EDUCATION AND THE SOCIAL DETERMINANTS OF HEALTH

Adewale Troutman, MD, MPH, CPH
Insanity:
Doing the same thing over and over again and expecting different results.
Albert Einstein
Who is on the bank of the river? And, what are they doing?

"The web of causation"

Nancy Kreiger

Finding the balance
SOCIAL DETERMINANTS OF HEALTH

The complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities.
Dealing with the social determinants of health may yield greater and more sustainable returns

The Troutman Group
Education can improve health by increasing health knowledge
Leads to greater employment opportunities
Linked with social and psychological factors that affect health
PQLI experience
“55,000 degrees”
Kalamazoo Promise
IN EL SALVADOR, IF MOTHERS HAD NO EDUCATION THEIR BABIES HAVE 100 CHANCES IN 1000 OF DYING IN THEIR FIRST YEAR OF LIFE; IF MOTHERS HAVE AT LEAST SECONDARY EDUCATION THE INFANT DEATH RATE IS A QUARTER OF THAT (WORLD BANK 2006)
TELL ME HOW A MAN DIED AND I’LL TELL YOU WHERE HE LIVED
ARISTOTLE

PLACE MATTERS
THE ROLE OF RESIDENTIAL SEGREGATION;
“THE METROPOLITAN AREAS WITH THE HIGHEST SEGREGATION LEVELS HAVE THE MOST UNEQUAL GEOGRAPHIES OF OPPORTUNITY”
DELORES ACEVEDO-GARCIA ET AL
In El Salvador, if mothers had no education their babies have 100 chances in 1000 of dying in their first year of life; if mothers have at least secondary education the infant death rate is a quarter of that (World Bank 2006).
Unemployment Rates by Education Level

- Bachelor's Degree or Higher
- Some College or Associate's Degree
- High School Graduate
- High School Dropout

December 2007

Unemployment Rate

Yearly Trend:
- 2007: 2.1%
- 2008: 4.7%
- 2009: 7.5%
- 2010: 9.4%
- 2011: 15.4%
REFRAMING HOW WE THINK ABOUT HEALTH

Based on Frieden 2010

Behavior Changes

Healthy eating, exercise

Rx for hypertension, insulin

Immunizations, smoking cessation

Smoke free policies, seat belt laws

Poverty, education, housing, inequality

Social Determinants

Policies

Long-term interventions

Clinical care

Healthy eating, exercise

Rx for hypertension, insulin

Immunizations, smoking cessation

Smoke free policies, seat belt laws

Poverty, education, housing, inequality

Social Determinants

Policies

Long-term interventions

Clinical care

Behavior Changes
### LIFE EXPECTANCY AT AGE 25, 1998

<table>
<thead>
<tr>
<th>Group</th>
<th>White</th>
<th>Black</th>
<th>Difference</th>
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</thead>
<tbody>
<tr>
<td>All</td>
<td>53.4</td>
<td>48.4</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 0-12 Years</td>
<td>50.1</td>
<td>47.0</td>
<td>3.1</td>
</tr>
<tr>
<td>b. 12 Years</td>
<td>54.1</td>
<td>49.9</td>
<td>4.2</td>
</tr>
<tr>
<td>c. Some College</td>
<td>55.2</td>
<td>50.9</td>
<td>4.3</td>
</tr>
<tr>
<td>d. College Grad</td>
<td>56.5</td>
<td>52.3</td>
<td>4.2</td>
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<tr>
<td><strong>Difference</strong></td>
<td>6.4</td>
<td>5.3</td>
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Murphy, NVSS 2000; Braveman et al. in Press, NLMS 1988-1998
INFANT DEATH RATES BY MOTHER'S EDUCATION, 1995

Education

Deaths per 1,000 population

<High School
High School
Some College
College grad. +

B/W Ratio

White
Black
B/W Ratio
INFANT MORTALITY BY MOTHER’S EDUCATION, 1995

<table>
<thead>
<tr>
<th>Years of Education</th>
<th>NH White</th>
<th>Black</th>
<th>Hispanic</th>
<th>API</th>
<th>AmI/AN</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>6.5</td>
<td>14.8</td>
<td>5.9</td>
<td>7.9</td>
<td>5.1</td>
</tr>
<tr>
<td>13-15</td>
<td>5.5</td>
<td>12.3</td>
<td>5.1</td>
<td>5.7</td>
<td>4.4</td>
</tr>
<tr>
<td>16+</td>
<td>6</td>
<td>17.3</td>
<td>5.7</td>
<td>4.4</td>
<td>4.0</td>
</tr>
</tbody>
</table>

NH White: Non-Hispanic White
Black: Black
Hispanic: Hispanic
API: Asian/Pacific Islander
AmI/AN: American Indian/Alaska Native

Infant Mortality rates by mother’s education level, showing a general trend of lower infant mortality rates with higher education levels.