



Compensation and Pension Record Interchange (CAPRI)

Traumatic Brain Injury (TBI) Template Workflow

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Systems Design & Development (SD&D)

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1 Introduction

1.1. Purpose

This document provides a high level overview of the contents found on the Traumatic Brain Injury (TBI) Template that was released in CAPRI patch DVBA*2.7*129. This document will serve as a workflow process guide.

1.2. Overview

The Traumatic Brain Injury Template contains the following four tabs:

History Tab

Physical Exam Tab

Tests Tab

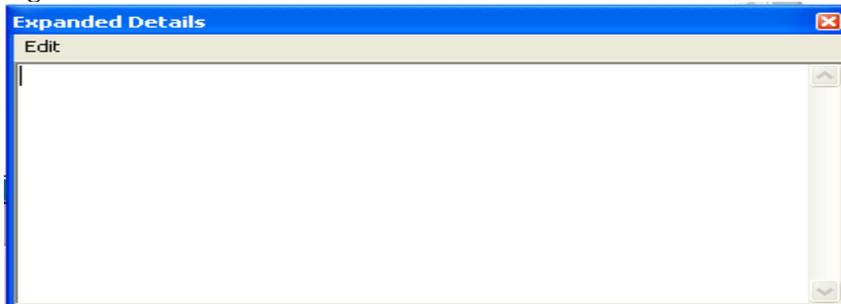
Diagnosis Tab

A common business rule used within the Traumatic Brain Injury Template is (for all multi-line free text entry areas the user is provided) the ability to expand the details in an additional free text memo-box when the *Details* button is selected.

Figure 1.2.a: Details Button



Figure 1.2.b: Additional Free text memo-box



A number of questions on the Traumatic Brain Injury Template are mandatory and require a response (value) prior to the exam being marked as completed.

2 History Tab

2.1. Screenshot of TBI - History Tab

Figure 2.1: Traumatic Brain Injury- History Tab

History | Physical Exam | Tests | Diagnosis

Traumatic_Brain_Injury

Note to Examiner

Records Review

Problems Claimed or Identified by Exam

Instructions

1. Build Problem List

2. Document Problems

3. Review Documentation

What was the severity of the initial injury?
 Mild Moderate Severe

Comments:

Has the condition stabilized?
 Yes No

Inquire specifically about each symptom or area of symptoms below, since individuals with TBI may have difficulty organizing and communicating their symptoms without prompting. It is important to document all problems, whether subtle or pronounced, so that the veteran can be appropriately evaluated for all disabilities due to TBI.

For each of the following symptoms that is present, answer specific questions asked:

Headaches? <input type="radio"/> Yes <input type="radio"/> No	Dizziness or vertigo? <input type="radio"/> Yes <input type="radio"/> No	Seizures? <input type="radio"/> Yes <input type="radio"/> No
Weakness or paralysis? <input type="radio"/> Yes <input type="radio"/> No	Ambulatory? <input type="radio"/> Yes <input type="radio"/> No	Mobility problems? <input type="radio"/> Yes <input type="radio"/> No
Balance problems? <input type="radio"/> Yes <input type="radio"/> No	Pain? <input type="radio"/> Yes <input type="radio"/> No	Speech or swallowing difficulties? <input type="radio"/> Yes <input type="radio"/> No
Bowel problems? <input type="radio"/> Yes <input type="radio"/> No	Bladder problems? <input type="radio"/> Yes <input type="radio"/> No	Sexual dysfunction? <input type="radio"/> Yes <input type="radio"/> No
Fatigue? <input type="radio"/> Yes <input type="radio"/> No	Malaise? <input type="radio"/> Yes <input type="radio"/> No	Decreased sense of taste or smell? <input type="radio"/> Yes <input type="radio"/> No
Sleep disturbance? <input type="radio"/> Yes <input type="radio"/> No	Hearing loss or tinnitus? <input type="radio"/> Yes <input type="radio"/> No	Hypersensitivity to light or noise? <input type="radio"/> Yes <input type="radio"/> No
Vision problems? <input type="radio"/> Yes <input type="radio"/> No	ENT or dental problems? <input type="radio"/> Yes <input type="radio"/> No	Are there behavioral changes? <input type="radio"/> Yes <input type="radio"/> No
Numbness, paresthesias or other sensory changes? <input type="radio"/> Yes <input type="radio"/> No	Psychiatric symptoms? <input type="radio"/> Yes <input type="radio"/> No	
Memory Impairment? <input type="radio"/> None <input type="radio"/> Mild <input type="radio"/> Moderate <input type="radio"/> Severe	Other cognitive problems? <input type="radio"/> Yes <input type="radio"/> No	

Describe other symptoms:

2.2. Note to Examiner

(Label/Button)

When the *Note to Examiner* button is selected, a pop-up window labeled “TBI: Note to Examiners” is displayed with the following read only text:

NARRATIVE: The potential residuals of traumatic brain injury necessitate a comprehensive examination to document all disabling effects. Specialist examinations, such as eye and audio examinations, mental disorder examinations, and others, may also be needed in some cases, as indicated below. If possible, conduct a thorough review of the service and post-service medical records prior to the examination.

2.3. Records Review

(Button, read only text and action)

The *TBI: Review of Records* panel will allow the user to annotate the “C File Review” and the “Medical Record Review”. For each review, one of the following associated actions may be selected: “Reviewed”, “Not Requested by VARO”, or “Requested by VARO but not available”. The review of records questions must be completed.

Example:

C File Review

- Reviewed
- Not Requested by VARO
- Requested by VARO but not available

Medical Record Review

- Reviewed
- Not Requested by VARO
- Requested by VARO but not available

2.3.1. Comments on records (Free Text Box)

The user may provide comments on the review of the records.

When the *TBI: Review of Records* pop-up window is closed without questions being answered, the following instructions will display in a pop-up window:

C File must be reviewed before submitting the report

Medical Records must be reviewed before submitting the report

2.4. Problems Claimed or Identified by Exam

(Section Label/Read Only Text)

2.4.1. Instructions (Label/Button)

When the *Instructions* button is selected, a pop-up window labeled “TBI: Instructions” is displayed with the following instructions:

1. Select Button “Build Problem” to create a list of problems claimed or identified during the examination(s). This problem list will then be available in the “Document Problem” window as part of the “Problem being detailed:” selection list.
2. Select “Document Problem” to enter data regarding problems relevant to the exam type.
3. Select “Review Documentation” to view and verify accuracy of submitted data.

2.4.2. **1. Build Problem List** (Labels/"1"left of Button)

When *Build Problem List* button is selected, a pop-up window is enabled with the following displayed:

2.4.2.1. **Problem List** (Label/ Text Box populated by "Add to List")

This section displays all the problems populated by *Add to List* button.

2.4.2.2. **New Problem:** (Label/Free Text Box and "Add to List" (Button/Submit function))

To add a problem, enter it in this box.

2.4.2.3. **Add to List** (Label/Button)

Click *Add to List* button to add the new problem to *Problem List*.

2.4.2.4. **Delete Selected Problem** (Read Only Text Constant Display)

To remove a problem, select it by clicking on it in the problem list, and then click *Delete Selected Problem* button.

2.4.2.5. To add a problem to the list type it in the box on the left and click "ADD TO LIST". To remove a problem, click it in the list, then click "DELETE THE SELECTED PROBLEM." (Read Only Text Constant Display)

2.4.3. **2.Document Problems** (Labels/"2"left of Button)

When *Document Problems* button is selected, a pop-up window labeled "TBI: Problem Specific History" with the following features are displayed:

2.4.3.1. **Instructions** (Read Only Text Constant Display)

Instructions to populate the document problems window are listed here. The instructions are:

"1. If needed, select button on left to add or edit problem list."

"2. Select problem being addressed."

"3. To extent possible, enter all required information."

Click the submit button to save this information (Text constant display left of Edit Problem List button).

2.4.3.2. **1. Edit Problem List** (Order Number/Button Label)

When *Edit Problem List* button is selected, a pop-up window is displayed allowing for editing of *Problem List* entries. (Reference Section 2.4.2 "[Build Problem List](#)" for usage instructions)

2.4.3.3. **2. Problem being detailed:** (Order Number/Free Text Box Label/Drop Down Select Item)

The drop down selectable items is populated from the *Add to List* button on the *Problem List* pop-up window display.

2.4.3.4. **3. Date of Onset:** (Order Number/Label/Free Text Box)

The date when the problem selected in the *Problem being detailed* box occurred will be entered in this text box.

2.4.3.5. To the extent possible, describe the circumstances and initial manifestations of the disease or injury or for a review exam provide interval history: (Label/Free Text Box)

2.4.3.6. **Course since onset:** (Label/Single select list Box Selection)

The following “Course since onset:” selections are available:

- Stable
- Progressively worse
- Improved
- Intermittent w/remissions
- Other

2.4.3.7. **Current treatments for each condition:** (Label/Single - select list Box)

a) The following “Current treatments for each condition:” are available for selection:

- None
- Medication
- Surgical
- OT/PT
- Other

b) If “None”, is selected no other items may be selected.

c) If “Medication”, “Surgical”, “OT/PT”, or “Other” is selected then the following questions will be enabled:

- i. Response to treatment (Good/Fair/Poor) (Label, Radio Buttons)
- ii. Describe current treatments: (Label/Free Text Box)
- iii. Side effects from current treatments: (YES/NO) (Label/Radio Buttons)
If “Yes”, then following question will be enabled:
Describe side effects from current treatment (Label/Free Text Box)

2.4.3.8. **Other comments:** (Label/Free Text Box)

2.4.3.9. **Submit** (Button)

“* Press Submit to add entries to the Summary” (Read Only Text/Constant display on screen)

If entries are not made in one or more fields of *TBI: Problem Specific History* panel, when the *Submit* button is selected, a message will appear to remind the user to enter the missing information.

Submit Instructions:

- You must specify the problem currently being detailed.
- You must enter the date.
- You must enter the circumstances and initial manifestation of the disease.
- What is the course since onset?
- Are there current treatments?

2.4.4. **“3. Review Documentation”** (Labels/”3” left of Button)

When *Review Documentation* button is selected, a pop-up window is displayed providing a free text box with the following label:

TBI: Summary of Problem Specific History (Free Text/Edit Text/Populated by *Document Problems* (TBI: Problem Specific History [Submit](#) button).

2.5. **Severity of initial injury**

What was the severity of the initial injury? (Mild, Moderate, Severe): (Label/Radio Buttons)

2.5.1. **Comments:** (Label/Free Text Box)

2.6. **History Tab - Questions**

Note: A common rule for the following “History Tab” radio-button questions is once a question enables a pop-up window with additional questions, a “Re-open” button to re-access the window is provided when that window is closed.

2.6.1. **Has the condition stabilized?** (Yes/No) (Label/Radio Buttons)

If “No”, a pop-up window labeled “TBI: Stability of Condition” will be enabled with the following question:

When is stability expected: (Weeks, Months, 1 year, 2 or more years) (Label/Radio Buttons)

2.6.2. Inquire specifically about each symptom or area of symptoms below, since individuals with TBI may have difficulty organizing and communicating their symptoms without prompting. It is important to document all problems, whether subtle or pronounced, so that the veteran can be appropriately evaluated for all disabilities due to TBI. (Instructional Text Constant Display)

2.6.3. For each of the following symptoms that is present, answer specific questions asked: (Instructional Text Constant Display)

2.6.3.1. **Headaches?** (Yes/No) (Label/Radio Buttons)

If “Yes”, a pop up window labeled “TBI: Headaches” will display the following question:

Frequency, severity, duration, and if they most resemble migraine, tension-type, or cluster headaches: (Label/Free Text Box)

2.6.3.2. **Weakness or paralysis?** (Yes/No) (Label/Radio Buttons)

If “Yes”, a pop-up window labeled “TBI: Weakness or Paralysis” will display the following question:

Describe the location of weakness or paralysis: (Label/Free Text Box)

2.6.3.3. **Balance problems?** (Yes/No) (Label/Radio Buttons)

If “Yes”, a pop-up window labeled “TBI: Balance Problems” will display the following question:

State any Problems: (Label/Free Text Box)

2.6.3.4. **Bowel problems?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Bowel Problems” will display the following questions:

2.6.3.4.1. Fecal incontinence: (Yes/No) (Label/Radio Buttons)

If ‘Yes’, enable (un-gray) the following three questions:

- a. Pads required: (Yes/No) (Label/Radio Buttons)
- b. Extent of fecal leakage: (Mild/Moderate/Severe) (Label/Radio Buttons)
- c. Frequency of fecal incontinence: (Occasional leakage, Occasional involuntary bowel movement, Frequent involuntary bowel movements, Persistent loss of sphincter control) (Label/Free Text Box Drop Down Selection)

2.6.3.4.2. Is assistance needed in evacuating bowel? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, enable (un-gray) the following question:

Describe type of assistance needed for evacuating bowel (manual evacuation, suppositories, rectal stimulation, etc.) and frequency of need: (Label/Free Text Box)

2.6.3.5. **Fatigue?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Fatigue” will display the following question:

Describe the severity of fatigue: (Label/Free Text Box)

2.6.3.6. **Sleep disturbance?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Sleep Problems” will display the following question:

Describe the type and frequency of sleep problems: (Label/Free Text Box)

2.6.3.7. **Vision Problems?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Visual Problems” will display the following question:

Describe vision problems: (Label/Free Text Box)

2.6.3.8. **Numbness, paresthesias or other sensory changes?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Numbness, Paresthesias or Sensory Change” will display the following question:

Location of numbness, paresthesias or sensory changes: (Label/Free Text Box)

2.6.3.9. **Memory Impairment?** (None/Mild/Moderate/Severe) (Label/Radio Buttons)

2.6.3.10. **Dizziness or Vertigo?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Dizziness or Vertigo” will display the following question:

Describe the frequency: (Label/Free Text Box)

2.6.3.11. **Ambulatory?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Ambulatory” will display the following question:

What device, if any, is needed to assist walking: (Label/Free Text Box)

2.6.3.12. **Pain?** (Yes/No) (Label/Radio Buttons)

If 'Yes', a pop-up window labeled "TBI: Pain" will display the following question:

Frequency, severity, duration, location and likely cause: (Label/Free Text Box)

2.6.3.13. **Bladder Problems?** (Yes/No) (Label/Radio Buttons)

If 'Yes', a pop-up window labeled "TBI: Bladder Problems" will display the following question:

a) Urinary retention: (Yes/No) (Label/Radio Buttons)

If 'Yes', enable (un-gray) the following question:

Describe frequency of catheterization or dilation: (Label/Free Text Box)

b) Urinary incontinence: (Yes/No) (Label/Radio Buttons)

If 'Yes', enable (un-gray) the following question:

Which of these are required: (Label/Multi Select List Box Selection)

- Constant use of appliance
- Intermittent use of appliance
- Wearing of absorbent material not required
- Wearing of absorbent material that must be changed less than 2 times per day.
- Wearing of absorbent material that must be changed 2 to 4 times per day.
- Wearing of absorbent material that must be changed more than 4 times per day.

c) Urinary urgency: (Yes/No) (Label/Radio Buttons)

If 'Yes', enable (un-gray) the following question:

State frequency: (Label/Free Text Box)

2.6.3.14. **Malaise?** (Yes/No) (Label/Radio Buttons)

2.6.3.15. **Hearing loss or tinnitus?** (Yes/No) (Label/Radio Buttons)

If 'Yes', a pop-up window labeled "TBI: Hearing Problems" will display the following question:

Describe:

2.6.3.16. **ENT or dental Problems?** (Yes/No) (Label/Radio Buttons)

If 'Yes', a pop-up window labeled "TBI: ENT or Dental Problems" will display the following question:

Describe problems such as difficulty with jaw movements, tooth loss or damage etc,:

2.6.3.17. **Seizures?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Seizures” will display the following question:

Describe type and frequency of seizures: (Label/Free Text Box)

2.6.3.18. **Mobility Problems?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Mobility Problems” will display the following question:

State symptoms: (Label/Free Text Box)

2.6.3.19. **Speech or swallowing difficulties?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Speech or Swallowing Difficulties” will display the following question:

Severity and specific type of problem-expressive aphasia?, difficulty with articulation because of injuries to mouth?, aspiration due to difficulty swallowing?, etc: (Label/Free Text Box)

2.6.3.20. **Sexual dysfunction?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Sexual Dysfunction” will display the following question:

Describe symptoms and if erectile dysfunction is present, state most likely cause and whether vaginal penetration is possible: (Label/Free Text Box)

2.6.3.21. **Decreased sense of taste or smell?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window will display with the following instructional guidance:

Follow examination protocol for Sense of Smell and Taste.

2.6.3.22. **Hypersensitivity to light or noise?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Hypersensitivity to Sound or Light” will display the following question:

Describe hypersensitivity: (Label/Free Text Box)

2.6.3.23. **Are there behavioral changes?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Behavioral Changes” will display the following question:

Describe changes such as irritability, restlessness, other:

2.6.3.24. **Psychiatric symptoms?** (Yes/No) (Label/Radio Buttons)

If 'Yes', a pop-up window labeled "TBI: Psychiatric Symptoms" will display the following question:

Describe mood swings, anxiety, depression, other:

2.6.3.25. **Other cognitive problems?** (Yes/No) (Label/Radio Buttons)

If 'Yes', a pop-up window labeled "TBI: Other cognitive problems" will display the following question:

Other cognitive symptoms present: (Label/Multi Select List Box Selection)

- Slowness of thought
- Confusion
- Decreased attention
- Difficulty concentrating
- Difficulty understanding directions
- Difficulty using written language
- Difficulty comprehending written words
- Delayed reaction time
- Other

If 'Other' is selected, then the following question will be enabled (un-grayed)

Describe other cognitive symptoms: (Label/Free Text Box)

2.6.3.26. **Describe other symptoms:** (Label/Free Text Box)

3 Physical Exam Tab

3.1. Screenshot of TBI- Physical Exam Tab

Figure 3.1: Traumatic Brain Injury -Physical Exam Tab

The screenshot shows a software interface for a physical exam. At the top, there are tabs for 'History', 'Physical Exam', 'Tests', and 'Diagnosis'. The 'Physical Exam' tab is selected, and the patient name 'Traumatic_Brain_Injury' is displayed. Below this, an instruction reads: 'If there is spasticity or rigidity, assess any limitation of motion of joint (including contracture) by following the Joints Examination Protocol.' There are four sub-tabs: 'Vital Signs & General Appearance', 'Reflex Exam', 'Sensory Exam', and 'Motor Function'. The 'Vital Signs & General Appearance' sub-tab is active, showing a list of questions with radio button options for 'Yes' and 'No':

- Is there abnormal gait or cerebellar signs? Yes No
- Cognitive impairment? Yes No
- Psychiatric manifestations present? Yes No
- Is muscle tone normal? Yes No
- Is muscle atrophy present? Yes No
- Is there difficulty with gait? Yes No
- Is there speech impairment? Yes No
- Are there hearing problems on screening? Yes No
- Is there neurologic-related skin breakdown? Yes No

Other questions in the 'Reflex Exam' sub-tab include:

- Is there evidence of orthostatic hypotension, hyperhidrosis, or other autonomic dysfunction? Yes No
- Is there evidence of cranial nerve impairment on screening examination? Yes No
- Are there vision problems? Yes No
- Is there endocrine dysfunction related to TBI? Yes No

There are two text input areas with scrollbars:

- 'Describe jaw malalignment, cracked or missing teeth, etc. and refer for special Dental and Oral examination when indicated.'
- 'Describe other abnormal findings on physical exam.'

3.2. If there is spasticity or rigidity, assess any limitation of motion of joint (including contracture) by following the Joints Examination Protocol.

(Instructional Text Constant Display)

3.3. Vital Signs & General Appearance

(Label/Button)

When the *Vital Signs & General Appearance* button is selected, a pop-up window labeled “TBI: Vital Signs” is displayed with the following questions:

3.3.1. **Pulse:** (Label/Free Text Box)

3.3.2. **Blood Pressure:** (Label/Text Box “/” Text Box)

3.3.3. **Current weight:** (Label/Free Text Box)

3.3.4. **Height:** (Label/Free Text Box)

3.3.5. **Weight change:** (None, Loss, Gain) (Label/Radio Buttons)

a. If *Weight change* is a ‘LOSS’, then enable (un-gray) the following question:

Weight Loss (percent of weight loss compared to baseline) (average weight in the 2 years preceding onset of disease) (<10, 10, 20, 30, 40 or more)
(Label/Free Text Box Drop Down Selection).

b. If *Weight change* is a ‘GAIN’, then enable(un-gray) the following question:

Weight Gain (percent of weight gain compared to baseline) (average weight in the 2 years preceding onset of disease) (<10, 10, 20, 30, 40 or more)
(Label/Free Text Box Drop down Selection).

3.3.6. **Dominant hand?** (Left, Right, Ambidextrous) (Label/Radio Buttons)

If ‘Left’, ‘Right’ or ‘Ambidextrous’, enable the following question:

Means used to determine: (Label/List Box Selection)

- Evidence of record.
- Testing on examination (writing, combing hair, eating, etc.).
- Veteran’s statement.

3.3.7. **General appearance:** (Label/Free Text Box)

3.4. Reflex Exam

(Label/Button)

When the *Reflex Exam* button is selected, a pop-up window labeled “TBI: Detailed Reflex Exam” is displayed with the following:

- 3.4.1. **0-Absent. 1+-Hypoactive. 2+- Normal. 3+-Hyperactive, without clonus. 4+-Hyperactive, with clonus, NT-Not Tested** (Read Only Text/Constant Display)
- 3.4.2. **Left Biceps (C5-C6):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.3. **Left Triceps (C6-C8):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.4. **Left Brachioradialis (C5-C6):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.5. **Left Finger Jerk (C8-T1):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.6. **Left Abdominal (T8-T12):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.7. **Left Knee Jerk (L3-L4):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.8. **Left Ankle Jerk (S1):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.9. **Left Plantar (Babinski):** (Plantar flexion (Normal), Dorsiflexion (Abnormal), Other or NT) (Label/Radio Buttons)
 - If “Other”, then enable the following question:
 - Describe “other”: (Label/Free Text Box)
- 3.4.10. **Right Biceps (C5-C6):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.11. **Right Triceps (C6-C8):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.12. **Right Brachioradialis (C5-C6):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.13. **Right Finger Jerk (C8-T1):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.14. **Right Abdominal (T8-T12):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.15. **Right Knee Jerk (L3-L4):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.16. **Right Ankle Jerk (S1):** (O, 1+, 2+, 3+, 4+ or NT) (Label/Radio Buttons)
- 3.4.17. **Right Plantar (Babinski):** (Plantar flexion (Normal), Dorsiflexion (Abnormal), Other or NT) (Label/Radio Buttons)
 - If “Other”, then enable the following question:
 - Describe “other”: (Label/Free Text Box)

3.4.18. **All Normal** (Label/Button/Action)

When the *All Normal* button is selected, normal values are automatically populated to the following questions:

- Left Biceps (C5-C6): 2+
- Left Triceps (C6-C8): 2+
- Left Brachioradialis (C5-C6): 2+
- Left Finger Jerk (C8-T1): 2+
- Left Abdominal (T8-T12): 2+
- Left Knee Jerk (L3-L4): 2+
- Left Ankle Jerk (S1): 2+
- Left Plantar (Babinski): Plantar flexion (Normal)
- Right Biceps (C5-C6): 2+
- Right Triceps (C6-C8): 2+
- Right Brachioradialis (C5-C6): 2+
- Right Finger Jerk (C8-T1): 2+
- Right Abdominal (T8-T12): 2+
- Right Knee Jerk (L3-L4): 2+
- Right Ankle Jerk (S1): 2+
- Right Plantar (Babinski): Plantar flexion (Normal)

**Note: If “Not Tested” was chosen prior to selecting the *All Normal* Button “Not Tested” will remain as the value.

3.4.19. **Close** (Label/Button/Action)

3.5. Sensory Exam

(Label/Button)

When the *Sensory Exam* button is selected, a pop-up window labeled “TBI: Sensory Function Report” is displayed with the following questions:

3.5.1. **State location(s) tested and whether sensation is normal, decreased, or absent for all extremities.** (Read Only Text/Constant Display)

3.5.2. **Side:** (Right/Left) (Label/Radio Buttons)

3.5.3. **Extremity:** (Upper/Lower) (Label/Radio Buttons)

3.5.4. **Affected nerve(s):** (Label/Free Text Box)

3.5.5. **Sensory Exam** (Subsection Label)

3.5.6. **Vibration:** (Normal/Decreased/Absent/Not tested) (Label/Radio Buttons)

If “Decreased” or “Absent”, the following question is enabled (un-grayed):

Location of any abnormality: (Label/Free Text Box)

3.5.7. **Position sense:** (Normal/Decreased/Absent/Not tested) (Label/Radio Buttons)

If “Decreased” or “Absent”, the following question is enabled (un-grayed):

Location of any abnormality: (Label/Free Text Box)

3.5.8. **Pan/pinprick:**(Normal/Decreased/Absent/Not tested) (Label/Radio Buttons)

If “Decreased” or “Absent”, the following question is enabled (un-grayed):

Location of any abnormality: (Label/Free Text Box)

3.5.9. **Light touch:** (Normal/Decreased/Absent/Not tested) (Label/Radio Buttons)

If “Decreased” or “Absent”, the following question is enabled (un-grayed):

Location of any abnormality: (Label/Free Text Box)

3.5.10. **Other (if tested):** (Normal/Decreased/Absent/Not tested) (Label/Radio Buttons)

If “Decreased” or “Absent”, enable (un-gray) the following question:

- Location of any abnormality: (Label/Free Text Box)
- Sensory function tested: (Label/Free Text Box)

If “Normal”, the following question is enabled (un-gray):

- Sensory function tested: (Label/Free Text Box)

3.5.11. **Are there dysesthesias: (Yes/No)** (Label/Radio Buttons)

If “Yes”, enable (un-gray) the following question:

Location and description of dysesthesias: (Label/Free Text Box)

3.5.12. **Summary of sensory exam:** (Label/Free Text Box/Populated by *Submit* button)

3.5.13. **All Normal** (Label/Button/Action)

When the *All Normal* button is selected, normal values are automatically populated for the following questions:

Sensory Exam

- Vibration: Normal
- Position sense: Normal
- Pain/pinprick: Normal
- Light touch: Normal
- Are there dysesthesias: No

****Note:** If “Not Tested” was chosen prior to selecting the *All Normal* button, “Not Tested” will remain as the value.

3.5.14. **Submit** (Label/Button/Action)

If entries are not made in one or more fields of “TBI: Sensory Function Report” panel, when the *Submit* button is selected, a message will appear to remind the user to enter the missing information.

Submit Button Warnings:

- You must enter the side examined.
- You must enter the extremity examined.
- You must enter the vibration exam.
- You must enter the pain exam.
- You must enter the position sense exam.
- You must enter the light touch exam.
- Are dysesthesias present?

3.5.15. **Close** (Label/Button/Action)

3.6. Motor Function

(Label/Button)

When the *Motor Function* button is selected, a pop-up window labeled “TBI: Motor Function” is displayed with the following questions:

- 3.6.1. **Report level of motor strength for each muscle or muscle groups affected:** (Read Only Text/Constant Display)
- 3.6.2. **Side:** (Right/Left) (Label/Radio Buttons)
- 3.6.3. **Extremity affected:** (Upper/Lower) (Label/Radio Buttons)
- 3.6.4. **Motor strength:** (0,1,2,3,4, 5) (Label/Radio Buttons)
- 3.6.5. **Muscle(s) tested:** (Label/Free Text Box)
- 3.6.6. **Specify nerve(s) tested and/or affected:** (Label/Free Text Box)
- 3.6.7. **Describe specific functional motor impairment of affected areas of upper and lower extremities (for example, weakness of flexion of left elbow, complete loss of dorsiflexion of right foot):** (Label/Free Text Box)
- 3.6.8. **Summary:** (Label/Free Text Box/Populated by *Submit* button)
- 3.6.9. **Submit** (Label/Button/Populate “Summary” free text box)

If entries are not made in one or more fields of “TBI: Motor Function” panel, when the *Submit* button is selected, a message will appear to remind the user to enter the missing information.

Submit Button Warnings:

- You must enter the side
- You must enter the extremity.
- You must enter the muscle strength.
- You must enter the specific nerves tested or affected.
- You must describe specific functional motor impairment.

- 3.6.10. **Close** (Label/Button/Action)
- 3.6.11. **Muscle strength grading system for purposes of this examination:** (Read Only Text/Constant Display below the *Close* and *Submit* button)

0 = Absent – No muscle movement felt.

1 = Trace – Muscle can be felt to tighten, but no movement produced.

2 = Poor – Muscle movement produced only with gravity eliminated.

3 = Fair – Muscle movement produced against gravity, but cannot overcome any resistance.

4 = Good – Muscle movement produced against some resistance, but not against “normal” resistance.

5 = Normal – Muscle movement can overcome “normal” resistance.

3.7. Physical Exam – Tab Questions

Note: A common rule for the following “Physical Exam” Tab radio-button questions is that once a question enables a pop-up window with additional questions, a “Re-open” button to re-access the window is provided when that window is closed.

3.7.1. Is there abnormal gait or cerebellar signs? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Gait or Cerebellar Signs” will display with the following question:

Describe any gait abnormality, imbalance, tremor or fasciculations, incoordination, or spasticity. If there is spasticity or rigidity, assess any limitation of motion of joint (including joint contracture) by following the Joints examination protocol. (A tandem gait assessment (walking in a straight line with one foot directly in front of the other) is recommended.)
(Label/Free Text Box)

3.7.2. Cognitive Impairment? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, the following information will display in a pop-up window:

If cognitive abnormalities are found, claimed, or suspected, request a Mental Disorders examination protocol by a mental disease specialist.

Once the informational warning is acknowledged, a pop-up window labeled “TBI: Memory Loss and Cognitive Problems” will display with the following question:

Conduct a screening examination (such as Mini-mental State Examination) to assess cognitive impairment and report results and their significance. Does the screening show problems with memory, concentration, attention, information processing, aggressiveness, decreased spontaneity, etc.? If yes, have these been confirmed by prior special examinations, such as neuropsychological testing? If not, are these indicated? If cognitive abnormalities are found, claimed, or suspected, request a Mental Disorder examination protocol by a mental disease specialist. (Label/Free Text Box).

3.7.3. **Psychiatric manifestations present?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, the following information will display in a pop-up window:

If a mental disorder is suggested, request a Mental Disorders or PTSD examination protocol by a mental disease specialist.

Once the informational warning is acknowledged, a pop-up window labeled “TBI: Psychiatric Manifestations” will display with the following question:

Conduct a screening examination for psychiatric manifestations, including emotional behavior. If a mental disorder is suggested, request a mental disorder exam or PTSD exam, as appropriate, by a mental disease specialist. (Label/Free Text Box)

3.7.4. **Is muscle tone normal?** (Yes/No) (Label/Radio Buttons)

If ‘No’, then a pop-up box labeled “TBI: Abnormal Muscle Tone” is displayed with the following question:

Describe: (Label/Free Text Box)

3.7.5. **Is muscle atrophy present?** (Yes/No) (Label/Radio Buttons)

If ‘Yes’, then a pop-up window labeled “TBI: Muscle Atrophy” is displayed with the following questions:

- Location: (Label/Single Line Text Box)
- Left measurement: (Label/Single Line Text Box)
- Right measurement: (Label/Single Line Text Box)
- Summary: (Label/Free Text Box/Populated by *Submit* Button)
- Submit (Label/Button Action)

When the *Submit* button is selected, and if the location is not specified, then the following message will appear to remind the user to enter the missing information.

- You must specify the location.
- *Press Submit to add entries to the Summary (Read only text to the right of the *Submit* button)
- Close (Label/Button Action)

3.7.6. Is there difficulty with gait? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, then a pop-up window labeled “TBI: Gait Problems” is displayed with the following questions:

Describe gait difficulty:

3.7.7. Is there speech impairment? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, then a pop-up window labeled “TBI: Speech Impairment” is displayed with the following questions:

- Type of impairment (Label/Free Text Box)
- Severity of impairment: (Unable to be understood, Able to be understood less than half of the time, Able to be understood half or more of the time but not always, Able to be understood except for a few words or only occasionally) (Label/Single Select List Box Selection)

3.7.8. Are there hearing problems on screening? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, the following information will display in a pop-up window:

If abnormalities are found, or there are symptoms or a claim of hearing impairment, request an audiology exam.

Once the instructional warning is acknowledged, a pop-up window labeled “TBI: Hearing Problem” will display the following question:

Describe problems or abnormality. Refer for audio exam if hearing loss or tinnitus is found on screening or claimed: (Label/Free Text Box)

3.7.9. Is there neurologic-related skin breakdown? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, a pop-up window labeled “TBI: Skin Breakdown” is displayed with the following question:

Describe any areas of skin breakdown due to neurologic problems: (Label/Free Text Box)

3.7.10. Is there evidence of orthostatic hypotension, hyperhidrosis, or other autonomic dysfunction? (Yes/No) (Label/Radio Buttons)

If ‘Yes’, then a pop-up window labeled “TBI: Autonomic Nervous System Dysfunction” is displayed with the following question:

Describe: (Label/Free Text Box)

3.7.11. Is there evidence of cranial nerve impairment on screening examination?
(Yes/No) (Label/Radio Buttons)

If 'Yes', an Instructional warning will display in a pop-up window as follows:

Please follow Cranial Nerves examination protocol.

Once instructional warning is acknowledged, a pop-up window labeled "TBI: Cranial Nerve Impairments" will display the following question:

Describe cranial nerve impairment: (Label/Free Text Box)

Follow Cranial Nerve Template (Label/Read Only Text below Free Text Box)

3.7.12. Are there vision problems? (Yes/No) (Label/Radio Buttons)

If 'Yes', an Instructional warning will appear:

If abnormalities are found, or there are symptoms or a claim of eye impairment, request an eye exam by a specialist.

Once the instructional warning is acknowledged, a pop-up window labeled "TBI: Vision Problems" will display the following question:

Describe and refer for eye exam if vision problem is found on screening or claimed: (Label/Free Text Box)

3.7.13. Is there endocrine dysfunction related to TBI? (Yes/No) (Label/Radio Buttons)

If 'Yes', a pop-up window labeled "TBI: Endocrine Problems" will display the following question:

Describe: (Label/Free Text Box)

3.8. Describe Jaw malalignment, cracked or missing teeth, etc. and refer for special Dental and Oral examination when indicated:

(Label/Free Text Box)

3.9. Describe other abnormal findings on physical exam:

(Label/Free Text Box)

4 Tests Tab

4.1. Screenshot of TBI – Tests Tab

Figure 4.1: Traumatic Brain Injury - Tests Tab

The screenshot shows a software interface with four tabs: History, Physical Exam, Tests, and Diagnosis. The Tests tab is active, displaying a form titled "Traumatic Brain Injury". The form contains three text input areas, each with a label and a vertical scrollbar on the right side. The labels are: "Skull X-Rays if there is a bony defect due to surgery or injury:", "Describe results of any neuropsychological testing, done previously or on current examination and their significance:", and "Include results of all diagnostic and clinical tests conducted in the examination report:".

4.2. Skull X-Rays if there is a bony defect due to surgery or injury:

(Label/Free Text Box)

4.3. Describe results of any neuropsychological testing done previously or on current examination and their significance:

(Label/Free Text Box)

4.4. Include results of all diagnostic and clinical tests conducted in the examination report:

(Label/Free Text Box)

5 Diagnosis Tab

5.1. Screenshot of TBI – Diagnosis Tab

Figure 5.1: Traumatic Brain Injury: Diagnosis Tab

The screenshot shows a software interface for the 'Diagnosis' tab of a Traumatic Brain Injury (TBI) assessment. At the top, there are tabs for 'History', 'Physical Exam', 'Tests', and 'Diagnosis'. Below the tabs, the title 'Traumatic Brain Injury' is displayed. A question 'Was a Medical Opinion Requested?' is followed by radio buttons for 'Yes' and 'No'. Below this are three buttons: 'Employment', 'Diagnosis', and 'Capacity to Handle Financial Affairs'. Underneath the buttons are two text input fields: 'Additional exams recommended:' and 'Additional comments concerning functional impairment:'. At the bottom, there is a large text area labeled 'Summary of diagnosis:'.

5.2. Employment

(Label/Button)

When the *Employment* button is selected, a pop-up window labeled “TBI: Employment History” is displayed with the following questions:

5.2.1. **Usual occupation:** (Label/Free Text Box)

5.2.2. **Is Veteran currently employed:** (YES/NO) (Label/Radio Buttons)

If “NO”, a section labeled “**Retired or unemployed**” is enabled. (Section 5.2.3)

If “YES”, enable the following questions:

5.2.2.1 Current occupation: (Label/Free Text Box/Arrow up and down)

5.2.2.2 Type of employment: (Label/Drop Down/Free Text Box)

The following type of employment can be selected or an employment type not listed: Fulltime, Part-time, Self-employed, Seasonal or Other.

5.2.2.3 Duration of current employment: (Label/Drop Down/Arrow up and down)

The following duration of current employment can be selected or enter a duration not listed: Less than 1 year, 1 to 2 years, 2 to 5 years, 5 to 10 years, 10 to 20 years, More than 20 years.

5.2.2.4 Time lost from work during last 12-month period: (Label/Drop Down/Free Text Box)

The following drop down values for Time lost from work during last 12-month period are provided: 0, Less than 1 week, 2 weeks, 3 weeks, 4 weeks, 5 weeks, 6 weeks, 7 weeks up until 52 weeks. If any time lost is entered in the free text, the following question will be enabled:

Cause(s) of time lost from work in last 12-month period: (Label/Free Text Box)

5.2.2.5 Other occupational history since discharge (with dates) or since last exam if this is a review exam: (Label/Free Text Box)

5.2.3. **Retired or unemployed** (Section Label)

- a. Is veteran retired: (YES/NO) (Label/Radio Buttons)

If “NO”, proceed to enabled question “**Is veteran unemployed but not retired:**” (Section 5.2.4)

If “YES”, enable the following questions:

- b. Date of retirement: (Label/Free Text Box)
c. Cause of retirement: (Label/Multi Selection Box)

The following causes are available for selection (one or more may be selected at a time):

- i. Eligible by age or duration of work
- ii. Medical (physical problem)
- iii. Medical (psychiatric problem)
- iv. Other

- a) If “Eligible by age or duration of work” is selected, then no other questions are enabled.
- b) If “Medical (physical problem)” is selected, then enable free text box labeled: “Specify medical (physical) problems:”
- c) If “Medical (psychiatric problem)” is selected, then enable free text box labeled: “Specify psychiatric problems:”
- d) If “Other” is selected, then enable free text box labeled: “Other cause of retirement:”

5.2.4. **Is the veteran unemployed but not retired?** (Yes/No) (Label/Radio Buttons)

If “YES”, enable the following questions:

- a) Duration of current unemployment (Label/Drop Down selection/Free Text Box)
The user may select from the following Duration of current unemployment or enter a response: Less than 1 year, 1 to 2 years, 2 to 5 years, 5 to 10 years, 10 to 20 years, More than 20 years.
- b) Reasons given for unemployment (Label/Free Text Box)

5.3. Diagnosis

(Label/Button)

When the *Diagnosis* button is selected, a pop-up window labeled “TBI: Diagnosis” is displayed with the following questions:

5.3.1. **Select and submit each problem from the request form (Form 2507) or identified by exam:** (Label/Constant Display)

5.3.2. **Diagnosis:** (Label/Free Text Box)

5.3.3. **Problem(s) from the request form associated with this diagnosis:** (Label/Free Text Box/ Populated by "[Problem List](#)")

5.3.4. The following is instructional text that is a constant display and one *Edit Problem List* button requiring action:

For rating purposes, reporting each diagnosed condition and its effects separately is necessary to provide an appropriate disability evaluation for each condition.

For EACH diagnosis:

1. Type in or choose the item from the “Problem List” that are associated with this diagnosis.
2. Optional, to add or edit problems: *Edit Problem List* (Label/Button)
When the [Edit Problem List](#) button is selected, a pop-up window is displayed allowing for editing of Problem List entries. (Reference Feature “[Build Problem List](#)” for usage instructions).
3. Indicate the effects of each diagnosis on occupational and daily activities.
4. Submit.

5.3.5. Describe Effects of the Problem on Usual Occupational Activities (even if not currently employed) (Section Label)

Effect on occupation: (No significant effects, Significant effects, Not employed) (Label/Single select List Box Selection)

If “Significant Effects” is selected, the following questions are enabled (un-grayed).

a) Resulting work problems (Label/List Box Selected Item) with following selections:

Assigned different duties

Increased tardiness,

Increased absenteeism

Other

b) What effects of this disability impact on occupational activities: (Label/List Box Selected Items) with following selections:

Memory loss, Decreased concentration, Inappropriate behavior, Poor social interactions, Difficulty following instructions, Decreased mobility, Decreased manual dexterity, Problems with lifting and carrying, Difficulty reaching, Speech difficulty, Hearing difficulty, Vision Difficulty, Lack of stamina, Weakness or fatigue, Decreased strength: upper extremity, Decreased strength: lower extremity, Urinary incontinence, Fecal incontinence, Pain, Disfigurement and/or Other.

c) Describe other significant effects on occupational activities: (Label/Free Text Box)

5.3.6. Describe the effects of the condition on usual daily activities (Section Label)

Are there effects on usual daily activities? (YES/NO) (Label/Radio Buttons)

If “Yes”, the display will enable the following individual questions on

- Dressing (Yes/No) (Label/Radio Buttons)
- Driving (Yes/No) (Label/Radio Buttons)
- Feeding (Yes/No) (Label/Radio Buttons)
- Toileting (Yes/No) (Label/Radio Buttons)
- Bathing (Yes/No) (Label/Radio Buttons)
- Grooming (Yes/No) (Label/Radio Buttons)
- Describe “Other” effect on usual daily activities: (Label/Free Text Box)

5.3.7. Additional comments: (Label/Free Text Box)

5.3.8. **Submit** (Label/Button)

When the *Submit* button is selected, and if there is no diagnosis entered, the following warning(s) will be displayed:

- You must enter a diagnosis
- You must enter the effects of the condition on occupational activities.
- Does the condition affect usual daily activities?

5.3.9. **“* Press Submit to add entries to the Summary”** (Read only text)

The *Submit* button is used to populate the “[Summary of diagnosis:](#)” text box.

5.4. Capacity to Handle Financial Affairs

(Label/Button)

When the *Capacity to Handle Financial Affairs* button is selected, a pop up window labeled “TBI: Mental Competency” is displayed with the following note and six questions as follows:

5.4.1. Note: Mental competency, for VA benefits purposes, refers only to the ability of the veteran to manage VA benefit payments in his or her own best interest, and not to any other subject. Mental incompetency, for VA benefits purposes, means that the veteran, because of injury or disease, is not capable of managing benefit payments in his or her best interest. In order to assist raters in making a legal determination as to competency, please address the following questions:

(Read Only Text/Constant Display)

5.4.2. Does the veteran know the amount of his/her benefit payment? (YES/NO)

(Label/Radio Buttons)

5.4.3. Does the veteran know the amounts of his/her monthly bills? (YES/NO)

(Label/Radio Buttons)

5.4.4. Does the veteran prudently handle payments? (YES/NO) (Label/Radio Buttons)

5.4.5. Does the veteran personally handle money and pay bills? (YES/NO) (Label/Radio Buttons)

5.4.6. Do you believe the veteran is capable of managing personal financial affairs?

(YES/NO) (Label/Radio Buttons)

If either “Yes” or “No” is selected, enable the following question:

Please provide example(s) to support your conclusion: (Label/ Free Text Box)

5.4.7. Do you believe a Social Work assessment is necessary to render an opinion?

(YES/NO) (Label/Radio Buttons)

If “Yes” is selected, enable free text box labeled:

Please explain why: (Label/ Free Text Box)

5.4.8. Close (Label/Button/Action)

5.5. Additional exams recommended:

(Label/Free Text Box)

5.6. Additional comments concerning functional impairment:

(Label/Free Text Box)

5.7. Summary of diagnosis:

(Label/Free Text Box)