

Using Syndromic Surveillance to Fill Gaps in Worker Injury Surveillance

The Kentucky Occupational Safety and Health Surveillance (KOSHS) program at the Kentucky Injury Prevention and Research Center (KIPRC) developed a work-related ESSENCE query and weekly syndromic surveillance reporting for timely monitoring of work-related injuries in Kentucky.

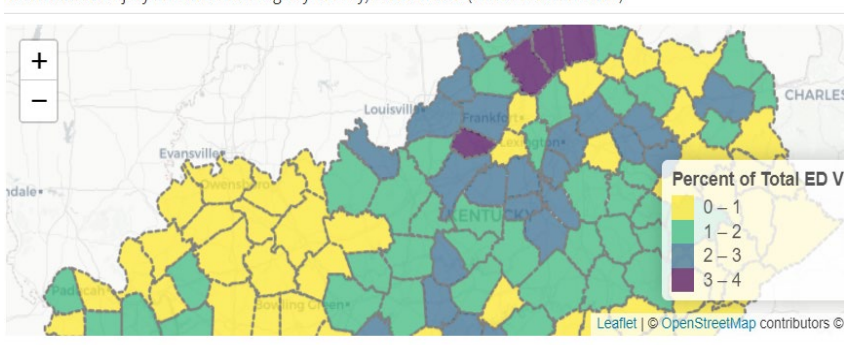
The Challenge

Current state-based surveillance of worker injuries relies heavily on the use of workers' compensation as the expected payer source for emergency department visits to identify worker injuries. However, since a large percentage of work-related injuries are not covered by workers' compensation, this reliance leads to a significant underestimation of work-related injuries. Many data sources utilized for surveillance of worker injuries have a lag of several months in their availability, making them unsuitable for timely monitoring.

The Response

The KOSHS program developed a new occupational health indicator of work-related injuries using syndromic surveillance data to address the gap of work-related injuries that are not identified by workers' compensation as the expected payer. KIPRC's syndromic surveillance epidemiologist developed an ESSENCE query that contains work-related ICD-10-CM codes (including e-codes), SNOMED codes, and free text chief complaint search terms that mention the workplace as the site of the injury. The KOSHS program then established a weekly syndromic surveillance dashboard that is distributed internally to monitor ongoing trends and to identify spikes in ED visits for work-related injuries. The dashboard provides the weekly number of ED work-related injuries by county, age group, sex, and race/ethnicity.

Work-Related Injury ED Visit Percentage by County, Last 8 Weeks (Out of Total ED Visits)



The Impact

With regular weekly monitoring of work-related injury syndromic surveillance injuries using a dashboard, the KOSHS team identified workers aged 15–24 as at risk for work-related injuries. Based on feedback, changes to the dashboard were implemented to break down this age category into subsets of 14- to 17-year-olds and 18- to 24-year-olds to calculate the proportion of injuries occurring among minors. Additionally, the team is reviewing youth work-related injury ESSENCE data for 2018–2023 to determine whether further research into work-related youth injuries in Kentucky is warranted.

For more information, visit the KIPRC website:

<https://kiprc.uky.edu/programs/kentucky-occupational-safety-and-health-surveillance-koshs-program>.