

THE NEW EVIDENCE ECOSYSTEM: MOVING TOWARDS LIVING GUIDELINES

**Andrew I.R. Maas on behalf of the CENTER Collaborators
International Initiative for Traumatic Brain Injury Research – 2017
6th Annual Meeting; October 30 – 31, Bethesda, MD**

The New Evidence Ecosystem

- Proof of concept established by the CENTER-TBI LSR pilots
- Scale up our efforts
 - Develop open/global collaborations
 - Involve a bigger community
 - Maximize technological efficiency
- **Create feeds from LSR's to practice recommendations**

LSR's in TBI: pioneered by CENTER-TBI

- Clossen MC, Scholten AC, Lingsma HF, et al. **Adherence to Guidelines in Adult Patients with Traumatic Brain Injury: A Living Systematic Review.** J Neurotrauma. 2016 Aug 25. doi: 10.1089/neu.2015.4121. [Epub ahead of print]
- Brazinova A, Rehorcikova V, Taylor MS, et al. **Epidemiology of Traumatic Brain Injury in Europe: A Living Systematic Review.** J Neurotrauma. 2016 Aug 25. doi: 10.1089/neu.2015.4126. [Epub ahead of print]
- Mondello S, Sorinola A, Czeiter E, et al. **Blood-based protein biomarkers for the management of traumatic brain injuries in adults presenting with mild head injury to emergency departments: a living systematic review and meta-analysis.** J Neurotrauma. 2017. Accepted for Publication.

JOURNAL OF NEUROTRAUMA 33:1–14 (Month XX, 2016)
Mary Ann Liebert, Inc.
DOI: 10.1089/neu.2015.4121

Living Systematic Review

LSR and Guidelines

BRAIN TRAUMA FOUNDATION TBI GUIDELINES

Nancy Carney, PhD*

Annette M. Totten, PhD*

Cindy O'Reilly, BS*

Jamie S. Ullman, MD‡

Gregory W.J. Hawryluk, MD,
PhD§

Michael J. Bell, MD¶

Susan L. Bratton, MD§

Randall Chesnut, MD||

Guidelines for the Management of Severe Traumatic Brain Injury, Fourth Edition

The scope and purpose of this work is 2-fold: to synthesize the available evidence and to translate it into recommendations. This document provides recommendations only when there is evidence to support them. As such, they do not constitute a complete protocol for clinical use. Our intention is that these recommendations be used by

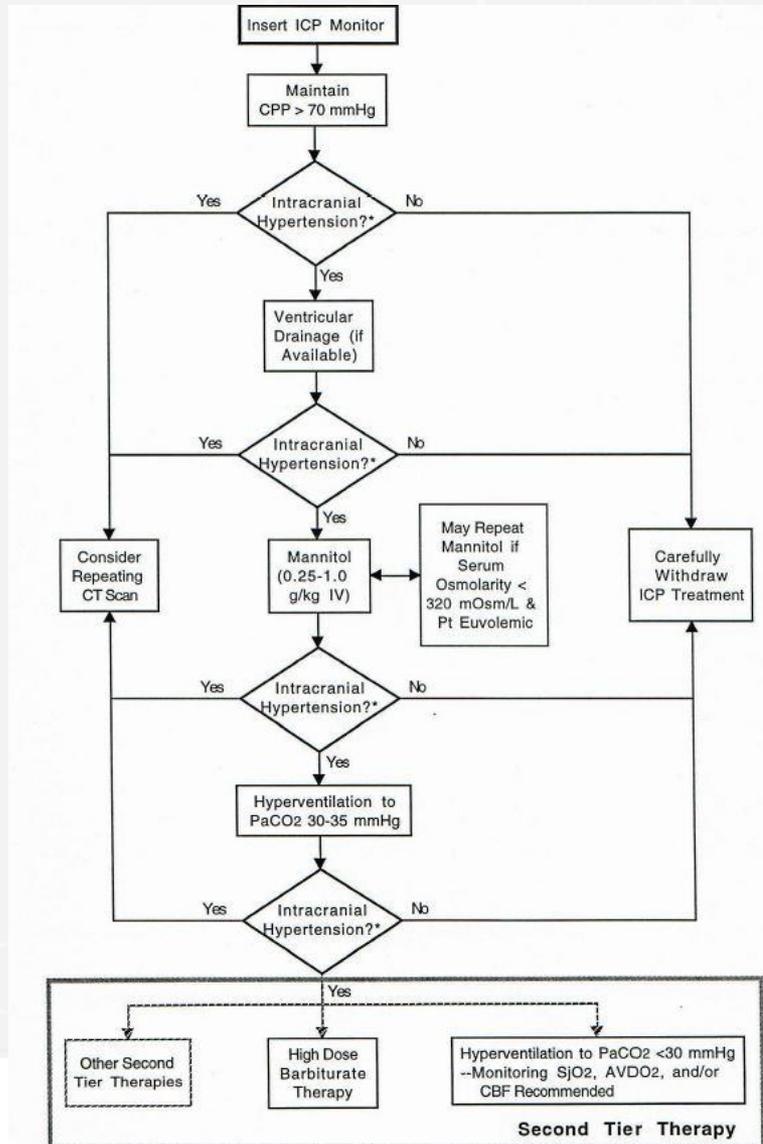
- 1996: 1st edition; 2000: 2nd edition; 2007: 3rd edition; 2016: 4th edition
- Summarize evidence
- Present evidence-based recommendations

The Evolution of the Evidence Base

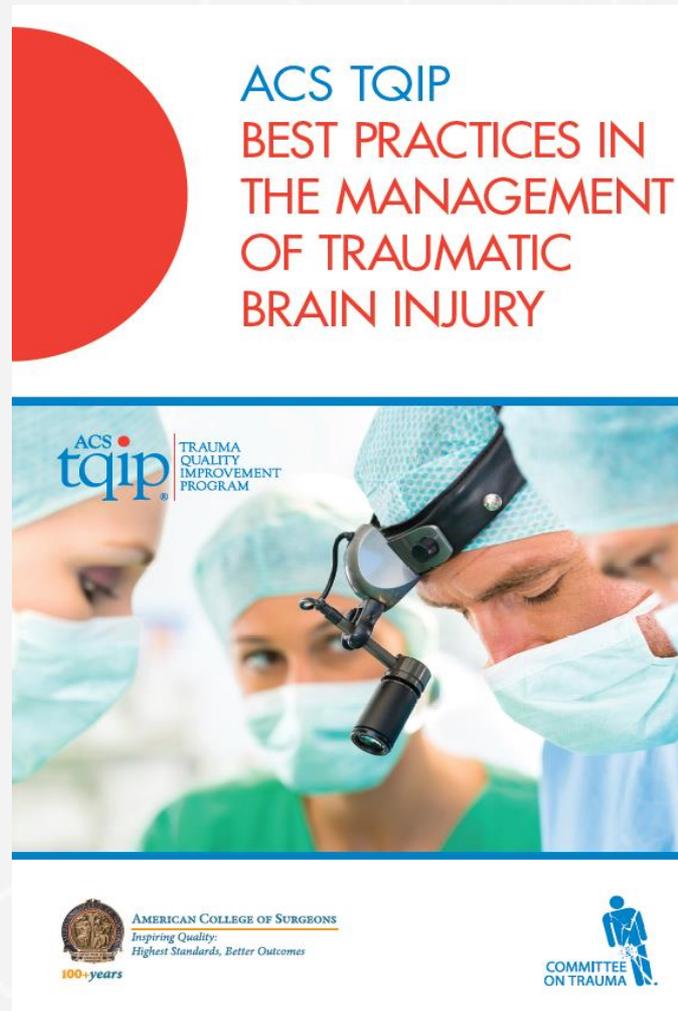
Edition	Level I	Level II		Level III	Discarded			Downgraded			New recommendations			
					I	II	III	I	II	III	II	III	III	
1996	3	8		6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A
2000	3	9		7	0	0	0	0	1	0	0	1		1
2007	1	14		17	0	0	1	2	3	0	0	5		9
2016	1	7 (IIA)	10 (IIB)	9	0	3	11	0	7	0	0	3 (IIA)	2 (IIB)	3

- New topics added
- Grading of Evidence changed

Critical Pathway For Treatment Of Intracranial Hypertension In The Severe Head Injury Patient



Practical Recommendations

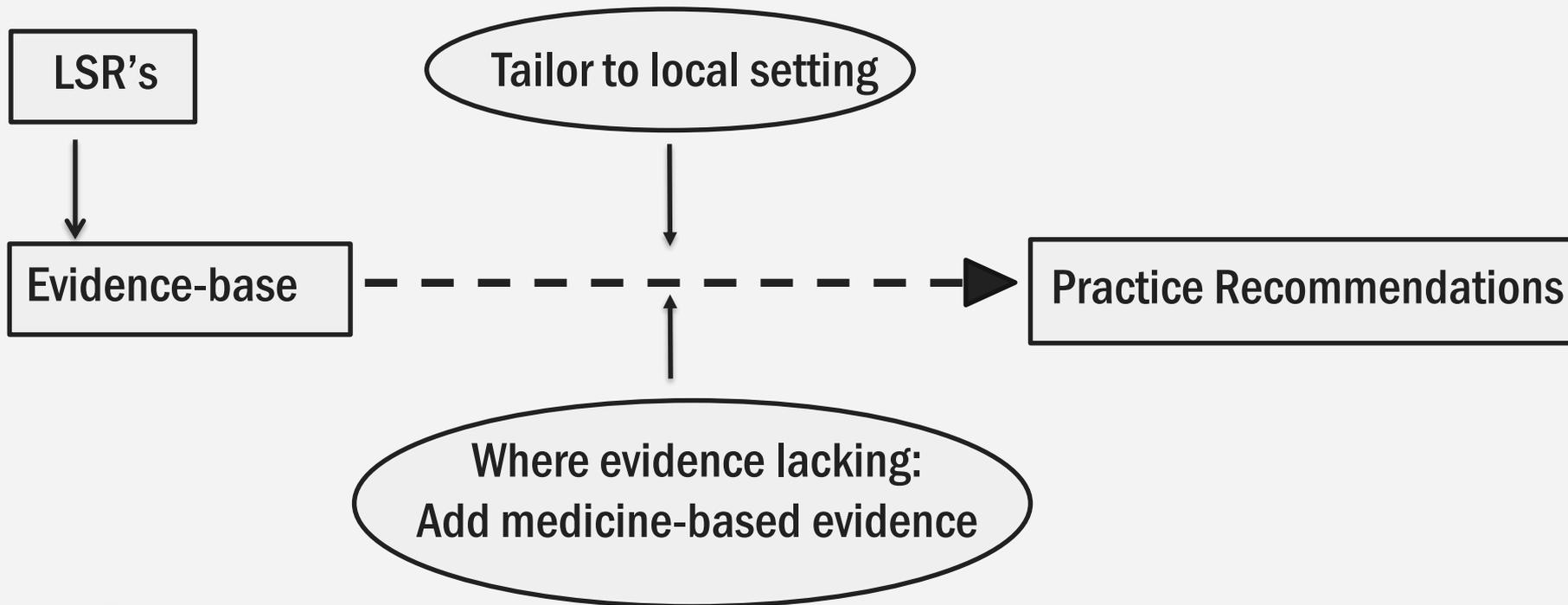


<https://www.facs.org/quality-programs/trauma/tqip>

Limitations of current guidelines

- Lack of evidence to provide strong recommendations
- Substantial time lags
- Clinical appeal low
- Fixed; cannot be tailored to local settings

New model for linking evidence to practice recommendations



In a new international collaboration: an agreed set of priority living guidelines in TBI could be maintained, with the LSRs selected to feed directly into the living guidelines.

Elements necessary for producing living recommendations

- Living systematic review
- Living Evidence profile
- Living Evidence to decision table
- Living Guideline Panel
- Living Peer review Process
- Living Publication and Dissemination
- Living Budget



Journal of Clinical Epidemiology ■ (2017) ■

Journal of
Clinical
Epidemiology

REVIEW ARTICLE

Living systematic reviews: 4. Living guideline recommendations

Elie A. Akl^{a,*}, Joerg J. Meerpohl^b, Julian Elliott^c, Lara A. Kahale^d, Holger J. Schünemann^e,
on behalf of the Living Systematic Review Network

^aDepartment of Internal Medicine and Clinical Research Institute, American University of Beirut, Beirut, Lebanon

^bCochrane Germany, Medical Center - University of Freiburg, Freiburg, Germany

^cDepartment of Infectious Diseases and Cochrane Australia, School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia

^dClinical Research Institute, American University of Beirut, Beirut, Lebanon

^eDepartment of Medicine and Department of Health Research Methods, Evidence, and Impact, Hamilton, Ontario, Canada

Accepted 17 August 2017; Published online xxx

Discussion

- Broaden collaborative efforts?
- How to guarantee continuity of LSR process towards the future?
- How best to link LSR's and practice recommendations?