

Traumatic Brain Injury at the Federal Level: Activities at the CDC

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Public Health Burden and Approach

TRAUMATIC BRAIN INJURY

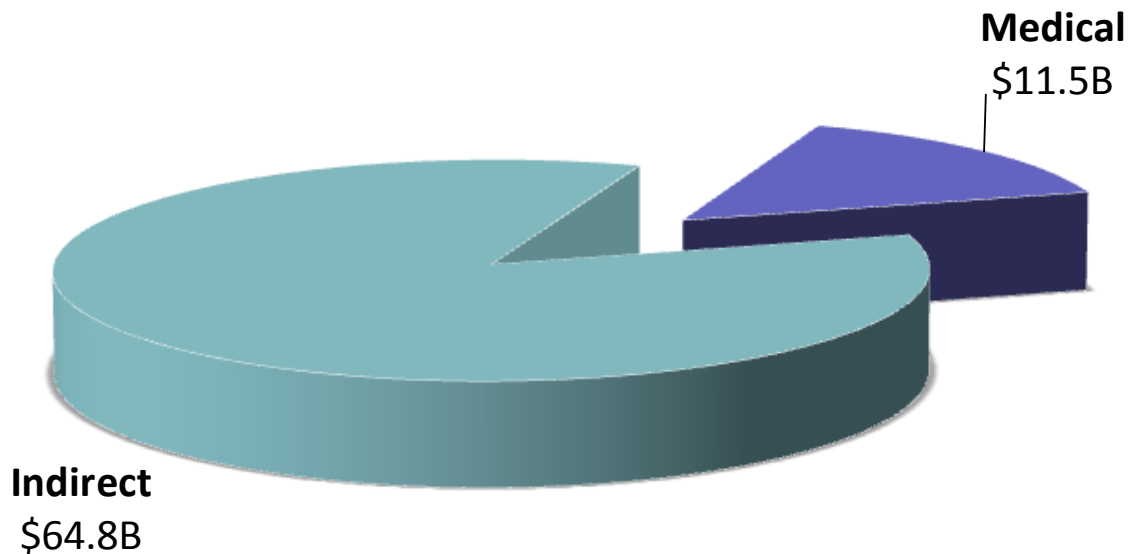
What is a Traumatic Brain Injury

**A TBI is a brain injury
caused by a bump, blow, or jolt to the head
or a penetrating head injury
that disrupts the normal function of the brain**

Estimated Average Annual Number of TBI in the United States, 2002–2006

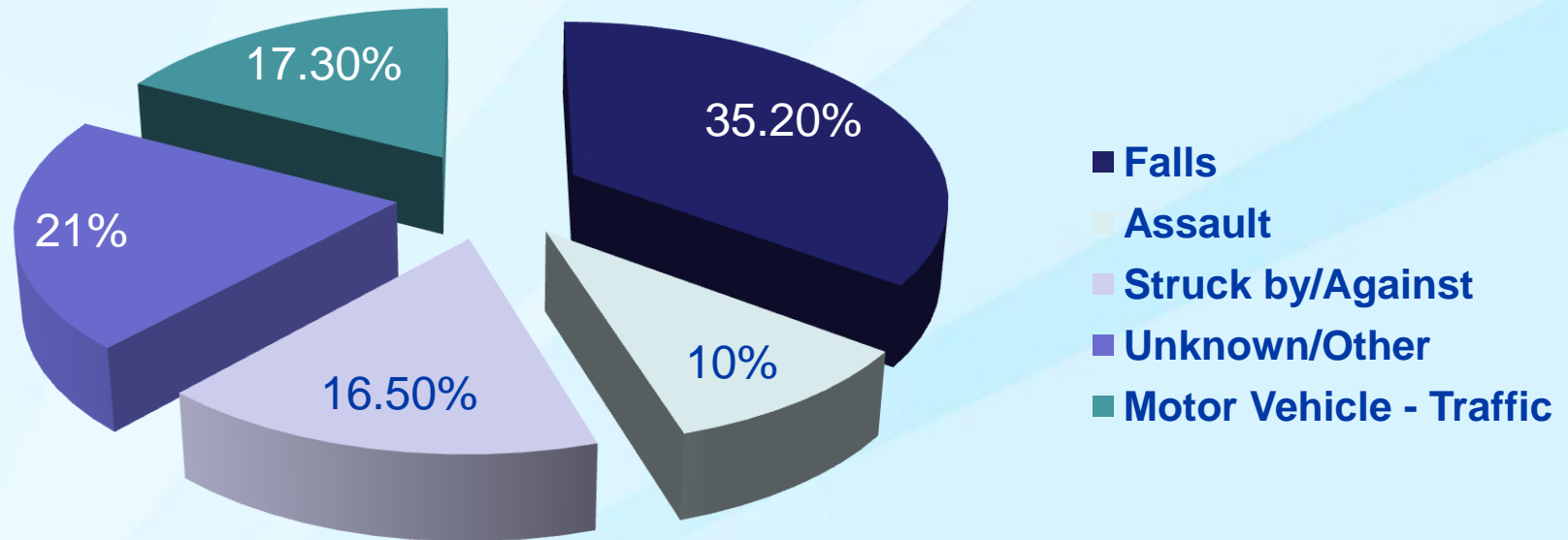


Estimated Economic Costs of TBI \$76.5 Billion in 2010



Finkelstein E, et al. The Incidence and Economic Burden of Injuries in the United States. New York (NY): Oxford University Press; 2006
Coronado, McGuire, Faul, Sugerman, Pearson. The Epidemiology and Prevention of TBI (in press) 2012

Causes of TBI



Estimated Average Percentage of Annual TBI by External Cause in the United States, 2002-2006

Public Health Role in Addressing TBI

- ❑ **Reducing TBI by providing the best scientific evidence for informing efforts**
 - Prevent TBIs from happening in the first place
 - Improve identification and management of TBI
- ❑ **Key activities**
 - Surveillance
 - Identification, dissemination, and implementation of evidence-based strategies

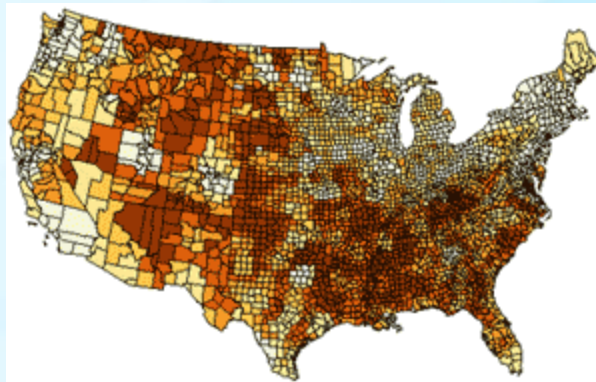
Surveillance

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WISQARS

❑ Interactive database providing customized reports of injury-related data

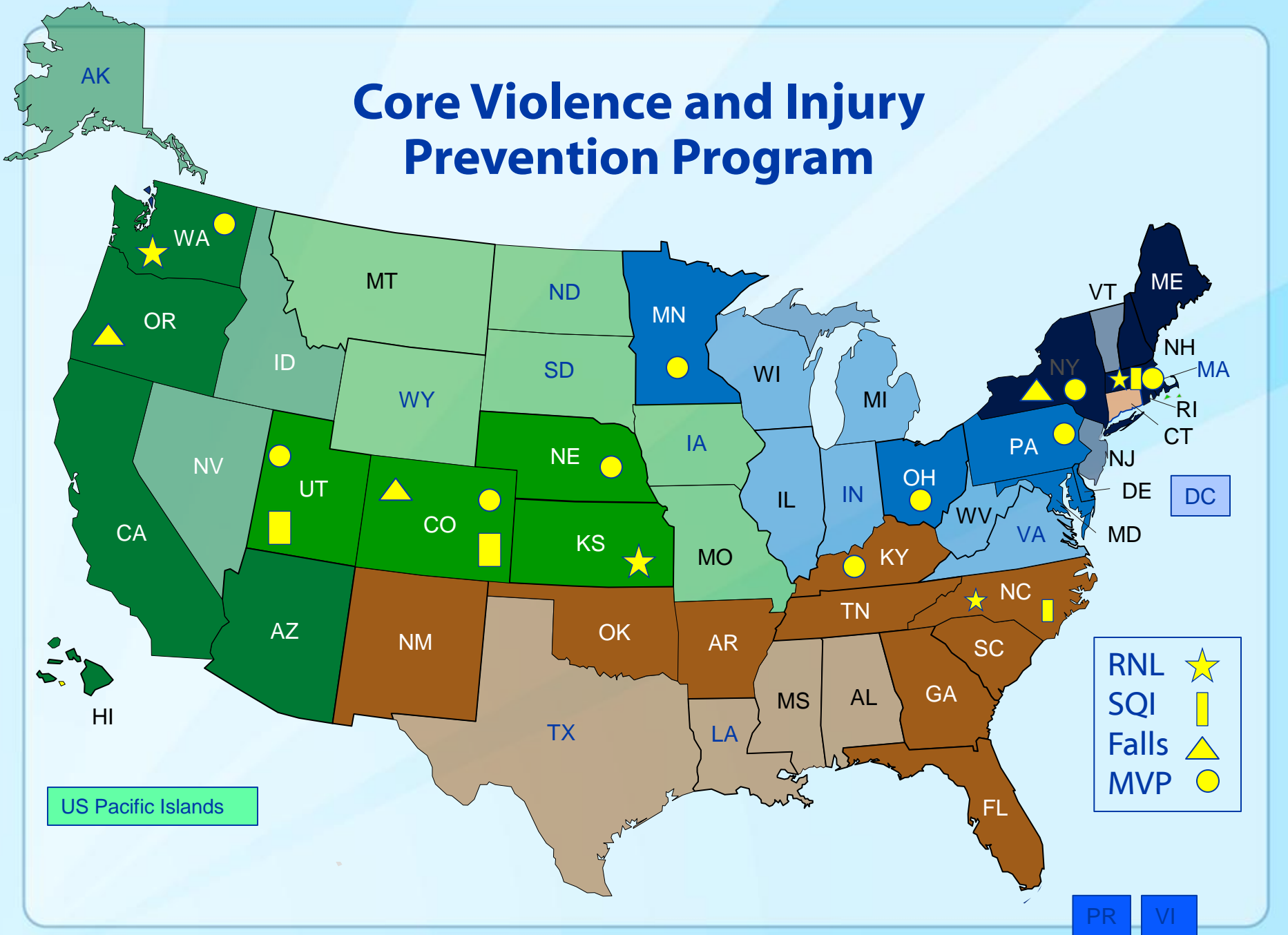
- Fatal injury data
- Nonfatal injury data
- Violent deaths (NVDRS)
- Cost of Injury Reports
- Mapping Module



Motor Vehicle Traffic Deaths and Estimated Lifetime Medical Costs, by Sex, 2005

Sex	Deaths and Type of Cost		Mechanism
			Motor vehicle, Traffic
Male	Deaths	--	30,291
	Medical Cost	Total	\$285,592,000
Female	Deaths	--	13,376
	Medical Cost	Total	\$133,357,000
Total	Deaths	--	43,667
	Medical Cost	Total	\$418,949,000

Core Violence and Injury Prevention Program



US Pacific Islands

RNL ★
SQT □
Falls ▲
MVP ●

PR VI

Primary Prevention

TRAUMATIC BRAIN INJURY

Motor Vehicle-Related Injury Prevention: A “Winnable Battle”



<http://www.articlesnatch.com/Article/Seat-Belt-Use-And-Traumatic-Brain-Injury/221375#ixzz1X75nGvuC>

Motor Vehicle-Related Injury Prevention: Policies that Work

□ Primary Seat Belt Policies

- Seat belts reduce risk of serious injury by 50%
- Seat belts reduce risk of death by 45%



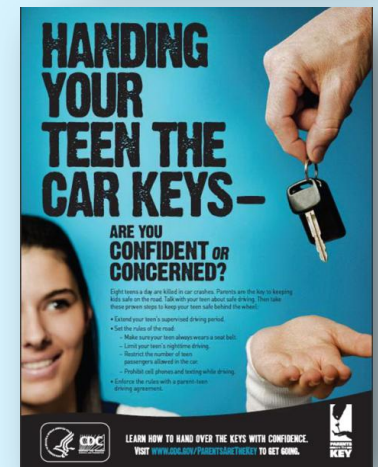
□ GDL Policies

- 38% reduction in fatal crashes among 16 year old drivers
- 40% reduction in injury crashes among 16 year old drivers



□ Motorcycle Safety Policies

- Helmets reduce risk of death in a crash by 42%
- Helmets decrease the risk of head injury by 69%



Motor Vehicle-Related Injury Prevention: CDC Activities

□ Major Focus Areas

- GDL
- Seat belt and child safety seats
- Alcohol-impaired driving

□ Tools and Resources

- Policy Impact Series
- Motorcycle Safety Guide
- Community Guide
- State-by-State Cost Fact Sheets



Abusive Head Trauma: A Preventable Cause of TBI in Infants

- ❑ **Leading cause of child abuse deaths in U.S.**
- ❑ **Results from violently shaking infant by shoulders, arms, legs or from impact (with or without shaking).**
- ❑ **Resulting whiplash effect can cause bleeding in brain or eyes.**
- ❑ **Babies (0-4 months) at greatest risk**
- ❑ **Inconsolable crying is a primary trigger**



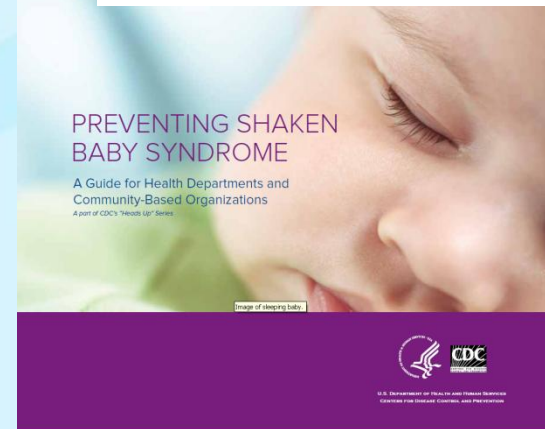
Abusive Head Trauma: CDC Activities to Identify Prevention Strategies

Major Activities

- Uniform Surveillance Methodology
- Evaluating Promising Interventions

Tools and Resources

- Preventing Shaken Baby Syndrome: A Guide for Health Departments and Community Based Organizations
- A Journalist Guide to Shaken Baby Syndrome: A Preventable Strategy



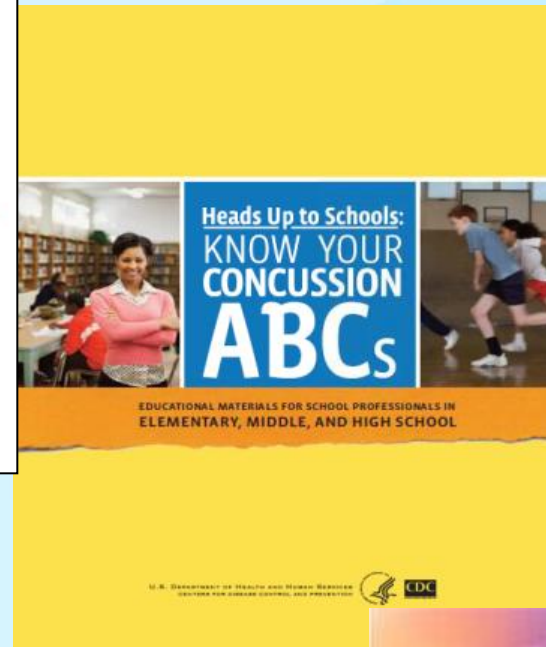
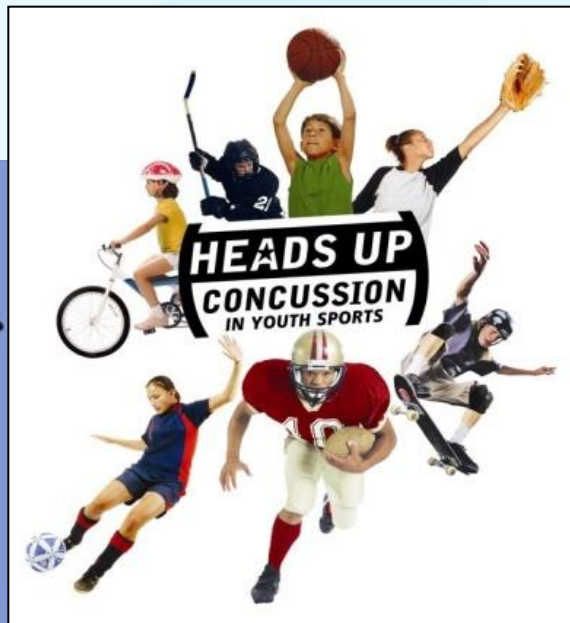
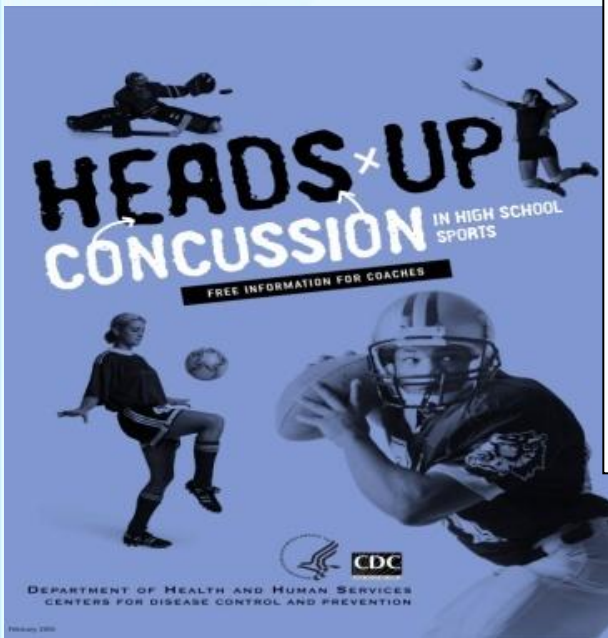
Recognition and Response

TRAUMATIC BRAIN INJURY

Concussion in Sports: Improving Recognition and Response

- ❑ **44 million boys and girls in organized sports annually**
- ❑ **TBI can occur in any sport or recreational activity**
 - Concussion: most common type of athletic head injury
 - Does not always involve loss of consciousness
- ❑ **Those with history of concussion at increased risk for another concussion**
- ❑ **Young children and teens can take longer to recover**

CDC's Heads Up Educational Initiatives: Improving Recognition and Response



New Online Trainings for Coaches: Improving Recognition and Response



Youth Sports Coaches



High School Coaches



Health Care Professionals

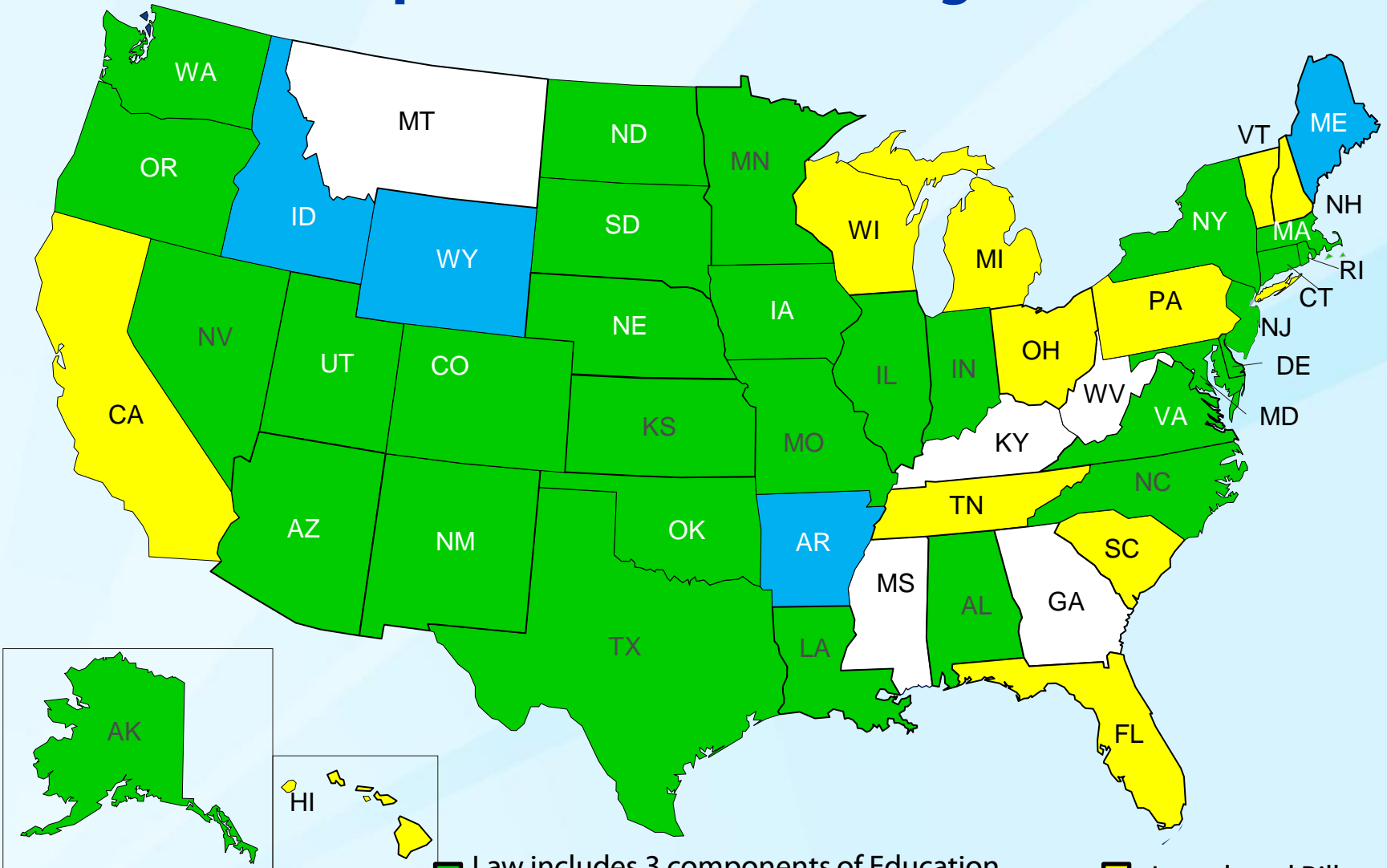
Youth Sports Concussion State Policies: Improving Recognition and Response

- ❑ **Education for coaches, parents, students**
 - Materials provided vs. required training

- ❑ **Removal-from-Play**
 - Immediately upon student athlete suspected to have sustained a concussion

- ❑ **Return-to-Play**
 - After removal, student must receive written authorization from an appropriate health care professional before returning to play

Youth Sports Concussion Legislation



■ Law includes 3 components of Education, Removal from play and Return-to-play

■ Law includes variation of 3 components but not all

■ Introduced Bill

■ Unknown

Pediatric TBI Guidelines

□ Developing Pediatric TBI guidelines

- Commencing Fall 2001
- Builds on *Diagnosis, Management and Discharge of Adults with Mild Traumatic Brain Injury in Acute Care Settings*
- Will convene group to collaborate on updating and releasing new guidelines, including
 - American Academy of Pediatrics
 - American College of Emergency Physicians
 - American Academy of Neurology
 - American College of Sports Medicine
 - American Academy of Family Physicians



What We Can Achieve

To put injury and violence prevention on the map as the premier public health achievement of the **decade!**



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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.