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Eviction and Pediatric Health Outcomes in Chicago

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Abstract
According to Eviction Lab there were 6877 evictions in Chicago in 2016. The rate was "1.1%" and came out to 18.79 evictions per day in Chicago in 2016. The presence of children in a household (HH) poses a greater risk for eviction than race or gender. Census tract-level data from the Chicago Department of Public Health, the Eviction Lab and American Community Survey was used to assess the relationship between eviction and pediatric health outcomes for 653 census tracts in Chicago. Correlation matrices and linear regression models were used to evaluate the relationship between eviction and health outcomes. Regression models were adjusted for the following: (1) female-led family HH with less than a high school degree and below poverty and (2) race/ethnicity. Compared to White Non-Hispanic HH, predominantly Black and Hispanic HH had higher rates of very low birth weight (VLBW), infant mortality (IM), eviction filings, and evictions. All covariates were found to be significantly correlated ($p < 0.01$). Eviction filing rates and eviction rates were significant predictors for both VLBW and IM in both unadjusted and adjusted models ($p < 0.05$). Though we cannot conclude causality, these results suggest that census tracts which experience high rates of eviction also experience high rates of VLBW and IM and this relationship should be further investigated.

Keywords Eviction · Pediatric health · Population health · Unstable housing · Socioeconomic factors of health

Background

There were 6877 formal evictions in Chicago in 2016, a rate of 18.8 evictions per day [1]. Amid the 2007 U.S. financial crisis, research was able to establish eviction of homeowners (by foreclosure) and 'unstable housing' as a determinant of health. However, the relationship between renter-specific evictions and health has not yet been well established. In a recent review of home eviction and its effect on health, the word 'eviction' was used to describe as forced displacement from a home, including both homeowners and renters [2]. However, the socioeconomic status differs between owner-occupied households (HH) and renter-occupied HH. In this analysis, 'eviction' will refer to forced expulsion from a renter-occupied HH and 'foreclosure' to forced removal form a homeowner-occupied HH.

Previous research has shown that eviction disproportionately affects low-income neighborhoods and contributes to the cyclic nature of poverty [3]. In addition to experiencing higher rates of eviction, low-income families have also experienced stagnating wages while housing costs continue to rise, causing an increased rent burden, defined as the percent of HH income spent on housing [4]. Most low-income renters spend over half of their income on housing and close to a quarter of this population spends approximately 70% of income on housing [5]. Rising rent burden among low-income renters has led to increased eviction in poor communities, trapping these vulnerable families in a cycle of poverty.

A recent review showed that adults facing the threat of eviction had worse mental and physical health status and the extent of this relationship depended highly on socioeconomic status [2]. Efforts to examine the relationship between eviction and health outcomes for youth is limited. One relevant study examined the negative impact of moving on children [6]. This study showed that any adverse effects related to moving was due to the stress involved with moving rather than the move itself [6]. Families or single mothers with children who are forcefully displaced are likely experiencing

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increased stress due to the circumstances surrounding an eviction. A retrospective study using the Pediatric Hospital Information System database showed that increases in (1) physical abuse in children < 6 years old and (2) non-birth and non-motor vehicle crash-related traumatic brain injury in infants < 1 year old were associated with current mortgage delinquency rates and foreclosure rates from the previous year [7]. This suggests that unstable housing in owner occupied HHs are somehow related to adverse pediatric health outcomes; however, they do not include eviction of renter-occupied HH in their populations. The adverse childhood experience study showed that adverse childhood experiences are strongly related to several leading causes of death in adults [8]. One might infer that adverse outcomes related to unstable housing can have a negative health effect lasting a lifetime for these children. Additionally, it has been shown that poor housing conditions are related to poor health outcomes [9]. These studies have been critical in our understanding of HH-related conditions that increase the risk for adverse health outcomes, however, the relationship between eviction and infant health has not been explored and should be a focus of public health research.

Infant mortality (IM) and very low birth weight (VLBW) were key population health metrics targeted in the Healthy People 2020 initiative. The United States as a whole met the benchmarks created by Healthy People 2020 in 2012 for VLBW (1.4% of U.S. births were VLBW) and 2014 for IM (IM rate of 5.8 per 1000 live births). However, there has been noticeable disparities among racial and financial classes in the U.S. A large urban study showed that Black race was a significant predictor of VLBW regardless of adequate or inadequate prenatal care [10]. Additionally, mothers from impoverished neighborhoods are at a greater risk for low birth weight [11]. The U.S. Black IM rate was more than double the U.S. White IM rate in 2013 [12].

In Illinois specifically, the Black–White IM ratio was 2.6 in 2000 and the same in 2012, showing that there was no progress toward equity in racial IM rates in a 12-year time span [13]. Brown Speights et al. [13] predict that Illinois will not achieve IM rate equity until 2130 based on the current trend. A recent study using the 77 Chicago community areas explored a set of indicators that may explain IM at the community-level [14]. Under their population-level indicators, White et al. [14] found Non-Hispanic Black race, unemployment rate and poverty rate for families with children under five years of age were significant predictors of community-level IM. They also found median home value, per capita income, median HH income and homicide rates to be predictors of community-level IM.

There is an abundance of literature from The Public Health Disparities Geocoding Project arguing that using population-based socioeconomic measures versus individual-based measures provide similar outcomes [15, 16]. One socioeconomic measure used as an example that population-based measures are valuable for tracking disparities was mortality rates at the census block group and census tract level [16]. Mortality rates in Massachusetts and Rhode Island measured comparably within and across both states with analysis at the census tract level [16]. Including data with poverty levels increased the robustness of results versus analysis using only education and wealth. Krieger et al. concluded using population level socioeconomic measures to measure socioeconomic inequalities in the U.S. is best served at the census-tract and census-block levels which reveal economic deprivation across regions and time. These types of analyses also produce results that are easy to understand and interpret. The Public Health Disparities Geocoding Project also showed that using census-tract level data was also useful in measuring socioeconomic inequalities in pediatric health specifically [15]. Measuring low birth weights in Massachusetts and Rhode Island at the census-tract level and census-block level also detected economic deprivation [15].

Racially segregated communities with lower incomes, lesser valued homes, higher rates of violence experience higher rates of renter-specific eviction [17]. Risk factors for preterm birth and low birth rate include financial stress and housing instability [18, 19]. It seems alarming that the presence of children in a HH can pose a greater threat than race, gender or class for eviction at the population level [20]. There is a .002 increase in the probability of being evicted for each child in a HH [17]. Ironically, children increase the risk of eviction while eviction poses a potential added stressor that could adversely affect mothers, possibly increasing the risk for IM and VLBW. Communities that experience higher rates of eviction, IM and VLBW have overlapping characteristics, however no investigation into the relationship between eviction and these adverse health outcomes has been conducted. This study provides a descriptive analysis in order to understand a complex relationship between evictions and pediatric health outcomes. The results from this study are meant to be hypothesis generating, aiding future research into population level evaluation and planning.

Methods

Data

VLBW and IM census tract-level data were obtained from the Chicago Department of Public Health (CDPH) for 2013–2017. According to the CDPH, VLBW percent is defined as the percent of births less than 1500 g among all births and infant mortality rate as the rate of infant deaths per 1000 live births.

Eviction data was obtained from the Eviction Lab National Database for 2012–2016. Eviction Lab only captures formal

evictions. Per the Eviction Lab, annual eviction rates were defined as the number of renter-occupied HH that experienced a forced renter eviction by a landlord per 100 renter-occupied HH in a year. Eviction filing rate serves as a proxy for informal evictions, as homeowners can threaten renters with an eviction filing though never follow through.

Confounders

Possible confounders for adverse health outcomes included in this study are already established social determinants of health: race, gender, poverty level, and education. The percentage of Non-Hispanic Black and Hispanic HH of all ages were included as confounders for each census tract to account for minority races. The percentage of Non-Hispanic White, Non-Hispanic Black, and Hispanic HH was calculated out of total Chicago HH per census tract. The percentage of Minority HH was calculated as follows:

$$\left(\left(\sum \text{Black HH} + \sum \text{Hispanic HH}\right) / \sum \text{Chicago HH}\right) \times 100 = \%\text{Minority HH}$$

Single mothers are at a higher risk for eviction [21] and mothers who were evicted from rental homes more often met criteria for depression and reported parental stress [22]. Previous research has also shown that low-income HH are disproportionately affected by eviction, thus poverty status was taken into consideration as another potential confounder [17]. Additionally, one of the strongest sociodemographic factors contributing to very preterm births, a major risk factor for VLBW, was maternal education [23]. In order to account for sex, poverty level, and educational attainment, the percentage of female, no husband present, less than high school (LTHS) diploma, and below poverty level family HH was calculated out of total Chicago HH per census tract. All socio-demographic data at the census tract-level were obtained from the American Community Survey 2013–2017, 5-year estimates.

Statistical Analyses

Data were linked at the census tract level out of Chicago's 807 census tracts (N = 653 tracts). Descriptive statistics were provided for independent and dependent variables. Variance inflation factor (VIF) and tolerance values were used to determine collinearity between variables. VIF values of less than 10 and tolerance values of greater than 0.1 were used as the thresholds to determine collinearity. Pearson correlation coefficients were used to examine the correlation between independent and dependent variables.

In the primary analysis, unadjusted and adjusted linear regression were used to assess and describe the relationship between independent (VLBW and IM) and dependent variables (eviction filing and eviction rates). For the secondary analysis, unadjusted and adjusted linear regressions were calculated among %Minority HH that comprised > 50% of a given census tract (Table 5). Best fit models were determined by comparing adjusted R-square and AIC values. All statistical analyses were conducted using IBM SPSS version 25 under an alpha level of 0.05.

Additionally, census tract-level data for eviction filings, evictions, VLBW, and IM were mapped in order to highlight disparities within Chicago. Mapping was performed using Maptitude 2019 Geographic Information System (GIS) software.

Results

On average, eviction filing rates were higher across the city compared to eviction rates (Table 1). Black and Hispanic HH comprised over 60% of total HH in Chicago. Compared to Non-Hispanic White HH, predominantly Black and Hispanic HH (census tracts > 50% of a given race) had higher rates of VLBW, IM, eviction filings, and evictions. Non-Hispanic Black HH had an infant mortality rate of 13.8 compared to 7.7 for Hispanic HH and 7.2 for Non-Hispanic White HH (Table 2). Based on Pearson correlation coefficients, all covariates were found to be significantly correlated ($p < 0.01$) (Table 3).

In the primary analysis, both eviction filing rates and eviction rates were significant predictors for both VLBW and IM in simple linear regression models ($p < 0.01$). When adjusting for (1) female, no husband present, LTHS diploma, and below poverty level family HH and (2) %Minority HH, eviction filing rates and eviction rates were found to be significant predictors for both VLBW ($p < 0.05$, adjusted R-square = 0.287 and 0.280 respectively) and for IM ($p < 0.05$, adjusted R-square = 0.113 and 0.110 respectively). Eviction filing rate had a β-coefficient = 0.120 (95%

Table 1 Descriptive statistics of indicators and outcomes, N = 653

Variable	Mean (SD)	Min–max
%VLBW	2.2 (1.4)	0.2–9.3
IM rate (n = 491)	10.5 (7.1)	1.1–46.5
Eviction filing rate	4.3 (2.9)	0.4–22.1
Eviction rate	1.5 (1.2)	0.0–8.5
%Female HH, LTHS, below poverty	2.0 (2.8)	0.0–17.3
%White HH	31.8 (31.3)	0.0–94.9
%Black HH	39.9 (41.4)	0.0–100.0
%Hispanic HH	22.8 (26.7)	0.0–99.4
%Minority HH	62.6 (34.7)	2.8–100.0

VLBW very low birth weight, *IM* infant mortality, *HH* households, *LTHS* less than high school

Table 2 Eviction filing and eviction rates by race and ethnicity

Variable	Mean (SD)	Min–max
White, Non-Hispanic HH (n = 216)		
%VLBW	1.3 (0.8)	0.2–4.6
IM rate (n = 131)	7.2 (4.7)	1.1–31.0
Eviction filing rate	2.0 (1.4)	0.4–14.6
Eviction rate	0.7 (0.6)	0.0–6.5
Black, Non-Hispanic HH (n = 258)		
%VLBW	3.2 (1.4)	0.7–8.7
IM rate (n = 221)	13.8 (7.6)	2.3–45.5
Eviction filing rate	7.0 (2.3)	2.2–22.1
Eviction rate	2.6 (1.1)	0.5–8.5
Hispanic HH (n = 116)		
%VLBW	1.7 (1.0)	0.2–5.1
IM rate (n = 92)	7.7 (4.8)	1.9–26.5
Eviction filing rate	3.3 (1.4)	1.2–12.1
Eviction rate	1.1 (0.7)	0.2–6.4

Table 4 Unadjusted and adjusted analysis of health outcome measures

Variable	Unadjusted, beta coefficient (95% CI)	Adjusted, beta coefficient (95% CI)*
VLBW percent		
Eviction filing rate	0.235 (0.20, 0.27)***	0.120 (0.08, 0.17)***
Eviction rate	0.525 (0.44, 0.61)***	0.235 (0.13, 0.34)***
IM rate		
Eviction filing rate	0.749 (0.54, 0.96)***	0.360 (0.07, 0.65)**
Eviction rate	1.62 (1.11, 2.13)***	0.652 (0.01, 1.30)**

*The analysis was adjusted for (1) female-led family HH with LTHS diploma and below poverty and (2) minority race (Black and Hispanic HH)

**Statistically significant at $p < 0.05$

***Statistically significant at $p < 0.01$

CI, 0.08–0.17) and eviction rate had a β-coefficient = 0.235 (95% CI, 0.13–0.34) when looking at VLBW outcomes in the adjusted models. For IM, eviction filing rate had a β-coefficient = 0.360 (95% CI, 0.07–0.65) and eviction rate had a β-coefficient = 0.652 (95% CI, 0.01–1.30) (Table 4).

For the secondary analysis, pediatric health outcomes and evictions were examined for %Minority HH > 50% of total HH per census tract. Eviction filing rates and eviction rates were both significant predictors for VLBW and IM in the unadjusted and adjusted models ($p < 0.01$). Eviction filing rate had a β-coefficient = 0.176 (95% CI, 0.13–0.23) and eviction rate had a β-coefficient = 0.353 (95% CI, 0.24–0.47) when looking at VLBW outcomes in the adjusted models. For IM, eviction filing rate had a β-coefficient = 0.497 (95% CI, 0.20–0.79) and eviction rate had a β-coefficient = 0.949 (95% CI, 0.28–1.62) (Table 5).

High rates of VLBW, IM, eviction filings, and evictions were also found to be predominantly concentrated in the same census tract areas on the South and West sides of Chicago (Fig. 1). Results suggest that populations which experience higher rates eviction of renter-occupied housing also experience higher rates of IM and VLBW.

Discussion

Results showed that HHs in census tracts with higher rates of eviction and eviction filings also experience a significantly higher VLBW percentage and IM rate, however, causality cannot be concluded from this analysis. Data showed that eviction rate, eviction filing rates, IM and VLBW were all clustered in the most underserved communities of Chicago: the South and West side neighborhoods. These neighborhoods are predominantly comprised of Black and Hispanic populations, which coincides with results showing that Black and Hispanic HH experienced higher rates of eviction, eviction filing, IM and VLBW.

Data used in this study only accounts for formal evictions—a forced displacement of a renter-occupied HH initiated by the property owner and processed in court. This analysis was not able to account for informal evictions—in which a landlord displaces a renter through a means which is not processed in court. There are many ways for landlords to displace tenants, including paying them to leave or even

Table 3 Correlation matrix

	1	2	3	4	5	6
1. %VLBW	–	–	–	–	–	–
2. IM rate	.527**	–	–	–	–	–
3. Eviction filing rate	.484**	.303**	–	–	–	–
4. Eviction rate	.446**	.274**	.960**	–	–	–
5. %Female HH, LTHS, below poverty	.268**	.194**	.372**	.345**	–	–
6. %Minority HH	.510**	.326**	.706**	.648**	.505**	–

**Statistically significant at $p < 0.01$

Table 5 Unadjusted and adjusted analysis of health outcome measures among predominant minority race (n = 401)

Variable	Unadjusted, beta coefficient (95% CI)	Adjusted, beta coefficient (95% CI)*
VLBW percent		
Eviction filing rate	0.180 (0.13, 0.23)**	0.176 (0.13, 0.23)**
Eviction rate	0.364 (0.25, 0.48)**	0.353 (0.24, 0.47)**
IM rate		
Eviction filing rate	0.531 (0.24, 0.82)**	0.497 (0.20, 0.79)**
Eviction rate	1.03 (0.37, 1.69)**	0.949 (0.28, 1.62)**

*The analysis was adjusted for female-led family HH with LTHS diploma and below poverty

**Statistically significant at $p < 0.01$

changing the locks or taking their doors off [4]. As such, this analysis utilized eviction filing rate as a proxy to more accurately portray the eviction crisis; a landlord can file for an eviction simply as a threat to displace a renter-occupied HH without ever going to court.

If chronic eviction and unstable housing during pregnancy increases the risk for adverse neonatal health outcomes, social support and regulatory services should, at the very least, focus on stable housing for poor pregnant women. This may provide a preventive health service and deter increases in costs and debt related to neonatal disease. Further analysis should attempt to capture informal evictions to more reliably establish the relationship between eviction of renter-occupied HH and adverse neonatal health outcomes.

Eviction and VLBW

This analysis showed that eviction and eviction filing may contribute as risk factors for VLBW. Non-Hispanic Black mothers are at an increased risk for VLBW [19]. In St. Louis, it was shown that Non-Hispanic Black race was a significant risk factor for VLBW whether or not the mothers received adequate prenatal care [10]. Additionally, structural racism has been shown to be more strongly associated with VLBW among Black mothers versus White mothers [24]. Results from this study also showed that there is a racial disparity for VLBW in Chicago. Predominantly Non-Hispanic Black HH experienced a mean VLBW percentage of 3.2 whereas predominantly Non-Hispanic White and Hispanic HH had mean VLBW percentages of 1.3 and 1.7, respectively.

The greatest sociodemographic contributors to the Black–White disparity in very preterm births were maternal education, marital status and paternity acknowledgment, and source of payment for delivery [23]. Preterm birth is a known risk factor for VLBW. Additionally, very preterm births are thought to have a larger Black–White disparity and greater long-term consequences than IM [25, 26]. Despite controlling for minority led HH (Non-Hispanic Black and Hispanic) and female led HH, analyses showed a significant relationship between eviction rate and eviction filing rate with VLBW percentage. This relationship remained significant when analyses were restricted to census tracts with over 50% of HH being minority led.

Preterm birth is a risk factor for and is even classified by severity of low birth weight, VLBW being less than 1500 g. Long-term complications among VLBW infants can include prolong hospitalizations [27], delays or impairment in cognitive development [28], impaired lung function [29] and chronic disease including kidney disease [30], hypertension and high blood pressure [31]. Infants who are born at a VLBW are also at an increased risk for long-term educational assistance [32], thus increasing financial and resource burden on mothers, especially single mothers. Results provided in this analysis suggest that increases in eviction and eviction filing rates are significantly related to higher percentages of VLBW and can possibly lead to increased financial burdens on already vulnerable and underserved populations of mothers. Regulatory agencies and social support programs should target pregnant women in poor and underserved communities, who are at increased risk for eviction, and provide a stable home. This may contribute to the prevention of VLBW and the associated complications, thus enabling these mothers and children to have decreased adverse health outcomes. These results should instigate further investigations between associations of unstable housing and low birth weights.

Eviction and infant mortality

States that experience higher levels of education and median HH income have lower rates of IM among both White populations and Black populations [33], suggesting that education and income are risk factors for IM. Wallace et al. [33] showed that for every $12,641 increase in a state's median HH income, Non-Hispanic Black IM decreased by 17%. Additionally, Wallace et al. [33] provide evidence that racism against Non-Hispanic Black populations, but not prejudice experienced by Non-Hispanic White populations, increase the risk for IM [33]. Other research has also shown that a portion of the Black–White gap in IM can be explained by racial disparities in very preterm births [23]. The Index of Concentration at the Extremes was used to assess if local measure of racial and economic segregation were associated with preterm birth and IM [34]. This showed that women residing in the least privileged zip codes were significantly more likely to experience preterm birth and IM.

Results from this analysis also showed disparities among races. Predominantly Non-Hispanic Black HH experienced almost double the IM rate at 13.8 compared to predominantly Non-Hispanic White and Hispanic HH, at 7.2 and

Fig. 1 Geomapping of very low birth weight percent (top left), infant mortality rate (top right), eviction filing rate (bottom left), and eviction rate (bottom right) by Chicago census tract

7.7, respectively. The relationship between eviction rate and eviction filing rate was shown to be significant with IM and remained significant when examining census tracts that were over 50% minority (non-Hispanic Black and Hispanic). This suggests that even controlling for the racial disparity, eviction rate may be a contributing factor for IM. The previously mentioned evidence that structural racism could be contributing to the racial disparity in IM could also be contributing to the racial disparity in eviction rates. One possible explanation could be racism among affluent property owners leading to increased evictions in minority populations. If a poor pregnant woman is chronically evicted, she likely is unable to maintain proper nutrient intake due to lack of access to proper food storage. Eviction among single mothers in renter-occupied HH are also likely unable to maintain control of any gestational or chronic diseases that could contribute to IM.

Causes of Infant Death and VLBW

Results from this study suggest that eviction has a relationship with IM and VLBW, however, we cannot determine if eviction contributes as a causal factor, mediating factor, or some combination of both. The five leading causes of infant death in the US as of 2014 were (1) congenital malformations or chromosomal abnormalities, (2) low birth weight or prematurity, (3) sudden infant death syndrome, (4) neonatal death due to maternal complications and (5) unintentional injuries [35]. Risk factors for very low birth weight, as defined as a birth weight of less than 1500 g, include prior preterm birth, uterine abnormalities, nutritional deficiencies, smoking, illicit drug use, maternal medical conditions and more. Recent studies have shown that there are socioeconomic inequalities in low birth weight across the US, United Kingdom, Canada and Australia [36]. Martinson and Reichman [36] found that there was a clear association between income and low birth weight, even more so in the US when compared to the other counties. Eviction may be mediating or exacerbating risk factors for both IM and VLBW. A pregnant mother experiencing chronic eviction or unstable housing could have nutritional deficiencies, increased stress, increasing the risk of maternal hypertension or diabetes, and increased risk for infection—all known risk factors for premature births and low birth weights. Chronic eviction traps renters into poverty [3], which could be contributing to the risks of low socioeconomic status on VLBW and IM. Future research should attempt to parse out the relationship of eviction with IM and VLBW. If eviction is solely a mediating factor, then perhaps stable housing will prevent other risk factors from causing IM and VLBW.

Spatial Disparity

The census tracts in this analysis that were found to have higher eviction and eviction filing rates were concentrated in areas of Chicago that are well-known to have higher levels of violence, poor education and food deserts. Resident HH of these neighborhoods likely have a slew of risk factors working against their ability to maintain a healthy lifestyle. Results from this analysis showed that these populations are likely experiencing an eviction crisis. It would be of interest to explore if there is an additive effect with the number of risk factors people are exposed to: if they live in areas with high eviction, high violence, lack of food options and lack of work options—are they at even higher risks for chronic and severe diseases than populations who only experience unstable housing or populations in food deserts that don't have high rates of eviction or violence? This study also found that IM rates and VLBW percentages were clustered in the same areas that have higher rates of eviction and eviction filings. This suggests that there is likely a complex multifactorial issue occurring in which people live in areas stricken with severe risk factors for poor health and living conditions. This makes it difficult to parse out how each factor contributes.

It has been shown that temporary financial assistance programs in Chicago do prevent homelessness, to an extent, and provide overall cost savings to society [37]. Though not exactly the same, homelessness is a more extreme analogy and can be the result of chronic eviction. Mothers who are at risk of being evicted can qualify for these programs and if they do, does the one-time financial assistance prevent further eviction? Or does it just delay the inevitable? Furthermore, it would provide immense benefits for these types of programs to prioritize single mothers who are experiencing chronic eviction. One thing is certain: the census tracts in this study shown to have higher rates of eviction, eviction filings, IM and percentages of VLBW are in dire need of assistance in the form of healthcare, evaluation and planning.

Limitations

A major limitation is the inability of these analyses to account for ecological fallacy. The unit of analysis used, census tract, does not allow for a direct link between eviction and IM and VLBW. Whereas the Eviction Lab data pertained to only renter-occupied HH, VLBW and IM were provided by Chicago Department of Public Health for each census tract, which included renter and owner-occupied HH. Additionally, Eviction Lab data are not uniformly accurate across the US, which could result in inconsistent results. The lack in uniformity and complete overlap in populations examined could lead to inaccurate variations in analysis outcomes.

Data used in this investigation for eviction was obtained from the Eviction Lab, which only accounts for formal evictions. The Eviction Lab obtains its data from court records, as such this study was not able to account for informal evictions.

Confounding variable data was obtained from American Community Survey, which uses data from self-reported surveys. The use of a minority variable does not distinguish independent risks for Non-Hispanic Black and Hispanic populations. This analysis was a population-level analysis and was not able to examine individual level relationships between eviction with IM and VLBW.

Conclusion

In summary, this study provides population-level analyses suggesting that eviction and eviction filing rates have a significant relationship with VLBW and IM. Though we cannot conclude causation, this investigation was meant to generate hypotheses and encourage further investigation into the growing field of eviction and health. Eviction in Chicago is disproportionately experienced by Non-Hispanic Black and Hispanic populations and these populations also experience noticeably higher IM and VLBW compared to Non-Hispanic White populations. Stable housing is a necessity, not a privilege, which unfortunately is not afforded to some members of our society. Previous rhetoric has argued that eviction is a population-level issue and will likely require a large scale solution—possibly at the town, county or regional level [38]. As such, this analysis provides useful results for regulatory agencies evaluating and planning for solutions to the current eviction crisis.

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Compliance with Ethical Standards

Conflict of interest All authors have indicated they have no potential conflicts of interest to disclose.

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