Economic Growth and Inequality: Drawing the Connections to Health

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This Session

- High-level, helicopter view of one piece of the picture: economic growth, inequality, and health

- Will become increasingly grounded in specific issues and policies in later sessions
Economic Growth and Inequality: The Famous Kuznets Curve
Inequality

Income
The New Kuznets Curve
From Income Inequality to Health
Percent of Persons in Poor Health, By Age and Income Quintile
Poor Health Level, by Child Age and Income
Possible Channels

- Fetal Origins Hypothesis and Economic and Nutrient Deprivation; fetal brain development
- Pre-natal care
- Post-natal care
- Chronic conditions “arrive” at a higher rate for lower-income children and health worsens more afterwards (less treatment), leading to cumulatively worse health during childhood
Much Yet to Learn about the Channels and about Policies to Address the Problems (need to know the Channels)
Kuznets Curves for Socially Determined Health Outcomes

David Bishai, MD, MPH, PhD
Professor
Johns Hopkins Bloomberg School of Public Health
Outline

- The Environmental Kuznets Curve
  - Economic growth can worsen health problems
  - Economic growth can diminish health problems
- How does this make sense?
  - Capacity and Interventions
  - Cultural change and Institutions
Environmental Kuznets Curve

Pollution (or other public health problem)

Income per Capita

$5000
Traffic Crashes

(Log Accidents per Person vs. Log GDP per Capita)

(Bishai, et al. 2006)
Traffic Injuries

(Bishai, et al. 2006)
Traffic Deaths

(Bishai, et al. 2006)
Economic growth brings

More crashes and injuries
- More trips
- More insurance claims

Ultimately fewer deaths
- Crashes less fatal
- Injuries less fatal
Reasons for improvements

**Interventions**
- Give people enough money and they will implement solutions
- Research just needs to find interventions that work

**Institutions**
- Social determinants of health pose a “public goods” problem
  - Tragedy of the commons
  - “Leave me alone, get those other crazy drivers off the road.”
- Well-functioning social institutions required for solutions
Traffic Enforcement in Uganda

06/30/2006
## Cost-effectiveness Analysis of Interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Cost per Disability Adjusted Life Year (DALY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved enforcement (LMIC average)</td>
<td>$5.25</td>
</tr>
<tr>
<td>Speed bumps at top 25%ile dangerous junctions (LMIC average)</td>
<td>$8.89</td>
</tr>
<tr>
<td>Bicycle helmets (China)</td>
<td>$107</td>
</tr>
<tr>
<td>Motorcycle helmets (Thailand)</td>
<td>$467</td>
</tr>
</tbody>
</table>
Paradox: Interventions not implemented

- Opposition to safety laws
- High perception of lethality of road transport
Empowered Communities

- There is variation in rates of national progress towards addressing social determinants
  - Depends on:
    - Political culture
    - Political Constitution
    - Champions
- Social determinants of health can be studied and manipulated
  - This is the practice of public health
“There are no universal solutions...
“There are no universal solutions...

There are only universal procedures for arriving at local solutions.” Carl Taylor
Local solution recipe?

- Combine:
  - Technical expertise
  - Community leaders
  - Political leaders

- Emphasize
  - Balanced Partnership
Local solution recipe?

Combine:
- Technical expertise— “Local Health Department” “State Highway Authority” “Academic institution”
- Community leaders— “NGOs” “Neighborhood associations” “PTAs” “Labor Unions”
- Political leaders— “Mayors, Sheriffs, Legislators”
Road Safety in 10 Countries (RS10)

- Brazil, Mexico, Egypt, Russia, China, India, Cambodia, Vietnam, Turkey, Kenya
- WHO office and partners pick interventions and pilot them
- RS 10 emerging as a learning lab for social determinants of success in launching public health interventions.
- Multisectoral partnership critical
Summary

Effects of economic growth on health can be non-linear

“Institutions” > “Interventions”

Public health manages the social determinants of health by combining
  - Local government (sharing the financing)
  - Community (mobilize political will)
  - Technical expert (benefit from learning)
Inequality – A Primer

Guru Sethupathy

Social Determinants of Health Conference
Johns Hopkins University
May 8-9, 2012
Gini Index - Income Disparity since World War II

where 0 is perfect equality, and 100 is perfect inequality (i.e., one person has all the income)

Source: US Census Bureau (2009)
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where 0 is perfect equality, and 100 is perfect inequality (i.e., one person has all the income)

Source: US Census Bureau (2009)
Causes of Inequality

• Technology
  – Technology is skill-biased?

• Globalization
  – International trade, offshoring
  – Mobility of capital and relative immobility of labor

• Institutional Changes
  – Weakening of unions
  – Fall in real minimum wage

• Regulatory Capture
Different Dimensions of Inequality

• Skilled versus unskilled
  – Technology
  – Globalization

• Superstars versus everyone else

• Capital versus labor
  – Institutions (weakening of unions, minimum wage)
  – Globalization

• Finance versus everyone else
  – Productivity gains or regulatory capture?
Skilled versus unskilled
Composition adjusted college/high-school log weekly wage ratio, 1963-2008

Source: Acemoglu and Autor (2010)
Source: Acemoglu and Autor (2010)
Cumulative log change in real weekly earnings at the 90th, 50th and 10th wage percentiles
1963-2008: full-time full-year males and females

Source: Acemoglu and Autor (2010)
Cumulative log change in real hourly earnings at the 90th, 50th and 10th wage percentiles
1974-2008: males and females

Source: Acemoglu and Autor (2010)
Superstars versus everyone else
Top 10% Income Share

Source: Piketty and Saez (2010)
Top 1% Income Share

Source: Piketty and Saez (2010)
Top 0.01% Income Share

Source: Piketty and Saez (2010)
Capital versus labor
Labor share of nonfarm business sector output, first quarter 1947–third quarter 2010

NOTE: The shaded bars denote National Bureau of Economic Research (NBER)-designated recessions.

Source: Fleck, Glaser, and Sprague (2012)
Financiers versus everyone else
Source: Phillipon and Reshef (2008)
Relative Financial Wage and Financial Deregulation

Notes: Wages are computed from the Industry Accounts of the U.S., from Kuznets (1941), and from Martin (1939). The relative wage is the ratio of Fins to Non Farm Private wages. See the text for the definition of the deregulation index.

Source: Phillpon and Reshef (2008)
Quality-Adjusted Unit Cost of Financial Intermediation

Notes: Total intermediation costs divided by quality-adjusted composite measure of financial intermediation output.

Source: Phillpon and Reshef (2008)
Consequences of Inequality

• Positive Effect
  – Incentives

• Negative Effect(s)
  – Political economy argument: Inefficient redistribution, social breakdown
  – Behavioral argument: Inefficiency of positional goods
  – Macro argument: Asset bubbles
  – Micro argument: Incentives