Health Disparities & HiAP

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“I know so much that I don’t know where to begin.”
Conclusion

1. Stark health disparities must be mitigated

2. Health in all policies is needed and important
On being asked to talk on the principles of research, my first thought was to arise… and say,

“Be careful”

and to sit down.

J Cornfield 1959
OBAMACARE ENROLLMENT

ACTUAL ENROLLMENT: 7,100,000
GOAL: 7,000,000

BETHANY RAVENEL
OBAMACARE SURVIVOR
Why do we get sick and ultimately die?
Myths about Health Insurance

• Narrowly, not having health insurance does not make you sick… *the reason you got a headache is not because you didn’t have an aspirin.*

• It’s not clear how much health insurance or even medicine prevents disease

• Health insurance does not imply quality care
### EXHIBIT 2
Total Deaths And Age-Adjusted Death Rates (Per 100,000 Population) For The Fifteen Leading Causes Of Death In The Total U.S. Population, 2003

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Number of deaths (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diseases of heart</td>
<td>(232.3)</td>
</tr>
<tr>
<td>Malignant neoplasms (cancer)</td>
<td>(190.1)</td>
</tr>
<tr>
<td>Cerebrovascular diseases (stroke)</td>
<td>(53.5)</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>(43.3)</td>
</tr>
<tr>
<td>Accidents (unintentional injuries)</td>
<td>(37.3)</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>(25.3)</td>
</tr>
<tr>
<td>Influenza and pneumonia</td>
<td>(22.0)</td>
</tr>
<tr>
<td>Alzheimer’s disease</td>
<td>(21.4)</td>
</tr>
<tr>
<td>Nephritis, nephrotic syndrome, nephrosis</td>
<td>(14.4)</td>
</tr>
<tr>
<td>Septicemia</td>
<td>(11.6)</td>
</tr>
<tr>
<td>Intentional self-harm (suicide)</td>
<td>(10.8)</td>
</tr>
<tr>
<td>Chronic liver disease and cirrhosis</td>
<td>(9.3)</td>
</tr>
<tr>
<td>Essential hypertension/hypertensive renal disease</td>
<td>(7.4)</td>
</tr>
<tr>
<td>Parkinson’s disease</td>
<td>(6.2)</td>
</tr>
<tr>
<td>Assault (homicide)</td>
<td>(6.0)</td>
</tr>
</tbody>
</table>


**NOTE:** Numbers in parentheses are age-adjusted death rates per 100,000 population.
Table 2. 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>400 000 (16.6)</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 vehicle</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>

*Data are from McGinnis and Foege. † The percentages are for all deaths.
What Causes Disease?

Social Forces
Markets
Norms
Racism; Sexism

Behavior
Life-Style
Choice

Physiology
Molec. Bio.
Genetics
Germs

Cause of Disease

Fundamental/Upstream
Immediate/Proximal
Health disparities are systematic, plausibly avoidable health differences adversely affecting socially disadvantaged groups…
A Couple of Basic Facts on Health Disparities
Infant Mortality Rates by Race, US 1900 - 1998
Homicide, HIV, and perinatal death, although demonstrating favorable trends, continue to keep the black-white gap unnecessarily large…

However, cardiovascular-related diseases remain the leading cause of black/white differences in life expectancy.

If all cardiovascular causes and diabetes are considered together, they account for 35% and 52% of the gap for males and females, respectively.

International Comparisons

**Figure 2.** Life Expectancy in Canada and the United States, 1850–2000
Lower Life Expectancy?

Life Expectancy at Birth

<table>
<thead>
<tr>
<th></th>
<th>Low Class</th>
<th>High Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USA (1980-82)</strong></td>
<td>73.0</td>
<td>75.8</td>
</tr>
<tr>
<td><strong>Brazil (1970)</strong></td>
<td>53.2</td>
<td>62.0</td>
</tr>
</tbody>
</table>

-3, +20, +11
Under 5 Mortality Rate (2010)
(deaths per 1,000 children)

United States = 7.5

Tanzania = 91.3
What surprises me?

What aren’t disparities bigger?
Some Issues
Justice?
Utilitarian: Greatest good for greatest number

Platonic: To the victor, the spoils

Rawlsian: Max welfare of least well off: fairness

Nozickian: Just rules = Just outcome

Marxist: From each according to their ability, to each according to their need

Meritocratic: From each according to their effort, to each according to their effort
**Theist:** God’s will

**Golden Rule:** Do unto others…

**Aristotelian:** Treat equals equally, unequals unequally

**Egalitarian:** Equal outcomes

**Hippie:** Let’s all share; give me some of yours

**Oakesian:** Tall people decide
Difference/Disparity in

Outcome
or
Opportunity?
**Difference or Ratio?**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>Diff</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>50</td>
<td>30</td>
<td>2.5</td>
</tr>
<tr>
<td>2500</td>
<td>3000</td>
<td>500</td>
<td>1.2</td>
</tr>
<tr>
<td>0.02</td>
<td>0.06</td>
<td>0.04</td>
<td>3</td>
</tr>
</tbody>
</table>
THE HEALTH OF NATIONS: Why Inequality Is Harmful to Your Health

Ichiro Kawachi and Bruce P. Kennedy

"The book America has been literally dying for! Give it to the rich and powerful, give it to the poor and downtrodden. Help heal our society."

—Richard Wilkinson, author of Unhealthy Societies

OXFORD UNIVERSITY PRESS Published by Oxford University Press for the Johns Hopkins Bloomberg School of Public Health
There is nothing new here
<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Number of deaths per 100 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>30–39</td>
<td>Rich 1.08</td>
</tr>
<tr>
<td></td>
<td>Poor 1.57</td>
</tr>
<tr>
<td>40–49</td>
<td>Rich 1.17</td>
</tr>
<tr>
<td></td>
<td>Poor 2.13</td>
</tr>
<tr>
<td>50–59</td>
<td>Rich 1.99</td>
</tr>
<tr>
<td></td>
<td>Poor 3.59</td>
</tr>
<tr>
<td>60–69</td>
<td>Rich 3.60</td>
</tr>
<tr>
<td></td>
<td>Poor 7.50</td>
</tr>
<tr>
<td>70–79</td>
<td>Rich 8.04</td>
</tr>
<tr>
<td></td>
<td>Poor 14.36</td>
</tr>
<tr>
<td>80–89</td>
<td>Rich 13.22</td>
</tr>
<tr>
<td></td>
<td>Poor 100.00</td>
</tr>
</tbody>
</table>

Source: Louis François Benoiston de Châteauneuf, “De la durée de la vie chez le riche et chez le pauvre,” *Annales d'hygiène publique et de médecine légale* 3 (1830): 12. Data for the wealthy are taken from the years 1821–29; for the poor Benoiston de Châteauneuf only reports collecting figures “for several years,” presumably during the 1820s.
Table 6.5. Cholera incidence in Paris, 1832, by class of lodging house

<table>
<thead>
<tr>
<th>Class</th>
<th>Total houses</th>
<th>Houses attacked by cholera</th>
<th>% attacked</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>102</td>
<td>4</td>
<td>3.9</td>
</tr>
<tr>
<td>2</td>
<td>227</td>
<td>19</td>
<td>8.4</td>
</tr>
<tr>
<td>3</td>
<td>1,566</td>
<td>289</td>
<td>18.5</td>
</tr>
<tr>
<td>4</td>
<td>955</td>
<td>499</td>
<td>52.3</td>
</tr>
<tr>
<td>5</td>
<td>256</td>
<td>154</td>
<td>60.2</td>
</tr>
<tr>
<td>All classes</td>
<td>3,106</td>
<td>965</td>
<td>31.1</td>
</tr>
</tbody>
</table>

US Child (0-19 years) Mortality Rates, by time and SES

Table 1  Mortality rates per thousand for slaves and the antebellum population

<table>
<thead>
<tr>
<th>Age</th>
<th>Slaves</th>
<th>Entire United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>350</td>
<td>179</td>
</tr>
<tr>
<td>1-4</td>
<td>201</td>
<td>93</td>
</tr>
<tr>
<td>5-9</td>
<td>54</td>
<td>28</td>
</tr>
<tr>
<td>10-14</td>
<td>37</td>
<td>19</td>
</tr>
<tr>
<td>15-19</td>
<td>35</td>
<td>28</td>
</tr>
<tr>
<td>20-24</td>
<td>40</td>
<td>39</td>
</tr>
</tbody>
</table>

Sources: Age 0, slaves, see Notes 5 and 17; slaves aged 1 and above, Steckel (1979b: 92); United States, Haines and Avery (1980: 88), average of Model West and logit tables.
Causes of Health Differences
Today: Poverty and Child Health

- Intrauterine effects
- Infant mortality
- Low birth weight
- Accidental death
- Blood lead
- Cognitive deficiencies
- Sick days at School
- Lower educational attainment
- Obesity
- Asthma
- Hearing loss
- Chronic stress
- etc…

Five categories of reading proficiency: 5 = High

Tabulated from NCES 2002 “Adult Literacy in America”
National Center for Education Statistics. 1993-5
Estimates for the first 4 years of life reveal...

a child of a professional family would accumulate 560,000 more encouragements than discouragements.

But a child from a welfare family would accumulate 125,000 more discouragements than encouragements.
# Math Gains in Math Achievement Test, by SES

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>LOW</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;ST&lt;/sup&gt; Grade</td>
<td>49</td>
<td>45</td>
</tr>
<tr>
<td>2&lt;sup&gt;ND&lt;/sup&gt; Grade</td>
<td>43</td>
<td>42</td>
</tr>
<tr>
<td>Total 1&lt;sup&gt;st&lt;/sup&gt;-5&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>186</td>
<td>186</td>
</tr>
<tr>
<td>Summer 1&lt;sup&gt;st&lt;/sup&gt; – 2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>-5</td>
<td>9</td>
</tr>
<tr>
<td>Summer 2&lt;sup&gt;nd&lt;/sup&gt; – 3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>-5</td>
<td>3</td>
</tr>
<tr>
<td>Total Summer 1-5</td>
<td>-8</td>
<td>25</td>
</tr>
</tbody>
</table>

Heckman & Krueger 2005 “Inequality in America” Summary of Table 1.2 (page 31)
Percent who reject Evolution (2005)

Source: National Geographic
Tax-funded creationism

**Green**: Public schools in states where state law permits creationist instruction.

**Orange**: Private schools that teach creationism and accept tax-funded vouchers or scholarships.

**Red**: Responsive Ed charter schools using creationist curricula.
Is Income Inequality a Determinant of Population Health? Part 1. A Systematic Review

JOHN LYNCH, GEORGE DAVEY SMITH, SAM HARPER, MARIANNE HILLEMEIER, NANCY ROSS, GEORGE A. KAPLAN, and MICHAEL WOLFSO

University of Michigan; University of Bristol; Pennsylvania State University; McGill University; Statistics Canada

This article reviews 98 aggregate and multilevel studies examining the associations between income inequality and health. Overall, there seems to be little support for the idea that income inequality is a major, generalizable determinant of population health differences within or between rich countries. Income inequality may, however, directly influence some health outcomes, such as homicide in some contexts. The strongest evidence for direct health effects is among states in the United States, but even that is somewhat mixed. Despite little support for a direct effect of income inequality on health per se, reducing income inequality by raising the incomes of the most disadvantaged will improve their health, help reduce health inequalities, and generally improve population health.
Is Income Inequality a Determinant of Population Health? Part 2. U.S. National and Regional Trends in Income Inequality and Age- and Cause-Specific Mortality

JOHN LYNCH, GEORGE DAVEY SMITH, SAM HARPER, and MARIANNE HILLEMEIER

University of Michigan; University of Bristol; Pennsylvania State University

This article describes U.S. income inequality and 100-year national and 30-year regional trends in age- and cause-specific mortality. There is little congruence between national trends in income inequality and age- or cause-specific mortality except perhaps for suicide and homicide. The variable trends in some causes of mortality may be associated regionally with income inequality. However, between 1978 and 2000 those regions experiencing the largest increases in income inequality had the largest declines in mortality \( r = 0.81, p < 0.001 \). Understanding the social determinants of population health requires appreciating how broad indicators of social and economic conditions are related, at different times and places, to the levels and social distribution of major risk factors for particular health outcomes.
Different Environments
Sure, but where does environment come from?
HiAP
Whose health?
What do you mean by “health”?
What policies?
Who gets to decide?
Change *health* to *social welfare* and you’ll find 250 years of scholarship on how all policies impact social welfare, and which are deemed just/fair by what criteria.
$1,000,000 each, just to get started
$13,000,000,000,000 to just build
Figure 1—Number and Percent of Alcohol Related v. Nonalcohol Related Highway Vehicle Fatalities: 2001-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Fatalities</th>
<th>Fatalities Involving Alcohol</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>41.2</td>
<td>16.1</td>
<td>39.2%</td>
</tr>
<tr>
<td>2002</td>
<td>40.8</td>
<td>15.6</td>
<td>38.9%</td>
</tr>
<tr>
<td>2003</td>
<td>39.9</td>
<td>15.1</td>
<td>38.9%</td>
</tr>
<tr>
<td>2004</td>
<td>39.2</td>
<td>14.7</td>
<td>38.9%</td>
</tr>
<tr>
<td>2005</td>
<td>41.5</td>
<td>16.0</td>
<td>39.5%</td>
</tr>
<tr>
<td>2006</td>
<td>41.6</td>
<td>16.2</td>
<td>39.3%</td>
</tr>
<tr>
<td>2007</td>
<td>41.3</td>
<td>16.0</td>
<td>38.4%</td>
</tr>
<tr>
<td>2008</td>
<td>42.0</td>
<td>16.8</td>
<td>40.0%</td>
</tr>
<tr>
<td>2009</td>
<td>41.3</td>
<td>16.5</td>
<td>39.3%</td>
</tr>
<tr>
<td>2010</td>
<td>40.6</td>
<td>15.9</td>
<td>39.0%</td>
</tr>
</tbody>
</table>

Remedial Models
Health Disparity = 3
Health Disparity = 2
Health Disparity = 2
Health Disparity = 3
Health Loss = 5
Rich
Socioeconomic status
Poor
Health Disparity = 2
Health Loss = 1
Excellent

Health Loss = 7
Health Disparity = 2
Health Loss = 1

Rich
Poor
Rich
Poor

Health Disparity = 6
Health Gain = 2
Health Loss = 2

Excel
Poor

Excel
Poor
Health Disparity = 11

Health Gain = 5

Health Gain = 4
HiAP

Food for Thought
In 2013, the WHO reported that globally, nearly 1/3 of all women are victims of physical or sexual violence.

The vast majority of these are attacked by their husbands or boyfriends.
UNICEF estimates that 91 percent of women in Egypt, 98 percent in Somalia, 96 percent in Guinea, 93 percent in Djibouti, 89 percent in Eritrea, 89 percent in Mali, 88 percent in Sierra Leone, and 88 percent in Sudan have undergone some form of genital cutting, and more than 50 percent of the women in Burkina Faso, Chad, Ethiopia, The Gambia, Guinea-Bissau, and Kenya have also been cut.
Share of Women Who Have Experienced Physical or Sexual Violence by an Intimate Partner

- North America: 21%
- Middle East and North Africa: 40%
- Sub-Saharan Africa: 40%
- Latin America and the Caribbean: 33%
- Europe and Central Asia: 29%
- East Asia and the Pacific: 30%
- South Asia: 43%
- Australia and New Zealand: 28%

World Bank
The horrifying kidnapping of nearly 300 Nigerian schoolgirls by the extremist group Boko Haram was made even more horrifying by the fact that the group specifically targeted the girls for trying to improve their lives. Boko Haram went
EDUCATION

If You’re So Smart, Why Ain’t You Rich?

It still remains true, especially for men, that we are primarily valued for what we earn.

More Education

RAISING BOYS

The Wonder of Boys

The MOON magazine’s issue on why they need physicality, and how they emote, plus fiction, poetry and quotes, all about boys.

More Raising Boys
Moving to Opportunity for Fair Housing Demonstration Program

Final Impacts Evaluation

SUMMARY
Simple Results:

• Approx 40% of families eligible to move chose not to

• Many target communities rejected study families

• Approx 20% of families that moved to better neighborhoods, moved back

• No discernable effects on employment rates

• Self-reported mental health of adults appears to have improved

• Girls seemed to improve, boys suffered
The $10,000,000 question.
“Mike, you’re the expert, What should we do?”
• Create jobs
• Improve schools
• Add PH nurses services
• Increase prenatal services
• Give each HH $10k
• Help increase program take-up
• Add cops to street
• Buy, renovate, and rent houses
• Fund free clinic
• Increase family (abuse) services
• …
• Early childhood education
• Provision of health insurance
• Medical screening
• Assistance coordination
• ???
Eden Prairie School District’s 2009 Boundary Re-Drawing

New boundaries would rebalance the schools' enrollments socioeconomically and by school capacity

At Forest Hills Elementary the percent of students receiving free and reduced lunch has climbed to more than 42 percent; but at Cedar Ridge Elementary, it's less than 10 percent. Under the new boundary plan, that discrepancy would fall from a 33-point difference to 2 points.
Eden Prairie school chief is leaving 9 months early

Article by: KELLY SMITH, Star Tribune | Updated: September 14, 2011 - 11:03 PM

Kroll, 51, has worked in the Eden Prairie schools for 28 years. She acknowledged the grind of pushing the divisive plan, which redrew school boundary lines largely so low-income students weren't concentrated at one elementary school in the 9,700-student suburban district.
Most people who aren't poor don't want schools integrated socioeconomically because no matter the color of one's skin, students from a lower socioeconomic status perform worse than those from a higher status. That's why Obama's kids and Biden's grandchildren attend a $34K per year private school. Hope and Change...for those that can afford it.

Report as inappropriate

52

Good riddance.

Report as inappropriate

109

I live in Eden Prairie and I'm glad she's going. She took a great school system and made it into something most of us don't want. We liked our neighborhood schools. We bought homes in areas that had neighborhood schools and she decided that our decisions weren't PC. So now we have...I don't know what we have!!!!!!

Report as inappropriate

99
In N.A.A.C.P., Industry Gets Ally Against Soda Ban

By MICHAEL M. GRYNBAUM
Published: January 23, 2013

As the American soft-drink industry argued its case in court on Wednesday against Mayor Michael R. Bloomberg’s restrictions on sugary drink sizes, a prominent local group stood by its side: the New York chapter of the N.A.A.C.P.

The obesity rate for African-Americans in New York City is higher than the city average, and city health department officials say minority neighborhoods would be among the key beneficiaries of a rule that would limit the sale of super-size, calorie-laden beverages.

But the N.A.A.C.P. has close ties to big soft-drink companies, particularly Coca-Cola, whose longtime Atlanta law firm, King & Spalding, wrote the amicus brief filed by the civil rights group in support of a lawsuit aimed at blocking Mr. Bloomberg’s soda rules, which are set to take effect in March.
Conclusion

1. Stark health disparities must be mitigated

2. Health in all policies is needed and important
This stuff is too important to be sloppy in our thinking...
This stuff is too important to be sloppy in our thinking...

Let’s get to work!
Thank you