

Focus Group Discussion Guide

Introduction: Hello, my name is [moderator's name]. I will be facilitating today's session on behalf of the study with which you are all involved.

Traumatic brain injury (TBI) is the second most common neurological condition affecting Canadians, and is the leading cause of death for hospitalized trauma patients. Many TBI patients are seen in the emergency department at hospitals. In order to provide appropriate treatment and provide accurate counselling to patients and families with TBI, healthcare professionals take special efforts to use prognostication in their decision making. Computed tomography (CT) is the imaging modality of choice to guide prognostication and treatment decisions because of its availability; however, it may be a challenge to prognosticate TBI based on CT imaging in a timely and reliable manner due to many factors.

Many researchers have worked on a project to develop an artificial intelligence (AI) pipeline to support a wide range of clinicians in prognosticating TBI patients.

The purpose of today's focus group is to describe (CDSS integration into medical practice workflow) the AI-driven prognostic models and to assess the opinions, perceptions and needs of health care providers who are involved in the care of patients with TBI and experts in AI.

We are interested in learning about your experience of these processes and would appreciate your help. The focus group will last about one hour, and your participation is voluntary. As outlined in the consent form, you may choose to withdraw from the study at any time. We plan to tape record your responses, which will remain anonymous in the report. We hope to use this input to improve the engagement of health professionals with the prognostic models we have created to date.

Instructions: A focus group is like a group interview. We are interested in everyone's responses to the questions. There are no right or wrong answers. We appreciate your participation in the discussion. I'd appreciate it if you could say your name before you make any comment. This will help with the transcription of the audio tape. Does anyone have any questions before we start?

Questions (ask and probe for responses):

1. How do you currently determine or assess TBI patients' long-term outcome in your practice?
[Questions for neurosurgeons and emergency physicians]
2. What do you think are the most important barriers in prognosticating TBI patients?
3. What do you think about AI-based clinical decision support software with the ability to estimate long-term outcome of TBI patients?
4. *Who* would find AI-based prognostic software useful?
5. *When* would you find AI-based prognostic software useful?
[Probe] What kind of information should the software provide?
[Probe] What do you think are barriers when using the software?

Thank you very much for your responses. We hope to use them to improve the management of patients with traumatic brain injury.