

STATEMENT OF POLICY

Traumatic Brain Injury Prevention

Policy

The National Association of County and City Health Officials (NACCHO) supports legislation, research, surveillance, and strategies that prevent traumatic brain injury (TBI), minimize the effects of TBI, and improve the long-term management of TBI. NACCHO recognizes that TBI is a public health issue and draws attention to the critical role local health departments play in protecting and improving community health and safety in coordination and collaboration with local, state, and national efforts.

NACCHO urges local, state, and federal governments to support the following strategies to address the prevention, treatment, and management of TBI:¹

- Development of a standard definition for TBI.
- Research, including longitudinal studies, related to prevention, treatment, and management of TBI.
- Surveillance of TBI through the creation and maintenance of a national injury surveillance system.
- Allocation of sufficient funding and resources to support TBI prevention, treatment, and management efforts at the local level.
- Adaptation, implementation, evaluation, translation, and dissemination of practice- and evidence-based TBI intervention strategies, especially for high-risk populations.
- Development of local, regional, and state trauma systems that are integrated with public health systems in order to provide the best level of care based on current evidence.
- Comprehensive, integrated, and effective community strategies that ensure that TBI survivors minimize risk of further damage or re-injury and regain and maintain health and function.
- Collaboration among federal agencies, state and local health departments, national and community-based organizations that serve at-risk populations, and the health care community (e.g., insurers, local trauma systems, and emergency medical services).

Justification

Traumatic Brain Injury is considered a major cause of death and disability in our nation,² with an estimated 1.7 million people in the United States sustaining a TBI each year.^{3,6} In 2010, it was estimated by the Centers for Disease Control and Prevention (CDC) that TBIs could be attributed to 2.2 million emergency department (ED) visits, over 280,000 hospitalizations, and more than 50,000 deaths in the United States.⁴ The estimated economic costs of TBI morbidity and mortality during this time period was \$76.3 billion, with \$11.5 billion attributed to medical costs and \$64.8



billion attributed to indirect costs of TBI, such as lost productivity.¹ Although these statistics show a 70% increase in ED visits and an 11% increase in hospitalization rates over the last decade (from 2001-2010),^{2,5} they may still underestimate the true occurrence of TBIs when considering the number of people receiving care outside of ED and hospital facilities, or receiving no medical care.^{4,6}

Data estimates from two states indicate that there are between 3.2 and 5.3 million survivors of TBI who are left with significant cognitive, behavioral, and communication disabilities.⁴ Approximately 40 percent of TBI patients develop post-concussion syndrome, symptoms of which include headache, dizziness, vertigo, memory problems, trouble concentrating, sleeping problems, restlessness, irritability, apathy, depression, and anxiety.⁷ Permanent or persistent cognitive deficits, such as becoming easily confused or distracted and having problems with concentration and attention, are more likely to result from moderate and severe TBI than mild TBI; however, temporary cognitive deficits are common for mild TBI and a series of mild TBIs may have an additive effect, causing cognitive deficits equivalent to those caused by moderate or severe TBI.⁷

According to the Centers for Disease Control and Prevention, the leading causes of TBI are falls (40.5%), struck by or against events (15.5%), motor vehicle-traffic crashes (14.3%), and assaults (10.7%).² TBI can affect all population groups, from infants and young athletes to military personnel and older adults,⁴ however some groups are at increased risk. Among non-fatal TBI related injuries for 2006-2010, males had higher rates of TBI hospitalizations and ED visits than women.² Men were also 3 times as likely to die according to TBI related death reporting during the same time period.² The prevalence of TBI varies across the lifespan, children aged 0 to 4 had the highest rates of TBI related ED visits,² and adults age 75 years and older had the highest rates of hospitalization and death.^{2,8} Between 2001 and 2012, 70 percent of sports and recreation-related TBI occurred among children ages 0 to 19 years.⁹ Compared to adults, younger people are at greater risk of TBI with increased severity and prolonged recovery.¹⁰ Evidence-informed and evidence-based interventions must be tailored for each at-risk population.

Local health departments play an important role in the prevention of TBI by providing essential public health services such as assessment, policy development, and assurance. Surveillance and community assessment efforts can inform the development of policies and plans that include evidence-based strategies for primary, secondary, and tertiary prevention of TBI.¹

The evidence base for primary prevention is well established for some causes of TBI. Falls—the leading cause—can be prevented through efforts such as exercise, maintaining a safe home and surroundings, and regular check-ups with a doctor.^{7,8} Motor vehicle-related TBI can be prevented through the use of safety restraints (see NACCHO's Policy Statement [96-01 Motor Vehicle Safety Belts](#)) and child passenger safety devices, improvements to vehicle safety technology, and reductions in impaired driving.^{1,11} Sports and recreation-related TBI can be prevented through widespread use of helmets that are specifically designed for the specified activity, coach and parenting education, and other evidence-based prevention strategies.^{1,12,13}

While early identification and transport of injured patients to the highest level of care within a trauma system is important, 45 million U.S. residents are not within one hour of a trauma center.¹

Local health departments can also play a role in convening key stakeholders, such as federal agencies, state health departments, national and community organizations, and the medical community, to develop comprehensive strategies that ensure survivors of TBI receive the best level of care and regain and maintain health and function.

References

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Record of Action

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