Racial and Ethnic disparities in firearm-related injuries among Floridian children

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INTRODUCTION

The United States (U.S.) has the highest rate of pediatric firearm injuries among developed countries. Firearm related injuries are the third leading cause of death in the pediatric population after unintentional injuries such as motor vehicle collisions and drowning and cancer. Gun violence accounts for 15% of all child deaths nationwide, and it has become a national crisis in the country. Every 1 and ½ hour, a child dies in the U.S. of a firearm related injury.

For every child killed due to a firearm, a significantly greater number are severely injured, and approximately half of the children hospitalized with a firearm-related injury are discharged with a lifelong disability. These disabilities are categorized in any degree of limitation in vision, hearing, speech, daily living activities and behavior, cognition or bladder and bowel control. Even when children survive a firearm assault, their quality of life will subsequently and disproportionately be decreased. In addition, being exposed to gun violence, is related to a higher prevalence of mental health issues. Victims have significantly higher levels of psychological distress, depression, suicidal ideation and/or psychotic experiences compared to unexposed peers.

Ethnical and racial disparities exist among gun violence victims. However, when it comes to the pediatric population they are not quite established. There seems to be a higher incidence of injury related deaths in Black youth, Hispanic youth and American Indian youth compared with White or Asian American youth over the last 20 years.

OBJECTIVES

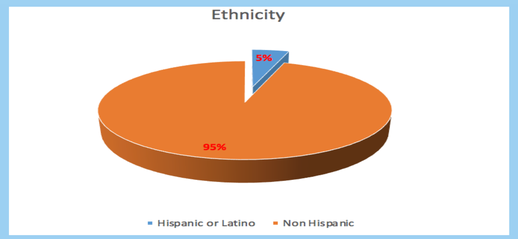
To assess the incidence of firearm-related injuries among pediatric patients in Florida by race and ethnicity

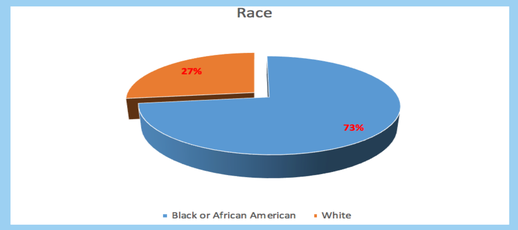
METHODS

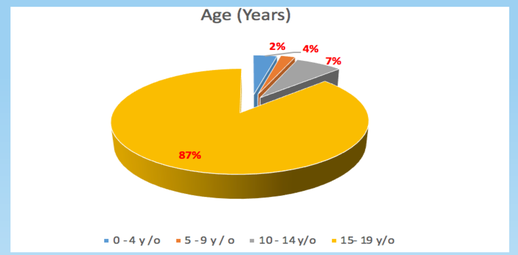
Data utilized for this study was drawn from ambulatory Emergency Department discharge records compiled by Florida's Agency for Health Care Administration. This data included all ED visits in Florida for the years 2014. Variables included ambulatory ED-visits of Floridian pediatric patients (aged ≤ 19 years) who had firearm-related Principal Diagnosis International Classification of Diseases, Clinical Modification Codes. (ICD-9-CM) and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)21,62 codes for firearm-related injuries.

RESULTS

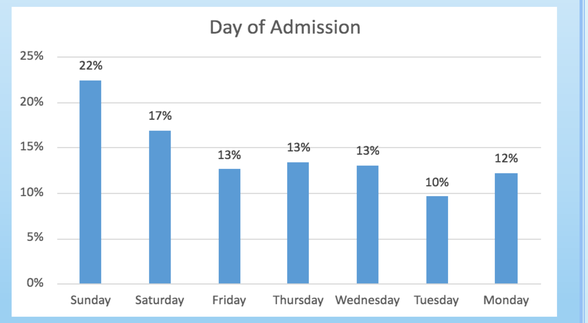
In total, 2,658 gun-violence victims were included in the analyses. The majority of pediatric patients involved in firearm-related injuries were males (87%), Non-Hispanics (95%), and Black (73%). ED-visits were most commonly reported on Sunday (22%), followed by Saturday (17%). Out of the 11 regions, the highest proportion (18%) of the pediatric population was from Miami-Dade and Monroe; 87% of the population were males and 87% were 15-19 years of age. Medicaid was the largest payor (61%) followed by self-payers (21%). The rates of ED-visits for firearm-related injuries per 10,000 population for the 15-19 years age group was 13 for Black and 9 for Non-Hispanics in the above-mentioned regions

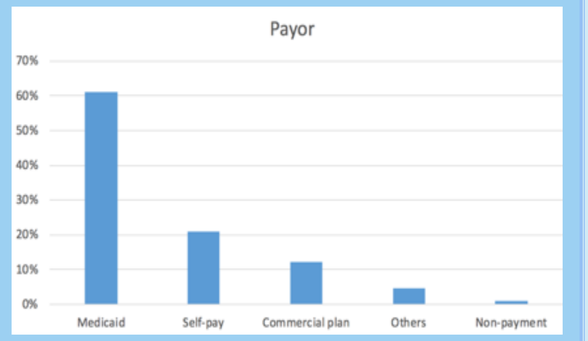


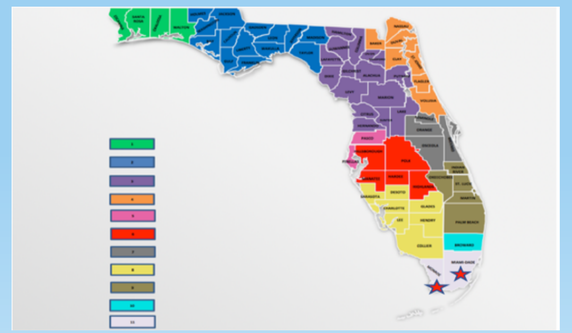




RESULTS







DISCUSSION

Since the U.S. population has become increasingly diverse during the past decades, closing the gap between racial and ethnic groups has become more important than ever. Inequalities in demographic and socioeconomic factors, such as household income and educational attainment, can explain racial/ethical disparities in pediatric firearm-related injuries.

Typically, non-Hispanic Black children tend to live in families with lower socioeconomic status. Low level of household income along with other stressors such as living in violent neighborhoods and can predispose minority children to gun violence. In Florida, 24% of all children and 40% of Black children live under poverty.

There is also a relationship between parents' educational attainment and mortality risk of their offspring. Fire-arm accidents reflect the average level of educational attainment, in Florida 32% of black children do not graduate from high school.

Miami Dade and Monroe counties, the number one hot spot for gun violence, are predominantly populated by Blacks and Hispanics. Similar to studies in other health related disciplines, being insured through Medicaid is a predictor of gun-related injuries. Thus, public funds and tax payer moneys that could be allocated to cover societal needs including education, infrastructure etc., are utilized to pay for healthcare services related to gun violence.

The findings of this study somewhat disagree with a similar recent study by Urrechaga and Stoler, who concluded that males, black and Hispanic children were more likely to be affected by gun violence.

CONCLUSIONS

The largest incidence of firearm related injuries occurred among minority children with the highest rates seen in Black and Non-Hispanics. Similar to previous studies, ethnicity, demographic and socioeconomic factors are predictors of gun violence among the pediatric population. Future studies should be conducted to gain a deeper understanding of sociodemographic and economic characteristic to be able to identify risk factors and design targeted interventions to reduce the burden of gun violence among minority children.