and rhetoric rife with false, inaccurate and misleading information
- CDC on 4th leader/director in 2 years
  - One ousted; 2nd acting replaced; 3rd "senior official performing delegable duties" was co-running NIH; 4th just confirmed
- No confirmed surgeon general
  - One dropped out; 2nd nominated was a doctor who did not complete residency and held no active medical license; 3rd senate vote delayed, pending
- NIAID (NIH) Director fired after filing whistleblower complaint; 2nd stepped down

In August 2025:

- Chief Medical Officer and Deputy Director for Program and Science, resigned,
- Director of the National Center for Immunization and Respiratory Diseases, resigned
- Director of the National Center for Emerging and Zoonotic Infectious Diseases, resigned

Federal institutions

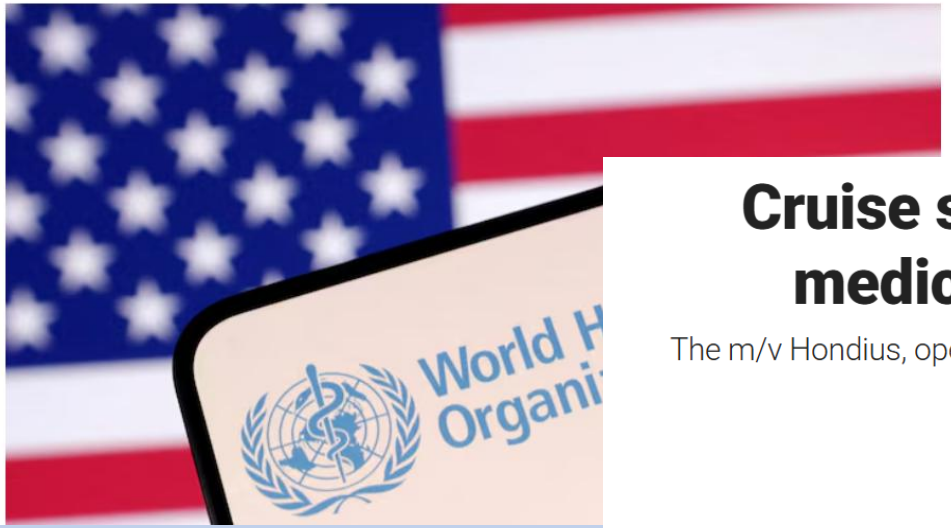
- CDC 25-33% layoffs, about 3-4,000 employees
- Dismantling of USAID – 95% of its workforce (16,000) and 85% of foreign aid programs gone (including health infrastructure and disease surveillance abroad)
- Billons of dollars in NIH research funding frozen
- Significant decrease for science funding across all agencies – the driver of American innovation

- Demoralized federal public health and science workforce

US withdraws from the World Health Organization

By **Jennifer Rigby** and **Emma Farge**

January 22, 2026 5:25 PM EST · Updated January 22, 2026

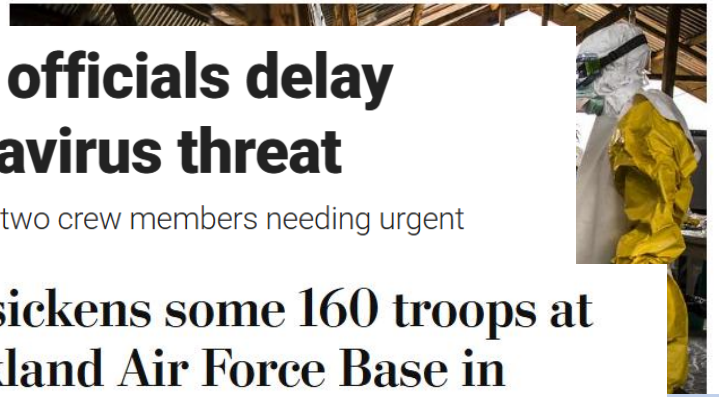


Ebola cases near 1,000 as world scrambles to contain outbreak

Stephanie Soucheray, MA, May 27, 2026

Topics: Ebola , Viral Hemorrhagic Fever

SHARE



Cruise ship outbreak leaves 3 dead as officials delay medical evacuations and probe hantavirus threat

The m/v Hondius, operated by Oceanwide Expeditions, is sailing off West Africa with two crew members needing urgent care

By **Greg Wehner** · **Fox News**

Published May 3, 2026 8:12pm EDT | Updated May 3, 2026

Americans' Challenges with Health Care Costs

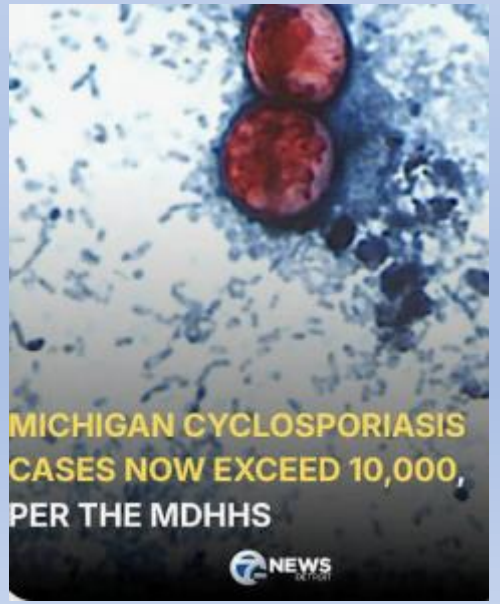
Authors: Grace Sparks, Lunna Lopes, Alex Montero, Marley Presiado, and Liz Hamel

Published: Apr 30, 2026

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Editorial Note: This brief was updated on April 30, 2026, to include the latest KFF polling data. It was originally published on December 14, 2021.

For many years, KFF polling has found that the high cost of health care is a burden on U.S. families, and that health care costs factor into decisions about insurance coverage and care seeking. These costs also rank as



Flu sickens some 160 troops at Lackland Air Force Base in Texas

The outbreak comes less than two months after Defense Secretary Pete Hegseth said American troops would no longer be required to get an annual flu shot.

June 18, 2026

5 min Summary 1,044 Make us preferred on Google



Politics, social cohesion, medicine and public health

Where do we go from here?

Values

Individualism

- Freedom
- Self-determination
- Personal responsibility
- Self-discipline
- Limited government

Community

- Equality
- Fairness
- Compassion
- Community responsibility or solidarity

Individual limitations

Limitation

1. Understanding root causes of social problems
2. Approaches to solve public health problems
3. Moral justification to act

Disposition

1. Circumstances outside an individuals control
2. Individual actions only
3. Helping others to compete or out of self-interest

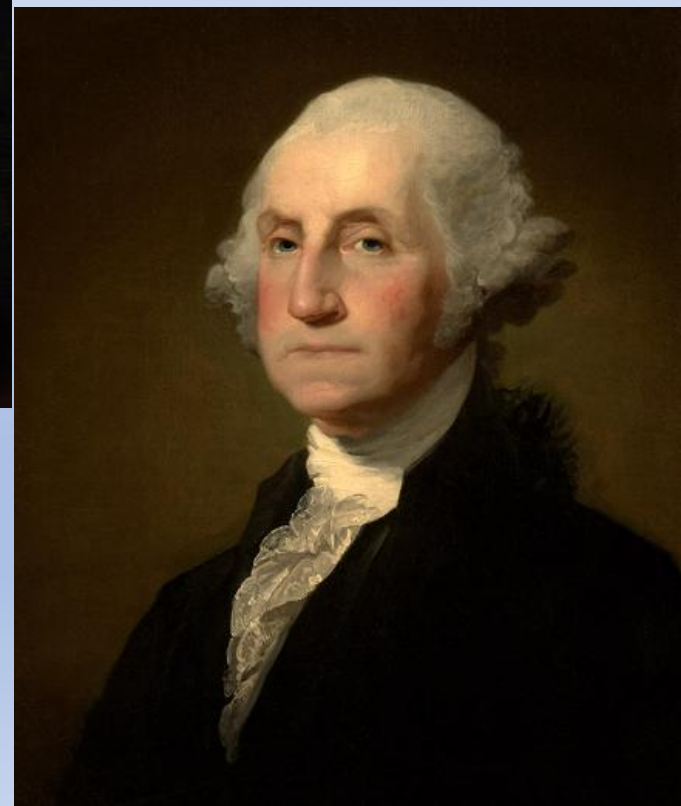
Communal limitations

- Infringing on individual autonomy
- Perception of a “homogeneous community,” ignores minority views
- Stigmatization of groups (e.g. if health disparity that affects specific geographic or cultural group)
- Top down approaches erode trust

Tension: Individual vs community is pronounced with infectious disease control

- Tension in US colonies on use of smallpox inoculation
- George Washington *changed his mind* and mandated smallpox inoculation of the Continental Army in 1777





- Paul Revere was America's first health officer
- He quarantined ships, mandated reporting and isolation of individuals

Interconnection

- Public
- Social
- Community
- Nurturance
- Interdependence
- Civic membership



Out of many, **one**

Interconnected policy frameworks

One Health

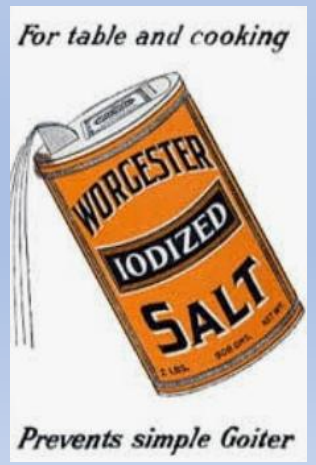
- Focuses on relationship between human health, animal health and the environment
- Emerging zoonotic infections (avian/bovine influenza), vector-borne disease, water contamination, antimicrobial resistance

Health in All

- Collaborative framework that assesses how decisions in non-health sectors—like housing, transportation, and education—impact public health and health equity.
- Integrates health concerns into policies, laws, programs, funding

Health in all policies

- No single approach
- **Opportunity** to protect individual rights
- Cross-sector and inter-governmental collaboration
- Stakeholder engagement





Opportunity

- “There is nothing wrong with underlining personal agency, but there is something unfair about using personal responsibility as a basis for assigning blame while simultaneously denying those who are being blamed the **opportunity** to exert agency in their lives”

-Dr. Paul Farmer



America as evolving opportunity

Health Equity

- Ensuring everyone has the same **opportunity** to achieve optimal health

American Dream

- “Dream of a land in which life should be better and richer and fuller for everyone, with **opportunity** for each according to ability or achievement.”

Opportunity Together: Medicine and Public Health

