Traumatic Brain Injury
CDC INJURY CENTER RESEARCH PRIORITIES
A Focus on Youth Sports Concussion

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Surveillance Summary

TRAUMATIC BRAIN INJURY
Emergency Department Visits, Hospitalizations, and Deaths

2007 and 2013
Causes and Prevention Strategies: Sports and Recreation

- There were over 450,000 ED visits for sports and recreation-related TBIs in the United States in 2012, with significant increases in rates since 2001.

  - **CDC HEADS UP initiative**: educational materials to help protect youth from concussions and other serious brain injuries and their potentially devastating effects (e.g., for clinicians, coaches, schools, and parents).
Among older adults, 8 out of 10 TBIs are caused by a fall

- Stopping Elderly Accidents Deaths and Injuries (STEADI): helps healthcare providers implement an integrated and coordinated approach to fall prevention (screen, assess, and intervene)

Causes and Prevention Strategies: Falls
Causes and Prevention Strategies: MV Crashes

- Between 2007 and 2013, rates of motor vehicle TBI-related ED visits increased by over 17% while the overall MV death rates decreased.

- Motor Vehicle Prioritizing Interventions and Cost Calculator for States (MV PICCS): helps state officials to prioritize interventions (e.g., seatbelt and helmet laws).

[Image: Motor Vehicle PICCS Prioritizing Interventions and Cost Calculator for States]

CDC offers a NEW interactive calculator to help states prioritize and select effective motor vehicle injury prevention interventions.

This tool can be used to calculate the:
- Number of injuries prevented
- Number of lives saved at the state level and
- Costs of implementation, while taking into account available resources.

www.cdc.gov/motorvehiclesafety/calculator
Diagnosis and Management: Mild Traumatic Brain Injury Guideline

CDC Advisory Committee Workgroup draft evidence-based clinical recommendations for healthcare providers:

- DIAGNOSIS
- PROGNOSIS
- MANAGEMENT & TREATMENT
NCIPC Research Priorities

Four priority areas to reduce the incidence of TBI through primary prevention and to foster secondary prevention through better identification and management of TBI.

1. Evaluate Surveillance Systems
   Evaluate the effectiveness and economic efficiency of existing surveillance systems to capture TBI, especially mTBI related to youth sports participation.

2. Quantify Outcomes and Identify Risk and Protective Factors
   Quantify short- and long-term outcomes experienced as a result of TBI and identify modifiable risk and protective factors predicting those outcomes.

3. Identify Sports Concussion Primary Prevention Strategies
   Identify effective strategies for the primary prevention of sports concussion

4. Evaluate Prevention Strategies for All Forms of TBI
   Evaluate the effectiveness of strategies for preventing all forms of TBI and enhance the recognition and management of mTBI in clinical and community settings.

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Identify sports concussion primary prevention strategies – Example questions

• Can behavioral intervention strategies be developed and tested that change the culture of sports to promote safety and reduce concussion in youth sports and recreation?

• Which primary prevention strategies to reduce concussions are most effective with players, coaches, social groups or teams, leagues, school staff members, and families?

• What is the impact of changes in rules, training practices, and the sporting environment (including officiating practices and the enforcement of rules and fair play policies) on the incidence or severity of concussions?
Evaluate prevention strategies for all forms of TBI – Example questions

• What barriers and facilitators influence athletes’ reporting of concussions in sports, and how can the accuracy of reporting be improved?

• What are the effects of state, community, and organizational policies focused on the early recognition and management of concussion in sports (e.g., return to play, return-to-learn laws and policies)?

• How can education and awareness efforts (e.g., CDC’s Heads Up initiative) best complement policy change to reduce concussion?

• How effective are pediatric guidelines for recognition and management of mild TBI in improving clinical decision making and management?
To Learn about Funding Opportunities

https://www.cdc.gov/injury/fundedprograms/index.html
To Learn about Funding Opportunities

https://www.grants.gov/web/grants/manage-subscriptions.html
Extra Slides
Evaluate surveillance systems

• What are the differences and similarities between surveillance systems designed to capture data on concussions in different populations?

• What are the specificity, representativeness, and cost of such sports injury surveillance systems?

• What differences are there in the prevalence, incidence, or rates of concussion in youth sports estimated from a variety of reporting strategies (e.g., reports by physicians or trainers versus surveys of players and coaches, reports of athletes versus those of parents)?
Quantify outcomes and identify risk and protective factors

• What is the range of long-term health, social, and occupational impacts of TBI on adults?
• What is the range of long-term health and educational outcomes for children?
• What risk and protective factors might hold promise in positively changing the trajectory of these outcomes?