

## Heuristic Evaluation of **RecoveryGrow**

Evaluator A

Evaluator B

Evaluator C

Evaluator D

(Your TA will remove your names before the document is given to the project team. Throughout the report, use these letters to identify yourselves.)

### 1. Problem/Prototype Description

RecoveryGrow is a mobile application providing a healing space for individuals dealing with the physical and mental ramifications of concussions, where they can log their progress, journal, and connect with a community.

### 2. Violations Found

#### 1. H1: Visibility of System Status/ Severity 1 / Found by A, B, D

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No confirmation of saved log entry once completed
- Rationale: After finishing a journal entry, the app goes straight to the overview update page with no clear indication that the entry was successfully logged.
- Suggested Fix: Add a short pop-up message to say that your new entry has been successfully added, or some motion that indicates a refresh of the overview page

#### 2. H1: Visibility of System Status /Severity 3/ Found by B, C, D

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No date when viewing specific journal/photo log entry
- Rationale: While clicking into and viewing a specific journal or photo log from the updates page, there's no title, date or indication of which entry it is; users may be confused or would need to look for context cues to infer
- Suggested Fix: Add the date on the top of the page when viewing a logged update

#### 3. H1: Visibility of System Status /Severity 2/ Found by B

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No confirmation after toggling between public and private update
- Rationale: After clicking the lock button, there's no textual indication or confirmation that the entry has been changed from private to public or vice versa; new users may not understand what the toggle did
- Suggested Fix: Add a word below the lock button that says "public" or "private" depending on if the update is locked or not

**4. H1: Visibility of System Status / Severity 3 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Clicking into an existing update with a photo gives the option of “add photo”
- Rationale: When users see the “add photo” option when one already exists, they might be confused about whether the action adds a new photo or replaces the current one
- Suggested Fix: For updates that have photos added already, change the wording to “edit photo/edit gallery”, which gives you option to add or delete

**5. H1: Visibility of System Status/ Severity 2 / Found by B**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Problem Description: No confirmation after replying or posting in forum
- Rationale: After posting a reply or an original post in the forum, there is no confirmation that the message has been sent successfully; users might be unsure if the post actually went through
- Suggested Fix: Add a short pop-up message to say that your post/reply has been successfully sent

**6. H1. Visibility of system status / Severity: 2/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: The user is unable to readily find previously made forum posts.
- Rationale: The user is not able to keep track of their previous posts and community responses to their actions.
- Fix: Implement a feature (ex. Filter system, new tab) that displays users’ past posts.

**7. H1 Visibility of system status / Severity: 2 / Found by A, C**

- Task: Recording and keeping track of daily symptoms
- Description: On the line graphs labeled “Physical Patterns” and “Mental Patterns”, there is no label or relative numbers for the y-axis.
- Rationale: It may be unclear to users what a relative dip or peak means if the y-axis isn’t labeled, because it could be scaled.
- Fix: Specify numbers and y axis label on the Physical and Mental patterns graph (ex. “Frequency per week”).

**8. H1 Visibility of system status / Severity: 4 / Found by C**

- Task: Recording and keeping track of daily symptoms

- Description: It is not entirely clear what happens when the user locks or unlocks the post – whether this makes the post visible to others/people in their network or whether unlocking the post makes the post visible to just the user.
- Rationale: If the user does not understand what an “unlocked” vs. “locked” state means or doesn’t receive visual feedback immediately after interacting with the lock, the specific consequences of this action are unclear to the user.
- Fix: If unlocking just makes the post visible to the user, add a blank screen while the post is “locked”. If unlocking makes the post visible to others/people in their network, communicate this somewhere around the lock/unlock button – either through a tooltip or a message after locking/unlocking the post.

### **9. H1 Visibility of system status / Severity: 2 / Found by C**

- a. ask: Connect with others recovering from concussions and share insights with personal connections
- Description: There is no visual indication when a user has selected a filter.
- Rationale: Changing the appearance of the tag after it has been selected will make it clear to the user that the tag has been selected.
- Fix: Make the filter another color (or darker) after a user selects it.

### **10. H1 Visibility of system status / Severity: 1 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: More contextual information, like whether a user is friends with a poster, could be useful on the forum page.
- Rationale: This can help distinguish posts and relate the user to the post/poster, particularly if they’re already friends with someone who posted. Even if the goal is to minimize the ‘social media’ look for this page, tying this to other features, like ‘Friends’ or ‘Chat’, can help the product feel more cohesive.
- Fix: Add a small icon to indicate if the poster is someone the user is friends with.

### **11. H1: Visibility of System Status / Severity: 3 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No update after filtering
- Rationale: When user filters public/private/all tasks, there is no indication of which one the user is viewing
- Suggested Fix: Add a label or indicator of whether the current tasks are public or private.

### **12. H1 Visibility of system status / Severity: 2 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: A user can delete a chat with a button that reads 'delete'.
- Rationale: There is no context about what clicking this button actually means for the user. Does this delete the message for both users? Does this delete all previous messages or only the message that has been sent? The user can make a mistake if they don't understand the meaning of this message.
- Fix: Make the delete message more representative of the action that is actually being taken either "delete message" or "delete chat history".

### **13. H1: Visibility of System Status / Severity: 3/ Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No indicator of how many sections, or which section is currently being viewed on the homepage.
- Rationale: Scrolling is the only way to navigate between physical patterns, mental patterns and summary. Because the scroll button is only sometimes visible it's unclear that we need to scroll to look for this, and when scrolling, it's unclear how many sections there are.
- Suggested Fix: Add a header with a list of sections, potentially allowing 'jump to'

### **14. H2. Match between system and the real world / Severity: 2/ Found by A**

- Task: Record daily symptoms and emotional well being.
- Description: Homepage has 'More Information' button when there is no other text information on the page to indicate why users may be needing more information.
- Rationale: Users may be confused by what 'More Information' entails.
- Fix: Remove button or change label to a description of where the button navigates to (ex. "View Updates").

### **15. H2 Match between system and the real world / Severity: 3 / Found by A**

- Task: recording daily symptoms and emotional well being
- Description: Homepage has a "+" icon button but there is no indication of anything users are able to add on the Homepage.
- Rationale: Users may be confused by what they will add by clicking the '+' button.

- Fix: Remove button or change label of button to be descriptive of what the user is adding (“Add new journal entry”)

**16. H2 Match between system and the real world / Severity: 3/ Found by A**

- Task: Recording daily symptoms and emotional well being.
- Description: The lock icon on top of the Homepage matches the lock icon which indicates ‘Public’ or ‘Private’ journal entries on the Your Updates page. There are no Updates shown on the home page, creating an inconsistency.
- Rationale: Users don’t know what they are locking on the Homepage.
- Fix: Remove the lock icon on the Homepage; it currently doesn’t link anywhere

**17. H2. Match between system and the real world / Severity: 2/ Found by A**

- Task: Recording daily symptoms and emotional well being.
- Description: A lock icon is used to indicate whether a journal entry is public or private.
- Rationale: Users may be confused by the lock icon as it may suggest ‘locking’ or not being able to edit an option rather than public vs. private content.
- Fix: Use a text label ‘public’ or ‘private’ next to the icon.

**18. H2. Match between system and the real world / Severity: 2/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: There is a ‘Speech to text ‘ option on the Support Forum page before the user has decided to create a post.
- Rationale: Users are unclear what the speech to text option would be translating.
- Fix: Remove the ‘Speech to text’ option from visibility on the screen until the user clicks to create a new forum post.

**19. H2. Match between system and the real world / Severity: 2/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: On the Support Forum page, the ‘Example audio transcript’ is positioned in between the Sound icon and the ‘Reply’ Button.
- Rationale: Users do not understand if the text area is the original poster’s text/transcript, or if this is the reply they would be writing.
- Fix: Position ‘Example Audio transcript’ and the ‘Reply’ button on separate lines vertically.

**20. H2: Match between system and the real world / Severity: 2/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: The Share button is located on top of the contacts graph.
- Rationale: Users may not immediately understand what or who to share their insights with upon first looking at the Personal Contacts page.
- Fix: Position the Share button below the contacts graph.

**21. H2: Match between System and World /Severity 2 / Found by B, D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: In share page, clicking on specific name in your support network shows a delete option instead of sharing your logged entry
- Rationale: When users enter the share page, the text below indicates that users should be able to easily share their entry with their support network. The UI feels a bit like airdrop, so instinctively users might think that clicking on the name circle would share your logged entry; they might then be confused that it brings them to delete instead.
- Suggested Fix: Have clicking the name lead to sharing, and have a separate edit button.

**22. H2: Match between System and World /Severity 1 / Found by B**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Problem Description: In trends, "one month ago" wording is confusing
- Rationale: In the real world, "one month ago" commonly refers to a rough time-frame instead of a specific date; however, if you are displaying an entry from a specific date, the time frame should be made more clear
- Suggested Fix: Change to "Exactly one month ago", or add a date to the entry display

**23. H2: Match between System and World /Severity 2 / Found by B**

- All three tasks
- Problem Description: Bottom-menu styling is confusing
- Rationale: Middle option in bottom-menu is protruding regardless of which page we are on, users may mistakenly think that protruding means that page is selected;
- Suggested Fix: Change styling to get rid of protruding middle option

**24. H2: Match between System and World /Severity 2 / Found by B**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Problem Description: Color mismatch in toggle-button between profile-updates in user profile
- Rationale: Right now, the selected (or currently viewed) option has the darker color, while the other has the lighter color; in most systems, however, the lighter color in dark-mode indicates selection
- Suggested Fix: Switch colors between the two

**25. H2: Match between System and World / Severity 2 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Leaf placeholder photo does not imply a status update.
- Rationale: Users at first glance do not understand that they are looking at a status update.
- Suggested Fix: Replace the leaf placeholder with a blank placeholder to indicate it is empty.

**26. H2 Match between system and the real world / Severity: 3 / Found by A,C**

- Task: Recording and keeping track of daily symptoms
- Description: There are two options for updates, “public updates” and “private updates”, but these terms seem to reflect the system designers’ understanding of the system, rather than a user’s understanding of their own posts and sharing opportunities.
- Rationale: Users should know what making a “public” update means – whether it is immediately visible to friends or people in their support network – to ensure that they have knowledge of where their personal data is going.
- Fix: Use more descriptive language, like “Shared with support network”, for “public updates” or use the language of public/private more consistently throughout the app.

**27. H2 Match between system and the real world / Severity: 3 / Found by C**

- Task: Recording and keeping track of daily symptoms
- Description: There are 5 options for a user’s mood that may not sufficiently capture the expanse of their emotion. It can also be difficult for users to understand how to label their emotions with these 5 mood terms.
- Rationale: The user may not feel that the app is able to capture their emotional state, leading to decreased use of the app.

- Fix: Allow users to customize or add more moods. Provide sentiment analysis of their journal entry to suggest mood terms they seem to be experiencing – “you seem to be excited”.

### **28. H2 Visibility of system status / Severity: 3 / Found by C**

- Task: Analyze symptoms and gain insights into one’s recovery journey
- Description: The titles ‘Physical patterns’ and ‘Mental patterns’ may reflect the system’s internal model of the user’s state.
- Rationale: The user may be confused when they encounter ‘Physical patterns’ and ‘Mental patterns’ either because they don’t delineate between their symptoms this way or because they would use other, more casual terms.
- Fix: Make titles more descriptive and perhaps better reflect how recoverees think about the delineation between physical and mental health patterns.

### **29. H2 Match between system and the real world / Severity: 3 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connection
- Description: Speech-to-text is used as a label on the forum screen when a user is creating a post.
- Rationale: “Speech-to-text” is not a common phrase that users would be acquainted with. It reflects the system designers’ internal jargon.
- Fix: Replace with an informative instruction like “Record a post by voice”.

H3

### **30. H3: User control and freedom /Severity 3 / Found by B, C, D (A)**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: There are no option to delete logs or edit logs for typos
- Rationale: Users might want to edit or delete wrongly typed journal entries; the system doesn’t give an option to edit or delete(no redos)
- Suggested Fix: Allow journals to be edited within 2 hours of posting; add a delete option

### **31. H3: User control and freedom /Severity 1 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No response after clicking “x” after accidentally clicking “share”
- Rationale: (This might just be missing from the medium-fi implementation, but the cancel button in the popped up share page doesn’t work;) Users would have to click return and then reenter the share page, which involves more steps

- Suggested Fix: Add animation/functionality for the cancel button

### **32. H3: User control and freedom /Severity 2 / Found by B, D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: User can't directly exit wrong specific view after toggling from grid-view to specific;
- Rationale: When users enter the overall updates page, it is unclear what happens when they toggle from grid-view to specific-view (the last viewed entry?) There's no way to exit the wrong specific view apart from toggling back to grid-view, selecting a new journal, and then being able to correctly toggle between the two
- Suggested Fix: Get rid of toggle entirely and replace with a return option (return from specific to overview)

### **33. H3: User control and freedom /Severity 2 / Found by B**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Problem Description: User cannot exit friend's profile view
- Rationale: Users may misclick on a friend's profile and need to return to the previous state
- Suggested Fix: Add return option

### **34. H3: User control and freedom /Severity 3 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Scroll button is not clearly visible on the home (summary) page
- Rationale: It is unclear that there is more information under 'Mental Patterns,' and no indication that there is a monthly section on the homepage. Users miss out on this information by not knowing to scroll
- Suggested Fix: Add an arrow or a more visible scroll button to indicate the user
- should look below the screen

### **35. H3: User control and freedom /Severity 3 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Buttons on the bottom navigation bar are not clearly labeled.
- Rationale: Without any text that says 'log' or 'write,' etc. it's not clear that the paper & pencil button is clickable or that it will take you to that task. If there

was an explicit button on the homescreen that was labeled this might also help reinforce for first time users.

- Suggested Fix: Add action-text under the bottom panel or explicit buttons on the homepage.

**36. H3: User Control and Freedom / Severity: 3 / Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: The user is unable to take back a post on the Support Forum they have just made.
- Rationale: Users have their posting actions be permanent, while they may want to delete or undo a post.
- Fix: Implement a delete post option.

**37. H3: User Control and Freedom / Severity: 3/ Found by A (B,C,D)**

- Task: Recording daily symptoms and emotional well being.
- Description: No option to delete an asset or photo that is uploaded.
- Rationale: Users are unable to back out from uploading a photo and will need to restart their journal entry in order to do so.
- Fix: Create a 'delete' option on uploaded images.

H4

**38. H4 Consistency & Standards / Severity: 2 / Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: Share button is used to represent the Personal Contacts page.
- Rationale: Users often associate the share button with sharing information rather than a contacts page.
- Fix: Change button to reflect a more appropriate icon (ex. Multiple people icon).

**39. H4 Consistency & Standards / Severity: 3 / Found by A, B**

- Task: Recording daily symptoms and emotional well being.
- Description: The 'back' button on creating a journal entry is the Multi-Square icon, which is not consistent with the left arrow back button used on other pages.
- Rationale: Users may not understand that the Multi Square icon takes the user back to the Your Updates page.
- Fix: Use the left arrow button for all 'back' interactions.

**40. H4 Consistency & Standards / Severity: 2 / Found by A, C, B**

- Task: Recording daily symptoms and emotional well being.
- Description: Journal entry display on 'Updates' page of personal profile does not match Your Updates page layout.
- Rationale: Users' may not understand the connection between both pages (which reflect the same content) as the UI is different.
- Fix: Have the same UI component for all logged entries regardless of whether they contain a photo or not; could have a small preview of the photo contained within the component for those with photos and a paper-background image of the same size for those without.

**41. H4 Consistency & Standards / Severity: 2 / Found by A**

- Task: Recording daily symptoms and emotional well being
- Description: There is duplicative use of the 'Squares' icon and 'Writing' icon on the Homepage in close proximity that both lead to the 'Your Updates' page.
- Rationale: The user may believe the icons leading to different pages.
- Fix: Remove the 'Squares' icon on the Homepage.

**42. H4 Consistency & Standards / Severity: 3 / Found by A, D**

- Task: Recording daily symptoms and emotional well being.
- Description: The page compiling all journal entries is called 'Your Updates', yet creating a new entry on this page brings up a title saying 'New journal Entry'.
- Rationale: Users may be confused by the difference between an 'Update' and a 'Journal Entry' which are the same thing.
- Fix: Use either 'Update' or 'Journal Entry' consistently in the task flow.

**43. H4 Consistency & Standards / Severity: 2 / Found by A**

- Task: Recording daily symptoms and emotional well being.
- Description: The Your Updates page has squares which have different icons in them, namely a drawing icon and a 'cross' icon.
- Rationale: Users may be confused by whether the drawing icon and cross icon mean different types of journal entries, whereas they are the same.
- Fix: Use the same icon for all null entries in the Your Updates page.

**44. H4: Consistency and Standards / Severity 2 / Found by B**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Problem Description: Wording for physical/mental separation is inconsistent

- Rationale: On the trends page, trends are separated into physical/mental while the flashback display is separated into symptoms/mood; since they refer to the same set of things, wording should be consistent.
- Suggested Fix: Stick to one wording or adjust wording to indicate the connection.

**45. H4: Consistency and Standards / Severity 2 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: The 'More Information' page shows buttons in the same state as the 'Add Log' page.
- Rationale: Because black circle-white outline represents "undecided/incomplete" on the 'add log' page, it is unclear if the mood/symptoms on the 'more information' page are left blank or if the person truly has no symptoms.
- Suggested Fix: Use a third color to distinguish between 'decided no' and 'left blank'.

**46. H4: Consistency and Standards / Severity: 2 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Back button is the same format as the the 'lock' button.
- Rationale: Because they are both bold-green on the top panel, I assume they have similar function. Without a label, it isn't clear if 'lock' means make private or that it won't allow changes.
- Suggested Fix: Label the lock button and use a different color or placement in the visual hierarchy.

**47. H4: Consistency and Standards / Severity: 3 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: 'View most recent log' button is the same format as the the 'add log' button
- Rationale: Because they are both bold-green on the bottom row, I assume they have similar function. Thus, I assume the 'View most recent log' creates something new.
- Suggested Fix: Add labels or change color/placement of one of the buttons

**48. H4: Consistency and Standards / Severity: 2 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Symptoms/mood selection look like radio buttons
- Rationale: It's unclear whether the user can select only one or multiple options

- Suggested Fix: Make options square instead of circular or use checkmarks/some multi select indicator.

**49. H4: Consistency and Standards / Severity: 4 / Found by D**

- Analyze symptoms and gain insights into one's recovery journey
- Problem Description: Post reply button is grayed out.
- Rationale: Even though you are allowed to make reply's the grey implies this option is disabled.
- Suggested Fix: Change the color to the usual green used for active buttons.

**50. H4 Consistency and standards / Severity: 1 / Found by C**

- a. Task: Recording and keeping track of daily symptoms
- b. Description: The accent shades of green used on the insights screen (for symptoms/mood) and on the logging screen are slightly different.
- c. Rationale: Subtle changes in the primary accent color can distract the user from their task.
- d. Fix: Ensure that the primary accent colors are the same across all tasks/screens.

**51. H4 Consistency and standards / Severity: 2 / Found by C**

- Task: Recording and keeping track of daily symptoms
- Description: The five mood options fit on the screen when viewing a journal entry, but don't fit on the screen in the insights screen.
- Rationale: Consistency in the display and ordering of mood options will help users quickly learn the moods and, over time, they could become more acquainted with the relative ordering and patterns of their moods through visual cues.
- Fix: Use the same spacing and sizing for mood display on the insights and journal entry screen.

**52. H4 Consistency and standards / Severity: 2 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: The plus button is currently used for the product's chatting feature.
- Rationale: The industry standard for chatting is a text bubble, and this may be more aligned with the user's mental model of 'chatting', reducing the barrier to getting comfortable with the product.
- Fix: Use the text bubble icon rather than the plus icon for starting a new chat.

H5

**53. H5: Error Prevention / Severity: 2/ Found by A, B**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: On the Support Forum page, the user is unable to replay a speech for their forum post after making it.
- Rationale: The user is not able to check for errors before posting a voice memo on the Support forum.
- Fix: Create a speech replay option and redo option.

**54. H5: Error Prevention / Severity: 3/ Found by A**

- Task: Recording daily symptoms and emotional well being.
- Description: There is no error checking on whether 'Mood' or 'Symptoms' are selected by the user before creating a Journal post.
- Rationale: Users may forget to input this field, which is crucial to viewing insights and understanding their recovery.
- Fix: Toggle error message if user skips "Mood" or "Symptoms" input field.

**55. H5: Error Prevention /Severity 2 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No confirmation option after adding contact to support
- Rationale: Users might click on the wrong contact when they try to add new members to their support networks; there is no confirmation option to check if the person chosen is correct before the user commits to the action
- Suggested Fix: Add a confirmation option "Add \_\_\_\_ to Support Network? Yes, No"

**56. H5: Error Prevention /Severity 2 / Found by B, C**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Problem Description: In chat, no confirmation before deleting all chat messages
- Rationale: Users could misclick the delete option; for anything permanent (like deletion), there should be confirmation before committing to the action
- Suggested Fix: Add confirmation question

**57. H5: Error Prevention /Severity 1 /Found by B**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Problem Description: In friends' profile, no confirmation before deleting that user as a friend
- Rationale: Users could misclick the delete friend option; there should be confirmation before committing to the action
- Suggested Fix: Add confirmation question "Do you want to remove user xx as a friend?"

**58. H5: Error Prevention / Severity: 3 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Clicking dizzy selects 'Headache' and 'Eye Strain' instead
- Rationale: Even though this is 'Wizard of Oz' please only enable buttons for which their action is supported. ex. If the only options implemented are selecting headache and eye strain, please only enable those buttons.
- Suggested Fix: See rationale.

**59. H5: Error Prevention / Severity: 4 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: There does not appear to be a way to deselect symptoms or moods
- Rationale: In the medium-fi, If users accidentally select 'dizzy', there's no way to unselect the option
- Suggested Fix: Make clear deselect or edit buttons, or support toggling

**60. H5 Error prevention / Severity: 4 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: There is no review or confirmation screen before a post is posted to the forum.
- Rationale: The user may make mistakes in their post, either while recording or labeling, and may not be aware of these mistakes until after the post has been made public to the forum.
- Fix: Add an additional screen to provide users the option to review the post transcript and recording before submitting a post to the forum.

H6

**61. H6: Recognition not Recall / Severity: 2 / Found by A, D**

- Task: Connect with others recovering from concussions and share insights with

personal connections.

- Description: The app does not tell the user what posts they have previously replied to.
- Rationale: In order to view interactions to their reply, the user is forced to recall which specific post they had commented under.
- Fix: Show a replies notification area where users can see which post they have replied under and if someone has engaged with their reply.

**62. H6: Recognition rather than recall / Severity 3 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: In the updates overview page, it is not clear that “Your Updates” is a button.
- Rationale: In the overview page, “Your Updates” looks more like a textual title, with no indication that could be clicked on to switch to “Community Updates”; users could have a hard time finding that option.
- Suggested Fix: Add a downward triangle symbol next to the words “Your Updates” to indicate that it can be clicked on.

**63. H6: Recognition rather than recall / Severity 2 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: The toggle button between grid-view and specific entry for the updates page look too similar; symbol for specific entry page is unintuitive
- Rationale: While the “grid-view” option is relatively intuitive, users could have a hard time inferring what the “specific-view” button means without having used the system before
- Suggested Fix: Change the symbol to be more visually representative, like a vectorized single page document

**64. H6 Recognition rather than recall / Severity: 3 / Found by C**

- Task: Recording and keeping track of daily symptoms
- Description: The prompt for the journal entry is currently within the textbox. The text is helpful but I assume that it disappears when a user starts typing their response.
- Rationale: The journal prompt can be useful for the user to reference as they are writing their response.
- Fix: Place the journal prompt below the “Journal Entry” heading and above the text box.

**65. H6 Recognition rather than recall / Severity: 3 / Found by B, C**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Description: The current date is not easily visible to the user, nor is the date of the journal entry from a month ago.
- Rationale: Recall of the date could be useful to help the user contextualize their journal entries and logged symptoms. It also provides more context that requires less additional information for the users to recall (which could be particularly difficult if they're recovering from a concussion).
- Fix: Add dates wherever it would reduce the cognitive load on the user. Add the current date to the top of the screen and/or add the date of the journal entry from one month ago.

**66. H6 Recognition rather than recall / Severity: 2 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: All chats with one person seem to be viewed as separate instances, rather than aggregated over time.
- Rationale: The user may need to reference multiple screens to recall information from previous conversations with someone, rather than being able to reference one chat.
- Fix: Allow all chats between two users to be saved and viewed in aggregate.

**67. H6 Recognition rather than recall / Severity: 3 / Found by C**

- Task: Recording and keeping track of daily symptoms
- Description: The prompt for the journal entry is currently within the textbox. The text is helpful but I assume that it disappears when a user starts typing their response.
- Rationale: The journal prompt can be useful for the user to reference as they are writing their response.
- Fix: Place the journal prompt below the "Journal Entry" heading and above the text box.

**68. H6 Recognition rather than recall / Severity: 3 / Found by C**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Description: The current date is not easily visible to the user, nor is the date of the journal entry from a month ago.
- Rationale: Recall of the date could be useful to help the user contextualize their journal entries and logged symptoms. It also provides more context that

requires less additional information for the users to recall (which could be particularly difficult if they're recovering from a concussion).

- Fix: Add dates wherever it would reduce the cognitive load on the user. Add the current date to the top of the screen and/or add the date of the journal entry from one month ago.

### **69. H6 Recognition rather than recall / Severity: 2 / Found by C**

Task: Connect with others recovering from concussions and share insights with personal connections

- Description: All chats with one person seem to be viewed as separate instances, rather than aggregated over time.
- Rationale: The user may need to reference multiple screens to recall information from previous conversations with someone, rather than being able to reference one chat. Fix: Allow all chats between two users to be saved and viewed in aggregate.

H7

### **70. H7. Flexibility and efficiency of use / Severity: 2 / Found by A, D**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: Unable to filter through posts to discover relevant topics, despite all posts being tagged with different categories.
- Rationale: Even though users can tag posts in discrete categories, there is no way to sort posts. Consequentially, users who are specifically interested in one of those categories need to scroll through every time
- Fix: Implement a filter tab by category.

### **71. H7. Flexibility and efficiency of use / Severity: 2/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: On the Support Form page, there is low colour differentiation between post tags for categories: 'Mental Health' 'Physical Health' and 'Miscellaneous.
- Rationale: Users cannot visually filter through posts to find the information they want, which is the intended use of tagging with multiple colours. Instead, they are confined to reading the tag text.
- Fix: Use contrasting colours to distinguish between post tags.

**72. H7: Flexibility and efficiency of use / Severity 2 / Found by B**

- Task ⅓
- Problem Description: Users cannot specify preference for audio input/text input
- Rationale: Though both audio/text inputs are options for journaling/forum posting, some users may have strong preference for one over the other; it could be nice to allow users to specify their preferred default
- Suggested Fix: Allow users to set default in settings

**73. H7: Flexibility and efficiency of use /Severity 2 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: Users cannot pin certain updates
- Rationale: There are certain updates that users might want to return to more often (i.e. one tracking a very significant change, or one with a particularly meaningful photo)
- Suggested Fix: Allow users to pin updates

**74. H7 Flexibility and efficiency of use / Severity: 2 / Found by C, D**

- Task: Recording and keeping track of daily symptoms
- Description: Right now, posts can only be shared with one's support network through the share button on an individual post.
- Rationale: There may be users who always want to share their posts with specific individuals (parents, significant others, etc.), and sharing each post is an extraneous task.
- Fix: Allow the option for users to share all posts on default to a specific group or individual. Potentially add a share button to the journal overview screen.

H8

**75. H8: Aesthetic and Minimalist Design / Severity: 2 / Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: Similar colouring used on buttons Share and Add Contacts
- Rationale: The user may be confused and less efficient distinguishing between the Share and Add Contacts button.
- Fix: Use different colours, not both green, for the Share and Add Contacts button.

**76. H8: Aesthetic and Minimalist Design / Severity: 2 / Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: Use of green on 'You' bubble which is non-clickable.
- Rationale: The user may mistakenly believe the 'You' bubble is clickable.
- Fix: Use a grayscale colour for the 'You' bubble.

**77. H8: Aesthetic and Minimalist Design / Severity: 2 / Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: Highly contrasting and distracting red colour on X button next to friend and location.
- Rationale: Users' attention is immediately drawn to the remove friend option.
- Fix: Change red colour to grayscale colour on X button next to friend profile.

**78. H8: Aesthetic and minimalist design / Severity 3 / Found by B**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Problem Description: Other forum comments are displayed while user types replies or makes new posts
- Rationale: While user is focusing on a specific reply/post, the other information is redundant, but it competes with the users' attention
- Suggested Fix: Don't display other posts when user is typing/speaking to reply/post

**79. H8 Aesthetic and minimalist design / Severity: 2 / C**

- Task: Recording and keeping track of daily symptoms
- Description: The 'More information' label for the button consumes visual attention but does not communicate much information.
- Rationale: The 'more information' label is not descriptive and is visually distracting.
- Fix: Include all of the information for a journal entry in one consistent scroll, with one button that signals the scroll or to navigate downwards or make button text clear.

**80. H8 Aesthetic and minimalist design / Severity: 2 / C**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Description: The screen employs double ellipses with the headings "One month ago..." and "You said..." in succession.

- Rationale: The ellipses, while effective in introducing some pause or moment of reflection, may be repetitive and excessive with no content between the headings.
- Fix: Remove the ellipses from the second heading.

### **81. H8 Aesthetic and minimalist design / Severity: 3 / C**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Description: The headers on the insights screen are often separated by inconsistent spacing. The distance between the 'one month ago' and 'you said' heading is larger than the distance between the end of the journal entry and the 'you felt' heading.
- Rationale: The spacing should suggest relationships between the text and content on the screen.
- Fix: Make spacing between headers and sub-headers consistent and smaller than the amount of spacing between sections (journal entry vs. symptoms, for ex.).

### **82. H8 Aesthetic and minimalist design / Severity: 2 / C**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Description: The font size for "You felt" is smaller than the font size for "Symptoms"
- Rationale: The relative font size between headings and sub-headings should be representative of a relationship between the header (You felt) and subheadings (Symptoms/Mood).
- Fix: Make the font size for symptoms/mood smaller than the font size of the You felt header.

### **83. H8 Aesthetic and minimalist design / Severity: 3/ Found by C & D**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: The post preview contains the title, tags, the post transcript, and a button to listen to the post-recording.
- Rationale: All of this information can be overwhelming for a user, particularly if they are recovering from a concussion, and it is unclear what post information should be the most relevant for them.
- Fix: Make the hierarchy of information for the post evident. The title should be above the post tags. There could be a button for listening to the post and reading the transcript.

**84. H8 Aesthetic and minimalist design / Severity: 2 / Found by D**

- Task: Recording and keeping track of daily symptoms
- Description: Placeholders for images are not aesthetically pleasing.
- Rationale: Placeholders are not visually distinct from grid lines and clash with the smooth feel of the rest of the app.
- Fix: Add image placeholders on the “your updates” screen.

**85. H8 Aesthetic and minimalist design / Severity: 1 / Found by D**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: There is little font consistency on the friends profile page
- Rationale: For example, the ‘Friends’ button changes font depending on whether you’ve already added them or not.
- fix: Separate the crowded friends screen into individual pages.

H9

**86. H9: Recognize, diagnose, recover from errors / Severity 2/ Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: No error message if photo was not able to upload after adding photo to logged entry
- Rationale: Users might be uncertain if their photo was successfully uploaded, and may be confused if it wasn’t since there was no error indication
- Suggested Fix: Add error message (similar to what many social media platforms have) if photo wasn’t able to successfully upload

**87. H9: Recognize, diagnose, recover from errors / Severity: 3/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: The Support Forum page does not prompt users when they forget to insert an attachment for a speech text functionality or give an error message
- Rationale: Users may err by sending in a post without attaching the speech file that they intended to attach.
- Fix: Toggle an error message if no speech file is attached.

**88. H9 Help users recognize, diagnose, and recover from errors / Severity: 3 / Found by C**

- Task: Recording and keeping track of daily symptoms
- Description: If a user posts an empty post or forgets to fill out any required portion of the entry, there is no visual indication that this is an error.

- Rationale: The user should be able to know about any missing information about their entry before they finish logging it.
- Fix: When clicking the “Save” button, provide the user with red, bold messaging about any missing fields.

**89. H9 Help users recognize, diagnose, and recover from errors / Severity: 3 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connections
- Description: Recording a post is missing error handling if the audio is inaudible or empty.
- Rationale: The user may be unaware of issues with their audio recording and may post an unsatisfactory recording.
- Fix: Scan the audio file for any issues before posting. Communicate any issues clearly to the user (e.g., ‘we can’t hear anything, want to re-record?’)

H10

**90. H10: Help and Documentation / Severity 4 / Found by B, D**

- All tasks
- Problem Description: No help/documentation for how the app works
- Rationale: There’s usually a learning curve for new apps, especially for more novel platforms; users could use extra guidance
- Suggested Fix: Add a brief walkthrough tutorial when users first join and have a separate documentation file accessible in settings/somewhere else

**91. H10: Help and Documentation / Severity: 2 / Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: The documentation for the page is placed at the bottom of the screen for the Personal Contacts page.
- Rationale: Users may not understand how to use the screen and cannot readily find documentation as it is placed at the bottom of the screen.
- Fix: Place documentation at the top of the screen.

**92. H10 Help and Documentation / Severity: 3 / Found by C**

- Task: Recording and keeping track of daily symptoms
- Description: There are no instructions or documentation about how to log or edit journal entries.

- Rationale: The task of logging, editing, and sharing posts can be difficult for users to immediately intuit.
- Fix: Add a help button at the top of the journal screen that has instructions about how to post/edit an entry.

**93. H10 Help and Documentation / Severity: 3 / Found by C**

- Task: Connect with others recovering from concussions and share insights with personal connections  
Description: There are no instructions about how to create or reply to posts.
- Rationale: Users likely have not had experience with a forum that is based solely on SST, so it is important that users are given guidance about how to navigate the forum.
- Fix: Provide instructions about how to create a post via a (question mark) icon/button near the “Create Post” section. Provide instructions about how to reply to a post via a (question mark) icon/button near the individual post reply.

H11

**94. H11. Accessible design / Severity: 4/ Found by D**

- Task: View insights about their recovery journey.
- Description: Bottom navbar buttons unlabeled
- Rationale: Without labels for profile, log, friends, summary, screen readers are unable to operate effectively for people who cannot handle the light/view the screen.
- Fix: add labels to bottom navbar

**95. H11. Accessible design / Severity: 3/ Found by A, C**

- Task: View insights about their recovery journey.
- Description: In the “Physical Patterns” and “Mental patterns” graph, similar colours are used between graph lines representing concussion symptoms. The lines are also very thin.
- Rationale: Users cannot effectively distinguish between different symptoms visually, and can only do so by reading text. The shades of green are difficult to visually parse and are not accessible for people with green color deficiency.
- Fix: Use different colours to represent graph lines for different symptoms. Use thicker lines and larger font for graph labels.

**96. H11. Accessible design / Severity: 3/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.

- Description: Low colour contrast between Add Contacts button text and button background.
- Rationale: Visually impaired users may have trouble reading the Add Contacts button.
- Fix: Use black text or another visually striking colour for the button or text.

**97. H11. Accessible design / Severity: 3/ Found by A**

- Task: Connect with others recovering from concussions and share insights with personal connections.
- Description: Users are able to add speech input to forums, but in personal chat messages speech input is not allowed.
- Rationale: Users that require speech accessibility controls are able to use some parts of the app but not others, creating an inequitable experience.
- Fix: Add a speech input option to chat messages with personal contacts

**98. H11: Accessible /Severity 3 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: There are no alt-text for photos in updates from community updates
- Rationale: Users who are visually-impaired (including due to a concussion) cannot see the photos in the community updates
- Suggested Fix: Add alt-text

**99. H11: Accessible /Severity 2 / Found by B**

- Task: Recording daily symptoms and emotional well being.
- Problem Description: There are no text-to-speech option for profile bios
- Rationale: Although it exists for most texts in the system, there are no text-to-speech options for profile bios, but users who are visually-impaired (including due to a concussion) would want to read other people's bios. In addition, people temporarily disabled due to a concussion might not be accustomed to cross-platform text-to-speech tools/text
- Suggested Fix: Add text-to-speech option for profile bios

H12

**100. H12. Value alignment and inclusion / Severity: 2 / Found by D**

- Task: Recording daily symptoms and emotional well being.
- Description: Mom and Dad are prefilled into the support system

- Rationale: Not everyone has a mom and dad in their life. This could be uninclusive to individuals with complicated or non-heteronormative families
- Fix: Remove Mom and Dad

**101. H12. Value alignment and inclusion / Severity: 2 / Found by A**

- Task: Recording daily symptoms and emotional well being.
- Description: Users have only a few preset options to customise symptoms and mood recorded.
- Rationale: Some segments of users may have specific experiences pertaining to the mood, support communities, and symptoms related to their experience recovering from the injury that they may not feel like they are able to express with the preset options.
- Fix: Add more options and potentially user input options to choose from for recording their Mood and Symptoms.

**102. H12: Value alignment and inclusion /Severity 2 / Found by B**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Problem Description: Solely downward trends may be discouraging for users
- Rationale: Users who see only downward trends in physical/mental patterns might be discouraged and feel worse about themselves
- Suggested Fix: Instead of only displaying trends, add more insights gained from their entries and highlight improvements

**103. H12 Value alignment and inclusion / Severity: 2 / Found by C**

- Task: Recording and keeping track of daily symptoms
- Description: There are large Xs throughout the journal entry page.
- Rationale: Xs do not visually communicate the product's design value of empowerment.
- Fix: Update the X's to be the image from the photo entry or an ambient photo or have an encouraging message.

**104. H12 Value Alignment and Inclusion / Severity: 2 / Found by C**

- Task: Analyze symptoms and gain insights into one's recovery journey
- Description: The insight graphs are displayed without messages of encouragement.
- Rationale: Contextual messaging can help make the graph more approachable for users and align with the product's value of empowerment.
- Fix: Depending on the user's trends, include encouraging and empowering messaging below the graph.

**3. Summary of Violations**

<b>Category</b>	<b># Viol. (sev 0)</b>	<b># Viol. (sev 1)</b>	<b># Viol. (sev 2)</b>	<b># Viol. (sev 3)</b>	<b># Viol. (sev 4)</b>	<b># Viol. (total)</b>
H1: Visibility of Status		2	6	4	1	<b>13</b>
H2: Match Sys & World		1	9	6		<b>16</b>
H3: User Control		1	2	5		<b>8</b>
H4: Consistency & Standards	0	1	10	3	1	<b>15</b>
H5: Error Prevention		1	3	2	2	<b>8</b>
H6: Recognition not Recall			4	5		<b>9</b>
H7: Efficiency of Use			2	3		<b>5</b>
H8: Minimalist Design		1	7	3		<b>11</b>
H9: Help Users with Errors			1	3		<b>4</b>
H10: Help & Documentation			1	2	1	<b>4</b>
H11: Accessible			1	4	1	<b>6</b>
H12: Value Alignment & Inclusion			5			<b>5</b>
<b>Total Violations by Severity</b>	<b>0</b>	<b>7</b>	<b>51</b>	<b>40</b>	<b>6</b>	<b>104</b>

**Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)**

**4. Evaluation Statistics (in %)**

<b>Severity / Evaluator</b>	<b>Evaluator A</b>	<b>Evaluator B</b>	<b>Evaluator C</b>	<b>Evaluator D</b>
Sev. 0 Ex: Eval A count / total sevs 0 in table #3	<i>[e.g. 10%]</i>	NA	1 / total	n/a
Sev. 1 Ex: Eval A count / total sevs 1 in table #3	14%	85%	28%	28%
Sev. 2 Ex: Eval A count / total sevs 2 in table #3	39%	31%	24%	22%
Sev. 3 Ex: Eval A count / total sevs 3 in table #3	33%	20%	40%	28%
Sev. 4 Ex: Eval A count / total sevs 4 in table #3	0%	33%	66%	66%
<b>Total (sevs. 3 &amp; 4)</b> Ex: Eval A = sum(sev 3: sev 4 counts) / sum(sev 3: sev 4 in table #3)	28%	22%	43%	33%
<b>Total (all severity levels)</b> Ex: Eval A total sev count / total sevs (green cell) in table #3	33%	25%	34%	27%

**\*Note that the bottom rows are *not* calculated by adding the numbers above it.**

**5. Summary Recommendations**

*[merge the general recommendations you made here]*

Great work! Your prototype does a great job of aligning design values, considering accessibility needs, and making use efficient and flexible. The app has a strong branding with the black and green color palette showing through clearly. It feels personal, friendly, and professional. We really like the overall layout of your system, and how each task flow is very atomized in different pages while having the bottom menu allows for easy navigation between the tasks. We also think you did a great job incorporating accessibility principles in your design with features like speech-to-text and text-to-speech.

In the Med-Fi, there were many instances where the system status was not clear or communicated to the user, leading to confusion around the status of a journal entry or post. We recommend having unique users and tasks, rather than placeholders. It was difficult to distinguish between distinct posts, friends, updates, etc. because they all have the same placeholder text. We also recommend state

updates, meaning something new appears when users make a new update or forum post, and allowing for easy return to a more general previous state.

The overall aesthetics of the product can be improved by making strategic use of consistent spacing, font size, and iconography. While the brand identity is mostly consistent, there is a lack of consistency in areas where language, colors, and layouts are not similar across various parts of the UI. Overall, the pages felt a bit cramped, with little whitespace, and the fonts trend to the large size. We also found many cases where the system utilized technical jargon that reflected the system designer's conception of the system, rather than a user's model of their own recovery journey.

Moving forward, one key improvement is to make this network be more centralized, given personal contacts and the online forum are kept in separate areas as a result of how navigation is currently laid out. Another key future consideration for the prototype build is enabling users to effectively find information and search for information that is relevant to them. There are no current filtration or search systems built into the Support Forum in order to better cater to users' unique needs. Inclusion and values wise, having more options to allow users to describe their complex and diverse experiences through having users input their mood & symptoms are important.

### **Severity Ratings**

- 0 - not a usability problem
- 1 - cosmetic problem
- 2 - minor usability problem
- 3 - major usability problem; important to fix
- 4 - usability catastrophe; imperative to fix

## **Heuristics**

### **H1: Visibility of System Status**

- Keep users informed about what is going on

### **H2: Match Between System & Real World**

- Speak the users' language
- Follow real world conventions

### **H3: User Control & Freedom**

- "Exits" for mistaken choices, undo, redo
- Don't force down fixed paths

### **H4: Consistency & Standards**

- Words, actions, and UI elements should be consistent across the entire platform
- Follow platform and industry conventions

### **H5: Error Prevention**

- Minimize error-prone conditions
- Remove memory burdens, support undoing, and warn your users when necessary

### **H6: Recognition Rather Than Recall**

- Make objects, actions, options, & directions visible or easily retrievable

### **H7: Flexibility & Efficiency of Use**

- Accelerators for experts (e.g., gestures, keyboard shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

### **H8: Aesthetic & Minimalist Design**

- No irrelevant information. Focus on the essentials.

### **H9: Help Users Recognize, Diagnose, & Recover from Errors**

- Error messages in plain language
- Precisely indicate the problem
- Constructively suggest a solution

### **H10: Help & Documentation**

- Easy to search
- Focused on the user's task
- List concrete steps to carry out
- Not too large

### **H11: Accessible**

- Users can interact with the system using alternative input methods.
- Content is legible with distinguishable contrast and text size.
- Key information is upfront and not nested for screen readers.
- Purely visual or auditory content has text-based alternatives for users with low vision and low hearing.

**H12: Value Alignment and Inclusion**

- The design should encode values that users can understand and relate to.
- It should make a diverse group of users feel included and respected.
- The design should prevent the reproduction of pre-existing inequities and not create additional burdens for members of disadvantaged populations.