Cornell University

Quality; and Health Disparities by Race and Ethnicity

PUBPOL 2350

November 9, 2023

13 NOV

PATHWAYS OF BELONGING:

6:00-7:30PM EST

NAVIGATING IMMIGRATION POLICIES THROUGH THE LENS OF THE MIGRANT EXPERIENCE

Come to hear from policy experts & stories from migrants: Featuring Steve Yale-Loehr, Mary Jo Dudley, Rebecca Fuentes, and Beth Lyon

Come for a chance to win a $50 gift card!

Join on Youtube:

https://www.youtube.com/watch?v=TbPDOIrdmYs

OR

Watch Party:

GIAC (301 W Court St) Refreshments Provided

YOU CAN SAVE A LIFE!

Thursday, November 30
6 - 7:30 PM
Location: MVR 1153

LIVE Narcan Education+Training!

In partnership with:

ADC Alcohol & Drug Council of Tompkins County, Inc.

SIGN UP!

WiHL
WOMEN IN HEALTHCARE LEADERSHIP

SOCIAL IMPACT:
BRIDGING THE GAP IN COMMUNITY PARTNERSHIPS

09 NOVEMBER, 2023
4:30 - 5:30 PM
MVR 1157

GRACE ZIELINSKI

COMMUNITY HEALTH COORDINATOR OF CCE

Grace's work focuses on student community partnerships between Cornell and Tompkins County to address SDOH. Join us as we discuss her views on healthcare and how they have evolved through her professional journey. Pizza will be provided!

BIG RED THON

BIG RED THON
DANCE MARATHON

Big Red Thon is Cornell's largest student-run non-profit organization!

We raise funds for Children's Miracle Network Hospitals, specifically Upstate Golisano (right here in New York!) to help provide kids with lifesaving treatments and the best quality care.

Every year, we host an annual **DANCE MARATHON** at Barton Hall as our main fundraising event, with games, prizes, food, and more! Your participations and contributions go directly to Upstate Golisano, so sign up now to show your support and save your spot at the event!

SCAN ME

REGISTER FOR THE EVENT!

WHEN: SATURDAY, NOVEMBER 11TH, 2-7PM

WHERE: BARTON HALL (CENTRAL CORNELL CAMPUS)

EMAIL US AT BIGREDTHON@GMAIL.COM

Current Events?

Today's Topics

1. **Finish Quality Topic:** discuss policies that could improve the quality of medical care in the U.S.

2. **Review current state of health disparities between racial and ethnic populations in the United States**

3. **Why do these differences exist?**

4. **What policies might effectively reduce health inequalities? (Tuesday)**

Institute of Medicine's 4 Underlying Reasons for Inadequate Quality of Medical Care

1. Growing complexity of medicine
2. Increase in chronic conditions among patients
3. Weak/small financial incentives for physicians/hospitals to invest time and money to improve quality
4. Failure to exploit the revolution in information technology

Source: Institute of Medicine, 2000 and 2001.

How Can the Quality of Medical Care Be Improved?

Policy #1: Health Care IT to the Rescue

"Today, no one clinician can retain all the information necessary for sound, evidence-based practice. No unaided human being can read, recall, and act effectively on the volume of clinically-relevant scientific literature."

Source: Crossing the Quality Chasm, Institute of Medicine, 2001, page 25.

Kaiser's Electronic Medical Record (EMR) screen shot

DOI: 10.1377/hlthaff.2010.0259

PEOPLE & PLACES: KAISER PERMANENTE

KAISER PERMANENTE. Demo Site

preferences | getting started | updates | FAQs | user guide | glossary | contact us

The Panel Support Tool

Return to list | Copy MRN to Clipboard | Mark as Reviewed | No Follow-up | No remarks

Print detail for clinician | Print handout for patient

Name: **DEMO1010365834**
MRN: **10365834**
Age: **64** Sex: **M**
Date of birth 12/18/45

Home: **123-4567** Work: **123-4567**
Last PC Visit: **8/24/09**
Next PC Visit:
Last Reviewed:

PCP: **DEMO DOC1**
Last THA:
kp.org INACTIVE

DM	CVD	CHF	HTN
Y	Y	Y	Y
CKD	Asth		Gap
1-2			14

Utilization Profile
Last Discharge: 9/27/02
CRNRY ATHRSCL NATVE VSSL
Last ER Visit:

Preventive Care
Last Flu Date:
Last H1N1 Date:
Last Pneumo: 5/9/98
Last Td: 5/5/06
Last TDap:
Last Colorectal: FOBT on 3/2/09

Patient Vitals
** Last BP 133 / 66 on 8/24/09
Pulse 65 on 8/24/09
Weight: 175.0 Height 72.0
BMI: 23.7 8/24/09
Ten Year Cardiac Risk: %

Panel Support Tool Caregaps:

Therapeutic Care Gaps:
ACE/ARB - RE-START? for HF (if Syst Dysf), DM nephrop, CVD risk
Beta Blocker - RE-START CARVEDILOL or METOPROLOL SR if Syst Dysf (HF pt).
Statin - RE-START at min SIMVA 80 based on last LDL 179 24-AUG-09 Possible interaction: AMLODIPINE
BP Meds - BP goal <=129/79. HIGH RISK PT with HTN dx. On 2 BP meds. Last 2 or 3 BPs >=130/80. Last: 133/66

Chronic Condition Monitoring Care Gaps:
DM eye screen OVERDUE -over 2 yrs ago
HBA1C DUE SOON Last: 10.6 25-AUG-09.

Preventive Care Gaps:
Flu Shot due
Active Tobacco Use: Advise quitting today

** LDL	179	8/24/09
HDL	26.0	4/24/09
TRI	187	4/24/09
CHOL	224	4/24/09
** A1C	10.6	8/25/09
** FBG		
ALT	33	8/24/09
** CRE	1.1	8/24/09
BUN	9	8/24/09
** GFR	71.9	8/24/09
** ALB/CRE		
** PRO/CRE	1.8	4/24/09
HGB	17.1	8/24/09
HCT	49.8	8/24/09
NA	135.0	8/24/09
K	4.4	8/24/09
TSH	1.43	4/21/09

**Hover over the result to see trended results if available

Most recent KP pharmacy dispense of each drug within certain drug classes in last 12 months . Bolded = dispensed in last 3 months

METOLAZONE TAB 5MG Date: 11/28/09 Daily Dose: 5.0
FUROSEMIDE TAB 40MG Date: 11/25/09 Daily Dose: 80.0
AMLODIPINE BESYLATE TAB 5MG Date: 4/27/09 Daily Dose: 5.0
DIGITEK TAB 0.125MG UD Date: 4/24/09 Daily Dose: 0.1
CARVEDILOL TAB 3.125MG Date: 4/21/09 Daily Dose: 6.3
FUROSEMIDE TAB 20MG Date: 4/21/09 Daily Dose: 20.0
LISINOPRIL TAB 40MG Date: 3/2/09 Daily Dose: 40.0
SIMVASTATIN TAB 80MG Date: 3/2/09 Daily Dose: 80.0
TOLBUTAMIDE TAB 500MG Date: 3/2/09 Daily Dose: 1000.0

A 2009 Law (not the ACA) Provided Strong Financial Incentives for Physicians and Hospitals to Adopt EMRs

- The carrots: an MD who adopted an EMR system in 2011 or 2012 received extra payments of $44,000 from the federal government to defray/cover the installation cost.

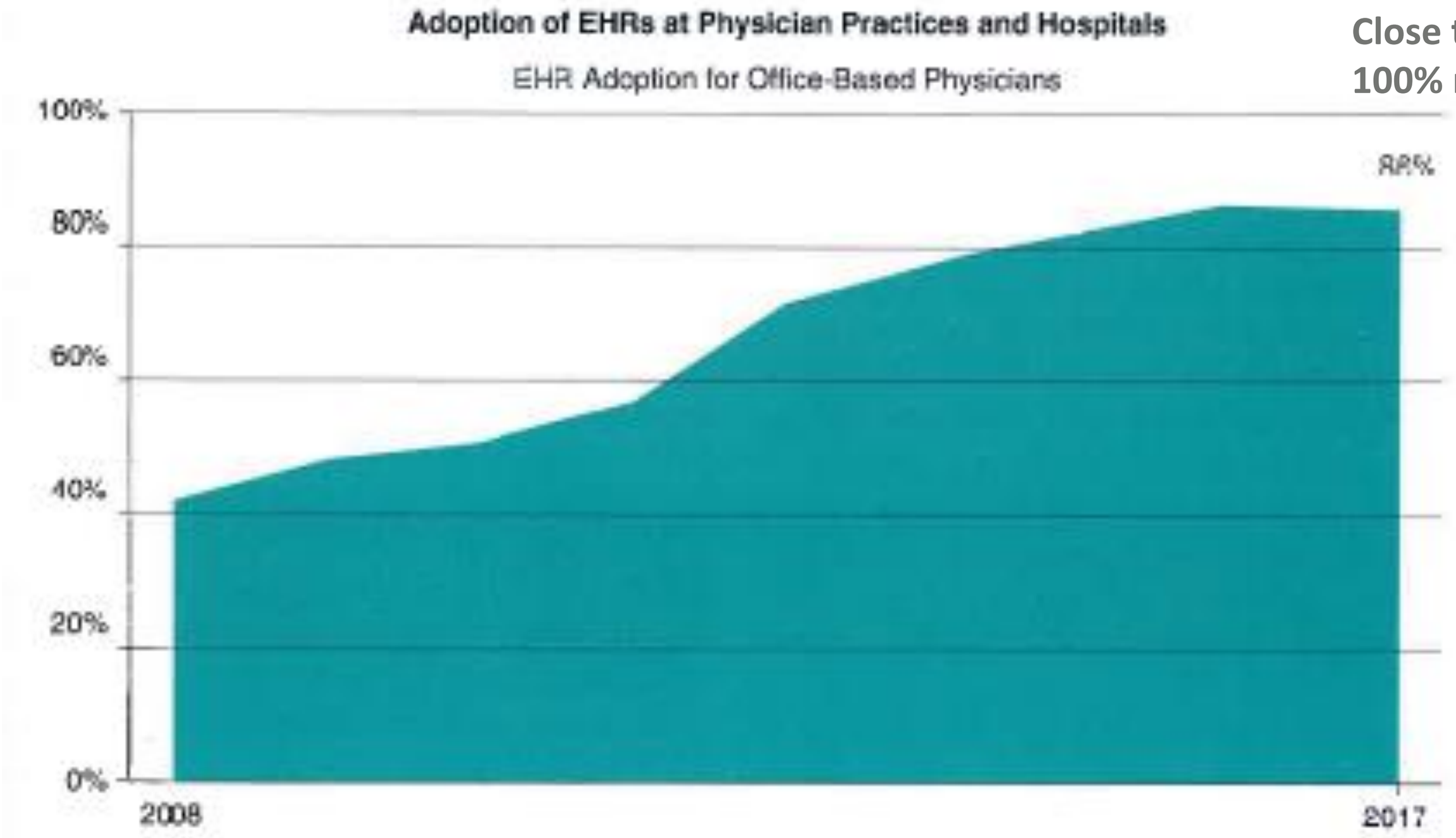
- An additional $64,000 per physician was available from state Medicaid programs in some states.

- The stick: MDs who did not adopt an EMR system by 2015 had their Medicare RBRVS fees reduced by 5%.

- Hospitals could secure millions of dollars to help offset the cost of implementing EMRs.

Source: Avalere Health; Beck, *Wall Street Journal*, 4/6/2015.

Physicians Responded Aggressively…



Close to 100% now

Source: Burns, Lawton, 2021.

…As Did Hospitals

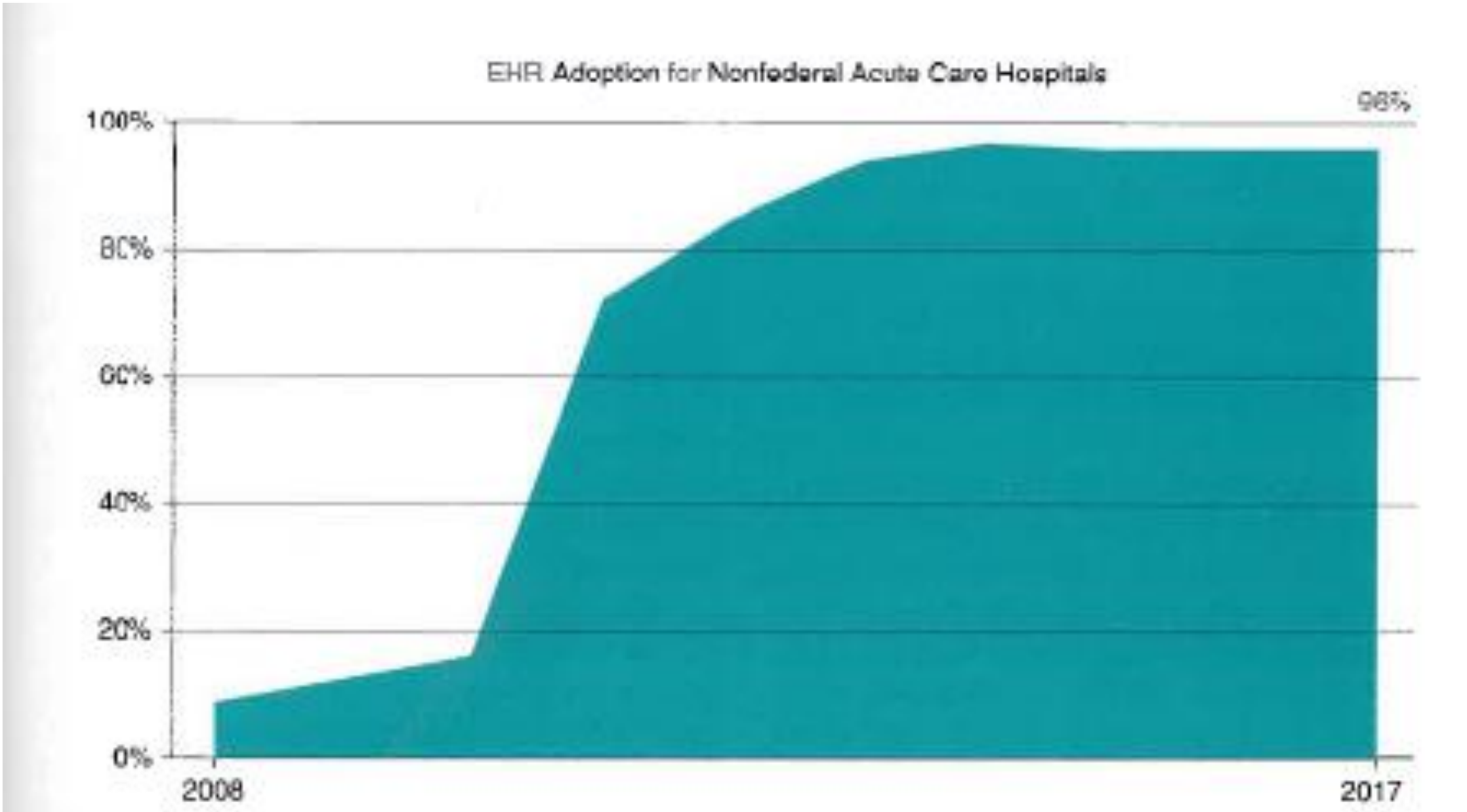


Figure 24-8 • Emergency Medical Record Adoption. EHR, Electronic Health Record. (Source: Fred Schulte and Erika Fry. Death by 1,000 Clicks: Where Electronic Health Records Went Wrong. Kaiser Family Foundation. March 18, 2019, https://khn.org/news/Death-by-a-Thousand-Clicks/.)

Source: Burns, Lawton, 2021.

However, U.S. Physicians Spend 90 Minutes Per Day Using an EMR, Raising Concerns About Burnout

- EMR systems place substantial responsibility on a MD to record patient data and place medical orders.

- U.S. physicians using Epic (the dominant EMR system) spend an average of 90 minutes per day using an EMR, versus 59 minutes for MDs internationally also using Epic.

- This includes an average of 27 minutes on the EMR after hours.

- EMR systems are not wildly popular with U.S. MDs. Hopefully the "next generation" of EMR systems will require less MD time.

Source: Holmgren et al., JAMA, February 2021.

Policy #2: Publicize Information on Quality of Health Plans, Physicians, and Hospitals, and Hope Patients Shun Low-Quality Providers/Plans and That Everyone Improves Quality to Avoid Losing Patients

Surgeon Data

	Surgeon Data 2008-2009 (Two Years Combined)							
	Number of Cases			Mortality		Readmissions		Post-Surgical Length of Stay
	2008	2009	Total	In-Hospital	30-Day	7-Day	30-Day	
McCurry, Kenneth R.								
CABG without Valve	41	0	41	⊙	⊙	⊙	⊙	7.5
Valve without CABG	7	0	7	NR	NR	NR	NR	NR
Valve with CABG	13	0	13	NR	NR	NR	NR	NR
Total Valve	20	0	20	NR	NR	NR	NR	NR
McGregor, Walter E.								
CABG without Valve	0	61	61	●	●	⊙	⊙	5.8
Valve without CABG	0	11	11	NR	NR	NR	NR	NR
Valve with CABG	0	18	18	NR	NR	NR	NR	NR
Total Valve	0	29	29	NR	NR	NR	NR	NR
Mehta, Sanjay M.								
CABG without Valve	69	76	145	⊙	⊙	⊙	○	4.6
Valve without CABG	31	20	51	⊙	⊙	⊙	⊙	5.7
Valve with CABG	18	32	50	⊙	⊙	⊙	⊙	5.9
Total Valve	49	52	101	⊙	⊙	⊙	⊙	5.8
Metcalf, Randy K.								
CABG without Valve	157	134	291	⊙	⊙	⊙	●	7.5
Valve without CABG	14	11	25	NR	NR	NR	NR	NR
Valve with CABG	32	27	59	⊙	⊙	●	⊙	11.8
Total Valve	46	38	84	⊙	⊙	●	●	10.4

Will the Elderly Be Able to Use Information Technology to Find High-Quality Providers?

Alexa Can Help

Amazon Echo Silver

- https://www.google.com/search?source=hp&ei=ZM9VW9afDs2q_QbAm5OwDw&q=snl+amazon+echo+silver&oq=snl+amazon+echo+silver&gs_l=psy-ab.1.0.0l2j0i22i30k1l6.1480.5572.0.7591.24.23.0.0.0.0.123.1599.20j2.23.0....0...1.1.64.psy-ab..1.23.1658.6..35i39k1j0

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Policy #3: ACA Has Changed the Way Physicians and Hospitals are Paid to Reward High-Quality Medical Care and Penalize Low-Quality Care

1

Pay for Performance (PFP)

Higher pay for higher quality, and lower pay for lower quality

2

Bundled Payments

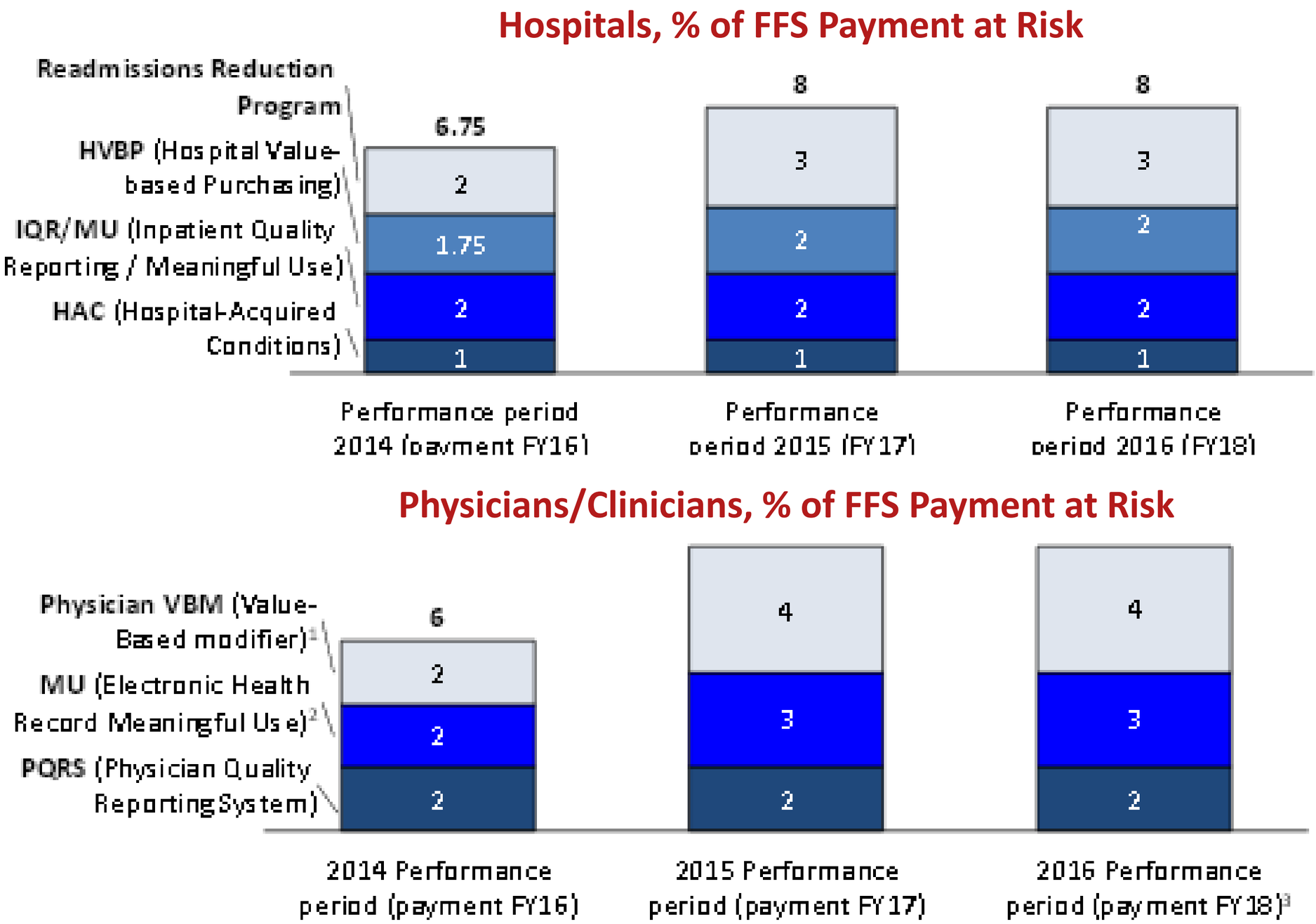
Incentives to coordinate across sites of care; shift to low-cost sites; reduce re-admissions (i.e., improve quality)

3

Accountable Care Organizations (ACOs)

An insurer shares cost savings with a health system and its physicians if they also provide high-quality care

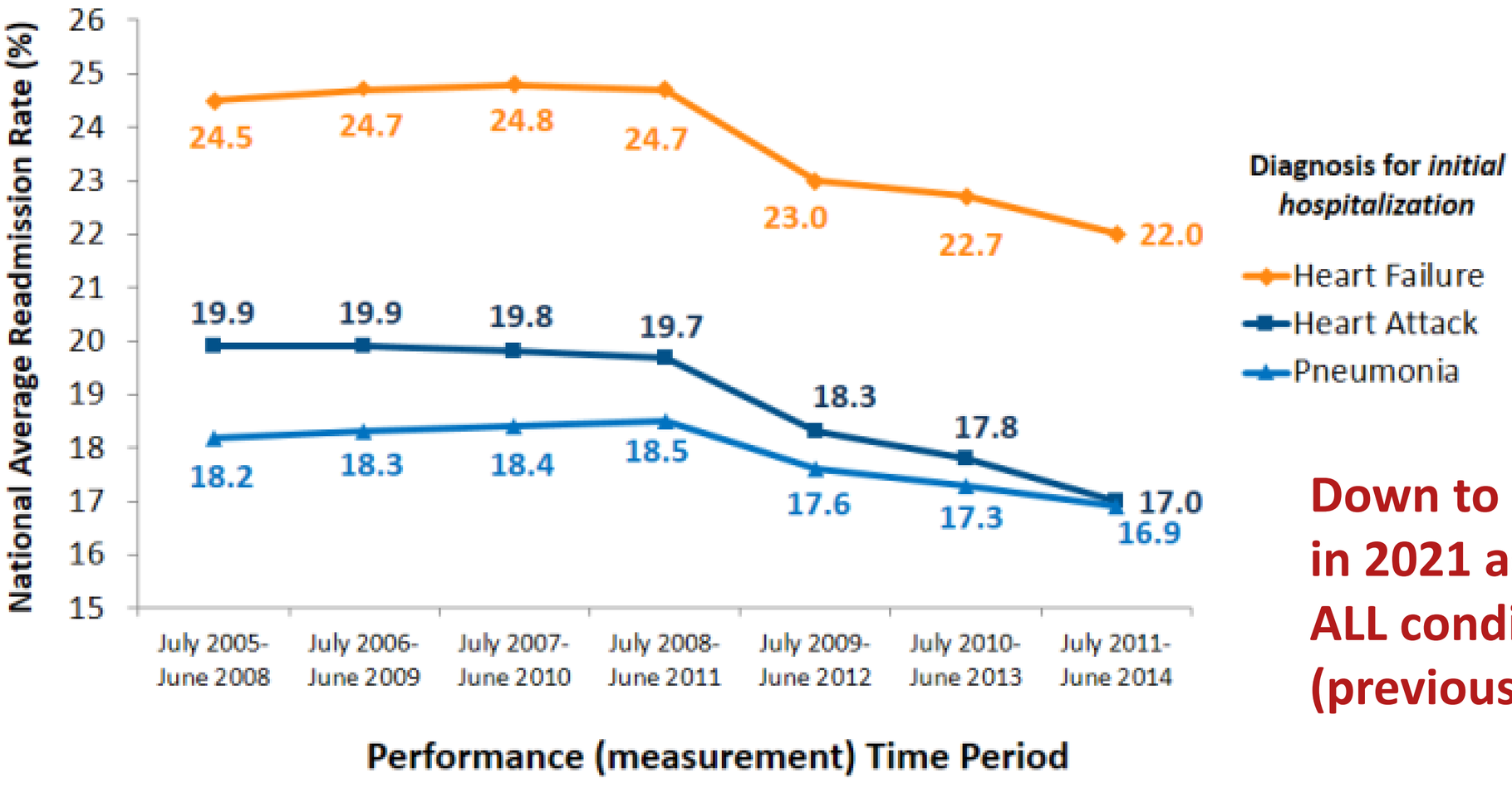
Pay-for-Performance: since 2018, a "Low-Quality" Hospital Can Lose Up to 8% of Its Payment from Medicare



Source: CMS Innovation Center Update, November 10, 2014.

Policy Appears to Be Working, the National Medicare Readmission Rates Started to Fall in 2012

National Average Readmission Rates over Time



Down to 14.9% in 2021 across ALL conditions (previously 20%)

Source: Kaiser Family Foundation Issue Brief, March 2017; MedPAC, 2022.

Example: a Proposed Solution For Eliminating a Bloodstream Infection in an ICU Patient's Line

- 5 million IV lines are placed in ICU patients each year
- 4% of the lines become infected
- Infections are fatal between 5% and 28% of the time

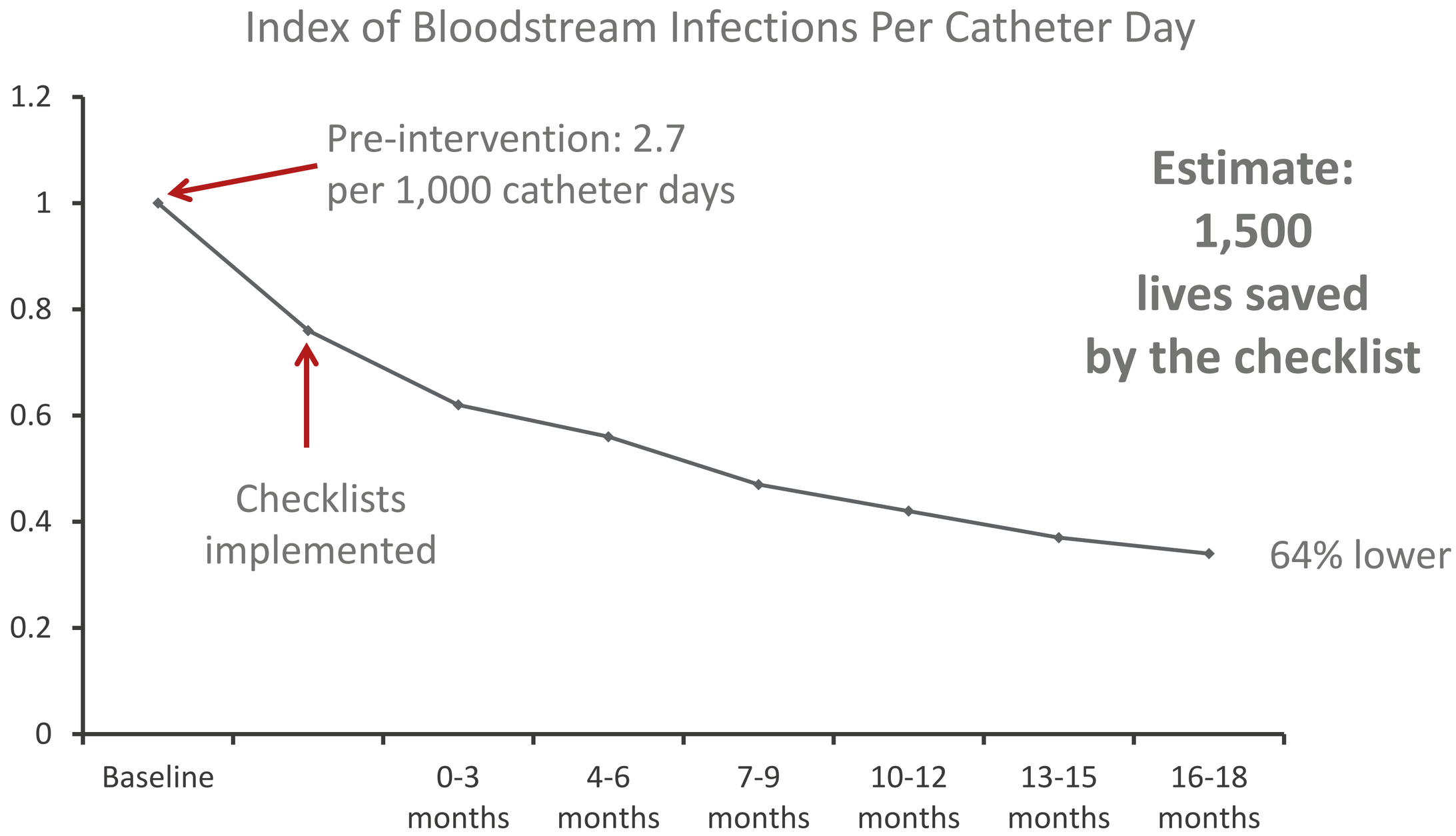
Checklist:

1. Doctors should wash their hands
2. Clean patient's skin with antiseptic
3. Put sterile drapes over patient
4. Doctors should wear a sterile mask, hat, gown, and gloves
5. Put sterile dressing over catheter site once the line is in

In one month at Johns Hopkins, doctors missed at least one step 33% of the time

Source: Gawande, "The Checklist," *The New Yorker*, 2007.

Striking Results When the Checklist Was Implemented at 96 Michigan Intensive Care Units



Estimate:
1,500
lives saved
by the checklist

Source: Pronovost et al., 2006, *New England Journal of Medicine*.

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It’s Hard to Change the Behavior of Physicians, Hospitals, and Nurses

Gawande Interview:

start at 0:40

https://www.cc.com/video/9mv77m/the-daily-show-with-jon-stewart-atul-gawande

Quality Conclusions

- Quality of medical care in the United States is worse than one would expect for our $4.0 trillion in annual spending

- Major problems:
  - too much information for physicians/nurses to retain
  - information technology is still not working as well as expected
  - more patients have multiple chronic conditions, which complicates treatment decisions
  - there are still relatively weak financial incentives to improve quality (but stronger than they used to be)

- Possible solutions:
  - incentives to use information technology (effectively)
  - insurers pay more for high- versus low-quality care
  - publicize information on physician/hospital quality to consumers and let them discipline providers

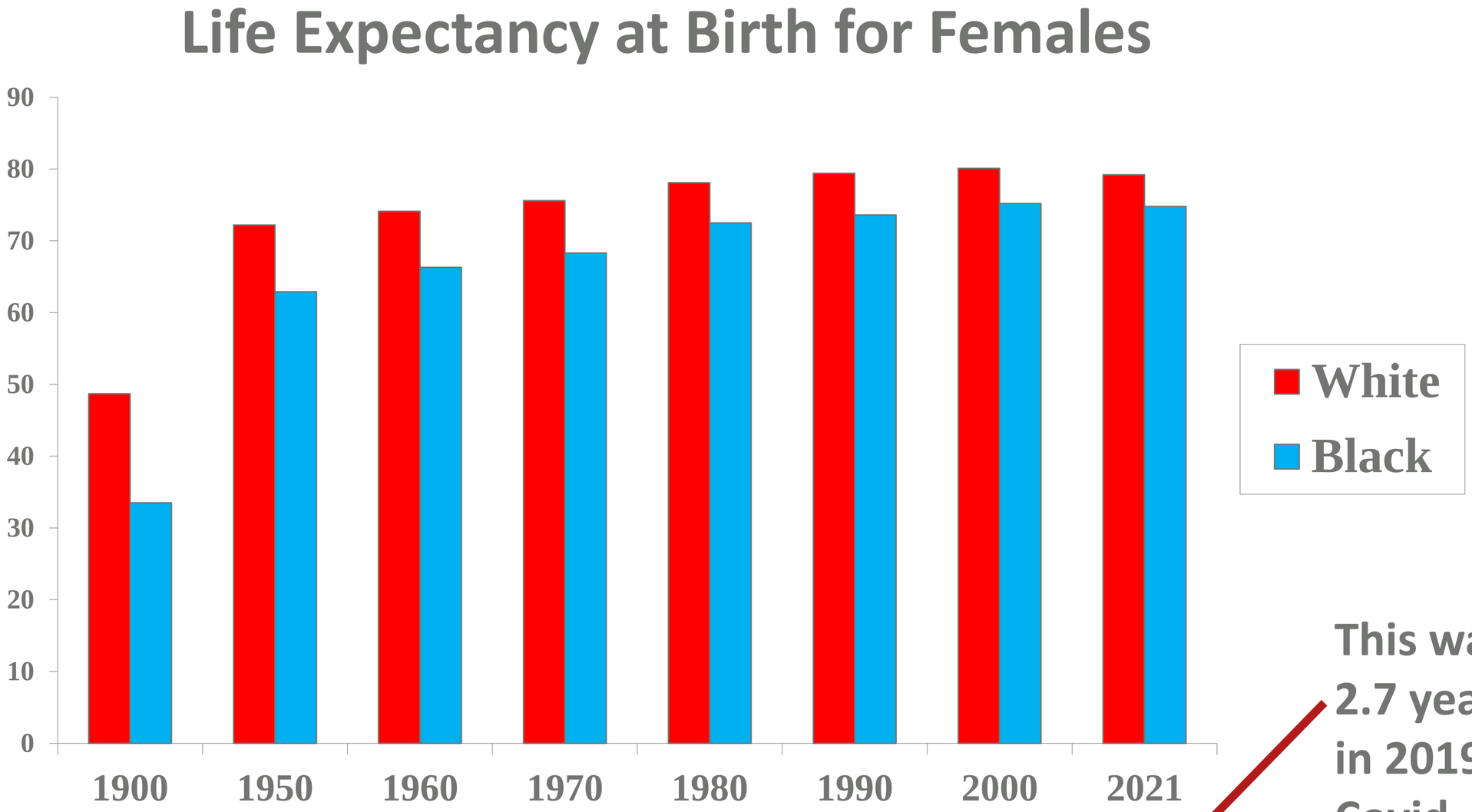
Some Definitions of Health Disparities

The Centers for Disease Control and Prevention defines health disparities as, “preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations.” A health care disparity typically refers to differences between groups in health insurance coverage, access to and use of medical care, the quality of medical care, or health outcomes.

Health equity generally refers to individuals achieving their highest level of health through the elimination of disparities in health and health care.

Source: Kaiser Family Foundation, 2021.

Racial Life Expectancy Disparity Has Narrowed Over Time But Remains Substantial



	1900	1950	1960	1970	1980	1990	2000	2021
Difference (years)	15.2	9.3	7.8	7.3	5.6	5.8	4.9	4.4

This was 2.7 years in 2019. Covid widened the gap substantially

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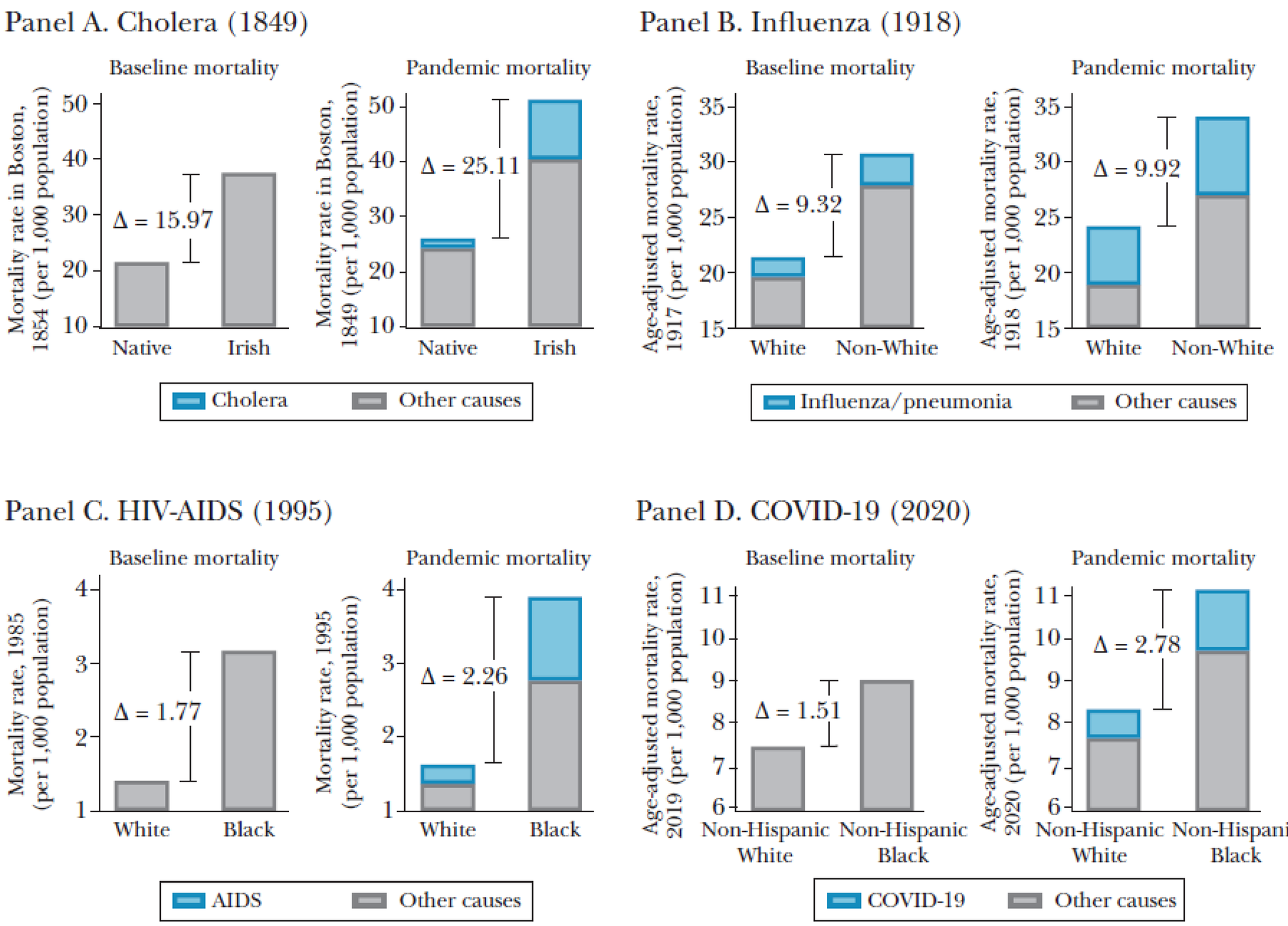
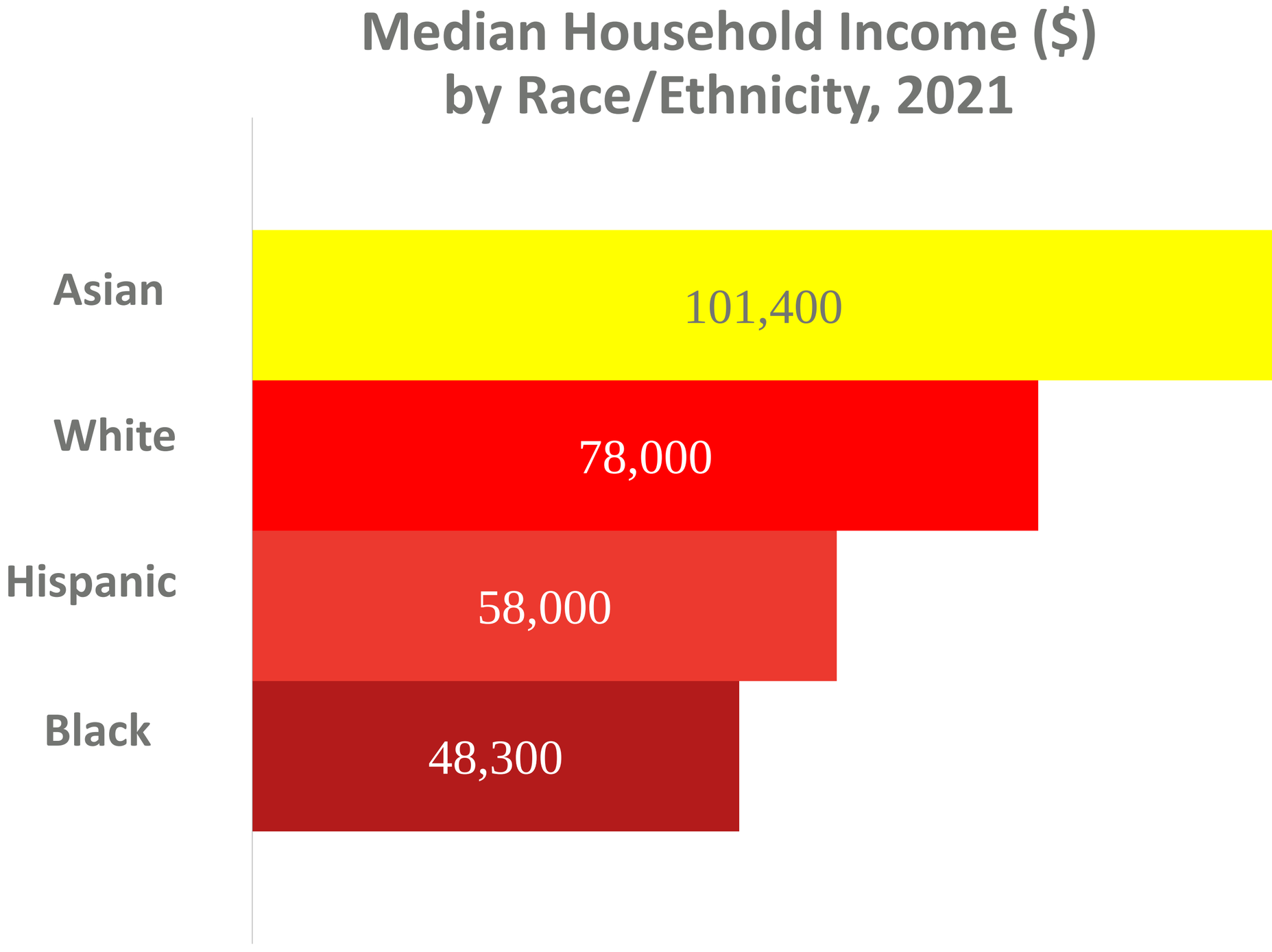
Source: National Center for Health Statistics, 2022.

Disadvantaged People in the U.S. Have Always Fared Worse During Pandemics



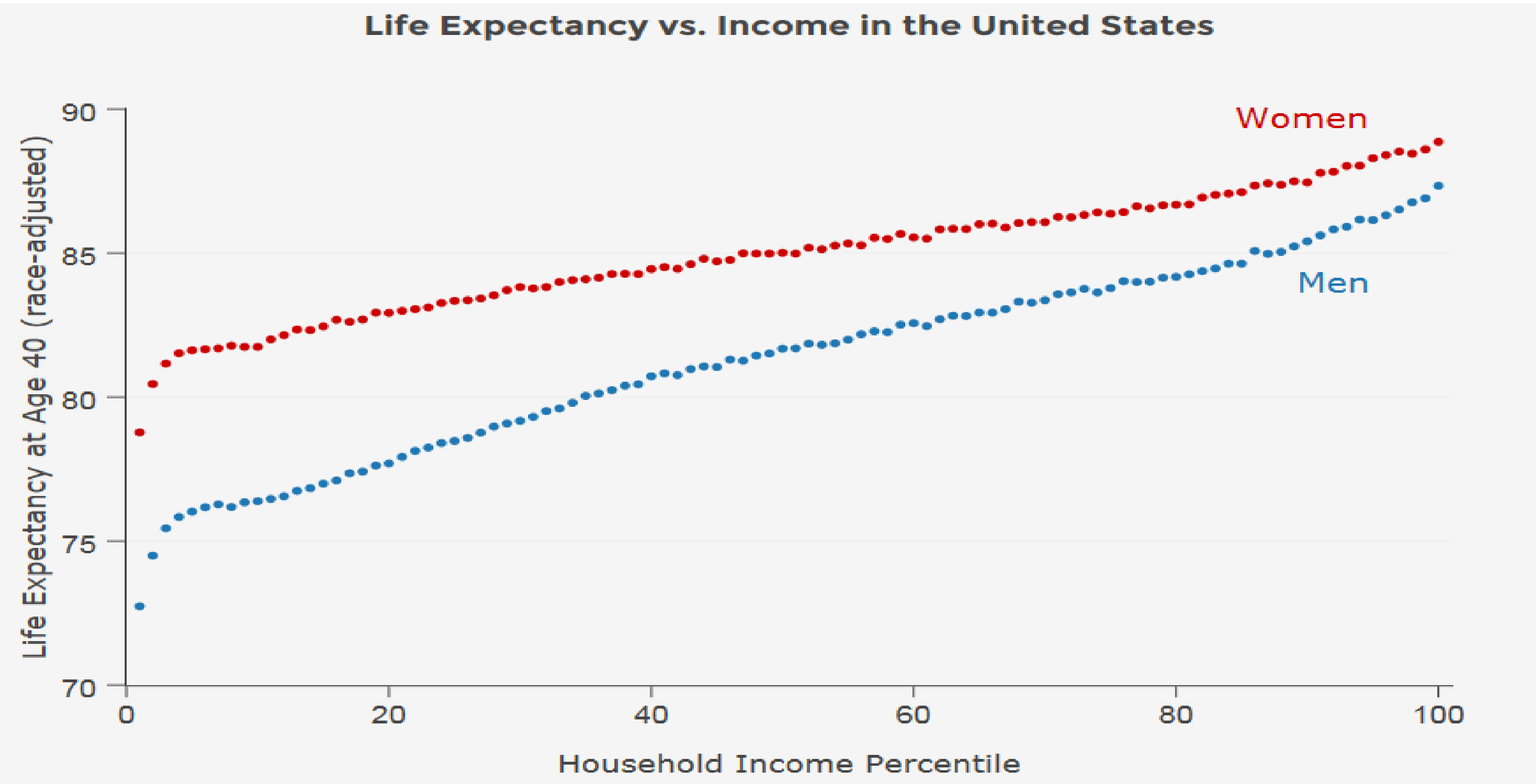
Source: Alsan et al., 2021.

Income Affects Health in Many Ways, and Differs Substantially Across Racial and Ethnic Groups



Source: Current Population Survey, 2022.

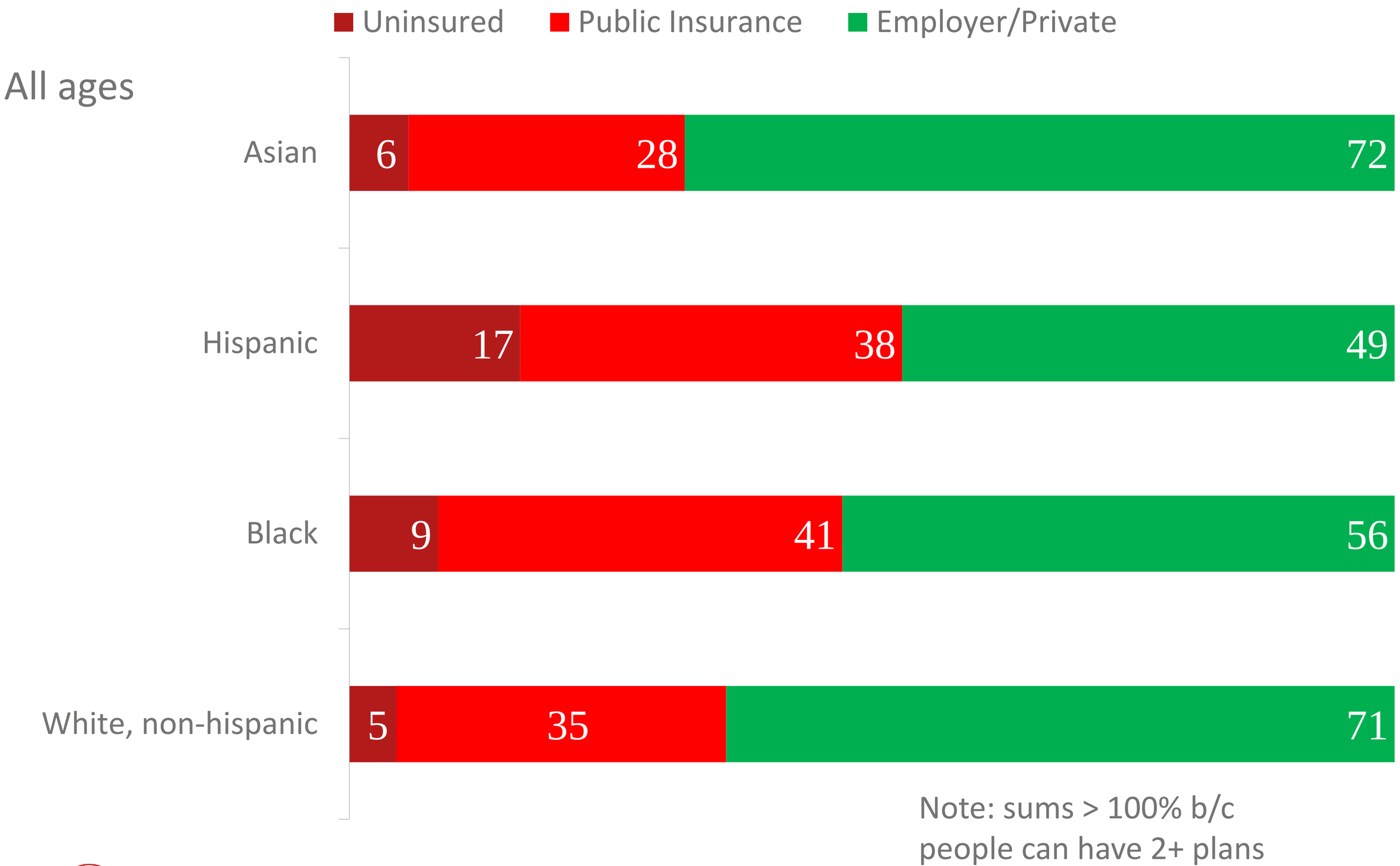
Differences in Life Expectancy By Income are Huge



The richest American men live 15 years longer than the poorest men, while the richest American women live 10 years longer than the poorest women.

Source: Chetty et al., 2016.

Insurance Coverage Also Differs Substantially Across Racial and Ethnic Groups



Note: sums > 100% b/c people can have 2+ plans

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Source: U.S. Census, 2023.

Income is Highly Correlated With <u>All</u> Factors That Affect Health, Including Those "Upstream" From the Formal Medical System

Figure 2

Social Determinants of Health

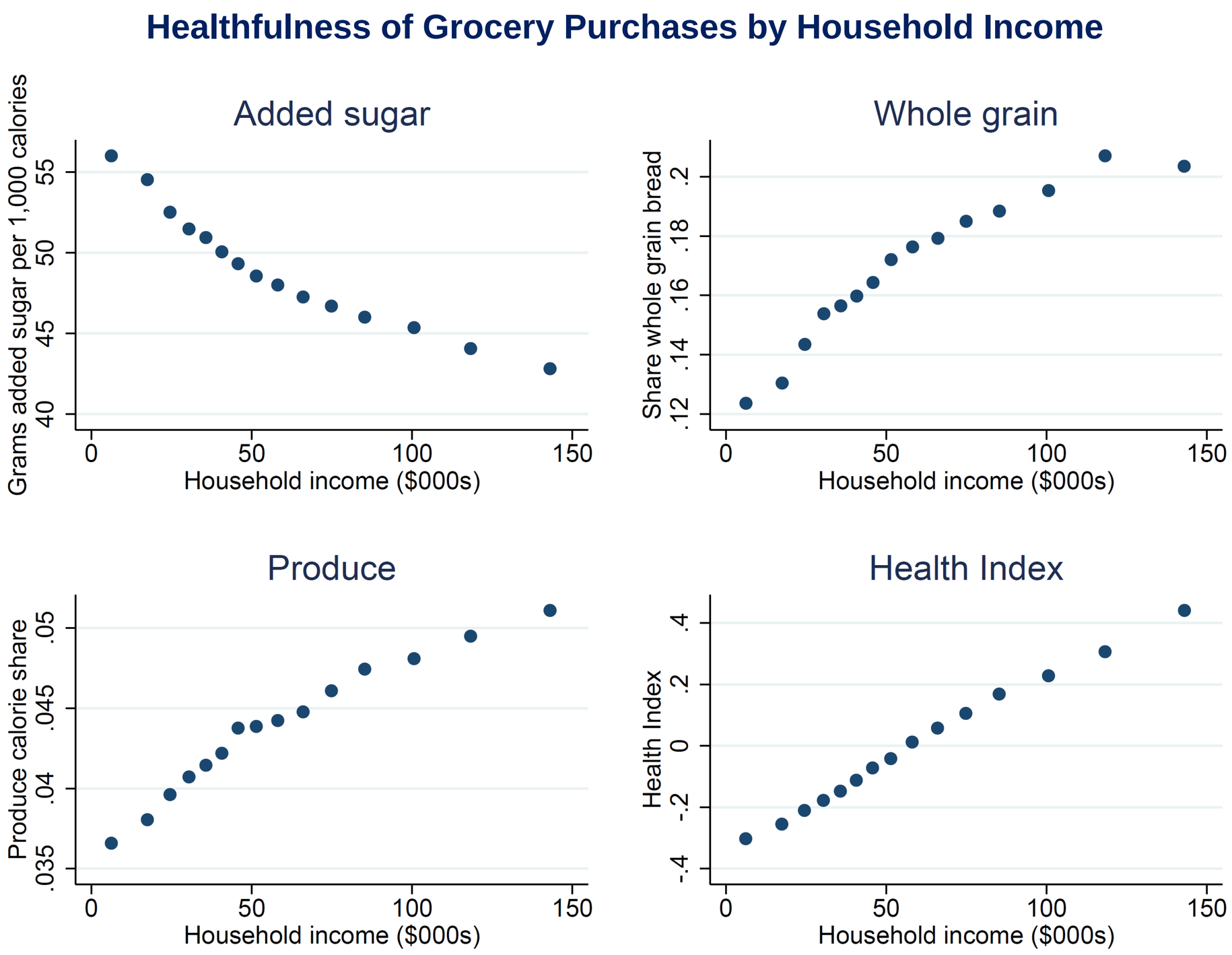
Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment Income Expenses Debt Medical bills Support	Housing Transportation Safety Parks Playgrounds Walkability	Literacy Language Early childhood education Vocational training Higher education	Hunger Access to healthy options	Social integration Support systems Community engagement Discrimination	Health coverage Provider availability Provider linguistic and cultural competency Quality of care

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

THE HENRY J. KAISER FAMILY FOUNDATION

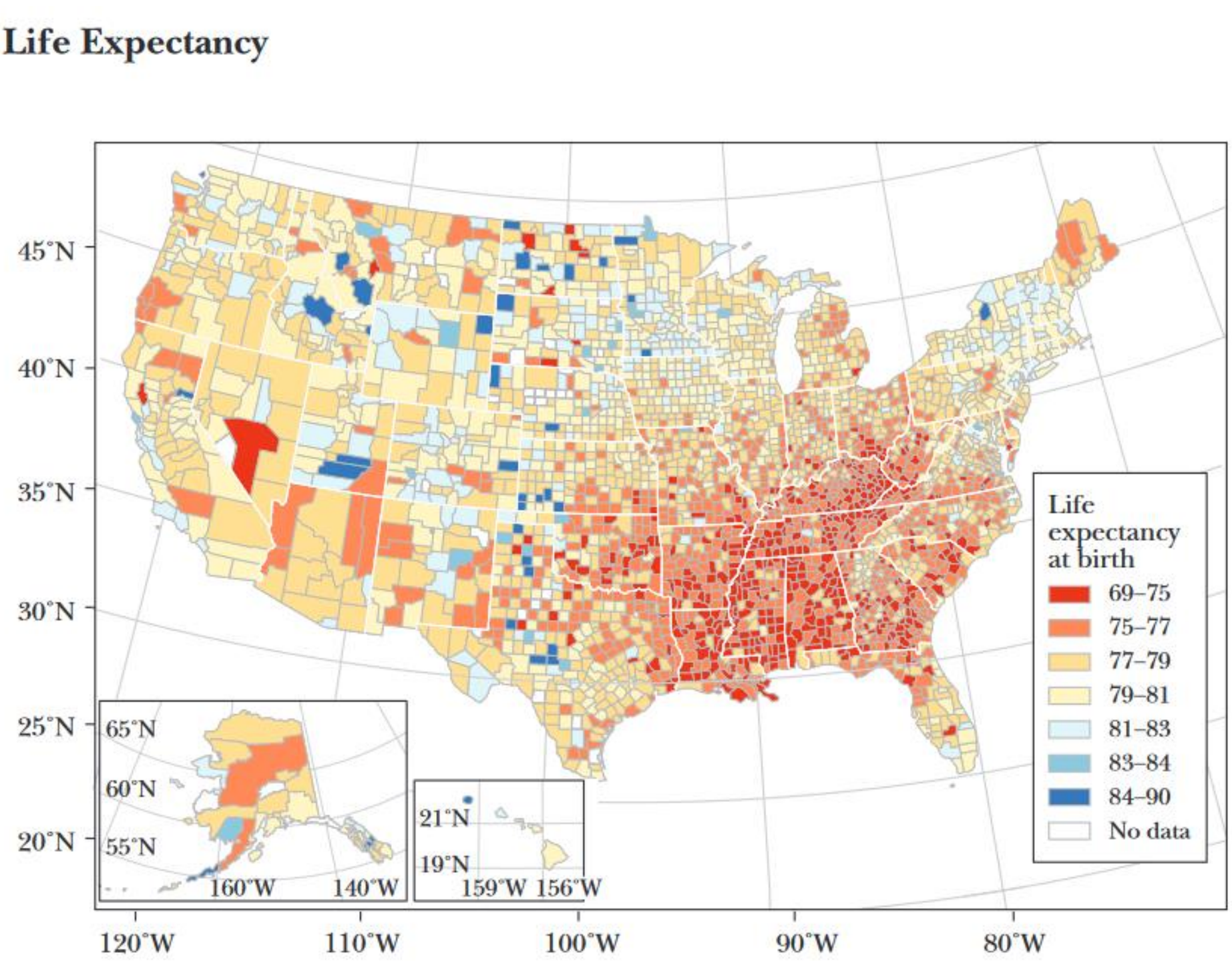
Figure 2: Social Determinants of Health

Example: Differences in Healthfulness of Food by Income



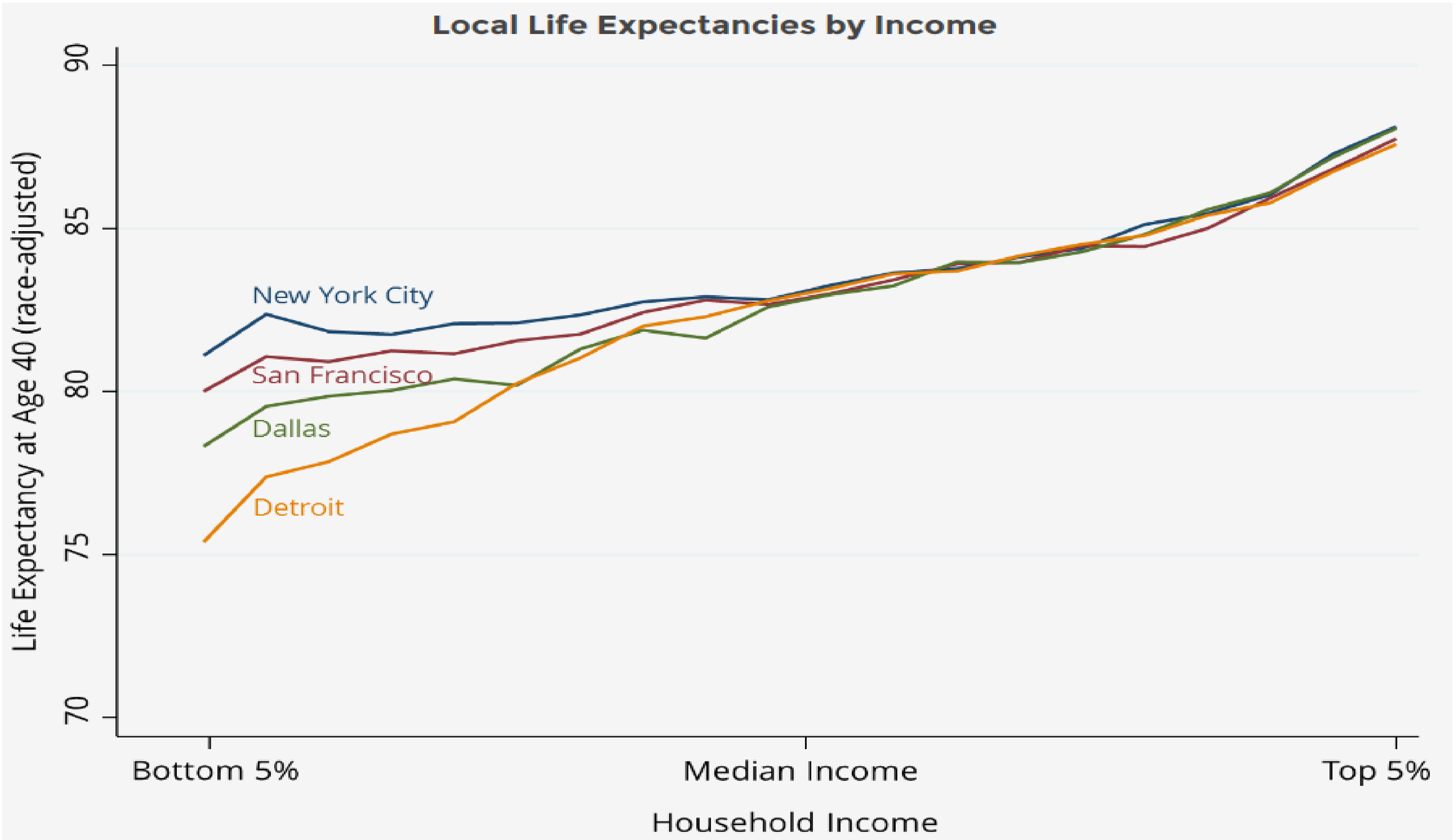
Source: Allcott, Diamond, Dube, Handbury, Rahkovsky, and Schnell 2018

Where You Live Matters Due to Social Determinants: "Your Zip Code is More Important Than Your Genetic Code"



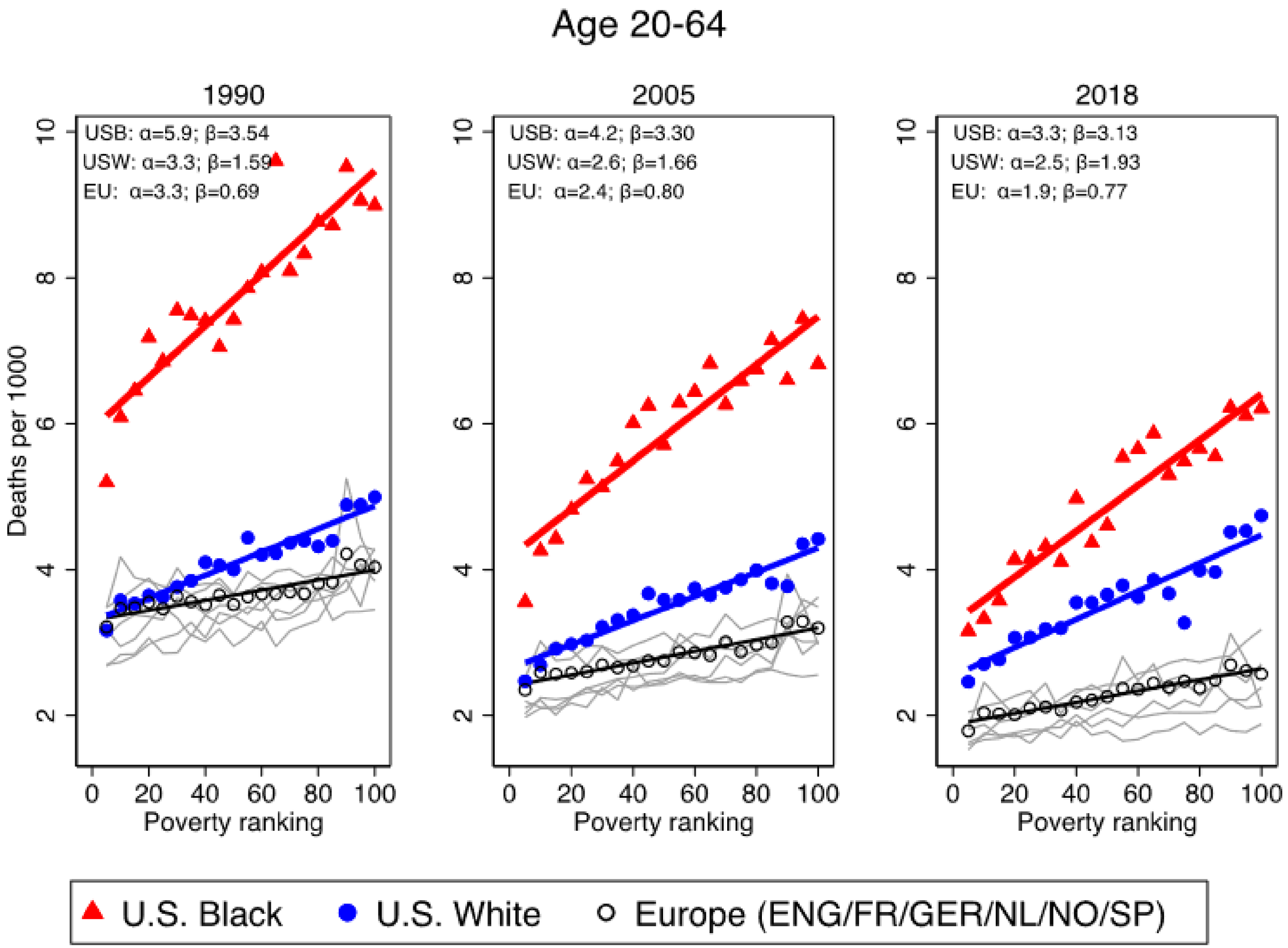
Source: Deryugina and Molitor, JEP, 2021.

More Evidence That Neighborhoods and Social Determinants of Health Play a Critical Role



Life expectancy varies substantially across cities, especially for low-income people. For the poorest Americans, life expectancies are 6 years higher in New York than in Detroit. For the richest Americans, the difference is less than 1 year.

Figure 3. One-year mortality for Black Americans, White Americans, and six European countries, age 20-64.



Source: Schwandt et al., 2021, PNAS.

Some Conclusions From the Previous Figure

- Mortality rates for Black Americans and White Americans have converged sharply (but not entirely) between 1990 and 2018 driven by substantial drop in mortality among Black Americans.
- This convergence has been most pronounced in low-income, high-poverty counties (right-hand side of each figure).
- Income and mortality are less correlated in Europe (the line is flatter), possibly due to universal insurance and stronger social support policies.
- In 2018, "the gap between Europeans and White Americans was generally larger than the gap between White and Black Americans…due to the stagnation in U.S. White mortality rates."

Source: Schwandt et al., 2021, PNAS.

But, Differences in Income, Insurance, and Location Do Not Fully Explain Health Disparities Between Black and White Patients

- Authors examined the records of 177,000 women who were diagnosed with Stage I (early) – Stage III (relatively late) breast cancer between 2010 and 2016.

- Relative to non-Hispanic white patients, Black and Hispanic patients were 46% and 35% more likely to be diagnosed with Stage III cancer.

- **After controlling for income, education, insurance status, and other SES variables**, Black and Hispanic patients were still 29% and 17% more likely to be diagnosed with Stage III cancer vs. white patients.

- That is, other factors explain about one-half of the disparities in stage of cancer at diagnosis, and thus probability of survival.

Source: Ko et al., JAMA Oncology, January 2020.

Some Studies: the SAME Health Facility Treats Patients of Different Racial Groups Differently -- Evidence Consistent With Racial Bias By Health Care Professionals

- Authors compared the use of opioid drugs for White and Black patients at 310 health systems in the U.S. in 2016 and 2017.
- White and Black patients being treated in the same health system were equally likely to receive an opioid prescription for pain relief.
- BUT, the average dose was 36% lower among Black patients than White patients.
- "These opioid-receipt patterns probably reflect both overtreatment of White patients and undertreatment of Black patients."

Source: Morden et al., NEJM, July 22, 2021.

Does Racial Discrimination Play a Role?

"Discrimination, as the (IOM) committee uses the term, refers to differences in care that result from biases, prejudices, stereotyping, and uncertainty in clinical communication and decision-making."

Source: Institute of Medicine, Unequal Treatment, 2002.

Health Care Professionals Display Implicit Bias at the Same Levels as the Entire Population

- Authors identified 37 studies that test whether health care professionals display implicit bias.
- Most common measurement -- Implicit Association Test (IAT): "in race IAT, participants pair photos of Black and White faces with good or bad words like pleasure or agony."
- In 31 of the 37 studies, the authors found evidence of pro-white bias among health care professionals.
- Mixed evidence on whether implicit bias translated into worse medical care or health outcomes for patients of color.
- Most common finding was that providers with stronger implicit bias demonstrated worse patient-provider communication.

Recommended optional test: https://implicit.harvard.edu/implicit/takeatest.html

Source: Maina et al., Social Science & Medicine, 2018.

More Evidence of Implicit (or explicit?) Bias Among Clinicians From Two 2022 Studies

- Authors used electronic medical records of 19,000 patients treated at one urban hospital in 2019 - 2020.
- Physicians and nurses were 2.5 times more likely to use a negative patient descriptor (e.g., “resistant” or “non-compliant”) with Black versus White patients (which could worsen a patient’s trust of the provider/medical system, and how they are treated).
- Second study: overall, 2.5% of the hospital admissions notes for 30,000 patients contained “stigmatizing language” such as “argumentative” or “junkie” or “nonadherence.”
- Non-Hispanic Black patients were 0.7 percentage points more likely to have such stigmatizing language in their notes relative to non-Hispanic White patients (about 30% higher). See Slide #13 for a possible implication.

Source: Sun et al., Health Affairs, February 2022; Himmelstein, JAMA Network, January 2022.

Importance of Effective Communication Between Patients and Physicians

- Black men in Oakland, CA were randomized to see black or non-black male physicians.
- Black men treated by a Black physician were more likely to agree to receive 5 preventive services (e.g., flu vaccine, cardiovascular screening), particularly for invasive services.
- The effect was strongest for men who mistrust the medical system.
- **"The results are most consistent with better patient-doctor communication during the encounter rather than differential quality of doctors or discrimination."**
- A separate study found that the Black-White gap in infant mortality was reduced by 50% when a Black physician (vs. a White physician) cared for a Black newborn baby.

Source: Alsan et al., 2019; Russell, *Washington Post*, January 13, 2021.

Importance of Communication and Trust Confirmed by Recent Study of the Military Health System

- Authors compare medical treatment and health outcomes of Black and non-Black patients in the Military Health System who switch military bases.

- Military bases differ in the % of physicians who are Black.

- Black patients who transfer to a base with a relatively high % of Black physicians (so they are more likely to be randomly assigned to a Black physician):
  - Receive better (based on evidence-based medicine)
  - Preventive care for diabetes.
  - Experience a 15% decline in mortality relative to Black
  - Patients assigned to a non-Black physician.

Source: Frakes and Gruber, 2022.

5 Possible Policies to Address Health Disparities

1) **Divest from racial health inequities**: treat all patients the same even if they (or their insurer) pay different amounts (e.g., Medicaid pays MDs/hospitals less than private insurance).

2) **Diversify the health care workforce.**

3) **Make "mastering the health effects of structural racism" a professional medical competency.**

4) **Mandate and measure equitable outcomes.**

5) **Protect and serve.**

Source: Hardeman et al, NEJM, July 2020.

Disparities Conclusions

- Substantial differences between Black people and White people in health status and use of medical services.

- Much of this can be explained by differences in socioeconomic factors (SES), income, education, access to health insurance, and access to providers of care.

- But, differences persist when controlling for these factors.

- The medical profession is perplexed by the possibility of overt or subconscious discrimination, lack of trust, and/or communication deficiencies.

- Disparities appear to be narrowing over time, but slowly.