Introduction: Non-battle injuries (NBIs) have been an important cause of death in the on-going Army deployments for Operations Enduring Freedom (OEF) in Afghanistan and Operation Iraqi Freedom/New Dawn (OIF/NOD) in Iraq. During 2001 to 2009, NBIs accounted for 21 percent of all deaths. The overall NI/NI combined rate was 1 in 110,000 deployed-soldier-years.

Purpose: The objective of this investigation was to utilize routine casualty and safety surveillance data to provide an update for the incidence and causes of fatal NBIs among Army soldiers deployed in support of OEF (2001-2012) and OIF/NOD (2003-2010).

Methods: Three electronic data sources were used to identify soldiers who sustained as NI from 2001-2012: the Defense Casualty Information Processing System, the Army Safety Management Information System and the Armed Forces Medical Examiner System. Descriptive statistics (frequencies and percentages) were used to report the casualty type and cause of injury for soldiers with fatal NBIs.

Results: Overall, there were 5,758 fatalities among soldiers in OEF (2001-2012) and OIF/NOD (2003-2010). Among these fatalities, 79% (n=3,839) were battle injuries, 18% (n=902) were NBIs, and 3% (n=125) were due to accidents. The accidental/fatal rates for NBIs were calculated as 0.004 per 100,000 deployed-soldier-years. During this timeframe, the overall fatal injury rate was 0.02 per 100,000 deployed-soldier-years (p<.001).

Conclusions: The accidental/fatal rates for NBIs were calculated as 0.004 per 100,000 deployed-soldier-years. Non-battle injuries were a significant cause of mortality among troops deployed in support of OIF/NOD and OEF between 2001 and 2012. Significant differences between operations were seen for the percent of non-battle fatalities caused by motor vehicle accidents, air transport accidents and handling explosives/implosives. Different results were observed for the leading causes of fatalities between the two operations. Important, many of these injuries are potentially preventable and could be targeted for intervention. Additional research is needed to better understand the factors contributing to fatal non-battle injuries and the differences between operations.