VA Mobile App: Information Architecture & Navigation Research

Usability Study Findings

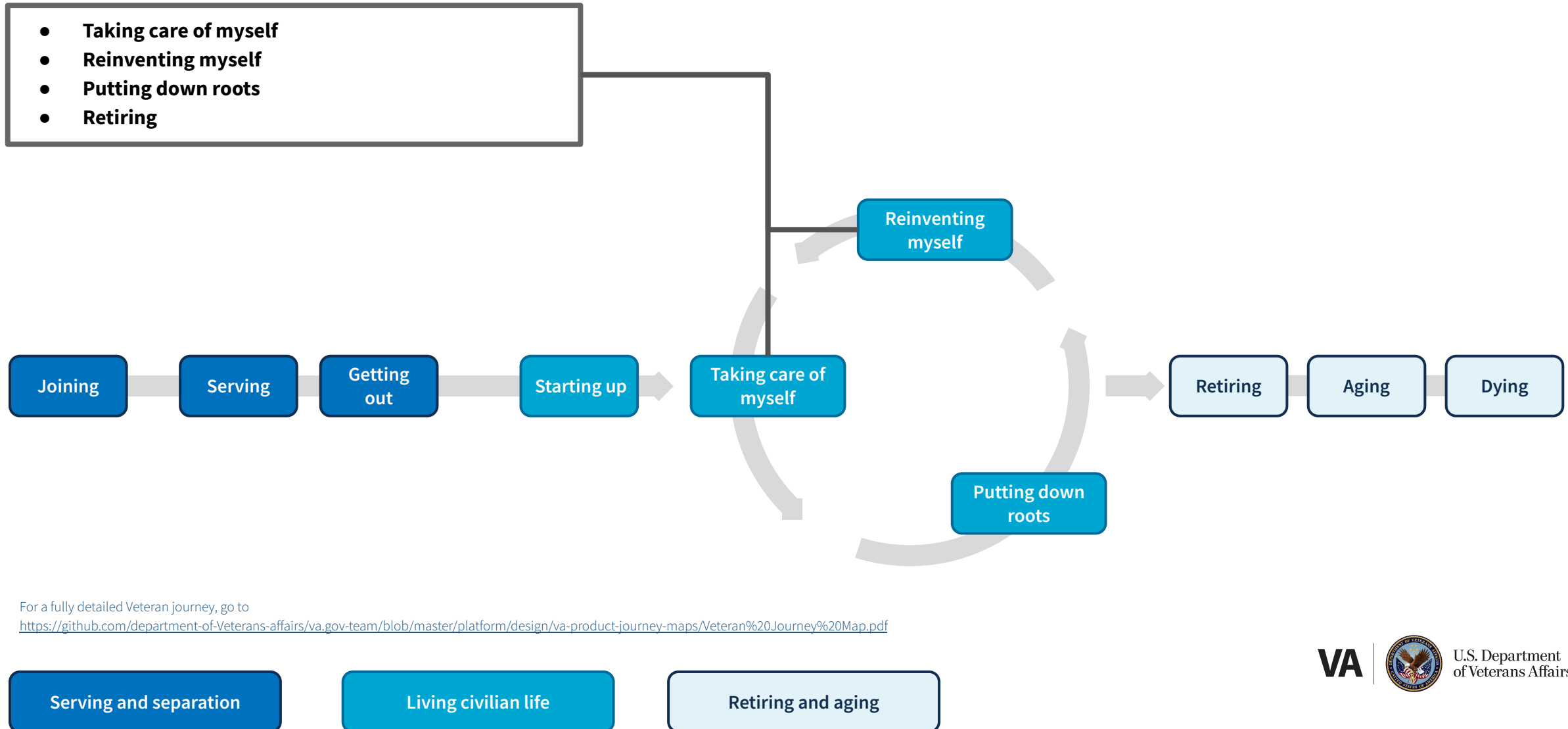**Holly Collier**
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October 31, 2022

Acknowledgements

Thank you to everyone who provided feedback, reviewed the report, helped us pilot, took notes and and contributed hypotheses to this work:
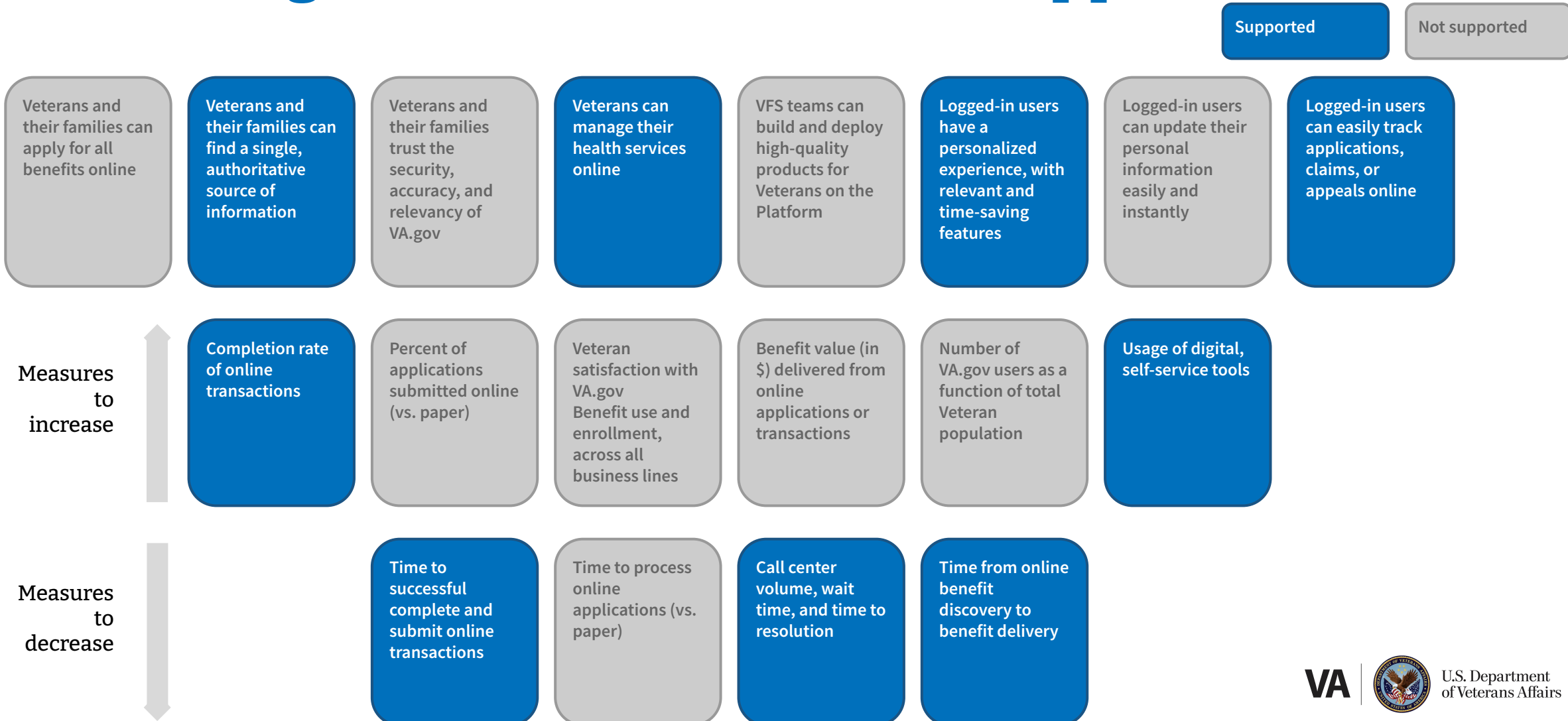
- **Lauren Russell**
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How this research maps to the Veteran journey

- **Taking care of myself**
- **Reinventing myself**
- **Putting down roots**
- **Retiring**

Reinventing myself

Joining → **Serving** → **Getting out** → **Starting up** → **Taking care of myself** → **Retiring** → **Aging** → **Dying**

Putting down roots

For a fully detailed Veteran journey, go to
https://github.com/department-of-Veterans-affairs/va.gov-team/blob/master/platform/design/va-product-journey-maps/Veteran%20Journey%20Map.pdf

Serving and separation

Living civilian life

Retiring and aging

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OCTO-DE goals that this research supports

Supported	Not supported

Veterans and their families can apply for all benefits online	Veterans and their families can find a single, authoritative source of information	Veterans and their families trust the security, accuracy, and relevancy of VA.gov	Veterans can manage their health services online	VFS teams can build and deploy high-quality products for Veterans on the Platform	Logged-in users have a personalized experience, with relevant and time-saving features	Logged-in users can update their personal information easily and instantly	Logged-in users can easily track applications, claims, or appeals online

Measures to increase

	Completion rate of online transactions	Percent of applications submitted online (vs. paper)	Veteran satisfaction with VA.gov Benefit use and enrollment, across all business lines	Benefit value (in $) delivered from online applications or transactions	Number of VA.gov users as a function of total Veteran population	Usage of digital, self-service tools

Measures to decrease

	Time to successful complete and submit online transactions	Time to process online applications (vs. paper)	Call center volume, wait time, and time to resolution	Time from online benefit discovery to benefit delivery

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Participant demographics

Findings may not include the perspectives of the following underserved Veteran groups:

- Veterans with a **high school degree or equivalent**
- Veterans who identify as **Hispanic or Native**
- **Assistive technology users**
- **Transgender, nonbinary, gender fluid, genderqueer, Two-Spirit (Indigenous only), or another gender** beyond man or woman

We recommend studies with these underserved groups in the future.

Participant Tracker on Google Sheets

2022-09 VA Mobile App - Moderated Navigation Usability Stud																										
final # of participants		**13**		# of AT users	**6**		# of no shows	**8**																		
Category	%	Target	Study	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Veterans		Based on current VA statistics																								
Age 55-64+	50.00%	7	7	N	1	N		1	1	N	N	1	N		1	1	N	N	N			1		
Cognitive Disability	50.00%	7	4	N	0	N		1	1	N	N	1	N		1	1	N	N	0			0		
Mobile user	50.00%	7	13	N	1	N	1	1	1	N	N	1	N	1	1	1	1	N	N	1	1	1	1	1
Rural	25.00%	4	NA	N	0	N	0	0	0	N	N	N	0	0	0	0	N	N	0	0	0	0	0	0
No degree	25.00%	4	1	N	0	N	0	0	1	N	N	N	0	0	0	0	N	N	0	0	0	0	0	0
Other than honorable	21.00%	3	NA	N	0	N	0	0	0	N	N	N	0	0	0	0	N	N	0	0	0	0	0	0
Immigrant origin	17.00%	3	NA	N	0	N	0	0	0	N	N	N	0	0	0	0	N	N	0	0	0	0	0	0
Women	10.00%	2	4	N	1	N				N	N	N		1			N	N					1	
Expat (living abroad)	0.40%	1	NA	N	0	N	0	0	0	N	N	N	0	0	0	0	N	N	0	0	0	0	0	0
Race		Based on VA's projected statistics																								
Black	15.00%	2	4	N	0	N		1	1	N	N	N	1	N		1	N		1	0	N	N		
Hispanic	12.00%	2	0	N	0	N	0	0	0	N	N	N	0	N	0	0	N	N	0	0	N	N	0	0
Biracial	3.90%	1	1	N	0	N	1	0	0	N	N	N	0	0	0	0	N	N	0	0	N	N	0	0
Asian	3.00%	1	1	N	0	N	0	0	0	N	N	N	0	0	1	0	N	N	0	0	N	N	0	0
Native	0.30%	1	0	N	0	N	0	0	0	N	N	N	0	0	0	0	N	N	0	0	N	N	0	0
LGBTQ+		LGBTQ+ Veterans are 5 times as likely to have PTSD																								
Gay, lesbian, or bisexual	--%	1	2	N	0	N	1	0	0	N	N	N	0	0	0	0	N	N	0	0	1	N	0	0
Transgender	--%	1	0	N	0	N	0	0	0	N	N	N	0	0	0	0	N	N	0	0	N	N	0	0
Nonbinary, gender fluid, ge	--%	1	0	N	0	N	0	0	0	N	N	N	0	0	0	0	N	N	0	0	N	N	0	0

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Background & goals

The purpose of this work is to **inform the information architecture (IA), content and design of the VA Mobile app** in order to deliver a solution that is usable, useful, and extensible. Prior to this study, we conducted two rounds of card sort research and navigation exploration exercises.

Our **primary goals** in this study are to:

- Evaluate the **usability of the proposed mobile app navigation pattern and IA** using a series of tasks the participants will be asked to complete.
- **Determine if any significant navigational barriers exist** for participants who are current users of the mobile app vs participants who are not users of the mobile app.

Our **secondary goal** in this study is to:

- Pilot conducting **remote, evaluative research using Figma prototypes in the browser on participants' mobile devices**, and improve the instructions and process for that in preparation for future usability studies.

Lean user research & IA process

This evaluative study is the **third** piece of a three-part research process:
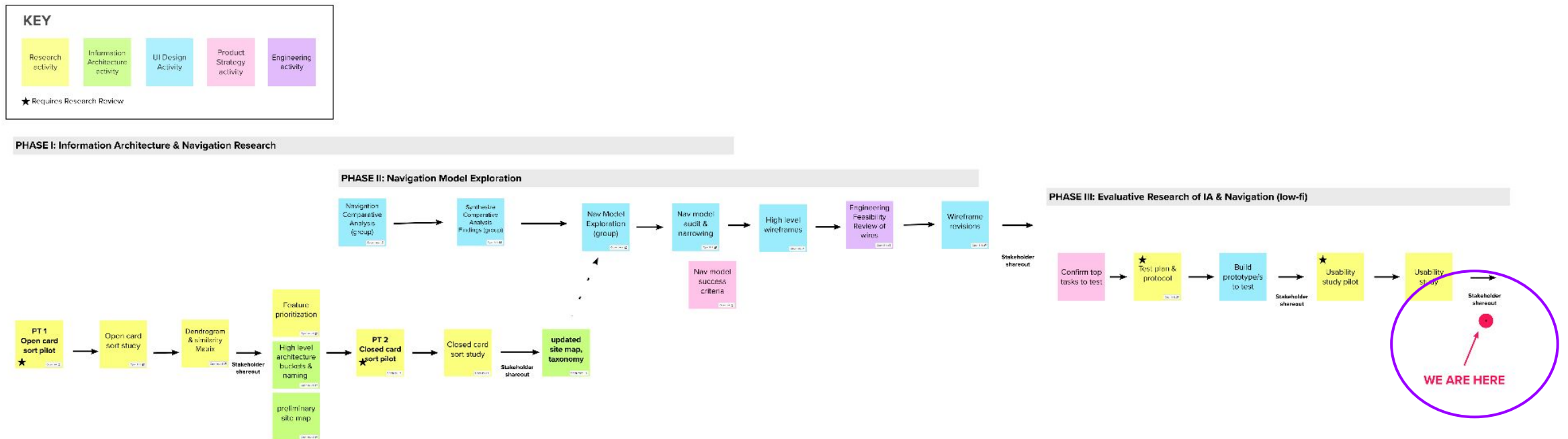
Research method

13 participants took part in **remote**, **moderated**, **think-aloud user interviews with usability testing** over Zoom.

We sent participants a link to a limited functionality, low-fidelity mobile prototype and then asked them to open it on their mobile device and to share their screen with us while completing a series of tasks.

- 5 participants were current users of the VA Health and Benefits mobile app
- 5 participants were not current users of the VA Health and Benefits mobile app
- 3 participants we were uncertain whether or not they used the app based on recruiting + answers interview questions

- 12 participants used either an **iPhone** (6) or **Android** (6) mobile device.
- One participant used a desktop prototype.

Research Plan for VA Mobile App Information Architecture & Navigation: Evaluative Research - Usability Study
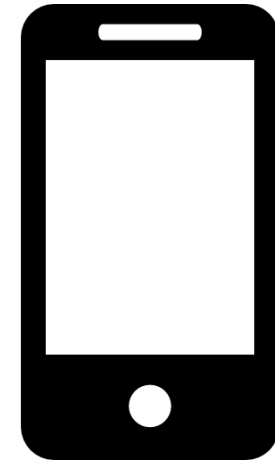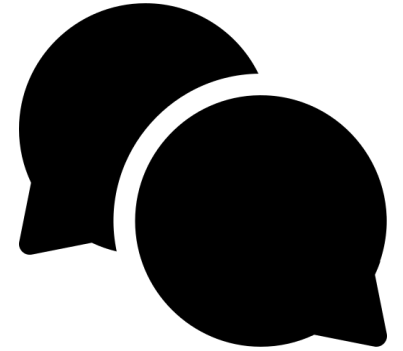
Study tasks & success measurement

The tasks tested in the study include:

- Each part of the app's proposed IA and navigation model
- Features with the highest engagement in the mobile app
- Features that have moved locations

Task completion was scored on a 4 point scale, measuring the effectiveness of the proposed solution:

4 - directly successful (participant went directly to the correct place)

3 - indirectly successful (participant did not go directly to correct place, but found their way there without help)

2 - could complete with help (participant required moderator to give them a hint or return them to home screen)

1 - did not understand/couldn't complete (participant was stuck or incorrect, even with help)

Task	Location/change	Difficulty
Update your email address	Profile (new location in nav UI)	Medium
Check your disability rating	Benefits (moved from Profile to new category)	Medium
Check the date of your upcoming doctor appointment	Health (no change)	Easy
Check your most recent disability payment	Payments (moved from Profile to new category)	Medium
Check the status of your disability claim	Benefits (new category name)	Easy

NNG: Success Rate: The Simplest Usability Metric
Research Plan for VA Mobile App Information Architecture & Navigation: Evaluative Research - Usability Study

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Prototype tested
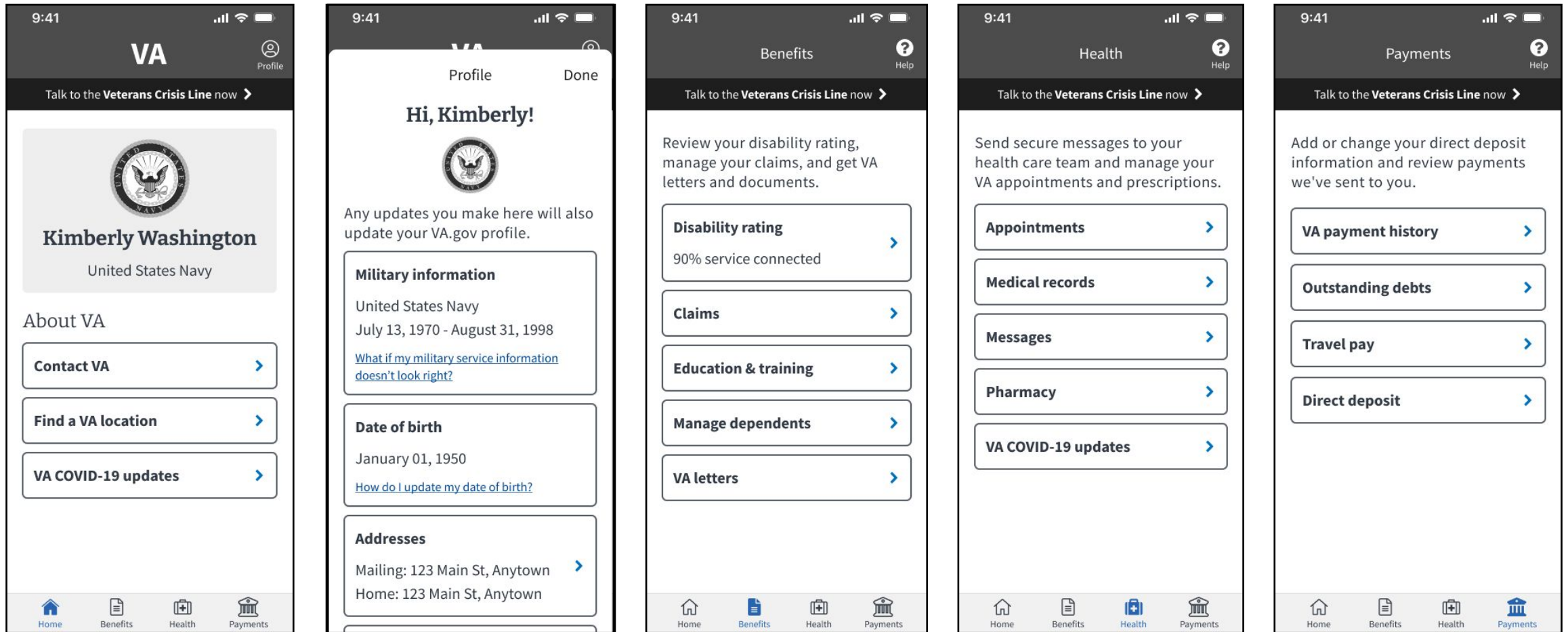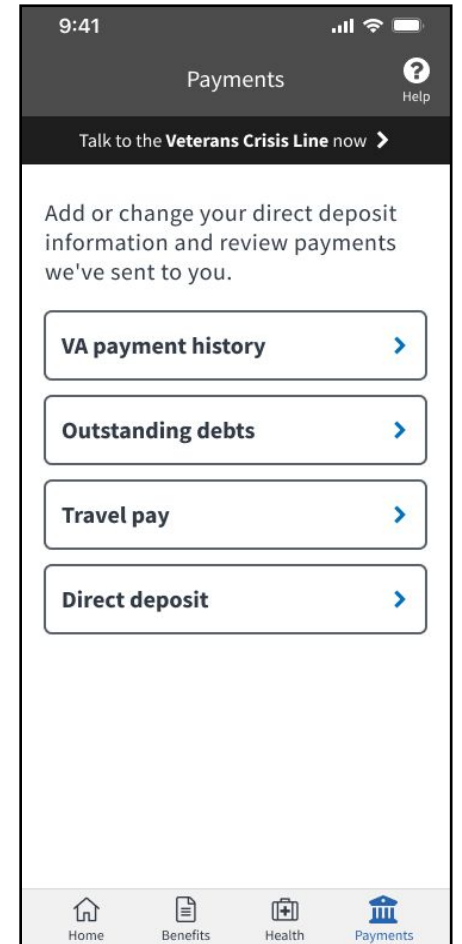
Key findings

1. An **overwhelming majority** of participants were able to complete each of the 5 provided tasks **successfully**.

   - For 4/5 of the tasks, 13/13 participants were directly or indirectly successful.
   - Update email address: 11/13 participants were directly successful or successful with help.

2. **Previous app usage did not seem to significantly affect participants' expectations** around the location of tasks in the prototype.

3. Increased depth of hierarchy (ex: Claims now being under Benefits) **did not seem to affect app users' perceptions of ease of use.**

   - 5/5 participants who are current app users reported that the prototype was the same or easier to use than the current app.

4. The **new category labels** (Benefits and Payments) were **clear and understandable** to participants.

   - 13/13 participants successfully completed the tasks in these categories.
   - Most participants also correctly predicted things that they would find in each of the new categories.

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Key findings (cont): Payments category

1. **Participants expected to find two main things in Payments (but not always both):**

   a. **A record of payments from the VA** (12/13 participants)

   The most frequently mentioned type of payment was related to **disability** (9/13).

   b. **A record of money owed to the VA** (8/13 participants)

   The most frequently mentioned type of money owed was a **copay** of some kind (6/13).

2. **When asked later what they expected to find in "outstanding debts," 12/13 participants expected that they would find money they owed to the VA.**

   a. The most frequently mentioned type of money owed were **copays** (5/13) and **overpayment** (4/13). Also mentioned were **loans** and **VA health locations**.

Secondary findings

1. Participants also had **positive reactions** to the following things:
   a. App is **simple**, **easy to understand**
   b. **"Everything you need in once place"**
   c. The prototype/aspects of the prototype feel "**personalized**"
      Example: Name and branch of service displayed on Home
   d. Tab bar serves as a **reminder/guide**
   e. Being able to **switch back & forth** between categories (Health & Payments, Benefits & Payments)

2. **Only one participant mentioned wanting to change anything about the app's top level navigation**, and a few participants mentioned the placement or prominence of feature level content.

Findings: Research ops

- There were **no technical issues with the method/script** for screen–sharing web-based Figma app on participants' phones.

- When guiding users through how to close the prototype, **several participants seemed surprised or commented upon seeing their open browser tabs** alongside the prototype tab.

- We had **difficulty vetting VA mobile app users during recruitment:** Several participants reported being app users (and passed our screening process), but answers to questions about their app use were not consistent with what's possible in the app. We believe this may have in part been due to several things:
  - Screening criteria—the VA mobile app icon and VA.gov shortcut icon are virtually identical, making confirming app use through the icon they have on their device an ineffective screening criteria.
  - User confusion around the difference between apps and websites on their phone.
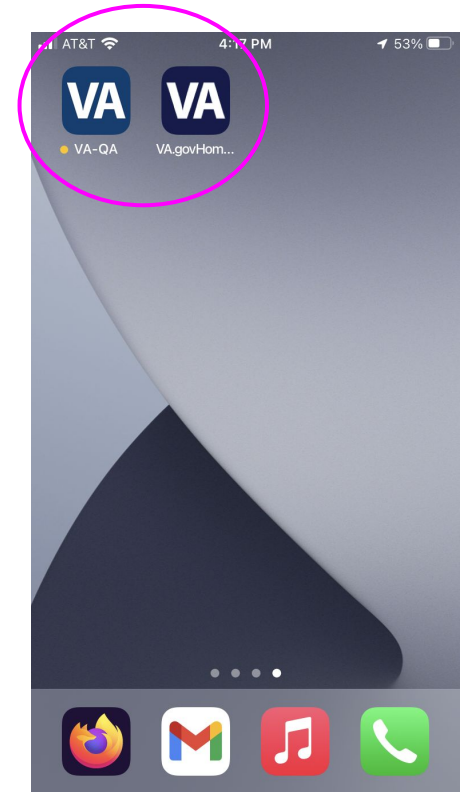
Recommendations

Overall IA & navigation model:

- Move forward with proposed information architecture, navigation pattern and labels (no changes).

Home screen:

- Keep name and service badge as a personalized element on the home screen.
- Think through the home screen hierarchy and treatment of non-personalized content vs personalized content when moving into the next phase of design.

Research ops:

- Use web-based Figma prototype method and section of protocol in future mobile studies.
- Continue to iterate on the app user vetting method within our recruiting process.
- Modify protocol when using web-based prototypes to better preserve participant privacy.

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Thanks!

Questions?

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Appendix

Research questions & hypotheses

Research Questions

1. Are participants able to successfully navigate to key tasks in the app using the updated IA and navigation?
   a. Which tasks, if any, do participants struggle with finding and where do participants expect to find those tasks?
   b. Does previous use of the VA Health and Benefits mobile app affect how participants expect to navigate to key tasks or ability to successfully complete tasks?
2. Are the new category labels (Benefits, Payments) clear & understandable to participants?
3. Does the increased depth of hierarchy (ex: Claims now being under Benefits) affect participants' perception of ease of use?
4. What, if anything, would participants want to change about the proposed IA and navigation?
5. What, if anything, are people expressing positive reactions to? How are they reacting?

Hypotheses

1. Participants will be able to find the provided tasks using the proposed navigation pattern and IA.
   a. Participants who are current VA Health and Benefits mobile app users may first look for some tasks (payments, disability rating) in Profile before discovering them in Payments and Benefits, but will be successful overall.
2. The new category labels (Payments, Benefits) will be clear & understandable to users.
3. The introduction of the Benefits category will not cause participants to feel that the app is slower/harder to use.

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Task success rates

An overwhelming majority of participants were able to complete each of the 5 provided tasks successfully.

Task	Success rate - direct or indirect (all participants)
Check your disability rating	13/13 (100%)
Check the date of your upcoming doctor appointment	13/13 (100%)
Check your most recent disability payment	13/13 (100%)
Check the status of your disability claim	13/13 (100%)
Update your email address	11/13 (84.62%) ● 9/13 (69.23%) completed the task successfully without help. ● 2/13 (15.38%) were able to complete the task, but required help (facilitator reworded the task). ● 2/13 (15.38%) did not complete the task successfully.

NNG: Success Rate: The Simplest Usability Metric

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Expectations: Payments category

- **Participants expected to find two main things in Payments (but not always both):**

  - **A record of payments from the VA** (12/13 participants)
    The most frequently mentioned type of payment was related to **disability** (9/13).

  - **A record of money owed to the VA** (8/13 participants)
    The most frequently mentioned type of money owed was a **copay** of some kind (6/13).
    - **P14:** "Payments the VA makes to me. View the Payment level related to disability claim, seeing the amount. Seeing dependent payment info."
    - **P21:** "Whether it was payments to me or from me, I guess I would expect to find it all in the same area, maybe."

- **When asked later what they expected to find in "outstanding debts," 12/13 participants expected that they would find money they owed to the VA.**
  The most frequently mentioned type of money owed were **copays** (5/13) and **overpayment** (4/13). Also mentioned were **loans** and **VA health locations**.
  - **P21:** "I would be looking for my Pharmacy copayments—even though it's not considered a collectible debt, it's still a debt, also if I had been overpaid, or if for some reason I'm owing the VA money for something."

Expectations: Benefits category

- **12/13 participants correctly predicted at least one of the category items:**
  - The most frequently mentioned were items related to **disability** (10/13: compensation, benefits, claims, or percentage), and **education** (6/13).
  - Also mentioned were healthcare, home loans, letters, forms, and dependant info.

- **Participants expected a mix of benefits they were using and benefits they were eligible for:**
  - 11/13 participants mentioned expecting to find **benefits they were interacting with**.
  - 4/13 participants specified that they also expected to also find **benefits they were eligible for.**
  - 1 participant initially expected it to contain **general information about benefits,** not personal interactions with them (later, this person revised their description after seeing the contents of the Profile section).
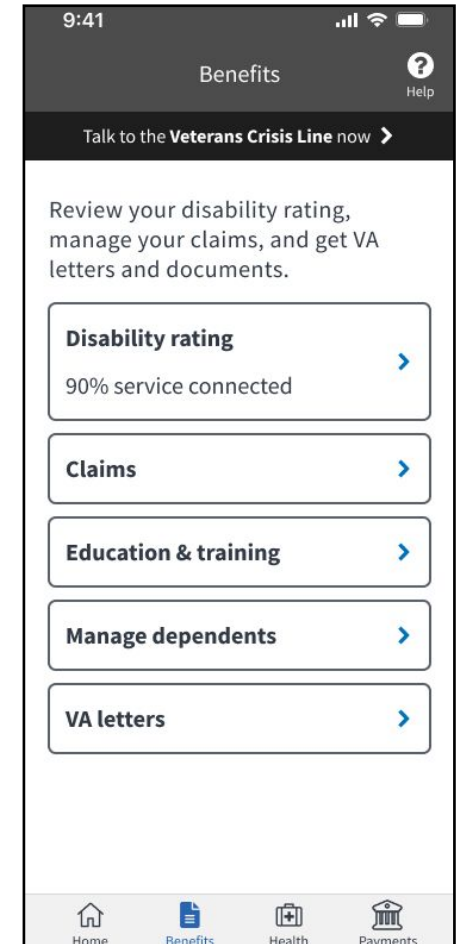
A deeper dive: Update email address

Update email address was the only task where *any* participants initially expected to complete the task in a location other than what is in the prototype, and eventually all but 2 participants were successful in completing the task.

- **9/13 participants initially expected to go to Profile to update their email address:**
  - **P10** "Traditionally most apps/websites have the primary personal info stored there."
  - **P13** "I expect to see Home, email, your phone number, your address, all your personal information in your profile."

- **4/13 participants initially expected to update their email address through Contact the VA, and described expecting to speak to a person at VA to make the change:**
  - **P5** "I would think if I go to Contact VA—they would ask for updated information like phone number or address… I would expect to talk to someone who could make [the changes] for me."

- **With prompting** *("What if you could do it yourself, in the app")*, **2 of those 4 participants then successfully located the place to update their email address in Profile.**
  - **P6** "I would go to Contact VA. Should be a place for me to communicate with them and give them my information, my email address or contact them if I have an Issue. *(What if you could change it yourself, using the app?)* I'd expect to find it under Contact VA. Wait a minute, wait a minute, up at the top I see Profile, let me try that."
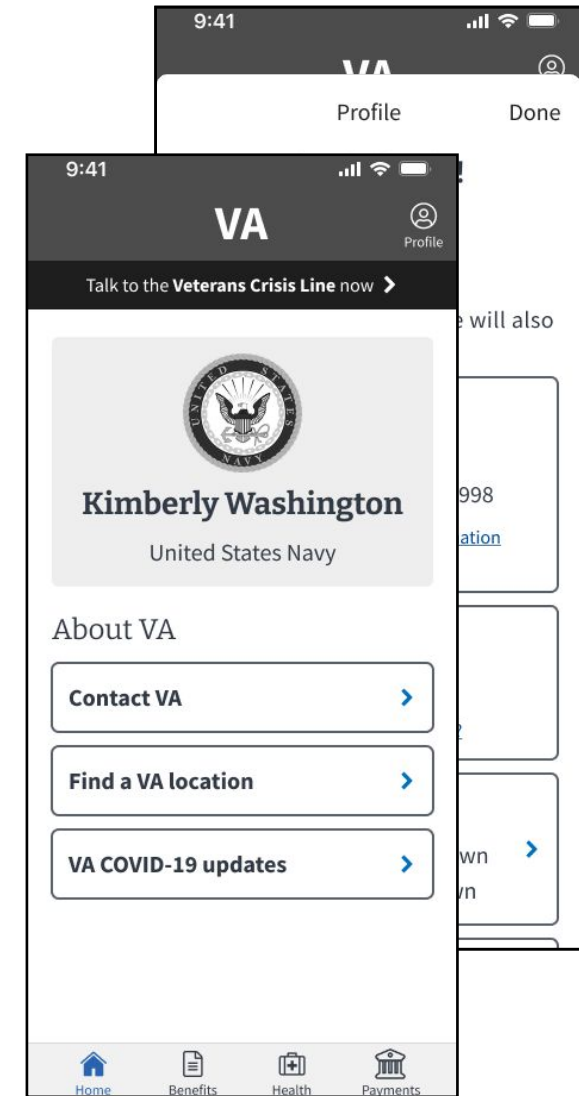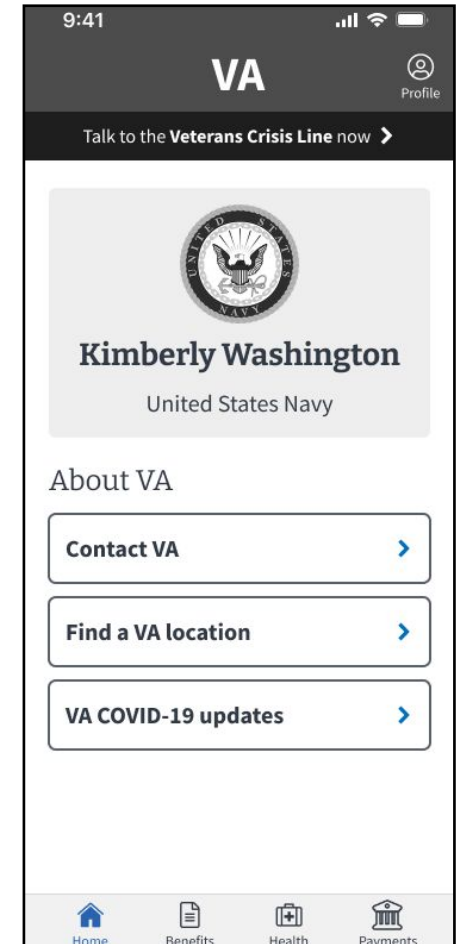
A deeper dive: Positive reactions

- **Simple, easy to understand** (6/13)
  - **P6** "Not as complicated, on the desktop there's a lot more information and stuff to choose from, this is a lot more simplistic."
  - **P14** "Clear, was easy to understand. Using new devices, you have to get used to it. It would take a bit of time, is that the right place to go? But it's easy enough to figure out. I've used [VA services] quite a bit so I would know an idea of what to click."

- **"Everything you need in once place"** (4/13)
  - **P5** "It's great. You need to implement it as soon as possible. Everything you need to do without searching around."
  - **P13** "YAY! A one stop shop!" "I would use it a lot. I like it because I'd be able to share with other Veterans. This one I can tell them, it's one app to do everything you need to do on there."
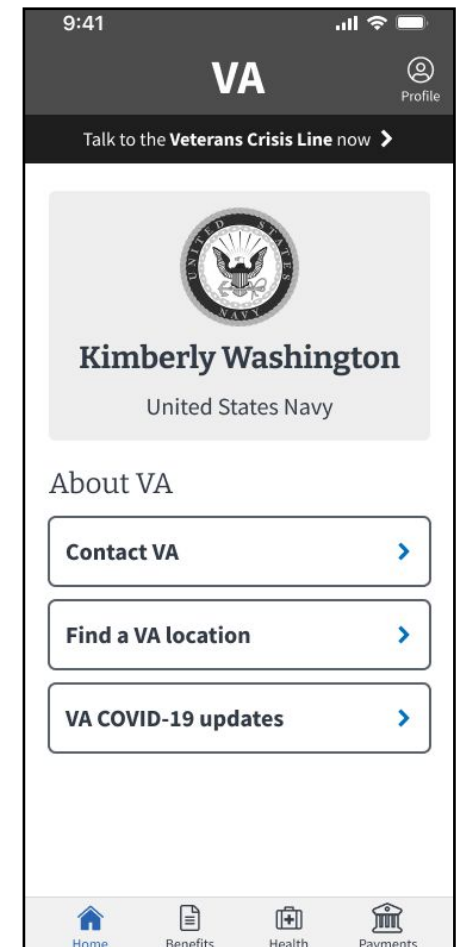
A deeper dive: Positive reactions (cont.)

- **Tab bar serving as a reminder/guide** (3/13)
  - **P2** "When I'm in 'VA mode,' the [tab bar] icons are reminders of other things I need to do."
  - **P10** "Down at the bottom [the tab bar], you can kinda guess in the ballpark which one of those Icons you're going to use to get you to where you want to pretty quickly."

- **Being able to switch back & forth between categories (Health & Payments, Benefits & Payments)** (3/13)
  - **P12** "Easy to navigate [between categories] with [tab bar]."
  - **P19** Described switching between Benefits & Payments categories to check % and payments being received.

- **Several participants described app/aspects of the prototype as "Personalized"** (4/13)
  - **P10** "My name was there, had my branch of service, that was cool. Kind of giving me a shoutout. " [things are] "personalized". "It knows me, knows my branch of service."
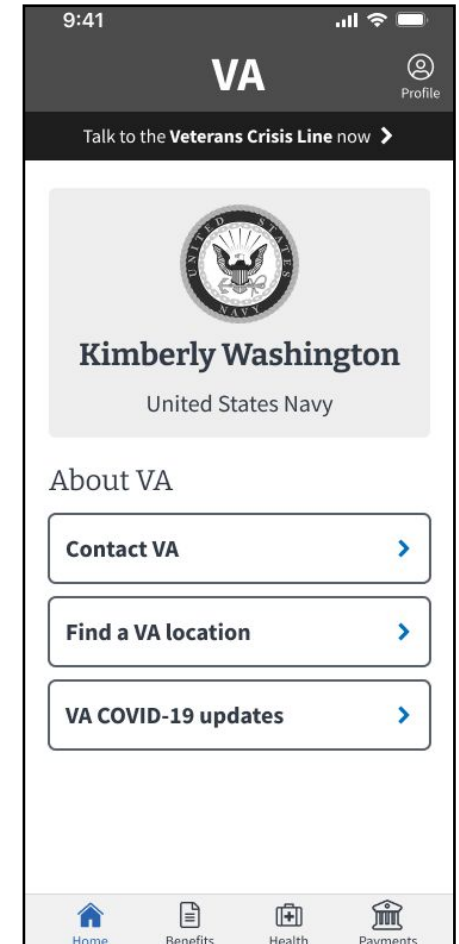
A deeper dive: Positive reactions (cont.)

(Reacting to seeing their name and branch of service on Home)

P18: "[It's] a cool touch. Another little personalization that says **'you're more than just we'**. We've been regarded for far too long as just name, rank and serial number. But to have that little touchback…
I'm not just a 'VA person.'
I'm a *Navy* person who is *with VA*.
Thank you."

A deeper dive: Other pain points

- **Didn't notice Messages feature:**
  4 participants mentioned that they didn't notice Messages (it wasn't included as a study task, but identified by participants as important).

- **Profile/Email:**
  Several participants did not see the save button in the top right corner (but commented on the delete email link).

- **Phone is too small:**
  1 participant mentioned an issue with screen size
  - **P13** "The reason I wouldn't use it is visual, phone too small. I have an iPad and use it because it's bigger. I would use it on my iPad if available."

- **Problems with Sign in/passwords:**
  4 participants mentioned issues with sign in or passwords in current app and VA websites
  - **P13** "I have a TBI and it is so frustrating to remember all my passwords (and go through login over and over and over)."
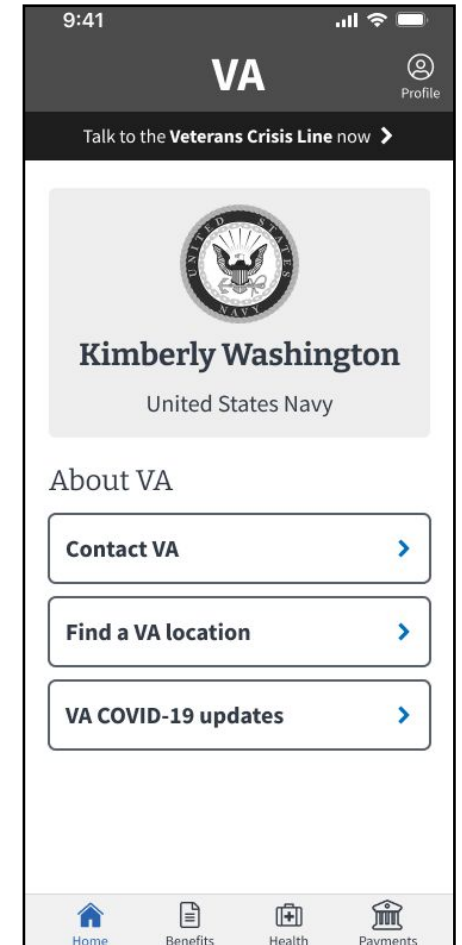
Appendix

Research materials

- [Findings](#)
- [Research plan](#)
- [Conversation guide](#)
- [VA Mobile App: Information Architecture & Navigation - High Level Project Summary](#)

Tools used for Synthesis

- [Navigation Usability Study - Analysis, Task Scoring & Notes - VA Mobile App (September 2022)](#) (no PII)
- [Navigation Usability Study - Observer Notes - VA Mobile App (September 2022)](#)

Pages and applications used

- Figma Prototype ([Android](#)) ([iOS](#))