Introduction to health economics

(Hurley, Chapter 1)

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Economics 317

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What is health economics?

Best answered by a breakdown of what (U.S.) health economists do.

- 50% study the behavior of individuals
- 34% study the behavior of firms
- 50% study government policy
- 48% study health insurance
- 50% study outcomes research
- 31% study other issues

Similar in Canada and elsewhere, with less emphasis on firms.
Who cares?

- Health economists study issues fundamental to human welfare:
  - how do we make decisions which affect our length and quality of life?
  - what government policies could we use to change behavior which affects health?
  - how could we better provide health care?
  - what other government policies affect health?
  - how does health in turn affect our well-being in other ways, for example, our incomes?
Why are some people healthier than others?

- Why are some Canadians in 2014 healthier than other Canadians?
- Why are we healthier in Canada now than in 1713, or 1913?
- Why is the average Japanese person healthier than the average Canadian?
- We will think about private (e.g., smoking, health care) and social (e.g., income, education) determinants of health.
I construct estimates of world GDP over the very long run by combining estimates of total human populations with estimates of levels of real GDP per capita.

Population

I take my estimates of human population from Kremer (1993), but it would not matter if I had chosen some other authority. All long-run estimates of human population that I have found are quite close together (with the exception of estimates of population around 5000 BC, where Blaxter (1986) estimates a population some eight times that of other authorities). Note that...
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What is health economics?

Health behavior.

Economic analysis.
Economics of health care systems.

- How do markets for insurance work (or not work)?
- Why is health care and/or insurance usually provided by government?
- Why is health insurance so ubiquitous, and what effects does insurance have on behavior?
- How should we pay physicians and other actors in the health care system?
Health Care Expenditures as a Fraction of GDP: Selected Countries

Source: Cheng and Kenkel, 2010
Chapter 2
Table 2.1: A Comparison of Health Care Spending and Health Care Utilization in Selected OECD Countries, 2006

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Health Care Spending (per capita, USD)</th>
<th>Total Health Care Spending (% of GDP)</th>
<th>Physician visits per capita</th>
<th>Acute care hospital days per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>3,336</td>
<td>8.7</td>
<td>6.1</td>
<td>1.0^a</td>
</tr>
<tr>
<td>Canada</td>
<td>3,920</td>
<td>10.0</td>
<td>5.9^a</td>
<td>0.9^a</td>
</tr>
<tr>
<td>France</td>
<td>3,937</td>
<td>11.0</td>
<td>6.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Germany</td>
<td>3,718</td>
<td>10.6</td>
<td>7.0^b</td>
<td>1.7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>5,877</td>
<td>11.3</td>
<td>3.4</td>
<td>1.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>3,332</td>
<td>8.4</td>
<td>5.1</td>
<td>0.9</td>
</tr>
<tr>
<td>United States</td>
<td>6,714</td>
<td>15.3</td>
<td>4.0^a</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Source: OECD Health Data (2008); ^aData from 2005; ^bData from 2004

Comparing differences across countries in health care spending and health care utilization highlights the distinction between monetary measure of activity and real levels of activity and resources. Both the U.S. and Switzerland are the highest spending countries but their citizens receive fewer physician and hospital services than do citizens of other countries. The reason for this discrepancy is prices, which are higher in the U.S. and Switzerland. Although they spend more, they do not necessarily get more.
Health behavior

A Tale of Two Cities: Excess mortality in Nevada vs Utah, 1959–68

<table>
<thead>
<tr>
<th>Age</th>
<th>male</th>
<th>female</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1</td>
<td>42%</td>
<td>35</td>
</tr>
<tr>
<td>1-19</td>
<td>16</td>
<td>26</td>
</tr>
<tr>
<td>20-39</td>
<td>44</td>
<td>42</td>
</tr>
<tr>
<td>30-39</td>
<td>37</td>
<td>42</td>
</tr>
<tr>
<td>40-49</td>
<td>54</td>
<td>69</td>
</tr>
<tr>
<td>50-59</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>60-69</td>
<td>26</td>
<td>17</td>
</tr>
<tr>
<td>70-79</td>
<td>20</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Fuchs, 1974
Lecture 1: Introduction to health economics

What is health economics?
Health behavior.
Economic analysis.

While the longer time period we study does not provide definitive results about the role of cigarette taxes or prices, our results show that it is important to recognize that the influences of key demographic factors on cigarette demand change over time. From 1944 to 2004: the gender difference in smoking rates almost disappears; the Black-white difference reverses; and a strong gradient with schooling emerges. As discussed in special Surgeon General's Reports, other social and behavioral sciences explore gender and racial differences in smoking (USDHHS 1998, 2001). The various and varying demographic influences on cigarette demand are potentially fruitful areas for future health economic research as well. In particular, better understanding the schooling-smoking gradient, and the perhaps related negative income elasticity of cigarette demand, remain key challenges.

11 See for example, Levy and Meara (2006) and Tauras (2006). Data limitations prevent us from estimating the effects of the specific tobacco control policies that constitute the anti-smoking campaign. Specific events include the 1964 Surgeon General's Report, the 1971 ban on television cigarette advertising, and the 1998 Master Settlement Agreement with the tobacco industry. The influences of these events are picked up by the year indicators in our models, so we cannot distinguish their effects from other changes over time.

Source: Cheng and Kenkel, 2010
Health behavior cont.

- Why has the distribution of body weight changed over time? (slideshow)
- Why do people smoke even when everyone knows smoking harms health?
- Would raising alcohol taxes reduce accidents? Violence? STDs?
- Would taxing sugared beverages reduce obesity?
- What is the government’s role in these decisions?
Characteristics of economic analysis.

1. Emphasize **tradeoffs**. We cannot have everything we want.
2. Usually assume rationality (jargon!) in models.
3. Think at the margin. Example: efficacy of health care system.
4. Use of models to understand complex systems.
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Example: RAND Health Insurance Experiment.

- What is the effect of price of care on quantity of care consumed?
- Price depends on insurance.
- Cannot just look at the correlation between insurance purchases and quantity.
- Experiment: randomize proportion of price paid by patient ("coinsurance rate")
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Yes Does Price Matter? The curves shown are similar to an economist's demand curve in that it shows people consuming more care as the care becomes less costly to the consumer in terms of dollars paid out-of-pocket. More importantly, the curve demonstrates that economic incentives do matter. Those facing higher prices demand less care.

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Why is health different?

- Uncertainty.
- Asymmetric information, e.g., your doctor knows more than you about treatments.
- Non-profit firms, government price setting.
- Restrictions on competition and other regulations.
References.