BOSTON ASSESSMENT OF TBI-LIFETIME
BAT-L, CIVILIAN VERSION

VA BOSTON HEALTHCARE SYSTEM

THIS RESEARCH WAS SUPPORTED BY THE
TRANSLATIONAL RESEARCH CENTER FOR TBI AND STRESS DISORDERS (TRACTS)
A VA REHABILITATION RESEARCH AND DEVELOPMENT TRAUMATIC BRAIN INJURY
CENTER OF EXCELLENCE (B6796-C).
BAT-L, Civilian
The Boston Assessment of Traumatic Brain Injury-Lifetime (BAT-L, Civilian Version) was designed to capture head injuries incurred across the lifespan and to be used as a companion instrument with the BAT-L Military Version. The emphasis of this semi-structured interview is to obtain a detailed account of the injury including the context and events occurring before, during, and after the injury in civilian experiences.

Administration
The BAT-L is designed to be used by doctoral level neuropsychologists or other comparably trained professionals (e.g., neuropsychology graduate students, fellows or clinical psychologists with supervision of a licensed neuropsychologist) and was validated as a consensus diagnostic instrument (Fortier et al., In Press). It was created for use in a research setting where detailed information regarding TBI incidence and severity is necessary. The instrument guides the examiner in gathering necessary information from veterans and service members about the three worst TBIs. Information is reviewed by a TBI diagnostic consensus team consisting of at least three doctoral-level psychologists, including at least one neuropsychologist. The consensus approach is integral to the instrument. If used without a consensus team, review of selected cases is suggested to assure a consistent diagnostic approach. It may be used both independently as well as part of a larger clinical interview. Please contact the TRACTS team for consultation and training requests.

<table>
<thead>
<tr>
<th>BAT-L Table of Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary Score Tables</td>
<td>3</td>
</tr>
<tr>
<td>Civilian Injuries</td>
<td>4</td>
</tr>
<tr>
<td>Blunt final query</td>
<td>11</td>
</tr>
</tbody>
</table>

BAT-L hybrid classification system for the diagnosis of mTBI into mild Grade I, II, and III injuries (adapted from Bailes and Cantu, 2001) and VA and DoD consensus criteria for TBI severity as defined in the Clinical practice guidelines: management of concussion—mild traumatic brain injury (mTBI). (DOD, 2009).

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Grade I</th>
<th>Mild Grade II</th>
<th>Grade III</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of Consciousness</td>
<td>None</td>
<td>&lt; 5 minutes</td>
<td>&gt; 5 minutes and &lt; 30 minutes</td>
<td>&gt; 30 minutes and &lt; 24 hours</td>
<td>&gt; 24 hours</td>
</tr>
<tr>
<td>Alteration of Mental Status</td>
<td>0 – 15 minutes</td>
<td>&gt; 15 minutes and &lt; 24 hours</td>
<td>&gt; 24 hours</td>
<td>&gt; 24 hours; severity based on other criteria</td>
<td></td>
</tr>
<tr>
<td>Post Traumatic Amnesia</td>
<td>0 – 15 minutes</td>
<td>&gt; 15 minutes and &lt; 24 hours</td>
<td>&gt; 24 hours</td>
<td>&gt; 1 day and &lt; 7 days</td>
<td>&gt; 7 days</td>
</tr>
<tr>
<td>Glasgow Coma Scale</td>
<td>13 - 15</td>
<td>9 - 12</td>
<td>&lt; 9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# BAT-L CIVILIAN SUMMARY SCORE SHEET

## Total # TBIs:

<table>
<thead>
<tr>
<th>1st Most Severe</th>
<th>2nd Most Severe</th>
<th>3rd Most Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td><strong>Age</strong></td>
<td><strong>Age</strong></td>
</tr>
<tr>
<td><strong>AMS</strong></td>
<td><strong>AMS</strong></td>
<td><strong>AMS</strong></td>
</tr>
<tr>
<td><strong>PTA</strong></td>
<td><strong>PTA</strong></td>
<td><strong>PTA</strong></td>
</tr>
<tr>
<td><strong>LOC</strong></td>
<td><strong>LOC</strong></td>
<td><strong>LOC</strong></td>
</tr>
<tr>
<td><strong>Severity</strong></td>
<td><strong>Severity</strong></td>
<td><strong>Severity</strong></td>
</tr>
<tr>
<td>❑ Mild</td>
<td>❑ Mild</td>
<td>❑ Mild</td>
</tr>
<tr>
<td>❑ Moderate</td>
<td>❑ Moderate</td>
<td>❑ Moderate</td>
</tr>
<tr>
<td>❑ Severe</td>
<td>❑ Severe</td>
<td>❑ Severe</td>
</tr>
<tr>
<td><strong>BATL Score</strong></td>
<td><strong>BATL Score</strong></td>
<td><strong>BATL Score</strong></td>
</tr>
<tr>
<td>(0 – 5)</td>
<td>(0 – 5)</td>
<td>(0 – 5)</td>
</tr>
<tr>
<td><strong>Nature of Injury</strong></td>
<td><strong>Nature of Injury</strong></td>
<td><strong>Nature of Injury</strong></td>
</tr>
<tr>
<td>❑ MVA</td>
<td>❑ MVA</td>
<td>❑ MVA</td>
</tr>
<tr>
<td>❑ Fall</td>
<td>❑ Fall</td>
<td>❑ Fall</td>
</tr>
<tr>
<td>❑ Sports-Related</td>
<td>❑ Sports-Related</td>
<td>❑ Sports-Related</td>
</tr>
<tr>
<td>❑ Physical Assault</td>
<td>❑ Physical Assault</td>
<td>❑ Physical Assault</td>
</tr>
<tr>
<td>❑ Penetrating Injury</td>
<td>❑ Penetrating Injury</td>
<td>❑ Penetrating Injury</td>
</tr>
<tr>
<td>❑ Other: ________</td>
<td>❑ Other: ________</td>
<td>❑ Other: ________</td>
</tr>
</tbody>
</table>

### BAT-L Score (0 – 5):

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>no TBI</td>
</tr>
<tr>
<td>1</td>
<td>mTBI grade I</td>
</tr>
<tr>
<td>2</td>
<td>mTBI grade II</td>
</tr>
<tr>
<td>3</td>
<td>mTBI grade III</td>
</tr>
<tr>
<td>4</td>
<td>moderate TBI</td>
</tr>
<tr>
<td>5</td>
<td>severe TBI</td>
</tr>
</tbody>
</table>

### BAT-L Lifetime Total Score:

**BAT-L TOTAL LIFETIME SCORE TOTAL**

**Total Estimated Repetitive Blunt Exposures:** ____________
CIVILIAN-RELATED HEAD INJURIES

During this interview I will be asking you about any blows to the head that may have occurred to you during your life.

CIVILIAN:

Have you experienced blows to the head at any time in your life? *(Patient report, you will evaluate below)*  
*Refer to BATL-Q for endorsed events.*

- ☐ Uncertain
- ☐ No  **If no, query further losses of consciousness or PTA, then discontinue questionnaire if none.**
- ☐ Yes  **If yes, What was the cause of the injury?**
  - ☐ MVA:  # Occurrences: __________
  - ☐ Fall:  # Occurrences: __________
  - ☐ Sports-related injury:  # Occurrences: __________
  - ☐ Physical assault:  # Occurrences: __________
  - ☐ Penetrating injury:  Type: ______________________________ # Occurrences: __________
  - ☐ Other:  Type: ______________________________ # Occurrences: __________

**Total Civilian (estimate to inform inquiry below): __________**

Next, I am going to ask you about the *[number 1 – 3]* worst or most severe head injuries you experienced.

CIVILIAN #1 (Most Severe):

**Age (or best estimate) at time of occurrence: __________**

1. What type of accident was it?
   - ☐ MVA
   - ☐ Physical assault
   - ☐ Fall
   - ☐ Penetrating injury
   - ☐ Sports-related injury
   - ☐ Other: ______________________________

2. Do you remember the event itself?  **If yes, Can you describe it to me? If you don't remember, can you tell me what other people said happened?**
   - a. Were others seriously injured?
   -  - ☐ Uncertain
   -  - ☐ No
   -  - ☐ Yes
   - b. What is the last thing you can remember just **before** the event?
c. What is the first thing you can remember just after the event? Following pt’s response ask, How long do you think that was after the event?

d. Did you experience any changes in your vision or hearing after the event? Establish that the pt is not reporting mental status change when was in fact hearing/vision change.

e. Did you experience confusion or disorientation (not sure where you were, what day or time it was, perform simple math calculations/multistep commands, perform activities as expected) after the event? If so, for how long? With this and the following question, try to determine if the pt experienced an actual change in mental status vs. vision/hearing difficulty associated with the blast/accident and the chaos surrounding the event.

f. Did you experience a loss of consciousness at the time of the blast/accident (were you ‘knocked out’)? If so, for how long? If yes, was LOC witnessed (were you told by others you were knocked out/unconscious)? Probe to ensure LOC is not due to anoxia/alcohol/substance overdose.


g. Did you experience any of the following immediately after the event? Note Sx duration.

<table>
<thead>
<tr>
<th>Sx</th>
<th>Duration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches</td>
<td></td>
</tr>
<tr>
<td>Trouble thinking</td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td></td>
</tr>
<tr>
<td>Dizziness</td>
<td></td>
</tr>
<tr>
<td>Fatigue</td>
<td></td>
</tr>
<tr>
<td>Poor coordination, balance problems, or slowed reaction times</td>
<td></td>
</tr>
<tr>
<td>Sensory changes (Hearing/Vision/Taste/Smell)</td>
<td></td>
</tr>
<tr>
<td>Numbness or tingling</td>
<td></td>
</tr>
<tr>
<td>Mood changes (Anxiety/Depression/Irritability)</td>
<td></td>
</tr>
<tr>
<td>Sleep trouble</td>
<td></td>
</tr>
<tr>
<td>Other: ________________________________</td>
<td>Duration:</td>
</tr>
</tbody>
</table>
3. After the injury did you see a physician, trainer, or other trained personnel?

- Uncertain
- No
- Yes

4. After the injury were you restricted from school, work, or physical exertion?

- Uncertain
- No
- Yes

If Yes:
- For how long were you away from work/school/duties? ____________________________
- Did you return to work/school/duties? ____________________________
- Did this event lead to medical leave of absence? ____________________________

**EVALUATE CIVILIAN #1:**

Using the questions above, or in spontaneous dialogue, evaluate the following:

<table>
<thead>
<tr>
<th>Alteration of mental status:</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, enter the estimated duration of the AMS? _________ hr / min / sec</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*AMS = AMS + PTA + LOC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PTA:</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, enter the estimated duration of the PTA? _________ hr / min / sec</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*PTA = PTA + LOC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOC:</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, enter the estimated duration of the LOC? _________ hr / min / sec</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Does the patient actually recall this information themselves? (e.g., can provide specific information regarding what they were doing when injury occurred, etc., or was knowledge gained from the reports of witnesses?)

- Uncertain
- No
- Yes

**Substance Related:**

- NO
- YES

**Emotional Context of Injury:**

- Traumatic
- Non-traumatic
CIVILIAN #2 (Second Most Severe):

Age (or best estimate) at time of occurrence: ________

1. What type of accident was it?
   - [ ] MVA
   - [ ] Physical assault
   - [ ] Fall
   - [ ] Penetrating injury
   - [ ] Sports-related injury
   - [ ] Other: ____________________________

2. Do you remember the event itself? **If yes**, Can you describe it to me? If you don’t remember, can you tell me what other people said happened?
   a. Were others seriously injured?
      - [ ] Uncertain
      - [ ] No
      - [ ] Yes
   b. What is the last thing you can remember just **before** the event?

   c. What is the first thing you can remember just **after** the event? **Following pt’s response ask**, How long do you think that was after the event?

   d. Did you experience any changes in your vision or hearing after the event? **Establish that the pt is not reporting mental status change when was in fact hearing/vision change.**

   e. Did you experience confusion or disorientation (not sure where you were, what day or time it was, perform simple math calculations/multistep commands, perform activities as expected) after the event? If so, for how long? **With this and the following question, try to determine if the pt experienced an actual change in mental status vs. vision/hearing difficulty associated with the blast/accident and the chaos surrounding the event.**

   f. Did you experience a loss of consciousness at the time of the blast/accident (were you ‘knocked out’)? If so, for how long? If yes, was LOC witnessed (were you told by others you were knocked out/unconscious)? **Probe to ensure LOC is not due to anoxia/alcohol/substance overdose.**
g. Did you experience any of the following immediately after the event? Note Sx duration.

- [ ] Headaches
  - Duration: ______

- [ ] Trouble thinking
  - Duration: ______

- [ ] Nausea
  - Duration: ______

- [ ] Dizziness
  - Duration: ______

- [ ] Fatigue
  - Duration: ______

- [ ] Poor coordination, balance problems, or slowed reaction times
  - Duration: ______

- [ ] Sensory changes (Hearing/Vision/Taste/Smell)
  - Duration: ______

- [ ] Numbness or tingling
  - Duration: ______

- [ ] Mood changes (Anxiety/Depression/Irritability)
  - Duration: ______

- [ ] Sleep trouble
  - Duration: ______

- [ ] Other: ______________________________
  - Duration: ______

3. After the injury did you see a physician, trainer, or other trained personnel?

- [ ] Uncertain
- [ ] No
- [ ] Yes

4. After the injury were you restricted from school, work, or physical exertion?

- [ ] Uncertain
- [ ] No
- [ ] Yes
  - If Yes:
    - For how long were you away from work/school/duties? ________________________________
    - Did you return to work/school/duties? ________________________________
    - Did this event lead to medical leave of absence? ________________________________

**EVALUATE CIVILIAN #2:**

Using the questions above, or in spontaneous dialogue, evaluate the following:

- **Alteration of mental status:**
  - [ ] NO  [ ] YES
  - *If yes, enter the estimated duration of the AMS? ________ hr / min / sec
  - *AMS = AMS + PTA + LOC

- **PTA:**
  - [ ] NO  [ ] YES
  - *If yes, enter the estimated duration of the PTA? ________ hr / min / sec
  - *PTA = PTA + LOC

- **LOC:**
  - [ ] NO  [ ] YES
  - *If yes, enter the estimated duration of the LOC? ________ hr / min / sec

**Does the patient actually recall this information themselves? (e.g., can provide specific information regarding what they were doing when injury occurred, etc., or was knowledge gained from the reports of witnesses?)**

- [ ] Uncertain  [ ] No  [ ] Yes

**Substance Related:**

- [ ] NO
- [ ] YES

**Emotional Context of Injury:**

- [ ] Traumatic
- [ ] Non-traumatic
CIVILIAN #3 (Third Most Severe):

Age (or best estimate) at time of occurrence: ________

1. What type of accident was it?
   - MVA
   - Physical assault
   - Fall
   - Penetrating injury
   - Sports-related injury
   - Other: __________________________

2. Do you remember the event itself? **If yes**, Can you describe it to me? If you don’t remember, can you tell me what other people said happened?
   
   a. Were others seriously injured?
      - Uncertain
      - No
      - Yes
   
   b. What is the last thing you can remember just before the event?

   c. What is the first thing you can remember just after the event? **Following pt’s response ask**, How long do you think that was after the event?

   d. Did you experience any changes in your vision or hearing after the event? **Establish that the pt is not reporting mental status change when was in fact hearing/vision change.**

   e. Did you experience confusion or disorientation (not sure where you were, what day or time it was, perform simple math calculations/multistep commands, perform activities as expected) after the event? If so, for how long? **With this and the following question, try to determine if the pt experienced an actual change in mental status vs. vision/hearing difficulty associated with the blast/accident and the chaos surrounding the event.**

   f. Did you experience a loss of consciousness at the time of the blast/accident (were you ‘knocked out’)? If so, for how long? **If yes, was LOC witnessed (were you told by others you were knocked out/unconscious)?** **Probe to ensure LOC is not due to anoxia/alcohol/substance overdose.**
g. Did you experience any of the following immediately after the event? *Note Sx duration.*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Duration:_________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches</td>
<td></td>
</tr>
<tr>
<td>Trouble thinking</td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
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<td>Dizziness</td>
<td></td>
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<tr>
<td>Fatigue</td>
<td></td>
</tr>
<tr>
<td>Poor coordination, balance problems, or slowed reaction times</td>
<td></td>
</tr>
<tr>
<td>Sensory changes (Hearing/Vision/Taste/Smell)</td>
<td></td>
</tr>
<tr>
<td>Numbness or tingling</td>
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<td>Mood changes (Anxiety/Depression/Irritability)</td>
<td></td>
</tr>
<tr>
<td>Sleep trouble</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

3. After the injury did you see a physician, trainer, or other trained personnel?

- Uncertain
- No
- Yes

4. After the injury were you restricted from school, work, or physical exertion?

- Uncertain
- No
- Yes
  
  If Yes:
  
  For how long were you away from work/school/duties?______________________________
  Did you return to work/school/duties?__________________________________________
  Did this event lead to medical leave of absence?_______________________________

**EVALUATE CIVILIAN #3:**

Using the questions above, or in spontaneous dialogue, evaluate the following:

<table>
<thead>
<tr>
<th>Alteration of mental status:</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, enter the estimated duration of the AMS? _________ hr / min / sec</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>AMS = AMS + PTA + LOC</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PTA:</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, enter the estimated duration of the PTA? _________ hr / min / sec</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>PTA = PTA + LOC</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOC:</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>If yes, enter the estimated duration of the LOC? _________ hr / min / sec</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Does the patient actually recall this information themselves? (e.g., can provide specific information regarding what they were doing when injury occurred, etc., or was knowledge gained from the reports of witnesses?)

- Uncertain
- No
- Yes

Substance Related:

- NO
- YES

Emotional Context of Injury:

- Traumatic
- Non-traumatic
BLUNT FINAL QUERY:

Is there anything else related to your life events that we haven’t already talked about that exposed you to a high rate of repetitive blows to the head? *(Regardless of presence or absence of acute AMS/PTA/LOC)*

- Uncertain
- No *If no, query specific causes listed below.*
- Yes *If yes, What was the cause of the injury?*
  - Sports-related (football, hockey, martial arts, boxing, roller-blading, biking, skateboarding, etc): # Occurrences: _____________
  - Jumps: # Occurrences: _____________
  - Combatives of any type: # Occurrences: _____________
  - Assaults or Domestic Violence: # Occurrences: _____________
  - Other: Type: _____________ # Occurrences: _____________

**Total Repetitive Blows: _____________**

*If acute symptoms are reported, assess further following format for TBI Injuries in the preceding sections.*