

Study finds racial disparities in gun-related eye trauma in the United States

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A review of patients who suffered firearms-related eye trauma shows significant disparities in race, location, and circumstance, according to research presented today at AAO 2017, the 121st Annual Meeting of the American Academy of Ophthalmology. Most of the victims survive, but suffer traumatic brain injury and require extensive rehabilitation. The researchers say their study can inform the direction of future public policy.

Evidence and research that could be used to develop effective laws that might decrease deaths and injuries from firearms is severely lacking, so researchers at Albert Einstein College of Medicine in New York decided to conduct a study using data from the National Trauma Data Bank, a U.S. trauma registry assembled by the American College of Surgeons, to look for patterns of firearms-related eye trauma.

Of 235,254 firearms injuries recorded from 2008 to 2014, 8,715 (3.7 percent) involved the eyes. Among the patterns that emerged:

- mean age was 33.8 years;
- most were male (85.7 percent), white (46.6 percent), and from the South (42.9 percent);
- African Americans made up 35 percent of patients;
- most common injuries were fractures to the bone around the eye (38.6 percent) and open injuries to the eye ball (34.7 percent);
- most common injury locations were the home (43.8 percent) and the street (21.4 percent);

- African Americans had greater odds of being assaulted on the street;
- whites had greater odds of suffering self-inflicted injuries at home; and
- the survival rate was 84 percent, with 64.6 percent suffering [traumatic brain injury](#).

"Firearms are a leading cause of sight-threatening ocular [trauma](#) and associated traumatic brain injury in the United States," said lead researcher Joyce N. Mbekeani, Ph.D. clinical associate professor at Albert Einstein College of Medicine. "Often non-fatal, these injuries can be debilitating, leaving patients in need of extensive rehabilitation. Although we can't readily explain the racial and ethnic disparities by region, location and intent of [injury](#), disclosed in this study, we think these differences can be exploited to develop demographically guided interventions that could help prevent unnecessary vision loss and long-term disabilities caused by firearms."

Provided by American Academy of Ophthalmology

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