Analyzing the Effect of State Legislation on Health Care Utilization for Children With Concussion

Purpose
Evaluate the impact of state concussion laws on the rates of concussion-related treatment and services for children in states with and without concussion laws.

Background
By 2014, all 50 states and DC have passed concussion laws, making this the first injury with legislation dictating medical intervention. It is unclear how injury reporting and health care use are affected by such legislation or the increased national awareness of concussion injuries in recent years.

Methods
Health insurance claims data was collected on children aged 12 to 18 years from a continuous cohort of employer and health plans, from January 1, 2006, through June 30, 2012. Health care use rates included visits (outpatient physician office, neurologist, emergency department, inpatient admissions) and treatment services (e.g., CT scan).

Key Findings
- **States without concussion laws** had higher concussion-related health care use rates each year compared with pre-legislation trends (2005-2009).
  - 2009-2010, 7% ↑
  - 2010-2011, 20% ↑
  - 2011-2012, 34% ↑
- **States with concussion laws** had a 10% higher concussion-related health care use rate and 17% higher rate of office visits compared to states without concussion laws from 2009-2012.

Implications
Increased concussion-related health care utilization rates are directly and indirectly related to concussion legislation.

The increase of concussion-related health care utilization rates in states without laws is partly attributable (60%) to the previous upward trend prior to legislation in 2009 combined with elevated public awareness from increased media attention (40%).

These findings show concussion legislation has demonstrated an effect on increasing medical attention to concussion injuries among children in the U.S., but suggests this overall increase could be a result of heightened injury awareness.

Citation