What we need to talk about when we talk about health

Sandro Galea
We care about health
Top Issues for Americans
Which of the following do you see as the most important issue facing the country right now?

- Health care: 35%
- Unemployment and jobs: 13%
- Terrorism: 11%
- Immigration: 10%
- Climate change: 10%
- Relationship with Russia: 6%
- Taxes: 4%
- Other: 4%
- Trade: 2%
- None of these: 2%
- Not sure: 2%

Note: Percentages may not add to 100 due to rounding.
Source: Bloomberg National Poll conducted by Selzer & Co. July 8-12, 2017, with 1,001 American adults. Margin of error +/- 3.1 percentage points.
The good
Life expectancy, 1543 to 2011
Life expectancy at birth is the average number of years a child born would live if current mortality patterns were to stay the same.

Data source: Clio Infra (life expectancy, both genders)
The not so good
Non-communicable diseases mortality rate in selected countries, 2015

U.S. vs. median mortality rates, age 0-75

- **U.S.**
- **Median of other OECD countries**
FIGURE 1-6 U.S. female life expectancy at birth relative to 21 other high-income countries, 1980-2006.

NOTES: Red circles depict newborn life expectancy in the United States. Grey circles depict life expectancy values for Australia, Austria, Belgium, Canada, Denmark, Finland, France, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and West Germany.

SOURCE: National Research Council (2011, Figure 1-4).
The US saw limited gains in average life expectancy at birth over the past 60 years.

In the same time period Japan, Singapore, Costa Rica and Chile experienced tremendous gains, so much so that all of them surpassed the US by 2000.

Author: GRAPH Team  Published: December 11th, 2013  Tagged: life expectancy, high-income countries, oecd

Ingraham C. Americans are dying younger than people in other rich nations. Washington Post. December 27, 2017.
Total health expenditures as percent of GDP, 1970 - 2017

Excludes spending on structures, equipment, and noncommercial medical research. Data unavailable for: the Netherlands in 1970 and 1971; Australia in 1970; Germany in 1991; and France from 1971 through 1974, 1976 through 1979; 1981 through 1984, and 1986 through 1989. These countries are not included in averages calculated for those years use interpolation from nearest year. US values are obtained from CMS National Health Expenditure data.


*Get the data* • PNG
Our World in Data. “The link between health spending and life expectancy: The US is an outlier.”
An Unhealthy Mismatch

SANDRO GALEA

At the heart of efforts to promote population health lies a mismatch between the collective interest in improving health and our understanding of what is required to do so. This mismatch shapes the health challenges we face as a nation and is a disparity that should inform both population health scholarship and how scholars must engage with the broader health conversation.

In order to explicate this mismatch, we need to understand the forces that produce healthier societies. By way of example, the past century has seen a remarkable improvement in the health of populations. While life expectancy in western countries was between 40 and 45 years until around 1900, these same countries gained more than 30 years in life expectancy in the ensuing 100 years. Much of this gain occurred during the first half of the 20th century thanks to a series of social and structural reforms. Most germane were the introduction of broad hygienic regulations to ensure safe food and water chains, and improvements in workplace, housing, and other fundamental living conditions, which contributed to more than two-thirds of these gains in health and life spans.

During the past 4 decades, however, health gains in western nations have slowed considerably. In particular, the United States has lagged behind its peers in health indicators during the past 35 years. For example, in 1980 life expectancy in Chile was 68 years, and by 2014 it was 81 years. By comparison, US life expectancy in 1980 was 74 years and by 2014 it had fallen behind Chile at 79 years. The United States has also fallen behind compared to some middle-income countries. Cuba, for example, had a life expectancy of 74 years in 1980 and a life expectancy of 79 years in 2005, higher than the life expectancy of 77 years in the United States. Today, children born in America can expect to have shorter lives than children born in a range of other countries, including Singapore (life expectancy of 83 years), Greece (life expectancy of 81 years), and Cyprus (life expectancy of 80 years).
Our achievement in health

How much we care about health
Why the mismatch?

Our scholarship

The national health conversation

Why the mismatch?

Our scholarship

The national health conversation

What the American People Care About vs. What the Media Cares About

The top issues for Americans are in **TAN**. The percentage of media coverage in **BLUE**.

- **Health care**: 35% (TAN), 4% (BLUE)
- **Jobs**: 13% (TAN), 1% (BLUE)
- **Terrorism**: 11% (TAN), 6% (BLUE)
- **Immigration**: 10% (TAN), 0% (BLUE)
- **Climate Change**: 10% (TAN), 10% (BLUE)
- **Russia**: 6% (TAN), 75% (BLUE)
- **Taxes**: 4% (TAN), 0% (BLUE)


[Links to Bloomberg and Newsbusters articles]
### What the American People Care About vs. What the Media Cares About

The top issues for Americans are in **TAN**. The percentage of media coverage in **BLUE**.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Americans</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care</td>
<td>35%</td>
<td>4%</td>
</tr>
<tr>
<td>Jobs</td>
<td>13%</td>
<td>1%</td>
</tr>
<tr>
<td>Terrorism</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>Immigration</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Climate Change</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Russia</td>
<td>6%</td>
<td>75%</td>
</tr>
<tr>
<td>Taxes</td>
<td>0%</td>
<td>4%</td>
</tr>
</tbody>
</table>


What we need to talk about when we talk about health
1. Health not healthcare
The spending mismatch: Health determinants vs. health expenditures

Determinants

Access to care: 6%
Genetics: 20%
Socioeconomic and physical environments: 22%
Healthy behaviors: 37%
Interactions among determinants: 15%

National health expenditures: $2.6 trillion

Medical services: 90%
Healthy behaviors: 9%
Other: 1%

<http://www.tbf.org/tbf/56/hphe/Health-Crisis>

Bostonfoundation.org
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

- United States: 16% health, 29% social
- Switzerland: 11% health, 22% social
- Sweden: 11% health, 25% social
- Germany: 11% health, 25% social
- France: 11% health, 31% social
- Netherlands: 11% health, 26% social
- Japan: 11% health, 25% social
- Comparable Country Average: 10% health, 25% social
- Belgium: 10% health, 27% social
- Austria: 10% health, 24% social
- Canada: 10% health, 20% social
- United Kingdom: 10% health, 25% social
- Australia: 9% health, 20% social

Social spending includes cash assistance.

Source: Kaiser Family Foundation analysis of data from OECD (2017), "Health expenditure and financing: Health expenditure indicators", OECD Health Statistics (database) and OECD (2017), Social spending (indicator) (Accessed on 12 November 2017). • Get the data • PNG

**Change in Massachusetts State Government spending, FY01-FY14, adjusted for inflation**

* Health care expenditure is Group Insurance Commission spending plus MassHealth (Medicaid)

2. Health emerges over a life lived
ON A PLATE

A SHORT STORY

This is Richard. His parents are doing OK.

And this is Paula. Her parents? Not so much.

Richard’s house is warm and dry. His shelves are full of books and his fridge is full of food.

Paula’s house is full of people and not much else. It’s damp and noisy and she keeps getting sick.
Richard’s parents will do anything for their baby...

Good boy! Clever!

And so will Paula’s. That’s why they’re working two jobs.

Richard goes to a great school. Well resourced, good kids. His teachers love their job.

At Paula’s school, the class sizes are large, the school is underfunded, and looks it. Her teachers are tired, stretched thin from the stress.

Oh man, I need a new job...

So maybe we can see why the expectations set for Richard...

B+? Oh dear, we need to get you a tutor...

...might be slightly different to those set for Paula...

B? Hey, not bad!
...AND OVER THE YEARS ALL THESE LITTLE DIFFERENCES...

(PARENTS PAYING FOR UNI)

...THEY START TO ADD UP, TO BUILD INTO SOMETHING BIGGER.

I have friends working there - I'll have a word, and get you an internship.

Thanks Dad.

You should be finishing your studies, not looking after me...

Dad, you're sick.

AND BECAUSE EACH LITTLE DIFFERENCE SNEAKS BY UNNOTICED.

Yep, the loan is approved. Congratulations!

Look, we just can't help you. Maybe try Ezee Finance?
Then maybe Richard starts to believe that he deserves to be on top, that he did it all himself.

Oh you're Roger's boy right? I've heard good things, keeping my eye on you...

And maybe Paula starts to settle, learns to 'know her place'.

OK, you've got the job, but I'm watching you sweetie...

Congratulations Richard.

What is the secret to your success?

Um... excuse me...

But I hope not.

Less whining, more hard work I say. I'm sick of people asking for handouts. No one ever handed me anything on a plate.

I really hope not.

Further reading: Look up Auckland City Mission's 'Speaking for ourselves' brochure.
Dose–response relationship between the number of traumas and cocaine use in adolescence

Adjusted odds of cocaine use

Cumulative number of traumas

3. Power, politics, and money are health
The U.S. has the highest rate of years of life lost to disability and premature death due to firearm assaults

Age-standardized disability adjusted life years (DALY) rate per 100,000 population for firearm assaults, 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>DALY Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>225</td>
</tr>
<tr>
<td>Canada</td>
<td>30</td>
</tr>
<tr>
<td>Belgium</td>
<td>18</td>
</tr>
<tr>
<td>France</td>
<td>17</td>
</tr>
<tr>
<td>Switzerland</td>
<td>12</td>
</tr>
<tr>
<td>Comparable Country Average</td>
<td>12</td>
</tr>
<tr>
<td>Sweden</td>
<td>12</td>
</tr>
<tr>
<td>Netherlands</td>
<td>11</td>
</tr>
<tr>
<td>Australia</td>
<td>10</td>
</tr>
<tr>
<td>Austria</td>
<td>8</td>
</tr>
<tr>
<td>Germany</td>
<td>6</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5</td>
</tr>
<tr>
<td>Japan</td>
<td>2</td>
</tr>
</tbody>
</table>

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
Annual gun lobbying expenditures for different groups, 2008 to 2017

$Millions

- Gun control
- Gun rights
- Gun manufacturing

Mass shooting at Sandy Hook Elementary School

Adjusted prevalence ratio of obesity by subsidy score quartiles, National Health and Nutrition Examination Survey from 2001 to 2006

4. There is no health for the many if we exclude the few
Big Blue's heartbreak
Star running back's career over at 23

EBOLA!
Man tested for disease in NYC

CNN gal bites EMTs Page Six
Minnesota's measles outbreak is what happens when anti-vaxxers target immigrants

A new study found Minnesota children with foreign-born parent were 25 percent less likely to have their vaccines.

By Julia Belluz | @julioftoronto | julia.belluz@voxmedia.com | Oct 26, 2017, 12:59pm EDT

Vaccination rates plummeted in Minnesota after anti-vaccine advocates targeted an immigrant group, making its members more susceptible to preventable diseases — such as measles and mumps. | BSBP / Contributor / Getty
10% of children killed by motor vehicles were pedestrians killed by an alcohol-impaired driver

https://www.cdc.gov/motorvehiclesafety/impaired_driving/impaired-dry_factsheet.html
https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812231
5. We need the wisdom, and humility, to understand health
## National Center for Health Statistics

### FastStats Homepage

- Diseases and Conditions
- Infectious/Immune
- Family Life
- Health Care and Insurance
- Disability and Risk Factors
- Injuries
- Life Stages and Populations
- Age Groups
- Births
- Deaths
- Deaths and Mortality
- Leading Causes of Death
- Life Expectancy
- Race and Ethnicity

### Leading Causes of Death

#### Number of deaths for leading causes of death

- Heart disease: 633,842
- Cancer: 595,930
- Chronic lower respiratory diseases: 155,041
- Accidents (unintentional injuries): 146,571
- Stroke (cerebrovascular diseases): 140,323
- Alzheimer’s disease: 110,561
- Diabetes: 79,535
- Influenza and pneumonia: 57,062
- Nephritis, nephrotic syndrome, and nephrosis: 49,959
- Intentional self-harm (suicide): 44,193

*Source: Health United States, 2016 Table 19* [PDF- 11.1 MB] (Data are for 2015)

### Related FastStats

- Deaths and mortality
### Actual causes of death in the United States in 1990 and 2000

<table>
<thead>
<tr>
<th>Actual Cause</th>
<th>No. (%) in 1990</th>
<th>No. (%) in 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>400 000 (19)</td>
<td>435 000 (18.1)</td>
</tr>
<tr>
<td>Poor diet and physical inactivity</td>
<td>300 000 (14)</td>
<td>365 000 (15.2)*</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>100 000 (5)</td>
<td>85 000 (3.5)</td>
</tr>
<tr>
<td>Microbial agents</td>
<td>90 000 (4)</td>
<td>75 000 (3.1)</td>
</tr>
<tr>
<td>Toxic agents</td>
<td>60 000 (3)</td>
<td>55 000 (2.3)</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>25 000 (1)</td>
<td>43 000 (1.8)</td>
</tr>
<tr>
<td>Firearms</td>
<td>35 000 (2)</td>
<td>29 000 (1.2)</td>
</tr>
<tr>
<td>Sexual behavior</td>
<td>30 000 (1)</td>
<td>20 000 (0.8)</td>
</tr>
<tr>
<td>Illicit drug use</td>
<td>20 000 (&lt;1)</td>
<td>17 000 (0.7)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1 060 000 (50)</strong></td>
<td><strong>1 159 000 (48.2)</strong></td>
</tr>
</tbody>
</table>

Deaths attributable to social factors

<table>
<thead>
<tr>
<th>Social Factor</th>
<th>No. (%) in 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual-level factors</strong></td>
<td></td>
</tr>
<tr>
<td>Low education</td>
<td>193 626 (8.3)</td>
</tr>
<tr>
<td>Poverty</td>
<td>102 672 (4.4)</td>
</tr>
<tr>
<td>Low social support</td>
<td>179 937 (7.7)</td>
</tr>
<tr>
<td><strong>Area-level factors</strong></td>
<td></td>
</tr>
<tr>
<td>Area-level poverty</td>
<td>39 553 (1.7)</td>
</tr>
<tr>
<td>Income inequality</td>
<td>145 388 (6.2)</td>
</tr>
<tr>
<td>Racial segregation</td>
<td>153 796 (6.6)</td>
</tr>
</tbody>
</table>

Comparing deaths from social factors to other causes

<table>
<thead>
<tr>
<th>Social Factor</th>
<th>No. (%)</th>
<th>Cause of Death</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low education</td>
<td>193 626 (8.3)</td>
<td>Acute MI</td>
<td>192 898 (8.0)</td>
</tr>
<tr>
<td>Low social support</td>
<td>179 937 (7.7)</td>
<td>Stroke</td>
<td>167 661 (7.0)</td>
</tr>
<tr>
<td>Racial segregation</td>
<td>153 796 (6.6)</td>
<td>Lung cancer</td>
<td>155 521 (6.5)</td>
</tr>
<tr>
<td>Income inequality</td>
<td>145 388 (6.2)</td>
<td>Chronic lower resp. dis.</td>
<td>122 009 (5.1)</td>
</tr>
<tr>
<td>Poverty</td>
<td>102 672 (4.4)</td>
<td>Unintentional injuries</td>
<td>97 900 (4.1)</td>
</tr>
<tr>
<td>Area-level poverty</td>
<td>39 553 (1.7)</td>
<td>Renal failure</td>
<td>36 471 (1.5)</td>
</tr>
</tbody>
</table>

6. Health needs to be understood as a public good
“...things [that] do not lend themselves to [market] production, purchase, and sale. They must be provided for everyone if they are to be provided for anyone, and they must be paid for collectively or they cannot be had at all”
DONATE WATER
HERE FOR
FLINT
7. Compassion has to be at the heart of health
True compassion is more than flinging a coin to a beggar; it comes to see that an edifice which produces beggars needs restructuring.

https://mashable.com/2018/01/01/newsweek-tweet-mlk-jr-casket/#Mqw9IK8jcPqr
Saddened by the deadly shooting in Virginia this morning. My thoughts and prayers are with the family and friends of the victims.
11:29 AM - 26 Aug 2015

This senseless shooting in Las Vegas is absolutely heart breaking. My thoughts and prayers go out to all of the victims and their families.
6:06 AM - Oct 2, 2017

Our prayers are with those injured and killed early this morning in horrifying act of terror in Orlando.
8:15 AM - 12 Jun 2016

Prayers for the victims, families, students, & faculty at Umpqua Community College, & the community of Roseburg, Oregon.
11:47 AM - 1 Oct 2015
PERSON OF THE YEAR 2014

THE EBOLA FIGHTERS

Salome Karwah
An Ebola survivor, 26, who lost both her parents to the disease and now counsels patients in Liberia.
Racial segregation is associated with lower life expectancy
8. Health should be a means, not an end
THIS BABY COULD LIVE TO BE 142 YEARS OLD
Dispatches From the Frontiers of Longevity
88% of Americans die before the age of 94.

98% of Americans die before the age of 100.

Mean life expectancy: 79.

Percent of Americans who die at each age

Age

0 15 30 45 60 75 90 105 120

Mean life expectancy: 79

9. We need to value health, to demand health
Prevention, keeping us from getting sick

Treatment, curing us once we get sick


**EXHIBIT 1**

Excess and Averted Breast Cancer Deaths in the United States, Compared to Western Europe, 1982–2010

**Source:** Authors’ analysis of data from the World Health Organization Cancer Mortality Database and the Human Mortality Database (see Note 13 in text).

Soneji S, Yang J W. New analysis reexamines the value of cancer care in the United States compared to Western Europe. Health Affairs, 34, no.3 (2015):390-397
10. We should be free to choose health
In Congress, July 4, 1776.

DECLARATION,

By the REPRESENTATIVES of the
UNITED STATES OF AMERICA,
In General Congress Assembled.

WHEN in the Course of human Events, it becomes necessary for one People to dissolve the Political Bands which have connected them with another, and to assume among the Powers of the Earth, the separate and equal Station to which the Laws of Nature and of Nature's God entitle them, a decent Respect to the Opinions of mankind requires, that they should declare the Causes which impel them to the Separation.

We hold these Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain inalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness.—That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed. That whenever Any form of Government becomes destructive of these Ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its Foundation on such Principles, and organizing its Powers in such Form, as to them shall seem most likely to effect their Safety and Happiness. Prudence, indeed, will dictate that Governments long established should not be changed for light and transient Causes; and accordingly all Experience hath shown, that Wars are begun at home by theks who have sworn allegiance to a King—government, and are governed by their Policies.

For protecting them by a just Trial, from punishment for any Misdemeanors which the King of Great Britain is in the Power to command:

For imposing Taxes on us without our Consent:

For abolishing the free System of English Laws in a neighbouring Province, establishing therein an arbitrary Government, and enlarging its Boundaries, so as to render it at once an example and instrument for introducing the same arbitrary rule into their Colonies:

For taking away our Charters, abolishing our most valuable Laws, and altering fundamentally the Forms of our Governments:

For suspending our own Legislatures, and declaring themselves invested with power to legislate for us in all cases whatsoever:

He has constrained our fellow Citizens, raider our Capitol, and burned our Towns, and destroyed the lives of our people.

He has personalized our armed Forces in vain Efforts to subdue these States, and to disrupt our Documents of State and Reputation.

He has plundered our seas, ravaged our Coasts, destroyed our commerce, and reduced us to Servitude.

He has combined our forces to repel our侵的, and has endeavored to bring us
New soda wars: infringement on freedoms?

June 06, 2012 | Daily News Editorial
<table>
<thead>
<tr>
<th>Food</th>
<th>20 Years Ago</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagel</td>
<td>140 calories (3” diameter)</td>
<td>350 calories (6” diameter)</td>
</tr>
<tr>
<td>Muffin</td>
<td>210 calories (1.5 oz)</td>
<td>500 calories (4 oz)</td>
</tr>
<tr>
<td>Cheeseburger</td>
<td>333 calories</td>
<td>590 calories</td>
</tr>
<tr>
<td>Pasta (Spaghetti &amp; Meatballs)</td>
<td>500 calories</td>
<td>1025 calories</td>
</tr>
<tr>
<td>French Fries</td>
<td>210 calories (2.4 oz)</td>
<td>610 calories (6.9 oz)</td>
</tr>
<tr>
<td>Soda</td>
<td>85 calories (6.5 oz)</td>
<td>250 calories (20 oz)</td>
</tr>
<tr>
<td>Theater Popcorn</td>
<td>270 calories (5 cups)</td>
<td>630 calories (1 tub)</td>
</tr>
<tr>
<td>Turkey Sandwich</td>
<td>320 calories</td>
<td>820 calories</td>
</tr>
<tr>
<td>Pizza</td>
<td>500 calories (2 slices)</td>
<td>850 calories (2 calories)</td>
</tr>
</tbody>
</table>
FIGURE 1. Motor-vehicle-related deaths per million vehicle miles traveled (VMT) and annual VMT, by year — United States, 1925–1997
A concluding metaphor
Well

WHAT WE NEED TO TALK ABOUT WHEN WE TALK ABOUT HEALTH

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sgalea@bu.edu