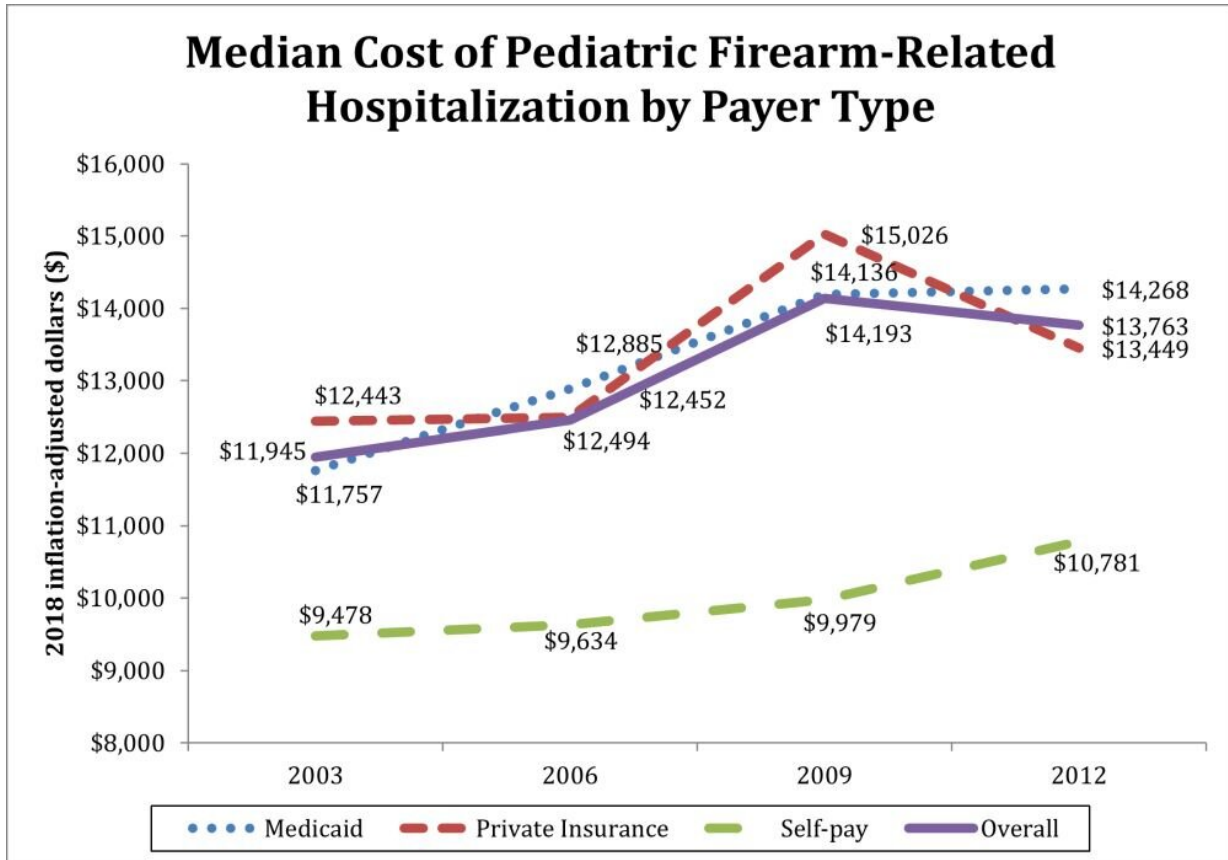


US children pay high price for gun violence

June 23 2021



Average hospital cost per admission for pediatric firearm-related injuries by payer type. All data from 2003-2012. Credit: Taylor et al, 2021, *PLOS ONE* (CC-BY 4.0, creativecommons.org/licenses/by/4.0/)

Initial hospitalization costs for pediatric firearm injuries across the U.S. were an average of \$109 million annually, according to a study published

June 23, 2021 in the open-access journal *PLOS ONE* by Jordan S. Taylor and colleagues from the Stanford University School of Medicine, U.S.

Gun violence is a huge problem for U.S. children: across the world, nine out of every 10 children under 15 years old killed by guns was in the U.S. This study is one of the first to characterize the cost of initial hospitalization from gun-related injury in U.S. children 18 and under over time, and to identify factors that may contribute to variation in cost.

To do so, the authors used data from the national Healthcare Cost and Utilization Project Kids' Inpatient Database (the largest publicly available all-payer pediatric inpatient care database in the U.S., sampling up to 80% of pediatric discharges from more than 4,100 U.S. hospitals), looking specifically at patients 18 and under admitted with gun-related injuries from the years 2003, 2006, 2009, and 2012 (representing between 36-44 states depending on the year). They compared demographic and discharge-level data including injury severity score, hospital length of stay, income quartile, injury intent, and inflation-adjusted hospital [costs](#) across four age groups (0-5, 6-9, 10-15, 16-18 years).

19,015 [pediatric patients](#) 18 years of age and under were admitted to the hospital for firearm-related injuries during the study period, working out to approximately 4,753 pediatric firearm-related admissions each year. Assault was the given reason for 63 percent of admissions; unintentional injuries accounted for 26 percent of admissions; self-inflicted injuries, three percent. 47 percent of all patients had a hospital length of stay (LOS) of four or more days. The median hospitalization cost was \$12,984 per patient, with annual initial hospitalization costs for pediatric firearm injuries approximately \$109 million over the study period. (The authors note inflation-adjusted hospitalization costs increased significantly over the study period (p injury severity, and increased length of time in the hospital were all associated with higher costs (p

The costs reported here represent initial hospitalization only, and don't account for costs from subsequent admissions, patients discharged directly from the emergency department, or patients who died prior to admission. Additional financial burdens like lost time from work for teens and parents, rehabilitation, long-term disability costs, and non-[hospital](#) resources (e.g. first responders) are also not counted in this data.

Even with these limitations, it's clear that gun injuries in U.S. youth 18 and under are a significant public health problem and financial burden. The authors hope that this and future work will lead to effective legislation and [prevention programs](#).

The authors add: "Among the devastating toll of firearm injuries, what we often don't consider are the financial consequences that go with it. Our study found that the US spends nearly 110 million dollars every year on initial hospitalization costs for children injured by guns. Those costs are even greater when work-loss and mental health costs are considered. In [younger children](#) (children under 10 years old), the majority of gun-related hospitalizations were due to accidents. By encouraging safer gun storage practices, we can reduce unintentional harm to our young, curious [children](#) and, in doing so, also reduce one area of rising US health care expenditures."

More information: Taylor JS, Madhavan S, Han RW, Chandler JM, Tenakoon L, Chao S (2021) Financial burden of pediatric firearm-related injury admissions in the United States. *PLoS ONE* 16(6): e0252821. doi.org/10.1371/journal.pone.0252821

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