

Quick Review of Model System Research

Life Expectancy After Inpatient Rehabilitation for Traumatic Brain Injury in the United States¹

What is the study about?

This study compared several characteristics between people with and without TBI, including life expectancy and certain causes of death. The study also looked at risk factors of death. The study focused on people with TBI who completed inpatient rehabilitation.

Who participated in the study?

Researchers used a sample of 6,913 individuals from the TBI Model Systems National Database that had moderate to severe TBI. The sample was weighted so that it represented the characteristics of the US adult TBI inpatient rehabilitation population. These people completed inpatient rehabilitation for TBI between October 2001 and December 2010. Most (80.2%) were white and the average age at injury was 55 years.

How was the study conducted?

Researchers used information from the TBI Model Systems (TBIMS) National Database (NDB) to create the sample. They obtained data through interviews and follow-up and used national registries for information about deaths.

What did the study find?

Those that were older at the time of having a TBI were at greater risk of death. A more severe TBI also increased risk of death. Compared with women, men with TBI had a greater risk of death. Sustaining a TBI increased the risk of death across all racial/ethnic groups in the study. Risk factors for death included older age, male gender, lower educational level, being single, not working, and having a TBI as a result of a fall. Common causes of death included cardiovascular, respiratory, and infectious diseases; neoplasm; and external causes of injury, trauma, and poisoning. Those that sustained a TBI from a fall had a 36% greater risk of death than those injured in a vehicle crash. People with TBI were 50 times more likely to die of seizures; 10 times more likely to die from accidental drug poisoning; and 6 times more likely to die from sepsis. On average, people with TBI were more than twice as likely to die, and lived 9 years less than those without TBI.

The contents of this quick review were developed under a grant (number H133A110004) from the U.S. Department of Education, National Institute on Disability and Rehabilitation Research. However, these contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

¹Harrison-Felix, C., Pretz, C., Hammond, F. M., Cuthbert, J. P., Bell, J., Corrigan, J., Miller, A. C., and Haarbauer-Krupa, J. (2014). Life Expectancy after Inpatient Rehabilitation for Traumatic Brain injury in the United States. *Journal of Neurotrauma*.