Association of Neighborhood Gun Violence With Mental Health–related Pediatric Emergency Department Utilization

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IMPORTANCE: Many children and adolescents in the United States are exposed to neighborhood gun violence. Associations between violence exposure and children's short-term mental health are not well understood. OBJECTIVE: To examine the association between neighborhood gun violence and subsequent mental health–related pediatric emergency department (ED) utilization. DESIGN, SETTING AND PARTICIPANTS: This location-based cross-sectional study included 128?683 ED encounters for children aged 0 to 19 years living in 12 zip codes in Philadelphia, Pennsylvania, who presented to an urban academic pediatric ED from January 1, 2014, to December 31, 2018. Children were included if they (1) had 1 or more ED visits in the 60 days before or after a neighborhood shooting and (2) lived within a quarter-mile radius of the location where this shooting occurred. Analysis began August 2020 and ended May 2021. EXPOSURE: Neighborhood violence exposure, as measured by whether a patient resided near 1 or more episodes of police-reported gun violence. MAIN OUTCOMES AND MEASURES: ED encounters for a mental health–related chief complaint or primary diagnosis. RESULTS: A total of 2629 people were shot in the study area between 2014 and 2018, and 54?341 children living nearby had 1 or more ED visits within 60 days of a shooting. The majority of these children were Black (45?946 [84.5%]) and were insured by Medicaid (42?480 [78.1%]). After adjusting for age, sex, race and ethnicity, median household income by zip code, and insurance, children residing within one-eighth of a mile (2-3 blocks) of a shooting had greater odds of mental health–related ED presentations in the subsequent 14 days (adjusted odds ratio, 1.86 [95% CI, 1.20-2.88]), 30 days (adjusted odds ratio, 1.49 [95% CI, 1.11-2.03]), and 60 days (adjusted odds ratio, 1.35 [95% CI, 1.06-1.72]). CONCLUSIONS AND RELEVANCE: Exposure to neighborhood gun violence is associated with an increase in children's acute mental health symptoms. City health departments and pediatric health care systems should work together to provide community-based support for children and families exposed to violence and trauma-informed care for the subset of these children who subsequently present to the ED. Policies aimed at reducing children's exposure to neighborhood gun violence and mitigating the mental symptoms associated with gun violence exposure must be a public health priority.

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