U.S. Health and Nutrition Programs and Intergenerational Economic Mobility

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Facts about U.S. Child Poverty

• Child poverty is higher than for other age groups.
  o Child poverty rate 19.7%
  o Adult poverty rate 12.4%
  o Elderly poverty rate 8.8%

• One in ten children spends half of their childhood in poverty (Wagmiller and Adelman, 2009)

• By many metrics, child poverty is higher in the United States than in most developed countries
Figure 1.1a Relative child poverty rates
% of children aged 0–17 living in households with equivalent incomes below 60% of national median

Poverty during childhood is a strong predictor of poverty in adulthood.

### Exposure to poverty from birth to age 15 and the probability of being poor in young and middle adulthood*

*Children born between 1970 and 1990*

<table>
<thead>
<tr>
<th></th>
<th>% poor at age 20</th>
<th>% poor at age 25</th>
<th>% poor at age 30</th>
<th>% poor at age 35</th>
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</thead>
<tbody>
<tr>
<td>1%–100% of childhood</td>
<td>21%</td>
<td>20%</td>
<td>14%</td>
<td>13%</td>
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<tr>
<td>1%–50% of childhood</td>
<td>12%</td>
<td>14%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>51%–100% of childhood</td>
<td>46%</td>
<td>40%</td>
<td>34%</td>
<td>45%</td>
</tr>
<tr>
<td>Never lived in poverty</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
<td>1%</td>
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</tbody>
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* Poverty rates for more advanced ages apply only to the reduced sample of individuals who reached the age specified.

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Child Poverty and Intergenerational Mobility
Health differences may be part of the story

• Poor children are less healthy than other children
  • Health inequalities appear early in life and widen as children age

• Poor children enter adulthood with more chronic health conditions
  o Asthma and other respiratory problems
  o Digestive disorders
  o Heart Conditions
  o Hearing problems
  o Mental health problems

• Poor children enter adulthood having missed more days of school

• Differences in health and learning are tied to performance in the labor market
Childhood health is predictive of later life outcomes

- Research in biological sciences and economics documents that early life health conditions directly affect later life outcomes
  - Nutrition, infectious disease, stress, pollution
  - Later life effects are not confined to health conditions but also include indicators of self-sufficiency (e.g. educational attainment and earnings)

- Research in biological and psychological sciences also makes clear that health and psychological wellbeing—important inputs into economic success—are malleable in early life

- By changing the early life health environment, programs like Medicaid and SNAP may be able to help break the cycle of poverty
Medicaid and SNAP can be thought of as investments

- Medicaid
  - $89 billion (2016)
  - 45 million children

- SNAP
  - $31 billion (2016)
  - 16 million children
  - lifts 3.8 million children out of poverty (Wheaton and Tran 2018)

Source: Hoynes and Schanzenbach, 2018
Challenges to evaluating early life investments

- Credible research design
  - cannot compare recipients to non-recipients
- Need data that provides information about both childhood circumstances and adult outcomes
- Time to measure the impacts of the intervention
  - Time lags required for measuring long term outcomes may mean that program parameters or contextual environment changes
Medicaid-Three Research Designs

• Initial Medicaid rollout (1966-1970)
• Variation in Medicaid eligibility across states and over time due to 1980s and 1990s program expansions
• Comparisons across children born before and after Sept 30, 1983, when there was a sharp change in eligibility
Medicaid—Three Research Designs

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Difference in prenatal coverage across cohorts born 1979-1986
Difference in eligibility at ages 1-4 between 1979-1986 cohorts
Medicaid—Three Research Designs

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• Comparisons across children born before and after Sept 30, 1983, when there was a sharp change in eligibility
Figure 1. Average Years of Childhood Eligibility for Medicaid/SCHIP by Birth Cohort and Family Income (%FPL)
Childhood Medicaid and Later Life Health

- Lower incidence of high blood pressure \((Boudreaux\ et\ al.\ 2016)\)
- Reductions in mortality \((Goodman-Bacon\ 2017)\)
- Reductions in hospital admissions for chronic conditions \((Miller\ and\ Wherry\ 2018)\)
- Lower incidence of obesity and related conditions \((Miller\ and\ Wherry\ 2018)\)
- Persistent effects to the next generation: reductions in the incidence of pre-term birth and low birth weight in later offspring \((East\ et\ al.\ 2018)\)
  - Consistent with biological evidence on the intergenerational transmission of health
  - Health cost savings in the first year of life alone are about 30% of the cost of the initial investment
Childhood Medicaid and Later Life Self-Sufficiency

- Higher test scores (*Levine and Schanzenbach 2009*)
  - Measured in 4th and 8th grade
- Higher levels of educational attainment (*Brown et al. 2017, Cohodes et al. 2016, Miller and Wherry 2018*)
  - High school and college completion
- Higher levels of employment (*Goodman-Bacon 2017*)
- Lower incidence of disability payments (*Goodman-Bacon 2017*)
- Higher earnings and tax payments (*Brown et al. 2017*)

- Each additional year of Medicaid eligibility from birth to age 18 is associated with
  - Increases in the probability of having attended college of 7 percent (women) and 3.6 percent (men)
  - Additional cumulative wages by age 28 of $656 (for women)
    - This gain is expected to grow as individuals age
  - Cumulative tax payments by age 28 of $127 (men) or $247 (women)
  - Conservative estimate: government recoups 56 cents for every dollar spent by age 60
SNAP

- Additional research challenge: very little program variation that can be used to create “treatment” and “control” groups
East (2017)

• Compare health outcomes among U.S. children of immigrants whose access to Food Stamps changed in the years following PRWORA
East (2017)

- Parental access to SNAP during pregnancy
  - increases offspring’s birth weight
  - reduces the likelihood that a child is reported to be in poor, fair or good health (relative to very good or excellent health) by 6 percent
  - suggestive evidence that SNAP reduces school absences, doctor visits and hospitalizations

- all of these predict later life improvements in health and self-sufficiency
Food Stamp start date, by county

(Hoynes and Schanzenbach, 2009)
SNAP improves health and self-sufficiency

- Availability of food stamps lowers the incidence of low birth weight by 7 percent (whites) 5-11 percent (blacks) (Almond, Hoynes and Schanzenbach, 2011)

- Children fully exposed to Food Stamps between conception and age 5 have better adult outcomes (Hoynes, Schanzenbach, Almond 2016, Bitler and Figinski 2018)
  - 0.3 standard deviation reduction in the incidence of later life metabolic syndrome
  - 0.2 standard deviation increase in the likelihood of being self sufficient in adulthood (women)
    - Largely due to increases in educational attainment
  - 3% increase in earnings (women)
Additional findings:

- Impacts largest among those who had access at the youngest ages, particularly 0-5, underscoring the importance of providing protection in early childhood.

- Impacts largest for those who spent their childhoods in the most disadvantaged counties.
How do we weigh program benefits against incentives to reduce work?

• Both programs have built in work disincentives
  • Important to consider since changes in labor force participation change household income and parental time with children

• Effects on parents’ work effort appear to be small in practice (Ham and Shore-Sheppard 2005; Meyer and Rosenbaum 2001; Hoynes and Schanzenbach 2009; East forthcoming)
Summary

• Medicaid and SNAP improve child health measures that are predictive of better health and self-sufficiency in adulthood

• Evidence that childhood access to both programs
  • Generate improvements in later life health
  • Increase economic productivity in adulthood
  • Evidence that benefits of Medicaid may persist to later generations
Summary

• Emerging evidence these programs are cost effective investments in the future
  • Benefits are not constrained to improvements in own earnings and health
  • Public benefits are also present due to increased taxes and decreases in health related costs
  • Many additional potential benefits have not yet been quantified – e.g. impacts on criminal activity and very long term impacts on health.
    • There are large public costs associated with addressing these outcomes, so benefit/cost ratios likely to be even larger

• Few studies have explored differential returns by child age of exposure, but when they have the evidence points to greater long-run returns to exposure in early childhood

• Benefits appear to be larger for disadvantaged groups, especially blacks