The Intersection of Adverse Childhood Experiences and Social Determinants of Health

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Chief Medical Officer Advocate Children’s Hospital
What is Health Equity?

• The ability for every person to attain his or her full health potential regardless of social position or socially determined circumstances.

- Healthy People 2020, CDC
Equality is different than Equity
What are Social Determinants?

- Conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks
What Makes Us Healthy

access to care 10%
genetics 20%
environment 20%
healthy behaviors 50%

What We Spend On Being Healthy

88% medical services

healthy behaviors 4%
other 8%
CURIOSITY AND WHAT EQUALITY REALLY MEANS

By Atul Gawande  June 2, 2018
We are all created equal and should be respected as such. We in medicine do not always live up to that principle. History has been about the struggle to close the gap between the aspiration and the reality. But when that gap is exposed—when it turns out that some people get worse or no treatment because of their lack of money, lack of connections, background, darker skin pigment, or additional X chromosome—we are at least ashamed about it. We believe a C.E.O. and a cabbie with the same heart disease deserve the same chance at survival.
Child Poverty Rates

Percent

25

20

15

10

5

0


Illinois U.S.

14.6 14.6 15.3 15.6 16.5 16.7 17.1 16.6 17.0 18.9 19.4 21.6 20.7 20.7

16.2 16.3 16.7 17.6 17.8 18.5 18.3 18.0 18.2 20.0 21.6 22.5 22.6 22.2

## Economic Well-Being

<table>
<thead>
<tr>
<th>Category</th>
<th>United States</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>U.S.:</em> 14,116,000</td>
<td><em>Ill.:</em> 512,000</td>
<td></td>
</tr>
<tr>
<td><em>U.S.:</em> 20,692,000</td>
<td><em>Ill.:</em> 772,000</td>
<td></td>
</tr>
<tr>
<td><strong>Children living in a household with a high housing cost burden</strong></td>
<td>41% (2010) 32% (2016)</td>
<td>42% (2010) 31% (2016)</td>
</tr>
<tr>
<td><em>U.S.:</em> 23,556,000</td>
<td><em>Ill.:</em> 900,000</td>
<td></td>
</tr>
<tr>
<td><strong>Teens not in school and not working</strong></td>
<td>9% (2010) 7% (2016)</td>
<td>8% (2010) 7% (2016)</td>
</tr>
<tr>
<td><em>U.S.:</em> 1,176,000</td>
<td><em>Ill.:</em> 45,000</td>
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**TOMORROW STARTS TODAY.**
Federal Poverty Levels (FPL)

Federal Minimum Wage - $7.25/hr.

Chicago - $11/hr.
Illinois $8.25/hr.

40 hr. work week at minimum wage:
Chicago = $22,880 annually
Suburbs = $17,160 annually
Trends in Child Poverty Rates by Race-Ethnicity

<table>
<thead>
<tr>
<th>Year</th>
<th>White</th>
<th>Black</th>
<th>Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>8.0</td>
<td>34.8</td>
<td>19.8</td>
</tr>
<tr>
<td>2006</td>
<td>11.2</td>
<td>38.7</td>
<td>8.5</td>
</tr>
<tr>
<td>2012</td>
<td>11.2</td>
<td>44.6</td>
<td>28.8</td>
</tr>
</tbody>
</table>

Figure 3.5

States in the South have among the highest infant mortality rates in the country.

Infant Mortality Rate, by State, 2011

United States: 6.15 infant deaths per 1,000 live births

Number of infant deaths per 1,000 live births
- 3.75 – 5.24 (13 states)
- 5.25 – 6.29 (12 states)
- 6.30 – 7.24 (13 states)
- ≥7.25 (12 states and DC)

Infant Mortality Rates for Mothers Age 20+, by Race/Ethnicity and Education, 2003-2005

Infant deaths per 1,000 live births:

- **Less than High School**
  - African American, Non-Hispanic: 9.1
  - American Indian/Alaska Native: 15.1
  - White, Non-Hispanic: 10.1
  - Asian and Native Hawaiian/Pacific Islander: 5.9
  - Hispanic: 5.4

- **High School**
  - African American, Non-Hispanic: 8.2
  - American Indian/Alaska Native: 13.9
  - White, Non-Hispanic: 6.6
  - Asian and Native Hawaiian/Pacific Islander: 5.8
  - Hispanic: 5.4

- **College+**
  - African American, Non-Hispanic: 6.5
  - American Indian/Alaska Native: 11.5
  - White, Non-Hispanic: 4.2
  - Asian and Native Hawaiian/Pacific Islander: 3.8
  - Hispanic: 4.7

**NOTES:** Data reported for 37 states, DC, and NYC.

**DATA:** Centers for Disease Control and Prevention/National Center for Health Statistics, National Vital Statistics System, Linked Birth/Infant Death Data Set.

**SOURCE:** Health, United States, 2008, Table 19.
Figure 1: Likelihood of Being Ready for School at Age Five, by Poverty Status at Birth

Source and Notes: Brookings tabulations of data from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B). Near poor is defined as household income between 100 and 185 of poverty percent and moderate or high income is defined as household income above 185 percent of poverty.
Average SAT Score by Family Income Level (2013)
Adverse Experiences of U.S. Children Aged 0-17 by Parental Income (2012)

- Parent divorced/separated: 24%
- Repeated any grades: 14%
- Parent served time in jail: 11%
- Witnessed neighborhood violence: 12%
- Witnessed domestic violence: 11%
- Has learning disability: 10%
- Parent/guardian died: 4%

## Outcomes for Former Foster Youth at Age 26

<table>
<thead>
<tr>
<th></th>
<th>Illinois (former foster youth)</th>
<th>Comparison group (all youth)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No H.S. diploma or equivalency</td>
<td>22%</td>
<td>6%</td>
</tr>
<tr>
<td>H.S. diploma or equivalency only</td>
<td>33%</td>
<td>22%</td>
</tr>
<tr>
<td>One or more years of college, but no degree</td>
<td>37%</td>
<td>26%</td>
</tr>
<tr>
<td>2-year college degree</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>4-year college degree or higher</td>
<td>3%</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Employment during past year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent with income from employment</td>
<td>67%</td>
<td>94%</td>
</tr>
<tr>
<td>Mean earnings</td>
<td>$12,588</td>
<td>$32,312</td>
</tr>
<tr>
<td>Median Earnings</td>
<td>$8,000</td>
<td>$27,319</td>
</tr>
</tbody>
</table>

**NOTE** The comparison group is a representative sample from the National Longitudinal Study of Adolescent Health.

**SOURCE** Chapin Hall at the University of Chicago, Midwest Evaluation of the Adult Functioning of Former Foster Youth (data from 2010–2011).
Core Domains of the SDOH

- The National Academy of Medicine defines 5 core domains that community services can address
  - Housing Instability
  - Food Insecurity
  - Transportation Problems
  - Utility Help Needs
  - Interpersonal Safety
8 Supplemental Domains

- Financial Strain
- Employment
- Family and Community Support
- Education
- Physical Activity
- Substance Use
- Mental Health
- Disabilities
Maslow’s Hierarchy of Needs

- Physiological
- Safety
- Love/Belonging
- Esteem/Accomplishment
- Self-Actualization/Achieving One’s Potential
FIGURE 1
Conceptual road map that links risk assessment to community-based interventions using Maslow's Hierarchy of Needs.
Steps to Screening for SDOH

1. Asking general questions at all pediatrics visits such as “What are your needs” or “How can I help you?”

2. Screening for specific concerns if necessary and then using a global tool to identify unmet needs

3. Documenting the patient’s social history in the medical record

4. Connecting patients and families with professionals and resources that can assist with their needs

Garg and Dworkin, Applying Screening and Surveillance to Family Psychosocial Issues, 2011
Notes on Screening

• Many providers underestimate the needs in their patient populations
• Only 51% of providers probe further when families reveal social needs*
• Families should be reassured that their concerns are confidential
• Connections with community based organizations are essential when social needs are determined
• We must start including this information in the patient’s medical record
• Families should be asked if they want or need the intervention

Conclusion

• There is a deep connection between one’s social circumstances and their overall health outcomes
• Failure to address these circumstances will prevent us from attaining health equity
• Unlike other areas of medicine, this will take a true paradigm shift – multidimensional support across public and private sectors
I think health care is more about love than about most other things. If there isn't at the core of this two human beings who have agreed to be in a relationship where one is trying to help relieve the suffering of another, which is love, you can't get to the right answer here.

Donald Berwick
American Public Servant