

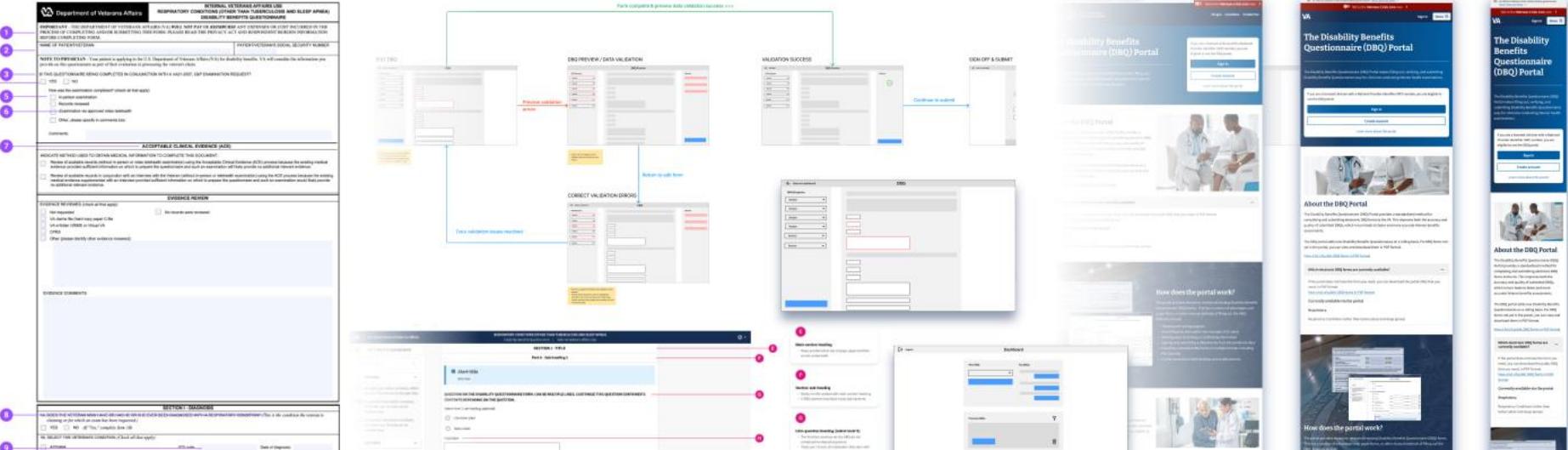


Nick Osmanski

Senior UX Designer

Case study 1

The VA DBQ Portal



The DBQ Portal

Overview

Background

- Clinicians send Disability Benefits Questionnaire (DBQ) forms to the VA
- DBQs are paper forms, electronic PDFs, or some database format (ex: csv, xml)

The problem

- VA spends a lot of time correcting errors, and confirming information accuracy
- This creates more work for Rating Veterans Service Representatives (RVSRs), and prevents Veterans from receiving their benefits in a timely manner

A DBQ form

HEART CONDITIONS (INCLUDING ISCHEMIC AND NON-ISCHEMIC HEART DISEASE, ARRHYTHMIAS, VALVULAR DISEASE AND CARDIAC SURGERY) DISABILITY BENEFITS QUESTIONNAIRE		
Name of Patient/Veteran	Patient/Veteran's Social Security Number	Date of examination:
IMPORTANT - THE DEPARTMENT OF VETERANS AFFAIRS (VA) WILL NOT PAY OR REIMBURSE ANY EXPENSES OR COST INCURRED IN THE PROCESS OF COMPLETING AND/OR SUBMITTING THIS FORM.		
Note - The Veteran is applying to the U.S. Department of Veterans Affairs (VA) for disability benefits. VA will consider the information you provide on this questionnaire as part of its decision in processing the Veteran's claim. VA may obtain additional medical information, including an examination, if necessary, to complete VA's review of the Veteran's application. VA reserves the right to confirm the authenticity of ALL completed questionnaires. It is intended that questionnaires will be completed by the Veteran's healthcare provider.		
Are you completing this Disability Benefits Questionnaire at the request of:		
<input type="checkbox"/> Veteran/Claimant		
<input type="checkbox"/> Third party (please list name(s) of organization(s) or individual(s))		
<input type="checkbox"/> Other: please describe	<input type="text"/>	
Are you a VA Healthcare provider? <input type="radio"/> Yes <input type="radio"/> No		
Is the Veteran regularly seen as a patient in your clinic? <input type="radio"/> Yes <input type="radio"/> No		
Was the Veteran examined in person? <input type="radio"/> Yes <input type="radio"/> No		
If no, how was the examination conducted?		
EVIDENCE REVIEW		
Evidence reviewed:		
<input type="radio"/> No records were reviewed		
<input type="radio"/> Records reviewed		
Please identify the evidence reviewed (e.g. service treatment records, VA treatment records, private treatment records) and the date range.		
		

The DBQ Portal

Overview

My role

- The sole designer assigned to this project team, supporting:
 - Front-end developers
 - Back-end developers
 - VA PO and SMEs
 - Internal PMs
- Final deliverables included:
 - Developer-ready design system components
 - Hi-fi mockups and prototypes
 - Demos and presentations to PMs and POs
 - (5-6 months project time)

Solution & impact

- An electronic portal where users could fill out and send DBQ forms to the VA, incorporating standardized formatting and form data validation
- Consistent positive reactions from VA stakeholders and SMEs
 - 10 DBQ forms designed
 - Planned expansion of scope before project termination

Interviews

- VA stakeholders: POs and PMs
 - VA Product Owner feedback about the state of the DBQ form process
 - VA Project Managers provided insight to the goals and needs of the project
 - VA SMEs: Clinicians and RVSRs
 - I interviewed retired and practicing VA clinicians
 - I spoke to practicing VA Rating Veterans Service Representatives (RVSRs)

DBQ form UX evaluation

- Form improvements
 - Standard sections for non-sequential navigation
 - Collapse conditional elements
 - Simplify Diagrams

3. DOES THE VETERAN HAVE ANY OF THE FOLLOWING PULMONARY CONDITIONS?															
<input type="checkbox"/> YES	<input type="checkbox"/> NO <i>(If "No," proceed to Section IV) If "Yes," check all that apply:</i>														
<p><input type="checkbox"/> Asthma <input type="checkbox"/> Bronchiectasis <input type="checkbox"/> Sarcoidosis <input type="checkbox"/> Pulmonary embolism and related diseases <input type="checkbox"/> Bacterial lung infection <input type="checkbox"/> Mycotic lung infection <input type="checkbox"/> Pneumothorax <input type="checkbox"/> Gunshot/fragment wound <input type="checkbox"/> Cardiopulmonary complications <input type="checkbox"/> Respiratory failure <input type="checkbox"/> Tumors or neoplasms <input type="checkbox"/> Other pulmonary conditions, pertinent physical findings: <i>(If checked, complete Part L below)</i></p>															
<p><i>(If checked, complete Part A below)</i> <i>(If checked, complete Part B below)</i> <i>(If checked, complete Part C below)</i> <i>(If checked, complete Part D below)</i> <i>(If checked, complete Part E below)</i> <i>(If checked, complete Part F below)</i></p>															
5D. List missing teeth by number:															
<table border="0"> <tr> <td style="vertical-align: top;">Right Upper</td> <td style="vertical-align: top;">Left Upper</td> </tr> <tr> <td style="text-align: center;"> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8</td> <td style="text-align: center;"> <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 16</td> </tr> <tr> <td colspan="2">Left Upper</td> </tr> <tr> <td colspan="2"> <input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24</td> </tr> <tr> <td colspan="2">Left Lower</td> </tr> <tr> <td colspan="2"> <input type="checkbox"/> 25 <input type="checkbox"/> 26 <input type="checkbox"/> 27 <input type="checkbox"/> 28 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 31 <input type="checkbox"/> 32</td> </tr> <tr> <td colspan="2">Right Lower</td> </tr> </table>		Right Upper	Left Upper	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 16	Left Upper		<input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24		Left Lower		<input type="checkbox"/> 25 <input type="checkbox"/> 26 <input type="checkbox"/> 27 <input type="checkbox"/> 28 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 31 <input type="checkbox"/> 32		Right Lower	
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Right Lower															



The clinician

Both private (unlicensed by the VA) and licensed clinicians see multiple patients per day, and may not complete a DBQ in one setting.

Needs

- To stop and resume a DBQ form
- To be notified of conflicting form entries and missing information

Pain points

- Ambiguous wording or unclear DBQ instructions
- Long and unnecessary sections of the DBQ form



The VA RVSR

The RVSR handles multiple DBQ forms for each Veteran. Rating is time consuming, so each error has a compounding effect.

Needs

- Complete DBQ forms
- Data consistency and accuracy (no conflicts)

Pain points

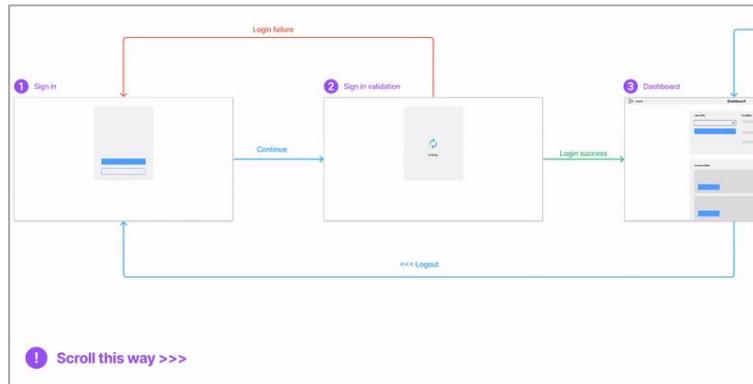
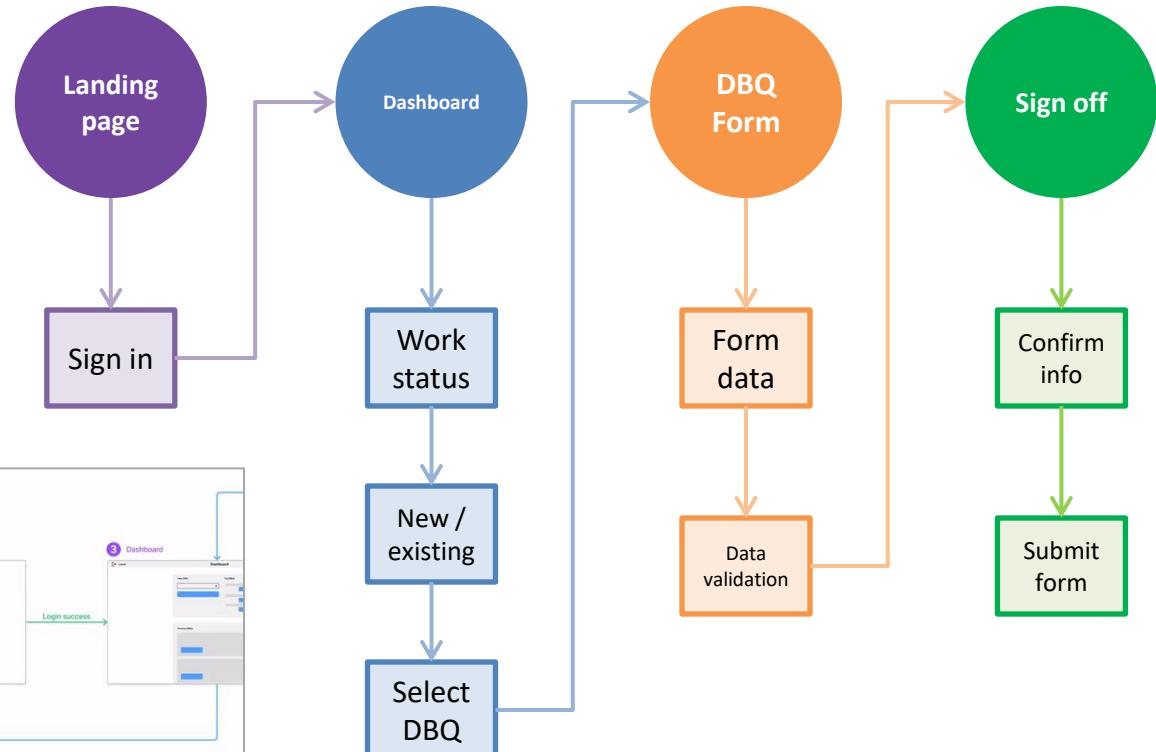
- Incomplete or conflicting form data
- Illegible handwritten form sections
- Manually searching through DBQ forms

The DBQ Portal

User flow

Key features

- From VA PM and POs:
 - Landing page
 - A dashboard
 - The DBQ form
 - Validating form data
 - Sign and submit



The DBQ Portal

Design iteration

Lo-fi form

Return to dashboard

DBQ Navigation

- Section

DBQ

Mid-fi form

Return to dashboard

Search DBQ

DBQ Sections

- I - Section heading
 - 1A. Question about the Veteran's condition with multiple choices and fields
 - 1B. Question with long description field
 - 1C. Question with radio buttons and conditional trigger
- Part A - Sub-heading
 - 1A. Example question that appears conditionally
- II - Section heading
 - 1A. Example question about the Veteran's condition with multiple choices and fields
 - 1B. Example question with a long description field
 - 1C. Example question with radio buttons that trigger conditional
- III - Section heading
 - 1A. Question about the Veteran's condition with multiple choices and fields
 - 1B. Question with long description field
 - 1C. Question with radio buttons and conditional trigger
- Part A - Sub-heading
 - 1A. Example question that appears conditionally
- IV - Section heading
 - 1A. Example question about the Veteran's condition with multiple choices and fields
 - 1B. Question with long description field
 - 1C. Question with radio buttons that trigger conditional
- V - Section heading
 - 1A. Example question that appears conditionally

Respiratory Disability Benefits Questionnaire

SECTION # - SECTION HEADING

NOTE TO PHYSICIAN

Your patient is applying to the U.S. Department of Veterans Affairs (VA) for disability benefits. VA will consider the information you provide on this questionnaire as part of their evaluation in processing the Veteran's claim.

1A. Example question about the Veteran's condition with multiple choices and fields:

Additional context information about the question.

Choice Label Label

Choice Label Label

Choice Label Label

1B. Example question with a long description field:

Additional context information about the question.

1C. Example question with radio buttons that trigger conditional:

Additional context information about the question.

Yes

No

PART A - SECTION SUB-HEADING

NOTE TO PHYSICIAN

Your patient is applying to the U.S. Department of Veterans Affairs (VA) for disability benefits. VA will consider the information you provide on this questionnaire as part of their evaluation in processing the Veteran's claim.

Testing prototype

VA | RESPIRATORY CONDITIONS (OTHER THAN SLEEP TUBERCULOSIS AND SLEEP APNEA)

Disability Benefits Questionnaire | Internal Veterans Affairs Use

SECTION HEADING

1A. QUESTION 1 - AN EXAMPLE QUESTION ON THE DBQ FORM. THIS QUESTION CAN BE MULTIPLE LINES.

Yes

No

1B. QUESTION 2 - EXAMPLE QUESTION ON THE DBQ FORM. THIS QUESTION CAN BE MULTIPLE LINES.

Yes

No

1C. QUESTION 3 - EXAMPLE QUESTION ON THE DBQ FORM. THIS QUESTION CAN BE MULTIPLE LINES.

Yes

No

U.S. Department of Veterans Affairs

RESPIRATORY CONDITIONS (OTHER THAN TUBERCULOSIS AND SLEEP APNEA)
Disability Benefits Questionnaire | Internal Veterans Affairs Use

SECTION I - DIAGNOSIS

1A. DOES THE VETERAN NOW HAVE OR HAS HE OR SHE EVER BEEN DIAGNOSED WITH A RESPIRATORY CONDITION?

Yes
 No
 If "Yes", complete item 1B

1B. SELECT THE VETERAN'S CONDITION
Check all that apply

Response is required
 Asthma ICD Code Date of diagnosis
 Emphysema ICD Code Date of diagnosis
 Chronic Obstructive Pulmonary Disease (COPD) ICD Code Date of diagnosis
 Chronic bronchitis ICD Code Date of diagnosis
 Constrictive bronchiolitis ICD Code Date of diagnosis
 Interstitial lung disease (if checked, specify):
 ICD Code Date of diagnosis
 Response is required
Note
 Interstitial lung diseases include but are not limited to asbestosis, diffuse interstitial fibrosis, interstitial pneumonitis, fibrotic alveolitis, desquamative interstitial pneumonitis, pulmonary alveolar proteinosis, eosinophilic granuloma of lung, drug-induced pulmonary pneumonitis and fibrosis, radiation-induced pulmonary pneumonitis and fibrosis, hypersensitivity pneumonitis (extrinsic allergic alveolitis) and pneumoconiosis such as silicosis, anthracosis, etc.

Restrictive lung disease (if checked, specify):
 ICD Code Date of diagnosis
 Response is required
Note
 Restrictive lung diseases include but are not limited to diaphragm paralysis or paresis, spinal cord injury with respiratory insufficiency, kyphoscoliosis, pectus excavatum, pectus carinatum, traumatic chest wall defect, pneumothorax, hernia, etc., post-surgical residual (lobectomy, pneumonectomy, etc.), chronic pleural effusion or fibrosis.

Mycotic lung disease (if checked, specify):
 ICD Code Date of diagnosis

SECTION II
SECTION III
SECTION IV
SECTION V
SECTION VI

RETURN TO DASHBOARD

EXPAND ALL QUESTIONS

Veteran Information
John Veteranski
*****1234

ACE

Evidence Review

SECTION I

1A. Does the veteran now have or has he or she ever been diagnosed with a respiratory condition?
1B. Select the veteran's condition
1C. If there are additional diagnoses that pertain to respiratory conditions, list using above format:

How & who

- Remote usability testing using Figma prototypes and a UAT live site
- Participants were given a general task: complete and send in a DBQ
- 3 clinicians, 1 VA PM, 1 RVSR

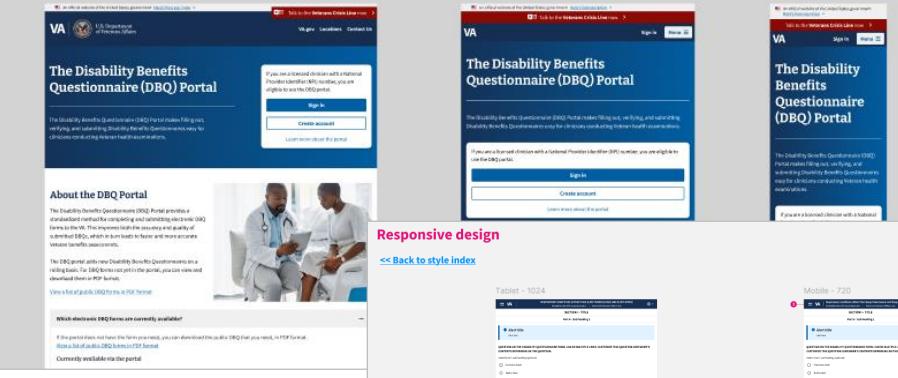
Results

- New features included:
 - Side panel status icons
 - Veteran info context
 - Hide/show conditionals
- General positive feedback
 - More efficient
 - Participants preferred this over their current workflow

The DBQ Portal | *Final deliverables*

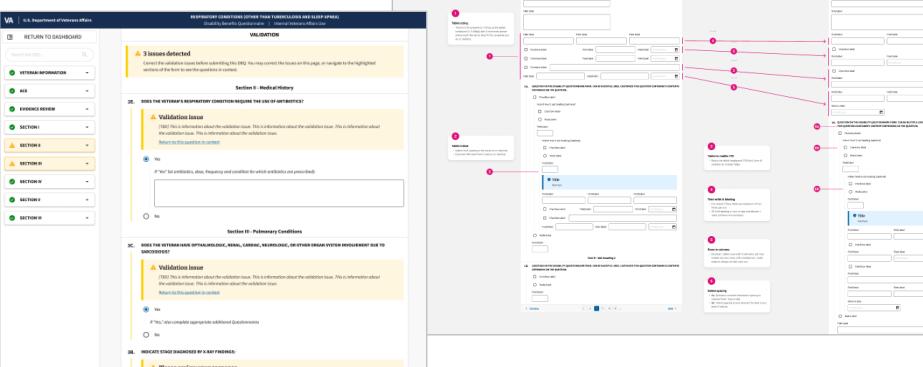
Deliverables

- Design system components
 - 508 compliant colors, grids, typography, form elements etc.
 - Mockups & prototypes
 - Annotated for developers
 - Desktop / mobile breakpoints
 - 10 DBQs in total
 - Demos
 - End-of-sprint presentations to PMs and POs
 - Front-end QA
 - Local server in Docker
 - Notes & feedback for devs



Responsive design

[<< Back to style index](#)



Indent structure update

[<< Back to style index](#)

A. Old design (deprecated)

A. Old design (deprecated)

Form container

DETERMINE THE FINAL DESIGN

16. DETERMINE THE FINAL DESIGN OF THE FORM CONTAINER. THIS IS THE CONTAINER THAT HOLDS ALL THE FORM ELEMENTS, AND IT IS WHERE YOU CAN ADD A TITLE, SUBTITLE, OR LOGO.

17. DETERMINE THE FINAL DESIGN OF THE FORM CONTROLS. THIS IS THE CONTROLS THAT ARE USED TO COLLECT INFORMATION FROM THE USER.

B. New design - updated container structure, indent, & border style

Form container

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C. Newest updates + contiguous radio buttons

Form container

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B. New design - updated container structure, indent, & border style

structure, indent, & border style
Form container

<p>SECTION VI – TRAIL OR RELEASE STATEMENT</p> <p>Do you consent to the use of your name and/or likeness in photographs, video, audio recordings, or other media for promotional purposes? If yes, indicate the level of consent.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>LEVEL OF CONSENT</p> <p><input checked="" type="checkbox"/> I consent to my name and/or likeness being used in any way without restriction.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for commercial purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for promotional purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for advertising purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for editorial purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for news reporting purposes.</p>	<p>SECTION VII – TRAIL OR RELEASE STATEMENT</p> <p>Do you consent to the use of your name and/or likeness in photographs, video, audio recordings, or other media for promotional purposes? If yes, indicate the level of consent.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>LEVEL OF CONSENT</p> <p><input checked="" type="checkbox"/> I consent to my name and/or likeness being used in any way without restriction.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for commercial purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for promotional purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for advertising purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for editorial purposes.</p> <p><input type="checkbox"/> I consent to my name and/or likeness being used in any way except for news reporting purposes.</p>
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Mini retro

- Lessons learned
 - More experience communicating design to devs (front-end QA review)
 - Making design system readable / navigable
- Do anything differently?
 - More usability testing with clinicians
 - No time for read data validation testing in UAT environment

Thanks!