

Upsurge in Firearm related Deaths among Children and Adolescents in the United States: An Alarming Trend

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Abstract

Firearm-related violence is a leading cause of death, disproportionately affecting adolescents and young adults across the world, especially in the Americas. It is one of the most common forms of suicide and homicide across the globe. Recent data from the Centers for Disease Control and Prevention (CDC) shows an alarming increase in firearm-related mortality among children and Adolescents which is a cause of concern and requires strict gun licensing regulation in countries like the U.S.

Keywords: Child, Adolescent, Young Adult, United States, Homicide, Suicide, Violence, Centers for Disease Control and Prevention, U.S., Americas

An estimated 251,000 people worldwide die each year from a firearm-related death and many more suffer non-fatal injuries with consequences that can last a lifetime. Firearm injuries, which include those that are intentionally self-inflicted, unintentional, or from an act of interpersonal violence, are heavily concentrated in the Americas, driven largely by firearm homicides.^[1] As per the Global Burden of Disease study (GBD) estimates, physical violence, self-harm, and unintentional injury by firearm, respectively caused 174.4×10^3 , 63.8×10^3 , and 22.6×10^3 deaths globally in 2017.^[2]

In April, 2022, the Centers for Disease Control and Prevention (CDC), United States (U.S.) released data on mortality and its causes, reporting 45,222 firearm-related deaths in the U.S. in the year 2020 an all-time highest.^[3] Although previous analyses had shown an increasing trend in firearm-related mortality in recent years (2015–2019), compared to the relatively stable firearm-related mortality rates in the earlier years (1999–2014).^[4,5] There was a sharp hike of 13% in the crude rate of firearm-related deaths from 2019 to 2020 in the U.S.^[3] This spiky increase was mainly propelled by firearm homicides, which saw a 33.4% increase in its crude rate from 2019 to 2020, as compared to only 1.1% increase in the crude rate of firearm suicides.^[3]

A previous analysis, which examined data from 1990 to 2016, showed that firearm-related injuries were second only to motor vehicle crashes (both traffic-related and non-traffic-related) as the leading cause of death among children and adolescents, i.e., those aged 1 to 19 years in U.S.^[6] Since 2016, the difference between the deaths due to firearm injuries and motor vehicle crashes started to narrow, and in 2020, firearm-related injuries became the leading cause of death in this age group.^[3] From 2019 to 2020, the relative increase in the rate of all types (suicide, homicide, unintentional, and undetermined) of firearm-related deaths among children and adolescents was 29.5% which was twice as high as compared as the relative increase in the general population showing the disproportionate affection of this vulnerable age- group by the firearm injuries.^[7] Apart from firearm deaths, deaths due to drug overdose and poisoning have also increased by 83.6% from 2019 to 2020, thus becoming the third leading cause of death in children and adolescents whereas the rates for other

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leading causes of death have remained relatively stable since 2016. This trend indicates that change in mortality trends among children and adolescents during the early COVID-19 pandemic period was mainly driven by firearm-related injuries and drug poisoning as COVID-19, itself, resulted in only 0.2 deaths per 100,000 children and adolescents in 2020.^[3]

Although these new findings are consistent with the previous evidence that firearm violence has increased substantially since initial phase of the COVID-19 pandemic.^[8] The reason/s for the increase is/are unclear, and it would be completely unwise to expect that firearm-related mortality among children and adolescents could later revert to pre-pandemic levels.

Access to firearms is a well-recognized risk factor for homicide and suicide among youths in the United States.^[9] In a study identifying storage patterns for firearms within the homes of adolescents, more than half of adolescents reported that they could access a loaded gun in less than an hour (33.9% in less than 5 minutes) and even in homes where firearms were reported as locked, more than one-third of adolescents reported that they could access the firearm in less than an hour.^[10]

One of the potential reasons for the increase in firearm-related violence during the pandemic could be increased stress and loneliness arising from prolonged home stay due to lockdowns and isolation and quarantine measures. During the first months (March to July, 2020) of the coronavirus pandemic, nationwide firearm purchasing increased substantially, which corresponded with the increased firearm injuries in U.S. during this period.^[8] The firearm deaths and injuries have been found to be associated with factors such as access, substance use, adverse childhood experiences, involvement in high-risk social networks, drug trafficking, the density of alcohol outlets, and neighborhood and social disadvantage.^[1]

CONCLUSION

In conclusion, the increasing firearm-related mortality among children and adolescents in the U.S. reflects an alarming trend which currently has the highest rate of firearm ownership, accounting for 40% of global ownership.^[11] The situation demands for adequate political prioritization and comprehensive firearm control efforts, including strict gun license regulations in U.S. as there is currently no federal

law requiring gun licensing for owning or purchasing a gun and the rule for ownership varies from state to state to protect the children and the youths from this completely preventable cause of death.

CONTRIBUTORSHIP STATEMENT

MAB conceived the idea of the study. NAS and MAB performed the literature review. MAB helped in evidence synthesis. MAB wrote the first draft of the paper, which was edited and improved by NAS. Both the authors approved the final draft for submission.

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