Traumatic Brain Injury: Prevalence, Disability & Services

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Brain Injury

Congenital and Perinatal (no period of normal development)

Perinatal (e.g., birth stroke)

Congenital (e.g., PKU)

Non-traumatic (internal occurrence e.g., tumor)

Acquired (following a period of normal development)

Traumatic (external physical force)

Open (e.g., gunshot)

Closed (e.g., fall)

Millions of Incidents

U.S. Disability Prevalence Rates

CAUSES OF TBI

Falls 12%

Motor Vehicle Crashes 57%

Firearms 14%

Other 17%

TBI Incidence per 100,000 persons

Estimate of TBI-Disabled Persons in ND: 12,844

Based on National prevalence estimate of 2%

AN ENVISIONED METHOD FOR IMPROVING SERVICES COORDINATION FOR NORTH DAKOTANS WITH TBI

INTEGRATED DATA SYSTEMS

AN ENVIORNMENTAL ASSESSMENT OF DEPENDENCIES

HEALTH CARE

DISABLED NEEDS

EDUCATION

INDEPENDENT LIVING SKILLS

SOCIAL SERVICES

INTEGRATED

EDUCATION

REHAB

PLANNING

EMPLOYMENT

RECREATION

EQUIPMENT

VOCATIONAL

TRAINING

INDEPENDENT

LIVING SKILLS

CASE MANAGEMENT

PHYSICAL, COGNITIVE & SENSORY IMPAIRMENT

PRIORITIZED SERVICES FOR PERSONS WITH PHYSICAL, COGNITIVE & SENSORY IMPAIRMENT

Continued Challenges

Increased/Improved Efforts Toward

Public Education

Prevention

Surveillance & Epidemiology

Research on Impact of Health Care & Rehab on Patient Outcomes

Access and Coordination of Services

Federal Grant Submission

In ND, there is a TBI grant planning committee that includes representation from a variety of state agencies, including: North Dakota Department of Human Services; North Dakota Department of Health; Open Door Center; UND School of Medicine & Health Sciences.

Committee’s purpose: Develop a grant proposal to seek funding for (a) conducting a statewide TBI needs assessment and (b) improving coordination of services (health, social, rehabilitation, etc.) for persons with TBI and their families.

In 2002, a grant proposal was submitted to the federal Maternal Child Health Bureau (funding decision is pending).

Traumatic Brain Injury (TBI) – rapid acceleration & deceleration, including tearing of nerve fibers, bruising of the brain tissue, brain stem injuries and swelling; or, when an external physical force hits the brain, producing an altered state of consciousness, resulting in impaired cognitive abilities, physical/behavioral/emotional functioning, language and/or memory (CDC, 1999).

Each year, 1 million persons with TBI are treated and released in hospital emergency rooms.

An additional 50,000 TBI victims die and another 80,000 are disabled each year.

About 5.3 million Americans, a little more than 2% of the U.S. population, currently live with TBI disabilities (CDC, 1999).


The leading causes of TBI are motor vehicle crashes, violence (e.g., firearms) and falls (particularly among elders).

TBI risk in men is twice the risk in women.

The risk is higher in adolescents, young adults and persons aged 75 years or older.

The risk is higher in African Americans, Native Americans, people of lower education and income levels, and those without health insurance.

Rural issues:

Rural residents with TBI have many unique problems as they transition from urban-based rehabilitation services to their local health & rehab services.

Rural families may find it especially challenging to adjust to newly-acquired and permanent changes in a family member’s cognitive, behavioral and emotional functioning.

If a disease were killing our children in the proportions that injuries are, people would be outraged and demand that this killer be stopped.”

Former Surgeon General

Former Surgeon General

TBI Alzheimer’s Stroke Epilepsy Cerebral Palsy

TBI Risk in Men is Twice the Risk in Women

Females

0.4

Males

2.3

Vehicles

14%

Motor Vehicles

57%

Firearms

14%

Other

17%

Falls

12%

Less than 3% of all estimated TBI cases result from motor vehicle crashes, violence, and falls (CDC, 1999).

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