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Cover Page Footnote

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All-cause and opioid-related mortality compared between traumatic spinal cord injury and the US general population

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ABSTRACT

Individuals with spinal cord injury (SCI) are susceptible to the misuse of opioids due to the introduction of these substances for pain management. There are very few studies examining the relationship between unintentional deaths caused by opioid usage following spinal cord injury. The objective of this study was to evaluate the trend of opioid-related mortality of individuals with spinal cord injury (SCI) over the years and compare these findings to the mortality rates due to opioid misuse in the general population. In this study, we used data provided by the National Spinal Cord Injury Model Systems (NSCIMS) for SCI 1999-2016 and Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research (CDC WONDER) for the United States (US) general population. Using the codes for poisoning due opioids, we analyzed and graphed the rates of opioid-related mortality and the related percent of total deaths for SCI as compared to the US general population. The all-cause mortality rate and opioid-related mortality in individuals with SCI was significantly higher for SCI than the rate in the US general population. However, despite the higher opioid-related mortality rates in the SCI model systems sample when compared to the US general population, the percentage of total deaths due to opioid misuse among individuals with SCI was lower than its percentage of total deaths in the US general population. Our results suggest that opioid usage places individuals with SCI at a much higher risk for opioid-related mortality, and drug misuse is becoming more popular among the general population. Overall, evaluating these trends can provide insight into safer pain management strategies for SCI and highlights the need to implement better preventative measures for the risks associated with prescribing these substances.

KEYWORDS: spinal cord injury, opioid-related mortality, opioids, pain management, health services, general population, National Spinal Cord Injury Model Systems, CDC WONDER