Effects of Child Health on Housing in the Urban U.S.

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Abstract

This study exploits an exogenous health shock, the birth of a child with a severe health condition that the medical community considers to be random, to investigate the effect of that shock on the family's housing situation. We use U.S population-based data from an urban birth cohort study that oversampled non marital births, resulting in a relatively disadvantaged sample that may be particularly susceptible to the effects of adverse life events. We focus on outcomes related to housing instability. We found that severe child health conditions increase the likelihood the family later 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.

Introduction

Housing and health are both essential for human well-being. A large body of research spanning multiple disciplines and studying different countries has investigated how various aspects of housing may affect health. It is inherently difficult to establish causality in such studies because individuals living in poor housing conditions are more likely to be poor, socially disadvantaged, and unhealthy and because randomized controlled trials are rarely feasible and relevant natural experiments are rare. Recent reviews conclude that, overall, the literature on housing and health is mixed in terms of methodological rigor and that the potential pathways need to be clarified (Fuller-Thomson, 2000; Dunn, 2000). Few studies have looked at the reverse—but potentially very important— core question of whether health affects a family's ability to remain housed.

We briefly turn to O'Flaherty's (1996) microeconomic theory of homelessness which posits that 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 homelessness. 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. As far as we know, no previous studies have investigated the causal effects of income shocks on homelessness.

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. 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.

Data and Methods

We use data from a birth cohort study 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 mostly unwed parents and

their newborn children in 20 large U.S. cities. The FFCWB study randomly sampled births in 75 hospitals between 1998 and 2000. 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 medical record data include detailed information on the child's health at birth, allowing us to construct measures of poor child health that are considered by the medical community to be random.

Homelessness

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.

Measures of poor child health

With our goal of isolating causal effects of poor child health on housing, 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 (i.e., for the most part random, given that the pregnancy resulted in a live birth), and (2) capture conditions strongly associated with long-term morbidity (as opposed to brief, one time, episodes). We relied on the coding of specific health conditions by an outside pediatric consultant who was directed to classify each infant health condition listed in the infants' medical record or reported by the mother at one year according to degree of severity (in terms of expected significant long-term morbidity) and likelihood, according to the medical community, of having been caused by parental behavior. We used the coding to construct three different measures of poor child health (severe child health condition, severe child health condition or very low birth weight, moderate or severe child health condition) and consider patterns in estimated effects across the different measures.

Covariates

In all models, we include sociodemographic characteristics – maternal age (years), race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, other), nativity (foreign born), and education (< high school, high school graduate, some college, college graduate); whether the birth was covered by public insurance; 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 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. Although we have been careful to characterize poor child health as

random, the mother's health is an obvious potential confounder. The mother's health was characterized by whether the mother had documentation of any pre-existing physical health condition in her medical record or whether the mother had a pre-existing diagnosed mental illness. Finally, we control for multiple births as well gender (male) and age (in months) of the child at the time a given outcome was measured. Multiple birth and male gender, which are associated with poor child health, were included to ensure that the estimated effects of poor child health do not reflect those characteristics. The child's age was included to control for length of time that infant health shocks had the potential to affect the family's ability to remain housed. We also control for a combined measure of homelessness or poor housing quality in the mother's prenatal record, allowing us to capture changes in rather than levels of, homelessness.

Findings

We estimate multivariate probit models of the effects of each measure of poor child health on homelessness and homelessness/eviction/shelter. We expect that poor child health will have adverse effects on both measures of homelessness and we expect that the effects will be strongest for the most stringent measure of poor child health and weakest for the broadest measure. We also expect that mothers living in cities with high rents and a child in poor health would be significantly more likely to experience homelessness. Our estimates suggest that poor child health increases the likelihood of homelessness and homelessness/eviction/shelter. For homelessness, 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 3 percentage points). 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.

We also 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 (2004, p. 2).

Implications

      This study has important research and policy implications. From a research perspective, the findings add substantively to a sparse literature on the effects of health on family economic well-being by demonstrating that a health shock can affect an entire family's ability to remain housed several years later. The findings also inform the vast literature on the effects of housing on health by highlighting the potential importance of reverse pathways. 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. Findings also suggest that linkages between impacted families and service providers involved in the birth hospitalization can be used as an opportunity to connect families with benefits (Food Stamps, SSI, housing subsidies) that can ease income volatility.

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