



# Effective Health Care

## Rehabilitation for Traumatic Brain Injury

### Nomination Summary Document

#### Results of Topic Selection Process & Next Steps

- Rehabilitation for traumatic brain injury will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

#### Topic Description

**Nominator:** Public payer

**Nomination Summary:** The nominator questions the comparative effectiveness and harms of treatments for the rehabilitation of patients with traumatic brain injury (TBI) 6 months post initial injury. The nominator is interested in children, adolescents, and adults with sustained cognitive, physical, and/or psychological impairments from a grade I-IV TBI. The nominator also questions whether there are differences in the effectiveness or harms of these treatments for specific subpopulations (e.g., severity of TBI, race, gender, concomitant psychological diagnoses and/or medical diagnoses).

#### **Staff-Generated PICO**

**Population(s):** Children, adolescents, and adults six months post an initial grade I-IV traumatic brain injury with sustained cognitive, physical, and/or psychological impairments from their injury

**Intervention(s):** Physical, behavioral, speech, occupational, and/or cognitive rehabilitation therapies, neurorehabilitation, medication, or combinations of these interventions

**Comparator(s):** Comparison of above interventions, standard of care, or other interventions

**Outcome(s):** Scores on standardized neuropsychological tests measuring cognitive function, functional improvement in activities of daily living, improvement in employment status, quality of life, reduced hospitalization and emergency department visits

**Key Questions from Nominator:**

1. What is the comparative effectiveness of treatment for TBI for grades I-IV?
2. For patients, what are the potential harms of TBI treatment interventions?
3. Are there subgroups of people with TBI for whom interventions are more effective

- or more harmful than for other subgroups of patients?
4. Are there particular forms of therapy, including number of treatments, length of treatments, frequency of treatments, or total duration of treatments that are most effective?

## Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- In the United States, approximately 1.5 million traumatic brain injuries occur per year. The most common causes of TBI include motor vehicle accidents, falls, assaults, gunshot wounds, and sports injuries. The sudden onset of TBI combines with extreme changes in behavior, personality, memory, and general function to produce catastrophic changes in a person's social system. Memory deficits and inappropriate behavior may limit an individual's ability to return to work, and personality changes and behavioral problems may mimic other pathologies such as mental retardation or psychiatric disorders. Long-term consequences of these changes can include financial dependence, social isolation, divorce, and various forms of incarceration such as prisons or state hospitals. Forms of rehabilitation to address the long-term outcomes include physical, behavioral, speech, occupational, and/or cognitive rehabilitation therapies, neurorehabilitation, and/or medication used during the non-acute phase of recovery from TBI. An evidence-based review on these interventions is needed in order to help guide care for patients with a TBI.