

Guidelines for the acute medical management of severe traumatic brain injury in infants, children, and adolescents

Practice guidelines for physicians who treat children with brain trauma are long overdue. A significant barrier to producing guidelines has been the lack of data from well-designed, controlled studies that address each specific juncture of the acute treatment phase. Our goal with this document was to assimilate the scarce data that exist and present it within an evidence-based framework in order to provide treatment guidelines. With topics for which there were no evidence-based data, we worked as a group to achieve consensus and provided treatment options. To accomplish this, we assembled a multidisciplinary team of clinicians and researchers, keeping in mind that the presence of multiple perspectives would minimize bias. Although we recognize that this list is not complete, it represents a multidisciplinary group of clinicians and scientists with considerable expertise in key areas relevant to the project.

We consider this work a "document in progress" and are committed to its ongoing revision and to incorporating additional areas of expertise that may not currently be represented. It is our goal that these guidelines be used to distinguish important areas of research, so that future revisions will contain more substantial evidence.

A number of acknowledgments must be made. The template for our work has been the adult guidelines of the Brain Trauma Foundation. This previous work made important distinctions in treatment that we used to formulate pediatric topics. As such, we are indebted to the Brain Trauma Foundation for their organization and support for the adult severe head injury guidelines—and to the authors of that document. Due to the relatedness of the two documents, we have frequently referred to and quoted from the original adult document and its more recent revision (1, 2).

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One of the greatest challenges in producing an evidence-based document with multiple authors is the administrative management of the project. The expertise to meet this challenge was provided by personnel of the Evidence Based Practice Center of Oregon Health and Science University, and the project would not have succeeded without this resource.

Members of the research team belong to a number of important medical societies that have provided a background of support throughout this project. Included are the Society of Critical Care Medicine, the Sections of Neurotrauma and Critical Care and Pediatrics of the American Association of

Neurologic Surgeons, the Congress of Neurologic Surgeons, the American Academy of Pediatrics, the American College of Emergency Physicians, and the World Federation of Pediatric Intensive and Critical Care Societies. Because of temporal constraints inherent in the preparation of this document, it was not possible to obtain formal endorsement by all of the relevant societies. We thank these societies along with the Child Neurology Society, the American Association for the Surgery of Trauma, the International Trauma Anesthesia and Critical Care Society, and the International Society for Pediatric Neurosurgery for important feedback and are especially grateful to those that gave expedited approval to the document.

Finally, and most sincerely, we thank each person who served as an investigator and coauthor on this project. We trust that the uncompensated time and absolute commitment over three years will result in improved outcomes for children who sustain traumatic brain injury.

Nancy A. Carney, PhD

Department of Medical Informatics
and Clinical Epidemiology

Oregon Health & Science University
Portland, OR

Randall Chesnut, MD

Department of Neurological Surgery
Oregon Health & Science University
Portland, OR

Patrick M. Kochanek, MD

Safar Center for Resuscitation
Research

University of Pittsburgh School of
Medicine

Pittsburgh, PA

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