Medical Care as a Cause of Improved Health

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What matters for health?

**Booske et al. (2010)**
- Behaviors: 30%
- Social Circumstances, Environment, Genetics: 50%
- Medical Care: 27%

**United Health Foundation (2016)**
- Behaviors: 25%
- Social Circumstances, Environment, Genetics: 60%
- Medical Care: 15%

**Park et al. (2015)**
- Behaviors: 27%
- Social Circumstances, Environment, Genetics: 46%
- Medical Care: 26%

**McGinnis et al. (2002)**
- Behaviors: 40%
- Social Circumstances, Environment, Genetics: 50%
- Medical Care: 10%

**Hunink et al. (1997)**
- Behaviors: 50%
- Social Circumstances, Environment, Genetics: 7%
- Medical Care: 43%

**Ford et al. (2007)**
- Behaviors: 44%
- Social Circumstances, Environment, Genetics: 9%
- Medical Care: 47%

**DHHS (1980)**
- Behaviors: 49%
- Social Circumstances, Environment, Genetics: 41%
- Medical Care: 11%

Sources:
- Booske et al. (2010)
- Ford et al. (2007)
- Hunink et al. (1997)
- McGinnis et al. (2002)
- Park et al. (2015)
- United Health Foundation (2016)
- DHHS (1980)
Biggest difference – cross-section v. time series

Health knowledge and technology is the same everywhere → most of difference due to behaviors and social factors

Technology is a lot better now than then → medical care matters more
Expected age at death, by current age

- Age 65 (6 yrs)
- Age 45 (8 yrs)
- Age 15 (8 yrs)
- Birth (11 yrs)

Year intervals:
- 1949–1951
- 1959–1961
- 1969–1971
- 1979–1981
- 1989–1991
- 1999–2001
- 2015
Ischemic heart disease mortality rates per 100,000: Actual vs. simulated in elderly Medicare beneficiaries

Chernew et al., 2015, based on IMPACT model of Ford et al.
Estimated deaths prevented or postponed in the elderly United States population: Treatment effect in elderly Medicare beneficiaries
### Trends in Risk Factor Control

#### Cardiovascular risk factors (20 years and older): age-sex adjusted to 2009-2010 NHANES

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<tbody>
<tr>
<td>Hypertension (uncontrolled)</td>
<td>41%</td>
<td>29%</td>
<td>23%</td>
<td>20%</td>
<td>17%</td>
<td>15%</td>
<td>14%</td>
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<tr>
<td>Hyperlipidemia (uncontrolled)</td>
<td>30%</td>
<td>21%</td>
<td>17%</td>
<td>16%</td>
<td>13%</td>
<td>12%</td>
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<td>Obese</td>
<td>15%</td>
<td>15%</td>
<td>23%</td>
<td>33%</td>
<td>35%</td>
<td>37%</td>
<td>39%</td>
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<tr>
<td>Current Smoker</td>
<td>40%</td>
<td>36%</td>
<td>28%</td>
<td>24%</td>
<td>25%</td>
<td>22%</td>
<td>20%</td>
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<tr>
<td>Diabetes (uncontrolled)</td>
<td>6%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>12%</td>
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Trends in Risk Factor Control
My questions

1. How to get people to do what they want?
   • Take meds, stop smoking, lose weight, avoid addictive substances
   • How to talk to their doc about $$$
   • Not all of this is medical, but some is

2. How to harness innovation of the medical system for good?
   • Most important areas: Pain; dementia
The importance of pain

(a) Percent on SSDI or SSI

(b) Average Number of Functional Limitations

(c) Percent with Back, Neck, or Joint Pain

(d) Percent with Chronic Knee Pain