



Indiana State  
Department of Health  
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Jerome M. Adams, MD, MPH  
State Health Commissioner

January 6, 2015

Gary Smith, MD, DrPH  
Director, Center for Injury Research and Policy  
The Research Institute at Nationwide Children's Hospital  
700 Children's Drive  
Columbus, OH 43205

Dear Dr. Smith:

Thank you for your inquiry regarding the Indiana Firework-related Injury Report. As indicated in the 2014 report, the Indiana State Department of Health (ISDH) began receiving reports about injuries resulting from fireworks in 2003. With the exception of 2005, a year when reporting was not required, firework-related injuries have been reported to the ISDH annually. Hospitals, medical facilities, and private medical practices are mandated by law to report all firework-related injuries and deaths to the ISDH. The law does not have an enforcement component, and we believe the number of injuries reported is an underestimation of the true burden of fireworks injuries.

In 2014, there were 69 hospitals, immediate/urgent care centers, and physician offices that submitted a total of 147 fireworks injury reports for 141 unique individuals. Of the 69 centers, 59 were hospitals with emergency departments. This represents **fewer than half** of all hospitals with emergency departments in the state (59/120). Eight injuries was the largest number reported by any one facility. Many of the facilities reported only one or two cases. **Only nine urgent care/immediate care centers and one physician's office** supplied fireworks-related injury reports to the ISDH in 2014.

Significant underreporting is further supported by the absence of reports from many large hospitals throughout the state. Three American College of Surgeons (ACS) verified trauma centers did not report any fireworks injuries. **Reports received by ISDH indicated that 22 fireworks-injured patients were transferred to another facility, but only three of those had reports submitted from the receiving facility.** Nine of those patients were transferred to out of state hospitals and one report didn't indicate a transfer hospital. The Indiana hospitals receiving the remaining 10 did not submit follow-up reports as required by Indiana law.

The largest number of injuries were reported in the two years during which reporting became mandated (2003) and re-mandated (2006), suggesting increased awareness of reporting during the aftermath of the legislation. During subsequent years, there has been little, if any, prompting of providers to complete reports of injuries sustained while using fireworks, as indicated by the virtual absence of reporting from urgent care and primary care providers. Indeed, as a family practice provider, I cared for patients with minor fireworks injuries but was never aware of the reporting requirement. Fireworks injury reporting has not been integrated in electronic medical records systems, so is not a part of normal patient care workflow. Newly hired emergency department staff may not be aware of reporting requirements.



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Of additional concern is the increased percentage of people who were hospitalized or transferred to a hospital as a result of a fireworks injury after the 2006 law loosening restrictions on the use of fireworks in Indiana. The data in **Table 2** below from the ISDH 2014 Firework-related Injury Report show, on average, a 3-fold increase in the percentage of these injuries requiring hospital care since 2006 when the more permissible law was enacted (13% vs. 4.5%), and 2 deaths.

The reported data on fireworks-related injuries from Indiana are incomplete and therefore not reliable for use in ascertaining trends in injuries. It would be erroneous to conclude that the Indiana law legalizing fireworks use resulted in a decrease in fireworks-related injuries given the vast underreporting of these injuries by medical facilities in Indiana.

The increased percentages of injuries requiring hospital care since the legalization of 1.4G consumer grade fireworks in Indiana may be more representative of the injury burden resulting from the change in law. While we can't confirm a decrease in the number of injuries, our data do show an increase in the percentage of more severe injuries requiring hospital care.

The 2014 report is available online here: [http://www.in.gov/isdh/files/ISDH\\_FireworksReport\\_2014.pdf](http://www.in.gov/isdh/files/ISDH_FireworksReport_2014.pdf).

Please let me know if I can provide any additional information.

Sincerely,



Joan M. Duwve, MD, MPH  
Chief Medical Officer