



Planning for the Long-Term Needs of Survivors and Their Families

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Aging with Traumatic Brain Injury

- What happens to people with brain injury as they get older?
- Are people with Traumatic Brain Injury at greater risk for age-related complications than the general population?



Risk for Medical Complications That Increase with Age

Table 1: Prevalence of chronic conditions by age group, 2005

Condition Prevalence Rate (%)

| | 12-29 | 30-49 | 50-64 | 65-79 | 80+ |
|-----------------------------|--------------|--------------|--------------|--------------|------------|
| Alzheimer's/other dementia | 0.0 | 0.1 | 0.2 | 1.1 | 4.3 |
| Has cataracts | 0.2 | 0.5 | 3.8 | 19.6 | 30.0 |
| Has glaucoma | 0.0 | 0.4 | 1.8 | 5.7 | 9.5 |
| Has heart disease | 0.5 | 1.3 | 6.4 | 17.1 | 25.3 |
| Has urinary incontinence | 0.4 | 1.4 | 3.6 | 9.6 | 16.3 |
| Has high blood pressure | 1.3 | 7.3 | 26.0 | 43.2 | 47.2 |
| Has diabetes | 0.6 | 2.3 | 8.3 | 15.0 | 13.4 |
| Has arthritis or rheumatism | 1.9 | 9.3 | 27.3 | 44.3 | 51.6 |
| Has thyroid condition | 1.2 | 4.6 | 8.5 | 12.0 | 13.9 |

This tabulation was prepared in the Statistics Canada Research Data Centre at McMas



novamente
Associação de Apoio aos Traumatizados
Crânio-Encefálicos e Suas Famílias



Institute of Medicine

- 1998 2 Acts of Congress
- PL 105-277, the Persian Gulf War Veterans Act
- PL 105-368, the Veterans Programs Enhancement Act.
- Gulf War and Health: Volume 7: Long-Term Consequences of Traumatic Brain Injury (2008)

Concurrent Evidence of a Causal Relationship

- Penetrating TBI and unprovoked seizures.
- Penetrating TBI and premature death.
- Severe or moderate TBI and unprovoked seizures.



Sufficient Evidence of an Association

- Penetrating TBI and long-term unemployment.
- Moderate or severe TBI and dementia of the Alzheimer type.
- Moderate or severe TBI and parkinsonism.
- Moderate or severe TBI and endocrine dysfunction, particularly hypopituitarism.
- Moderate or severe TBI and growth hormone insufficiency.
- Moderate to severe TBI and long-term adverse social-function outcomes, particularly unemployment and diminished social relationships.
- Moderate or severe TBI, in the subset of patients who are either admitted into or discharged from rehabilitation centers or receive disability support, and premature death.
- TBI and depression.
- TBI and aggressive behaviors.
- TBI and postconcussion symptoms (such as memory problems, dizziness, and irritability).

Limited/Suggestive Evidence of an Association

- Moderate or severe TBI and diabetes insipidus.
- Moderate or severe TBI and psychosis.
- Moderate TBI and neurocognitive deficits.
- Mild TBI resulting in loss of consciousness or amnesia and unprovoked seizures.
- Mild TBI and ocular and visual motor deterioration.
- Mild TBI with loss of consciousness and dementia of the Alzheimer type.
- Mild TBI with loss of consciousness and parkinsonism.
- Mild TBI and posttraumatic stress disorder in Gulf War military populations.
- TBI and decreased alcohol and drug use in the 1-3 years after injury.
- TBI and completed suicide.

Inadequate/Insufficient Evidence to Determine Whether an Association Exists

- Moderate or severe TBI and brain tumor.
- Mild, moderate, or severe TBI that is survived for 6 months or more and premature death.
- Mild TBI and neurocognitive deficits.
- Mild TBI (without loss of consciousness) and dementia of the Alzheimer type.
- Mild TBI and posttraumatic stress disorder in civilian populations.
- Mild TBI and long-term adverse social functioning, including unemployment, diminished social relationships, and decrease in the ability to live independently.
- TBI and mania or bipolar disorder.
- TBI and attempted suicide.
- TBI and multiple sclerosis.
- TBI and amyotrophic lateral sclerosis.



TBI Mortality Data

- TBI Decreases life expectancy by 4 years
- 49x more likely to die due to aspiration pneumonia
- 22x more likely to die from seizures
- 4x more likely to die from pneumonia
- 3x more likely to die from suicide
- 2.5 times more likely to die from digestive conditions
 - Harrison-Felix, et al 2004



TBI Mortality Data

- Expect to live 30-40 yrs beyond injury for those under 30 at time of injury
 - Felicitti (2008)



TBI Mortality Data

- Hi rates of unemployment
- Seizures
- On Medications
- Problems with obesity
- Smoking
- Hypertension
- Hi rates of chronic pain
- Lo rates of screening for potential medical problems
- Social isolation
- Loneliness
 - Trudel (2005)



Successful Coping

- Coping involves actively working on problems
- Using humor
- Engaging in enjoyable activities
 - Anson and Ponsford (2006)



Successful Aging

- Caloric Restriction
- Physical Activity
- Cognitive Intervention
- Stress Reduction
- Social Programs
 - Depp, Vahia, Jeste (2010)



Anticipating Changing Need for Support

- Social supports
 - Family tends to fill the gaps
- Housing
 - Supportive housing to allow for emancipation
- Vocational support
 - Available for updates or to support changes in workplace



Anticipating Changes in Support Structures

- Caretaker burnout
 - Caretaker isolation
 - Ongoing burden of care esp where there is disruptive behavior
 - Over time increase in rates of depression and anxiety
 - Increased use of medical services
- Aging caretakers
 - Caretakers' health issues limit ability to care for survivor
 - Survivor likely to out-live parents
- Marital distress
 - 50-70% of marriages end in divorce



Ongoing Medical Care

- TBI as a chronic medical condition
- Caretakers have to manage complex medical needs
- Keeping track of medical history
 - Electronic medical records
 - Copies of treatment records
- Coordinating care between specialist physicians
 - Physiatry
 - Internal medicine
 - Neurology
 - Psychiatry
 - Neuropsychologist/psychologist
 - Gynecology
 - Endocrinologist
 - Gerontologist



Legal Issues

- É Wills and Estate planning
- É Preparing for advocate succession



Challenges for Public Policy and Advocacy

- Public insurance coverage for preventative care
- Funding for services
- Life-long case management following DMR model

