

## **Background for the OSU TBI Identification Method**

The Ohio State University Traumatic Brain Injury (TBI) Identification Method (OSU TBI-ID) is a standardized procedure for eliciting lifetime history of TBI via a structured interview. The instrument is based on Center for Disease Control and Prevention (CDC; National Center for Injury Prevention and Control, 2003) case definitions and recommendations for TBI surveillance. The OSU TBI-ID was designed to use self- or proxy-reports to elicit summary indices reflecting TBI's occurring over a person's lifetime. While self-report is not an ideal for determining how much compromise a person's brain may have incurred as a result of lifetime exposure to TBI, it is for now the gold standard for both research and clinical uses. (See "Why Self-report?")

Self-report of prior medical history is highly vulnerable to under-reporting. Previous studies have observed that the words used to elicit self-report of TBI (e.g., "head injury," "traumatic brain injury," "concussion," "knocked out," "loss of consciousness") are interpreted differently by respondents, which can affect recall of an injury (National Center for Injury Prevention and Control, 2003; Warner, Barnes & Fingerhut, 2000; Warner et al., 2005). To avoid biases created by differences in terminology, the OSU TBI-ID first elicits recall of all injuries requiring medical attention, or that should have been treated. Previous studies of the validity of injury recall methods (Warner, et al., 2005; Warner, Barnes & Fingerhut, 2000) were utilized to optimize personal recall of injuries experienced. The elicitation method subsequently concentrates on those injuries involving a blow to the head or neck, or high velocity forces capable of causing shear injury in the brain. For these injuries, the occurrence of altered consciousness, its nature, and treatment received are determined. In a final step the interviewer inquires whether there is a temporal relationship between the onset or exacerbation of frequently experienced symptoms of TBI and each identified incident.

The validity of the OSU TBI-ID is not based on elicitation of a veridical accounting of a person's lifetime history of TBI. Instead, the OSU TBI-ID provides data for calculating summary indices reflecting the likelihood that consequences have resulted from lifetime exposure to TBI. Initial validation research has supported the psychometric qualities of these summary indices. Reliability has been demonstrated by both inter-rater and test/re-test reliability (Corrigan & Bogner, 2007; Bogner & Corrigan, 2009). Predictive validity has been shown by the relationship between indices of lifetime history and measures of cognitive performance, affective status, interpersonal functioning and aggression (Corrigan & Bogner, 2007; Bogner & Corrigan, 2009). Summary indices from the OSU TBI-ID can be used in both research and clinical care. Versions have been developed that vary in length; and it can be customized for clinical screening, treatment planning, system administration or research applications.

The OSU TBI-ID has become increasingly recognized as a validated method for assessing lifetime exposure to TBI and has been recommended or adopted for a variety of research and clinical uses:

- added to the [TBI Model Systems National Dataset](#) in 2010 to allow a thorough assessment of history of TBI before and after the injury that resulted in rehabilitation and subsequent enrollment in that study;
- included in the [NIH National Institute on Neurological Disorders and Stroke Common Data Elements](#) for inclusion in research studies on TBI, and recommended by the Parkinson's Disease Common Data Elements Workgroup for Parkinson's research;
- included in the [PhenX Toolkit](#), an NIH National Human Genome Research Institute (NHGRI) funded resource that recommends measures for use in conjunction with the Human Genome Project;
- incorporated in several federally funded research projects studying diverse populations, including military personnel, veterans, prisoners and clients dually diagnosed with substance abuse and severe mental illness (see below);
- trained public sector providers in multiple states for screening clinical populations, including clients in substance abuse treatment, high-risk adolescents, victims of domestic violence and older adults.

Clinicians, researchers and program administrators have choices about which version of the OSU TBI-ID will fit their application best. The OSU TBI-ID can be adapted for specific populations and situations; primarily via adaptation of the "probe" questions that are intended to elicit injuries that may have been TBIs. It is essential to spend time helping a respondent recall injuries throughout their lifetime. For this reason, at least for now, we believe the OSU TBI-ID needs to be administered via interview (telephone or face-to-face). Professionals with background in TBI grasp the tool quickly, as do novice interviewers who have had some basic training about TBI.

### **Federally Funded Projects Using OSU TBI-ID**

[Use of a traumatic brain injury screen in a veteran mental health population: prevalence, validation, and psychiatric outcomes](#); Contact Name: Lisa Brenner Ph.D.

[A Longitudinal Study of Deployment-Related Mild Traumatic Brain Injury \(mTBI\): Incidence, Natural History, and Predictors of Recovery in Soldiers Returning from OIF/OEF](#); Contact Name: Lisa Brenner Ph.D.

Building Knowledge and Capacity in the Rehabilitation and Recovery of African-Americans Suffering from Severe Mental Illness: The Dartmouth-Howard Collaboration; NIDRR-funded dual diagnosis project to Robert Whitley, Dept. of Psychiatry, Dartmouth Medical School (H133A080063-09)

### **References**

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3. National Center for Injury Prevention and Control (2003). Report to Congress on Mild Traumatic Brain Injury in the United States: Steps to Prevent a Serious Public Health Problem. Atlanta, GA, Centers for Disease Control and Prevention.
4. Warner M, P. M. Barnes, and Fingerhut, L. A. (2000). Injury and poisoning episodes and conditions: National Health Interview Survey, 1997. *Vital Health Statistics* 10(202).
5. Warner M, P. M. Schenker, N., Heinen, M. A., and Fingerhut L. A. (2005). The effects of recall on reporting injury and poisoning episodes in the National Health Interview Survey. *Injury Prevention*, 11, 282-287.