

## **Poster Number 68**

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### **The Life Course of Children with Pediatric Traumatic Injury Compared to Matched Controls: A Longitudinal Population-Based Study**

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#### **Background:**

Pediatric traumatic injury (PTI) is a leading cause of hospitalization among children. Little is known about the sequelae that follows, specifically regarding mental health outcomes (MHOs). This study hypothesized that survivors of PTIs will have increased rates of MHO relative to matched controls.

#### **Objective:**

This longitudinal cohort study compared the MHOs in survivors of PTI with matched controls from the general population.

#### **Methods:**

Children under 18 years old that survived an injury that required hospitalization between January 1, 2004 to December 31, 2016 (n = 9551) were matched to five controls from the general population (n = 47755). Industrials were matched based on age, sex and geographic region. Pre- and post-injury adjusted relative rates (ARRs) of anxiety, depression, and substance use disorders (SUDs) were determined with generalized estimating equations (GEE). Adjusting for sex, income group, location, and age group, RRs were compared and a group-period interaction term was used to determine the significance of the change over time.

#### **Results:**

Survivors of PTIs had increased RRs of anxiety RR=1.66, [95% confidence interval (CI) 1.51-1.82]; depression RR=2.87, (CI: 2.57-3.21); Substance use RR=3.23, [CI: 2.64-3.99]; and any MHO RR=1.90, [CI: 1.76-2.04]). They also had high pre-injury rates: (anxiety RR=1.30, [CI: 1.16-1.47]; depression RR=2.00, [CI: 1.73-2.32]; Substance use RR=4.99, [CI: 3.08-5.20]; any MHO RR=1.50, [CI: 1.37-1.66]). Comparing the pre- and post-injury ARRAs revealed a difference over time in anxiety, depression and any MHO (anxiety, p = 0.0004; depression, p<0.0001; any MHO, p<0.0001). There was no difference in Substance use over time.

#### **Conclusion:**

Child survivors of traumatic injury had increased rates of anxiety, depression and any MHO. This trend persisted even with adjustments for sex, income and age group and geographic location. No difference was found in the rate of substance use. Findings support targeted intervention strategies and innovative protection policies.