

Life Shocks and Homelessness

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Life Shocks and Homelessness

Marah A. Curtis, Hope Corman, Kelly Noonan and Nancy E. Reichman*

In order to understand the dramatic rise in homelessness in the 1980s, O’Flaherty (1996) formulated a microeconomic theory of homelessness in which high-priced housing markets lead landlords to disinvest in (or poorly maintain) low-priced rental units. Consumers at the lowest end of the income distribution, therefore, must choose between very low quality housing at a certain price, or homelessness. Under severe income constraints and holding preferences constant, a rational consumer would be indifferent between spending a substantial proportion of his/her income on very low quality housing or being homeless. Homelessness, then, is dependent on the housing markets faced by individuals at the bottom of the income distribution. In studies based on O’Flaherty’s framework, Quigley, Raphael & Smolensky (2001) found that the demand for the lowest-quality housing does indeed explain much of the variation in rates of homelessness, and Early (2005) found that families with children, younger heads of household, and alcohol or drug problems and who face higher rental prices for low-quality housing are all at increased risk of being homeless.

O’Flaherty argued that homelessness results from a “conjunction of bad circumstances” (2004, p. 2) occurring when market conditions and individual characteristics collide, and that the transitory component of income has been largely overlooked in the literature on the causes of homelessness (2008, 2009). He further argued that reducing real income volatility (i.e., smoothing individuals’ income flows) to buffer the potential effects of adverse life events, such as health shocks, relationship dissolution, or unemployment, is potentially the best way to prevent homelessness. He found that the most common shocks experienced by families involve income or health and that the main shocks precipitating homelessness involve income; however,

he cautioned that his descriptive analysis did not allow for causal inferences (O’Flaherty 2009). These intriguing arguments and observations point to the question of whether and to what extent adverse life shocks lead families into homelessness.

As far as we know, no previous studies have investigated the causal effects of income shocks on homelessness. In a theoretical article that touches upon the issue, Glomm and John (2002) developed a two-period model of the housing market that predicted homelessness in the first period as a function of low income and borrowing constraints and found that homelessness leads to reduced labor productivity in the second period. Although the main focus of this analysis was on how homelessness might affect productivity, their model suggests that exogenous income parameters can lead to persistent homelessness through reduced productivity.

Two recent studies have considered the effects of health, which a large body of literature has shown is strongly associated with income, on homelessness. Fertig and Reingold (2008) found that, among mothers with young children in a national urban birth cohort study, both poor overall health status (self-reported) and depression (using a standard screener) were positively associated with later homelessness controlling for a host of individual and contextual variables. Phinney et al. (2007) found that both mental and physical health problems were positively associated with later homelessness among mothers on welfare. Neither of these studies explicitly addressed the potential endogeneity of health. That is, they did not isolate the effects of health shocks.

In this study, we exploit an exogenous health shock—the birth of a child with a severe health condition that is considered by the medical community to be random in the population—to investigate the effect of a life shock on homelessness. Past research has shown that infant health shocks have immediate deleterious effects (occurring as soon as one year later after the birth) on

families' economic resources (e.g., Corman, Noonan, and Reichman 2005; Noonan, Reichman, and Corman 2004). As such, this study represents perhaps the best test to date of whether adverse life shocks at the individual level appear to be important determinants of homelessness. That is, by exploiting an exogenous life shock that has economic repercussions, we indirectly test O'Flaherty's hypothesis that income volatility is a key factor affecting homelessness.

II. Data

We use data from a recent national birth cohort survey that have been linked to medical records of mother respondents and their newborns. The Fragile Families and Child Wellbeing (FFCWB) survey follows a cohort of parents and their newborn children in 20 large U.S. cities (in 15 states). The study was designed to provide information about the conditions and capabilities of new (mostly unwed) parents, the determinants and trajectories of their relationships, and the consequences of welfare reform and other policies.

The FFCWB study randomly sampled births in 75 hospitals between 1998 and 2000. By design, approximately three quarters of the interviewed mothers were unmarried. Face-to-face interviews were conducted with 4,898 mothers while they were still in the hospital after giving birth (see Reichman et al., 2001 for a description of the research design). The postpartum (baseline) response rate was 86 percent among eligible mothers.

Follow-up interviews were conducted over the telephone approximately 1 and 3 years after the birth of the focal child. Eighty nine percent of the mothers who completed post-partum interviews were re-interviewed when their children were between 12 and 18 months old ("1 year"), and 86 percent of mothers who completed baseline interviews were re-interviewed when their children were between 30 and 50 months old ("3 years").

As part of an “add on” study to the core survey, data from medical records (from the birth hospitalization) of the mother and child were collected using a detailed standardized instrument. The availability of medical record data depended, for the most part, on administrative processes of hospitals rather than decisions on the part of survey respondents to make their records available. Medical record data, which were needed for the analyses, were available for 3,684 (75%) of the 4,898 births in the FFCWB sample.

The FFCWB data are well suited for analyzing the effects of child health shocks on homelessness. They were collected as part of a longitudinal birth cohort study, and include: (1) detailed data on the child’s health at birth from hospital medical records; (2) survey questions about later homelessness; and (3) detailed covariates including the poverty rate in the census tract in which the mother resided at the time of the birth (from the 2000 U.S. Census). In addition, the oversampling of nonmarital births resulted in a relatively socioeconomically disadvantaged sample that may be particularly susceptible to the effects of adverse life events.

III. Measures

Homelessness, assessed from the 3-year mother’s survey, is characterized two different ways—whether the mother had ever been homeless any time in the past 12 months and whether she had ever been evicted, homeless, or in a shelter in the past 12 months. The analysis is limited to cases for which medical record data, which are needed to characterize infant health shocks, are available. The sample size for our analyses is 3,078, obtained as follows: Of the 3,684 cases with medical record data, 3,192 mothers completed the 3-year survey. Of those, 1 case had missing data on homelessness and another 113 had missing covariate data. Three percent of the analysis sample had experienced homelessness at any time in the past 12 months, and 5 percent had ever been evicted, homeless, or in a shelter for at least one night during the same time period.

With our goal of isolating causal effects of poor child health on homelessness, the ideal measure of poor child health would: (1) characterize a health shock that was present at birth and unlikely a function of parental behaviors, and (2) capture conditions that are strongly associated with long-term morbidity (as opposed to brief, one time, episodes). Our goal was to capture severe conditions that are for the most part random (e.g., Down Syndrome, congenital heart malformations), given that the pregnancy resulted in a live birth. That way, we could be confident that our estimated effects of poor child health on housing are unbiased.

Our measures of poor child health are coded from the medical records and 1-year maternal reports of child disability by an outside pediatric consultant. The first measure, *severe child health condition*, includes any condition that is severe, chronic, unlikely caused by parents' prenatal behavior, and in the case of 1-year maternal reports, likely present at birth. This measure best meets our "gold standard," but captures conditions that are relatively rare (2% of the children in our sample). The second measure of poor child health, *severe child health condition or very low birth weight (VLBW)*, is measured as *severe child health condition* and/or the child was VLBW (<1500 grams), which is associated with a number of serious and long-term child health conditions (Reichman 2005). This measure characterizes a slightly larger number of cases as having poor child health (3%), but has the disadvantage that VLBW is potentially more endogenous than our coded measures of poor infant health. The third measure, *moderate or severe child health condition*, includes any abnormal condition that meets the criteria for *severe child health condition* or is less severe but still considered random (not a function of parental behavior). The disadvantage of this measure, which characterizes 20% of the sample, is that it is very broad; that is, it includes conditions that may or may not have poor long-term prognoses (examples are hydrocephaly and cleft palate).

In order to clearly establish the temporal ordering of events, all covariates are measured either at the time of the birth or before the focal child was born. We include a basic set of sociodemographic characteristics – maternal age (years), race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, other), nativity (foreign born), and education (less than high school graduate, high school graduate, some college, college graduate); whether the birth was covered by Medicaid or other public insurance (a proxy for poverty); whether the mother had worked within the 2-year period preceding the child’s birth; and the poverty rate in the mother’s census tract. Because both the adequacy of an individual’s housing situation and socioeconomic status are linked to household composition, we include measures of whether the parents were married, cohabiting, or neither married nor cohabiting at the time of the birth, as well as the number of children the mother had at the time of the focal child’s birth. We control for multiple births as well the gender (male) and age (in months) of the focal child at the time the homelessness measures were assessed. We also include the mother’s city of residence, to control for housing markets or other city- or state-level characteristics that may be associated with both child health and homelessness.

The mother’s health endowment was characterized by two different variables based on health history information in the mother’s medical record from the birth hospitalization. The first is whether the mother had documentation of any pre-existing physical health condition (including chronic lung disease, cardiac problems, chronic diabetes, and pre-existing hypertension) in her medical record. The second is whether the mother had a pre-existing diagnosed mental illness. Specifically, the mother was coded as having a mental illness if there was any documentation of a diagnosed mental disorder (e.g. depression, anxiety, bipolar disorder, schizophrenia, anorexia, suicidality, or mental retardation) in her record.

Finally, we control for a combined measure of homelessness or poor housing quality that was recorded in the mother's prenatal medical record in a checklist of situational risk factors for the pregnancy (2% of the sample), allowing us to capture changes in, rather than levels of, homelessness (all sample means available at [LINK TO AER CITE]).

IV. Results

Table 1 presents estimates from multivariate probit models for the two outcomes (homeless and homeless/evicted/shelter) as a function of each of the three different measures of poor child health and all of the covariates described earlier. Each cell contains marginal effects from a different probit model. Full regression results, including probit coefficients, standard errors corrected for city clustering of observations using the Huber-White method, and marginal effects, are available at [LINK TO AER CITE].

The estimates presented in Table 1 suggest that poor child health increases the likelihood of homelessness, measured both ways as described earlier. For homelessness itself, the estimated effect of poor child health is positive and significant when using two of the three measures of poor child health, with both magnitude and significance decreasing as the measure of poor child health is broadened (e.g., the magnitude decreases from 6 to 1 percentage point). For homelessness/eviction/shelter, the pattern is the same as that for homelessness, but poor child health is statistically significant only when using the most severe definition (our gold standard). In that case, the magnitude is 5 percentage points.

In supplementary analyses, we conducted "falsification tests" that predicted the baseline measure of homelessness or poor home quality as a function of poor child health and all of the maternal characteristics. The logic was that a shock that takes place at the time of the birth cannot possibly affect the mother's pre-birth housing situation, and finding significant

associations would indicate spurious correlation. We found no evidence that poor child health (measured any of the three different ways) is associated with prenatal housing problems, further supporting our assumption that we have been successful at characterizing poor child health as an exogenous shock (results available upon request).

Finally, we estimated models that interacted poor child health with MSA-level (metropolitan statistical or primary metropolitan statistical area) fair market rents in 2000 (from the U.S. Department of Housing and Urban Development). We found that mothers who both lived in cities with high rents, using various thresholds) and had a child in poor health (measured any of the three different ways) were significantly more likely than mothers who lived in lower-rent cities and had a child in poor health to become homeless (using either definition), providing some suggestive evidence in support of O’Flaherty’s hypothesized scenario of homelessness resulting from a conjunction of bad circumstances in which housing markets and individual characteristics collide (results available upon request).

V. Conclusion

We exploited an exogenous health shock—the birth of a child with a severe health condition that is considered by the medical community to be random in the population—to investigate the effect of that shock on probability of homelessness three years later. We found that this life shock substantially increases the likelihood that the family experiences homelessness, particularly in cities with high fair market rents, supporting the argument that reducing income volatility to allow families to buffer the potential effects of adverse life events may be an important way to prevent homelessness. The findings also inform the vast literature on the effects of housing on health by highlighting the potential importance of reverse pathways.

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Table 1: Effects of Poor Child Health on Homelessness (N=3,078)

	Homeless	Evicted/homeless/shelter
Severe health condition	.06***	.05*
Severe health condition or VLBW	.03**	.03
Moderate or severe health condition	.01	.01

Figures are marginal effects from multivariate probit models. *p < .10; **p < .05; ***p < .01.

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