UNEQUAL OPPORTUNITIES, UNEQUAL OUTCOMES

Averting the worst for Health and Health Care in America

Presentation by Susan Dentzer, D ’77
President and CEO
Network for Excellence in Health Innovation
To the Osher Lifelong Learning Institute at Dartmouth
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The United States: A far less healthy nation than many of our peer countries

Both health and health care is distributed unequally, with large disparities beginning at birth that become magnified over time

The poor and declining health status of many Americans underscores the importance of addressing the “social determinants of health.”

As it stands, we as a nation address poor health only when it ends up as “sick care” in our health care system, which now faces unsustainable costs
• There are vitally important opportunities to produce better health and health care for all
• Successes in some communities demonstrate the need for collective action across health care system, public health, education, housing, community development, and public policy writ large
AS A NATION, HOW DO WE STACK UP?
## U.S. Life Expectancy vs. Other Rich Nations

The U.S. has the shortest life expectancy among comparable countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Life Expectancy at Birth in Years, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>83.9</td>
</tr>
<tr>
<td>Switzerland</td>
<td>83</td>
</tr>
<tr>
<td>Australia</td>
<td>82.5</td>
</tr>
<tr>
<td>France</td>
<td>82.4</td>
</tr>
<tr>
<td>Sweden</td>
<td>82.3</td>
</tr>
<tr>
<td>Comparable Country Average</td>
<td>82</td>
</tr>
<tr>
<td>Canada</td>
<td>81.7</td>
</tr>
<tr>
<td>Netherlands</td>
<td>81.6</td>
</tr>
<tr>
<td>Austria</td>
<td>81.5</td>
</tr>
<tr>
<td>Belgium</td>
<td>81.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>81</td>
</tr>
<tr>
<td>Germany</td>
<td>80.7</td>
</tr>
<tr>
<td>United States</td>
<td>78.8</td>
</tr>
</tbody>
</table>

Note: Data for Canada are for 2016.

Source: Kaiser Family Foundation analysis of data from OECD (2017), Life expectancy at birth (indicator) (Accessed on November 13, 2017). • Get the data • PNG
“Notable among poor-performing countries is the USA, whose life expectancy at birth is already lower than most other high-income countries, and is projected to fall further behind such that its 2030 life expectancy at birth might be similar to the Czech Republic for men, and Croatia and Mexico for women.”

The U.S. was the “first of the high-income countries to experience a halt or possibly reversal of increase in height in adulthood, which is associated with higher longevity.”

The U.S “has the highest child and maternal mortality, homicide rate, and body-mass index of any high-income country.”

OVERWEIGHT AND OBESITY

% of population aged 15 years and over

Source: OECD
Data are from 2015 or nearest year

= 70.1%
More adults in the U.S. have a sedentary lifestyle than in most comparable countries

Prevalence of insufficient physical activity among adults aged 18+ years, age-standardized estimate, 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>37.3%</td>
</tr>
<tr>
<td>Japan</td>
<td>33.8%</td>
</tr>
<tr>
<td>Belgium</td>
<td>33.2%</td>
</tr>
<tr>
<td>United States</td>
<td>32.4%</td>
</tr>
<tr>
<td>Sweden</td>
<td>28.7%</td>
</tr>
<tr>
<td>Comparable Country Average</td>
<td>26.4%</td>
</tr>
<tr>
<td>Australia</td>
<td>23.8%</td>
</tr>
<tr>
<td>Austria</td>
<td>23.8%</td>
</tr>
<tr>
<td>France</td>
<td>23.8%</td>
</tr>
<tr>
<td>Canada</td>
<td>23.2%</td>
</tr>
<tr>
<td>Germany</td>
<td>21.1%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>15.5%</td>
</tr>
</tbody>
</table>

Note: Data not available for Switzerland.

Source: Kaiser Family Foundation analysis of data from the World Health Organization. (Accessed on November 22, 2015). • Get the data • PNG
Shalon Irving, 36, an epidemiologist at the Centers for Disease Control and Prevention in Atlanta, died from apparent post-partum preeclampsia 3 weeks after giving birth to daughter Soleil.

“Not only does the USA have high and rising health inequalities, but also life expectancy has stagnated or even declined in some population subgroups.”
Rising morbidity and mortality in midlife

- Estimated 500,000 lives lost 1999-2013 in U.S. due to rise in all-cause mortality of middle-aged, white, non Hispanic men and women

- Biggest mortality increases among those with least education

Source: Anne Case and Angus Deaton, “Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century, Proceedings of the National Academy of Sciences, vol. 112 no. 49, 15078-15083
• Increasing death rates from drug and alcohol poisonings, suicide, chronic liver diseases, cirrhosis
• Self-reported declines in health, mental health, ability to conduct activities of daily living
• Increases in chronic pain and ability to work
Disease burden from drug abuse disorders is higher in the U.S. than in comparable countries

Age-standardized drug abuse disorder Disability Adjusted Life Years (DALY) rate per 100,000 population, by drug use disorder, 2016

Source: Kaiser Family Foundation analysis of data from the University of Washington Institute for Health Metrics and Evaluation (Accessed on November 14, 2017). • Get the data • PNG
“High school-educated. A mother of three. Loyal employee of Kmart, Walls Bargain Center and Dollar Store…

What killed Jones was cirrhosis of the liver brought on by heavy drinking.”

Washington Post, April 8, 2016
According to the CDC, the annual age-adjusted U.S. suicide rate rose 24% from 1999-2014 to the highest rate recorded in 28 years.
"Deaths of Despair"

• Causes: “longstanding process of cumulative disadvantage for those with less than a college degree”

• Job loss, poor health in childhood, breakdowns of marriage, child-rearing, and religion

• “Prescription of opioids for chronic pain has added fuel to the flame.”

The Map of the “Mortality Gap” for Middle-Aged Whites

Combined Effect of Opioid Prescription Rates and Change in Labor Force Participation Rate
Prime Age Adults, Ages 25–54

Note: Data on change in state-level labor force participation is from CPS years 1999-2001 and 2014-2016 for prime age adults and county-level data on opioid levels is from CDC Vital Signs (Quartile/Median). For each county, the combined effect is the average of the percentile rank of labor force participation change and the percentile rank of opioid prescription rate.

Based on data used in “Where Have All the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate” by Alan Krueger. Brookings Papers on Economic Activity, Fall 2017
• Life expectancy gaps across US counties have widened in the past 3 decades, with many counties increasingly left behind

• Counties in which life expectancy stagnated or declined saw a 10-percentage-point increase in the Republican vote share between 2008 and 2016.

“According to our model, if diabetes were just 7% less prevalent in Michigan, Mr. Trump would have gained 0.3 fewer percentage points there, enough to swing the state back to the Democrats. Similarly, if an additional 8% of people in Pennsylvania engaged in regular physical activity, and heavy drinking in Wisconsin were 5% lower, Mrs. Clinton would be set to enter the White House.”
Why?
What Drives Our Health?

- Social & Economic Factors: 40%
- Health Behaviors: 30%
- Clinical Care: 10%
- Physical Environment: 10%
- Genes & Biology: 10%
What Drives Our Health?

Social determinants of health
<table>
<thead>
<tr>
<th>Tip</th>
<th>Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Don’t be poor. If you can, stop. If you can’t try not to be poor for too long.</td>
</tr>
<tr>
<td>2</td>
<td>Don’t have poor parents.</td>
</tr>
<tr>
<td>3</td>
<td>Own a car – it will mean that you have money, and you can drive out of the poor neighborhood where you live.</td>
</tr>
<tr>
<td>4</td>
<td>Also use that car if you live in a food desert and want to leave the neighborhood to get to know fruits &amp; veggies</td>
</tr>
<tr>
<td>5</td>
<td>Don’t live in damp, low quality housing.</td>
</tr>
<tr>
<td>6</td>
<td>Don’t work in a stressful, low-paid job.</td>
</tr>
<tr>
<td>7</td>
<td>Practice not losing your job and becoming jobless.</td>
</tr>
<tr>
<td>8</td>
<td>Be able to travel, relax, and de-stress.</td>
</tr>
<tr>
<td>9</td>
<td>If you’re jobless, sick, or disabled, claim all the benefits to which you’re entitled.</td>
</tr>
<tr>
<td>10</td>
<td>Don’t live next to a busy major road or polluting factory, or have lead in your water as in Flint, Michigan.</td>
</tr>
</tbody>
</table>
Income inequality: Growing disparities in life expectancy

• Comparing men who turned 50 in 1980 or 2010:
  • Those in top fifth of income gained 7 years of life expectancy; those in bottom fifth of income gained nothing

• Comparing women who turned 50 in 1980 or 2010:
  • Those in top fifth of income gained nearly 6 years of life expectancy
  • Those in bottom fifth of income lost 4 years of life expectancy
  • Those in next lowest fifth of income lost nearly 2 years of life expectancy
In the U.S., obesity is more prevalent among lower-income groups than those with higher incomes

Age-adjusted prevalence of obesity for adults age 20+, by poverty level, 2011-2014 average

- Below 100% FPL: 39.2%
- 100%-199% FPL: 42.6%
- 200%-399% FPL: 38.8%
- 400% FPL or more: 29.7%

Source: Data by poverty level are from CDC/National Center for Health Statistics, "Health, United States, 2016: With Chartbook on Long-term Trends in Health" • Get the data • PNG
Role of Education

Education is linked to lifespan: on average, college graduates live nine more years than high school dropouts.

Higher levels of education can lead to a greater sense of control over one’s life, which is linked to better health, healthier lifestyle decisions, and fewer chronic conditions.

Children whose mothers graduated from college are twice as likely to live past their first birthday.

www.countyhealthrankings.org
Declining college enrollment

College enrollment in two- and four-year institutions among all recent high school graduates has declined since 2008. But that drop has been most significant among the lowest-income students.

NOTES: Recent high school completers refers to individuals ages 16 to 24 who graduated from high school or completed a GED® test during the calendar year. Low income refers to the bottom 20 percent of all family incomes, high income refers to the top 20 percent of all family incomes, and middle income refers to the 60 percent in between.
THE MATERNAL AGE & EDUCATION GAP

• “Women with college degrees have children an average of seven years later than those without – and often use the years in between to finish school and build their careers and incomes.”

• Growing interregional differences in first maternal age exacerbate income inequality and disparities in child well-being

New York Times, Aug. 5, 2018
Adverse Childhood Experiences Study

25-year collaboration between the U.S. Centers for Disease control and Prevention and Kaiser Permanente; more than 15,000 patients followed

Has yielded more than 50 scientific articles linking childhood abuse, neglect, and other “toxic” stressors to such conditions as depression, heart disease, chronic lung disease, liver disease, and cancer.

More than two-thirds of study participants reported at least one such adverse childhood experience, including psychological, sexual, or physical abuses.
“Allostatic load:” cost of chronic exposure to elevated or fluctuating endocrine or neural responses resulting from stress.
The Prototypical Complex and Costly Patient: “Mr. D”

- 40 years old
- Affected by fetal alcohol syndrome, developmental delay, and obesity
- History of high blood pressure, diabetes, asthma, and chronic low back pain
- Victim of childhood abuse
- Suffers from post-traumatic stress disorder, anxiety, and bipolar disorder
- Lives in public housing
- Unemployed
- Covered by Medicaid
- Over previous year, saw primary care physician 23 times
- Missed 10 other appointments
- Phoned primary care clinic 22 times
- Made 21 emergency department visits
- Admitted to hospital 3 times for issues that could have been treated by his primary care physician

How Do We Deal With These Issues in the United States?
We spend vast sums of money on health care

U.S. spends 25% more per capita than next highest-spending country, Switzerland, and nearly double the OECD average.

Source: OECD
We have the highest-priced – and best paid -- health care system in the world

- Administrative costs of care = 8% of health spending in the US in 2016, vs a range of 1% to 3% in 10 other richest countries.
- Pharmaceutical spending per capita was $1443 in the US vs a range of $466 to $939 in the other countries.
- Salaries of physicians and nurses were higher in the US; for example, annual generalist physicians’ salaries were on average $218,173 in the US compared with a range of $86,607 to $154,126

Spending is high despite high uninsurance

The U.S. has the lowest insured rate of comparable countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Covered by Health Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>100%</td>
</tr>
<tr>
<td>Australia</td>
<td>100%</td>
</tr>
<tr>
<td>Canada</td>
<td>100%</td>
</tr>
<tr>
<td>Japan</td>
<td>100%</td>
</tr>
<tr>
<td>Sweden</td>
<td>100%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>100%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>100%</td>
</tr>
<tr>
<td>Austria</td>
<td>99.9%</td>
</tr>
<tr>
<td>France</td>
<td>99.9%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>99.9%</td>
</tr>
<tr>
<td>Comparable Country Average</td>
<td>99.9%</td>
</tr>
<tr>
<td>Belgium</td>
<td>99%</td>
</tr>
<tr>
<td>United States</td>
<td>91.2%</td>
</tr>
</tbody>
</table>

Note: 2016 data shown for the U.S., Australia, Canada, France, and Sweden.

US Imbalance: Health Care vs. Social Services Spending
The U.S. is an outlier for health spending, but when combined with other social services, spending is similar to other countries

Total health consumption as percent of GDP, 2013; Total social spending (including health and other social services) as percent of GDP, 2013

<table>
<thead>
<tr>
<th>Country</th>
<th>Total health consumption</th>
<th>Total net social expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>16%</td>
<td>29%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>11%</td>
<td>22%</td>
</tr>
<tr>
<td>Sweden</td>
<td>11%</td>
<td>25%</td>
</tr>
<tr>
<td>Germany</td>
<td>11%</td>
<td>25%</td>
</tr>
<tr>
<td>France</td>
<td>11%</td>
<td>31%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>11%</td>
<td>26%</td>
</tr>
<tr>
<td>Japan</td>
<td>11%</td>
<td>25%</td>
</tr>
<tr>
<td>Comparable Country Average</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>Belgium</td>
<td>10%</td>
<td>27%</td>
</tr>
<tr>
<td>Austria</td>
<td>10%</td>
<td>24%</td>
</tr>
<tr>
<td>Canada</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>Australia</td>
<td>9%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Social spending includes cash assistance.

Influencing Health

CDC Health Impact Pyramid
Factors that Affect Health

Examples
- Eat healthy, be physically active
- Rx for high blood pressure, high cholesterol, diabetes
- Immunizations, brief intervention, cessation treatment, colonoscopy
- Fluoridation, trans fat, smoke-free laws, tobacco tax
- Poverty, education, housing, inequality

Counseling & Education
Clinical Interventions
Long-lasting Protective Interventions
Changing the Context to make individuals’ default decisions healthy
Socioeconomic Factors
THE STATUS QUO IS NOT ACCEPTABLE.
What If We Wanted As a Nation to Advance Health?
What Would We Do to Advance Health?

- Focus on several categories of issues and interventions, and invest in upstream drivers of health:
  - Tackling Adverse Childhood Experiences
  - Guaranteeing Early childhood education
  - Expanding Access to Healthful Food, Nutrition, and Physical Activity
  - Enacting Policies to raise incomes
  - Battling substance use disorders
  - Expanding Health Insurance Coverage and Reforming Health Care System
Early Childhood Interventions: the “Heckman Equation”

- Policies that shape early life environments, such as early childhood education, are effective for promoting health (Conti and Heckman, 2014)

- Early childhood interventions targeted to disadvantaged children may promote adult health (Blackson and Hurley 2014; Campbell et al, 2014)
Implications for Policy: Need for Investment in Upstream Health Drivers

- U.S. ranks low on public investments in early childhood education and development.
Dignity Health, 5th largest health system in US, created a $100 million loan fund to develop affordable housing and assist neighborhood revitalization.

Boston Medical Center invested in eight local housing projects in areas of Boston where its highest-cost patients live.

Mayo Clinic helped to finance the state’s largest community-based assisted housing program, including construction of more than 875 units of housing.

The Role of Communities in the Link Between Income and Life Expectancy

- Study by Chetty et al linking 1.4 billion tax records and mortality data from 2000-2014
- Higher income associated with greater longevity
- Life expectancy gap increased over time
- Associations and effects differed across areas; do local policies matter? Which ones?

Policies that can help

- Higher minimum wage (federal minimum = $7.25/hour)
  - Today, at the federal minimum wage of $7.25 per hour, working 40 hours per week, 52 weeks per year yields an annual income of $15,080
  - Below the federal poverty line for families of two or more
- Expanded earned income tax credits
- ”Universal basic income” proposals
Are there places that have done this? YES!

- Enacted a “living wage” ordinance (now $13/hour)
- Created family resource centers
- Improved food served to children in child care
- And much more...

Buncombe County, NC (Asheville), winner of 2013 Robert Wood Johnson Foundation Culture of Health Prize
Community “Collective Action” Model in Atlanta
ARCHI Conclusions: GOALS to 2040

• Expand health insurance coverage – even though difficult in Georgia politics with respect to Medicaid expansion
• Change the way local health care providers were paid to incentivize value, not volume
• Invest savings into Healthy Behavior Interventions, including reducing smoking, alcohol, drug use, unprotected sex; improving diet and nutrition, increasing exercise
• Launch “Pathways to Advantage” - aiming at raising incomes to improve the likelihood of better health outcomes; increase community supports to education
• Ten-year plan to improve the well-being of county residents

• “Backbone” organization is county Health and Human Services agency; more than 100 partnering agencies including many hospitals and clinics and local military forces and installations

• Overall county budget aligned with goals: make San Diego a heart attack and stroke-free zone; combat child obesity; active and healthy living, tobacco-free, safe neighborhoods, protection from crime and abuse, resilience to disasters

• Funding: optimizing use of existing resources; grants from CDC and Center for Medicare and Medicaid Innovation
HOSPITALS AS ANCHOR INSTITUTIONS
IMPROVING COMMUNITY FOOD ENVIRONMENTS

• by modeling good nutrition and improving environmental health inside and outside their facilities
• by collaborating with community-based programs to support a healthy, regional food system and increased access to healthy food

MAKING THE HEALTHY CHOICE THE EASY CHOICE

Hosting hospital-based farmers markets
Kaiser Permanente: founded one of the first hospital-based farmers market in 2003 and now hosts more than 50 farmers markets.

Reducing waste & donating unused food to the hungry
University of Iowa Hospitals and Clinics: reduced food waste by 40% in 2013 by eliminating less-popular menu items and cutting surplus servings. The hospital donated more food to organizations that feed the hungry and composted 77 tons of food.

Educing patients about healthy grocery shopping and meal preparation
Children’s Hospital of Philadelphia: teamed up with the foodservices company Aramark to launch Home Plate, an innovative research study designed to combat childhood obesity, which teaches low-income parents the skills to cook healthy meals at home.

Supporting health professionals to be effective public policy advocates
Health Care Without Harm’s Food Matters program: engages over 4,000 doctors, nurses, and dietitians across the country to become leaders and advocates for a more sustainable food system.

Writing healthy food “prescriptions”
Fresh Prescription, City of Detroit & the Ecology Center: An expanding network of health care sites across the city are connecting chronic disease patients, at risk pediatric patients and food insecure families with local healthy food resources by writing prescriptions for fresh, local fruits and vegetables.

https://noharm-uscanada.org/
kp.org/green
@HCWithoutHarm
@KPSHare

Kaiser Permanente
How do we make a distinct impact relative to our resources?

Health and well being determinants

- 332 sites
- 13 hospitals
- Six ambulatory surgery centers
- 2,350+ licensed inpatient beds
- 338 continuum service beds
- 584,000+ Paramount insurance members
- 900+ employed physicians and providers
- 2,300+ physicians with privileges
- 15,000+ employees
- 90,000+ inpatient discharges
- 71,000+ surgeries
- 8,200+ births
- Strong financial ratings

- Rated 99th out of 100 in Gallup Well-Being Index
- 70% of adults overweight
- 36% of low-income families concerned about having enough food
- Ranked 69th of 88 counties for health outcomes
- Large race disparity for infant mortality / low-birthweight babies
- Ranked 5th for concentrated, extreme poverty in the country
- 28% of youth reported they felt sad or hopeless every day for 2 weeks or more in a row
- 29% children living in poverty
- Highest number of homeless students in public school system in the state
ProMedica established Ebeid Institute with $1.5 million grant.

Built Ebeid Center in UpTown neighborhood, a food desert.

Going beyond: Ebeid Center

- Food market – 1st Floor
- Teaching kitchen – 2nd Floor
- New Call Center – 3rd Floor
- Job training/career skills
- Financial literacy classes
- Parenting classes
- Nutrition counseling
- Diabetes education
- Block by block community empowerment/improvement
CLOSING THOUGHTS
“Of all the forms of inequality, injustice in health care is the most shocking and inhumane.”

--Martin Luther King
“You have to be very farsighted to go into public health, because there is no instant gratification.”

• Davida Coady, physician-activist who died at age 80 in May 2018

• Treated refugees in Latin America and Asia, drew attention to catastrophic famine in Nigeria, aided in eradication of smallpox, and established an organization to treat substance abuse in Bay Area of California
“In our every deliberation, we must consider the impact of our decisions on the next seven generations.”

From the Great Law of the Iroquois Confederacy
“Those who say it can’t be done are usually interrupted by others doing it.”

--James Baldwin
YOU MUST BE THE CHANGE YOU WISH TO SEE IN THE WORLD.

Mahatma Gandhi
THE END