MyCap

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OSU

REDCap Services

- **Grand Rounds**
  - Second Tuesday of Every Month at 11am

- **Office Hours**
  - Mondays from 11am-1pm and Wednesday from 1pm-3pm

- **Monthly Trainings**
  - Last Wednesday of Each Month at 12pm

- **Thursday Consults**
  - Scheduled

- **Form Reviews**
  - Scheduled

MyCap

- What is MyCap?
  - An external module for base REDCap
  - A mobile App for **participants to download** to complete data collection from a mobile device
 - Used to collect patient reported outcomes on a schedule
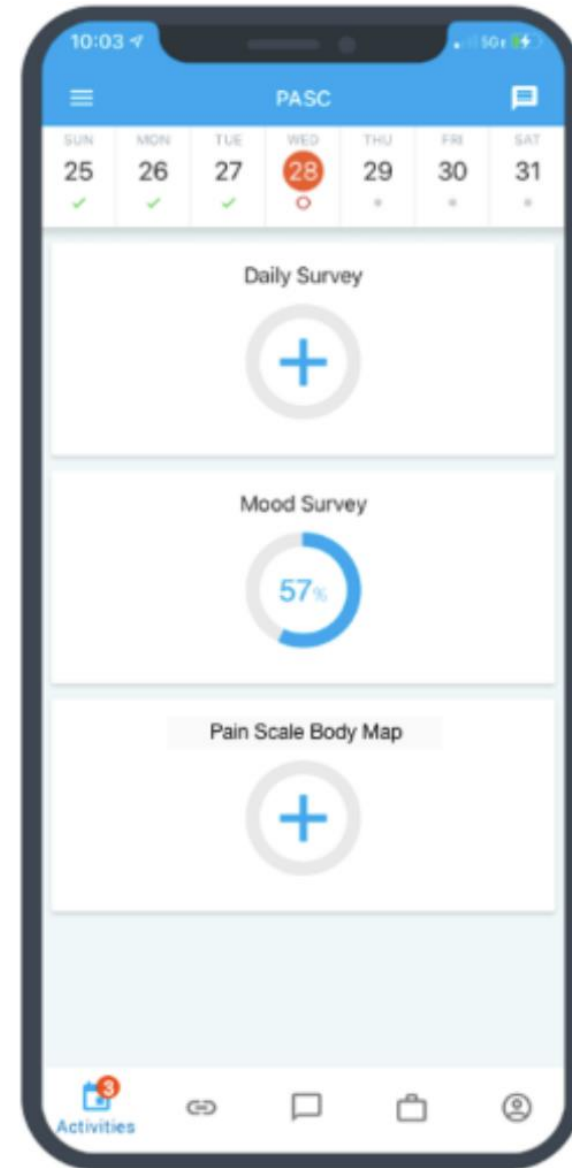
MyCap vs. REDCap vs. REDCap Mobile

Which do I use?

1. The **traditional REDCap** web surveys work well on phones and tablets whenever sustainable internet connectivity is available. Can be used for surveys or data collection.

2. The **REDCap Mobile App** is designed primarily for research teams sending research coordinators into the field for in person data collection, where sustainable internet connectivity is not available.

3. **MyCap** is used in longitudinal studies with frequent requests (surveys or active tests) for patient reported information.

4. **Third-party integrations** (e.g. Twilio) allow SMS collection or invitations to complete web-based surveys when singular reminders are helpful.

MyCap vs. REDCap vs. REDCap Mobile

Which one do I use?

What REDCap platform should I use to capture data from participants?
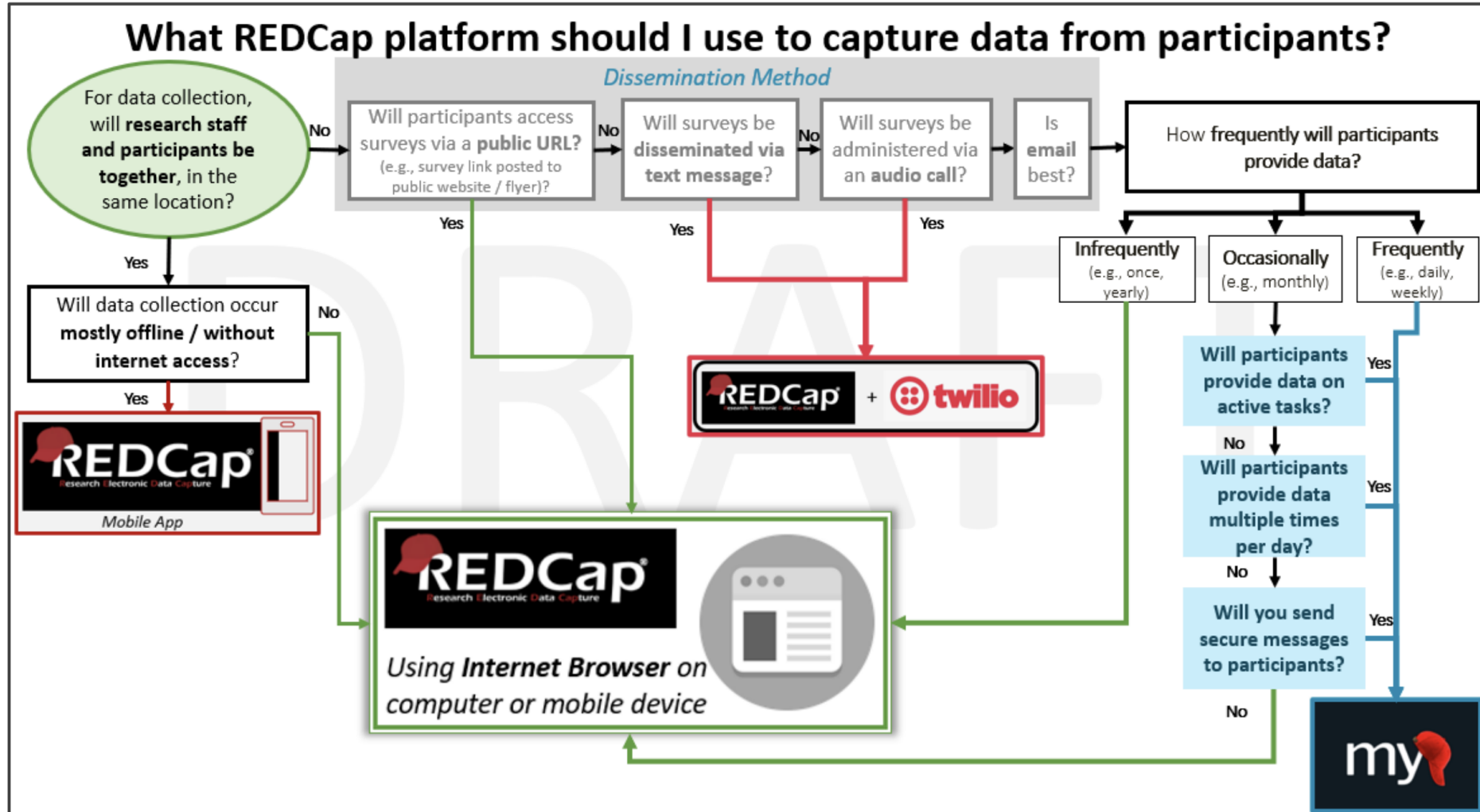
MyCap

- Compatible with iOS and Android (more limited)
- Supports REDCap Surveys in **classic** mode
- Captures active tasks
  - More on this later
- Flexibility with scheduling
  - One time and recurring tasks
- Can collect data multiple times per day
- Automates notifications
  - When tasks/ surveys are due

MyCap

Features Cont.

- Communication with participants
- Information screens
  - Project overview, study contacts, "get support", etc.
- Custom themes for the project (not supported by Android)
- Provides links to websites and web-based resources
- A single participant ca be in multiple projects/ studies if needed
- Offers 6 digit passcode security (if desired)

MyCap

Workflow

- Researchers use REDCap as normal to create instruments

- Researchers use the MyCap module to schedule when instruments/tasks should be taken

- Participants download the MyCap app, scan a QR code to load the appropriate project, and enter data when needed

MyCap

at OSU

- Separate server from Scarlet and Gray
  - Uses same login as Scarlet
    - Requires OSUMC credentials to access
  - https://redcap-mycap.osumc.edu/redcap/
- Request project in Project Request Form
- Reqeust access in Account Request Form

Is this project related to MyCap? ○ No ✖ Yes

Which server does the User need access to?

(Please select all that apply)

☐ Scarlet (old PHI)
☐ Gray (old Non-PHI)
☐ HEAL
✖ MyCap
☐ Containers
☐ Unsure

MyCap

Life Cycle of Project

1. Request a REDCap project on the MyCap server
    i. A REDCap Admin will turn on the External Module

2. Build your surveys
    i. Or have RIT build it with FFS or Voucher support

3. Meet with REDCap Admin to setup

4. Design the MyCap interface
    i. Schedule when and how often tasks/survey should appear
    ii. Create information screens
    iii. Create a custom theme

5. Test and move to Production

MyCap

The Module

1

2

3

MyCap

Configure App: About

- Title of project
- Description
- Image for project
  - Can be a system image or custom image
- Can add multiple pages (e.g., "About" page)

MyCap

Configure App: Theme

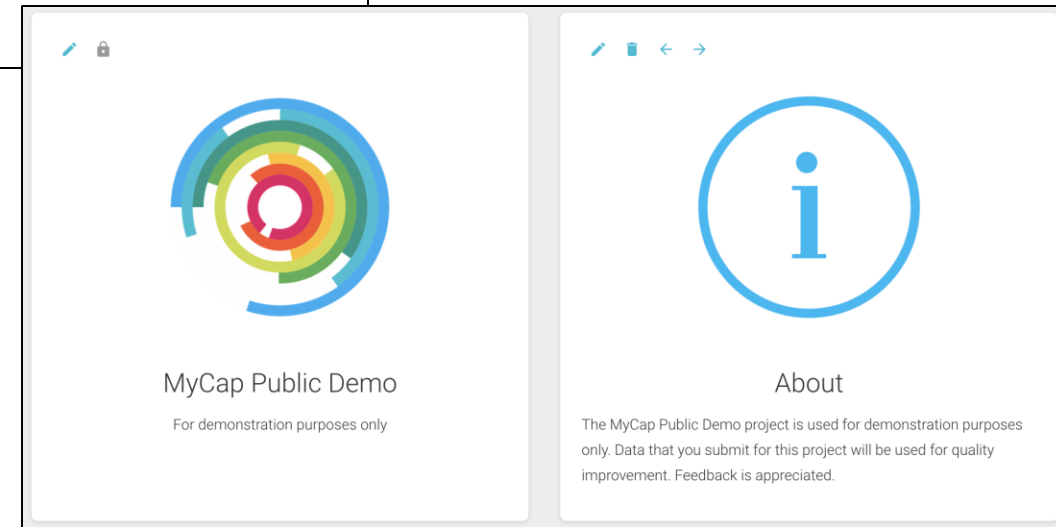- Set up Project Colors
- Can use pre-defined palette or create custom

MyCap

Configure App: Setup

- By default, tasks are scheduled based on participant's app **install date,** or the date they join the project

- On the Setup page you can toggle on/off the option of a **baseline date****, or a date chosen by the participant. Set up the instructions for collecting the date are also created here.

Baseline Date

○ Use baseline date?
○ Include instruction step?

Instruction Step
Title *
Start Date

Content *
Events can be scheduled relative to a start date. A schedule will be generated once you select a start date. All language can be tailored to fit your needs.

Task
Title *
Start Date

Yes/No Question *
Did you start SOMETHING today?

Date Question *
When did you start SOMETHING?

SAVE

MyCap

Configure App: Tasks

- Where you add and edit tasks (surveys and time points) in your project

New task (survey)

New active task

Edit task

Instrument	Enabled	Title	Format	Schedule	Actions
Participants	Cannot enable				
Welcome	Yes	Welcome	Questionnaire	One time	
Morning Checkin	Yes	Morning Checkin	Questionnaire	Repeats daily	
Peak Flow Rate	Yes	Peak Flow Rate	Form	Infinite	

NEW   NEW ACTIVE TASK   ONLINE DESIGNER

Search records

MyCap

Configure App: New Task

Task

REDCap Instrument

Welcome

"Turns off" survey in MyCap

⬤ Collect data for this REDCap instrument?

Title *

Name for Task that participants see

Welcome

Format

Questionnaire**: 1 question per card with a "Next" button between questions
Form: All questions for that survey on a single card

⦿ Questionnaire
◯ Form

Card Display

Crates a % complete figure**

⦿ Percent Complete
◯ Chart

Creates a chart for tracking things over a time period

Card Display Example

Example Percent Card

60%

Options

Allows surveys to be completed retroactively

◯ Allow retroactive completion?

Allows participant to save and return
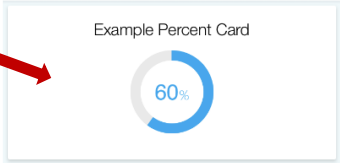
⬤ Allow save and complete later?

◯ Include instruction step?

Creates instruction and/or completion step

◯ Include completion step?

INSTRUCTION STEP	COMPLETION STEP
Title *	Title *
Content *	Content *

SAVE   ONLINE DESIGNER

MyCap

Configure App: New Task

The date the task is based on;
Baseline IS RECOMMENDED

- One time: Task is only completed once
- Infinite: It is always available
- Repeating: Choose how often it repeats
  - Daily (once daily)
  - Weekly
  - Monthly
- Fixed: Only appears on certain set days of the study (ex: Day 1 and Day 7)

How many days it is delayed from the date chose in "Relative to"

Schedule

Relative To
○ Install Date
◉ Baseline Date

Type
○ One Time
○ Infinite
◉ Repeating
○ Fixed

Delay
# of Days *
0

Ends
◉ Never
○ After Number of Occurrences
○ After Number of Days
○ On Date

SAVE

Repeats
◉ Daily
○ Weekly
○ Monthly

Every	On
1 WEEK	☐ Sunday
	☐ Monday
	☐ Tuesday
	☐ Wednesday
	☐ Thursday
	☐ Friday
	☐ Saturday

Every	On Day(s)
1 MONTH	1,7

This section only appears when "Infinite" or "Repeating" is selected; how many times it repeats

MyCap

Configure App: New Active Task

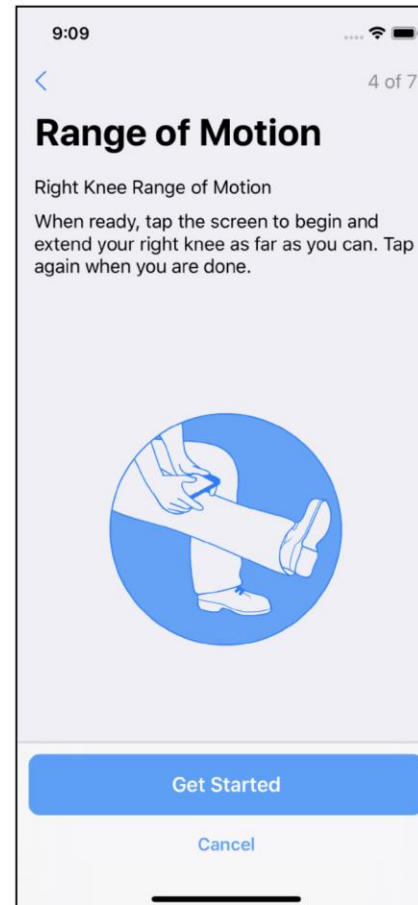| Category	Name	Platform	Notes	Actions
Motor Activities	Range of Motion	🍎		+
	Gait and Balance (Short Walk)	🍎		+
	Tapping Speed	🤖🍎		+
Fitness	Fitness	🍎		+
	Timed Walk	🍎		+
Cognition	Spatial Memory	🍎		+
	Stroop	🍎		+
	Trail Making Test	🍎		+
	Paced Serial Addition Test (PSAT)	🍎		+
	Tower of Hanoi	🍎		+
	Reaction Time	🍎	Partially implemented. Results are not sent to REDCap.	+
Speech	Sustained Phonation	🍎		+
	Speech Recognition	🍎	Partially implemented. Speech recognition image is not supported.	+
	Speech in Noise	🍎	Not implemented	
Hearing	Environment SPL	🍎	Not implemented	
	Tone Audiometry	🍎		+
	dBHL Tone Audiometry	🍎	Not implemented	
Hand Dexterity	9-Hole Peg Test	🍎		+
Vision	Amsler Grid	🍎		+

MyCap

Active Tasks

- Asking participants to perform activities under (partially) controlled conditions while iPhone sensors collect data
  - To note: Active Tasks are **not available** on Android Devices, except Tapping Speed.
- ResearchKit™ includes several predefined tasks, which fall into seven categories:
  - Motor activities
  - Fitness
  - Cognition
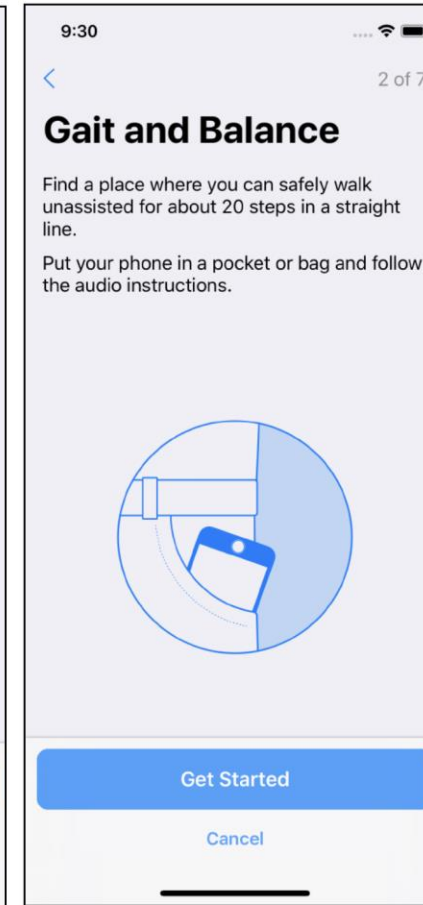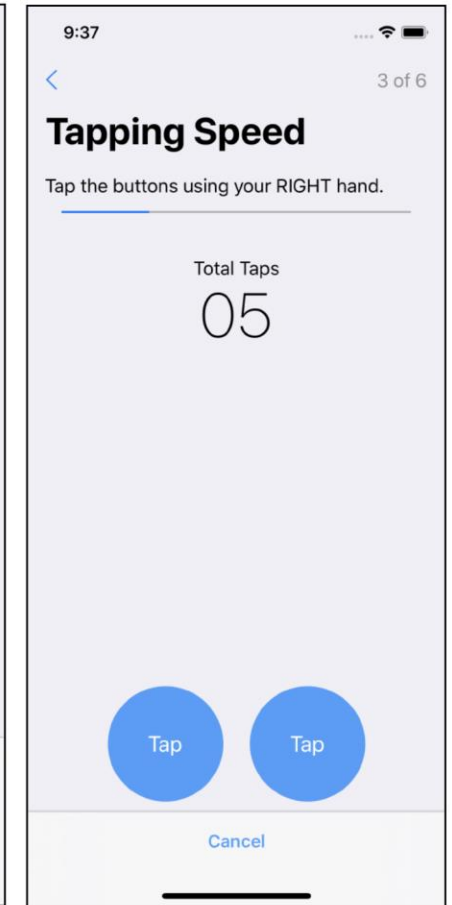 - Speech
  - Hearing
  - Hand dexterity
  - Vision
- http://researchkit.org/docs/docs/ActiveTasks/ActiveTasks.html

Active Tasks

Motor Activities

Task	Sensor	Data Collected
Range of Motion	Accelerometer Gyroscope	Device motion
Gait and Balance	Accelerometer Gyroscope	Device motion Pedometer
Tapping Speed	Multi-Touch display Accelerometer (optional)	Touch activity

Range of Motion

Right Knee Range of Motion

When ready, tap the screen to begin and extend your right knee as far as you can. Tap again when you are done.

Get Started

Cancel

Further instructions with an illustration

Gait and Balance

Find a place where you can safely walk unassisted for about 20 steps in a straight line.

Put your phone in a pocket or bag and follow the audio instructions.

Get Started

Cancel

Instruction step introducing the task

Tapping Speed

Tap the buttons using your RIGHT hand.

Total Taps

05

Tap   Tap

Cancel

The user rapidly taps on the targets using the right hand

Active Tasks

Fitness

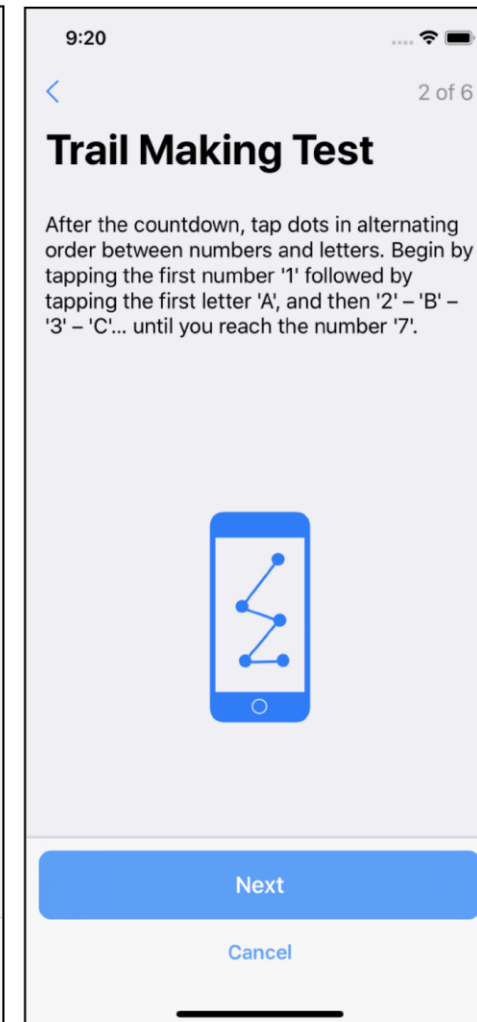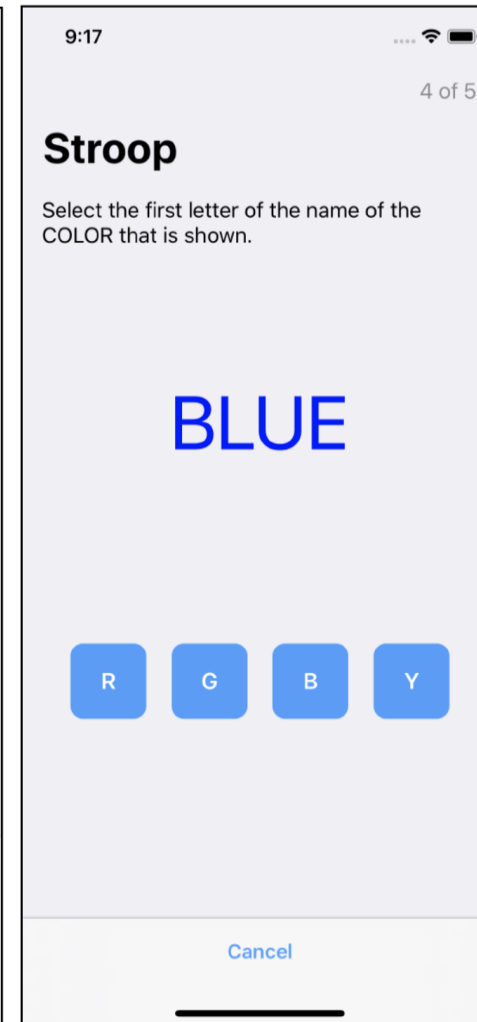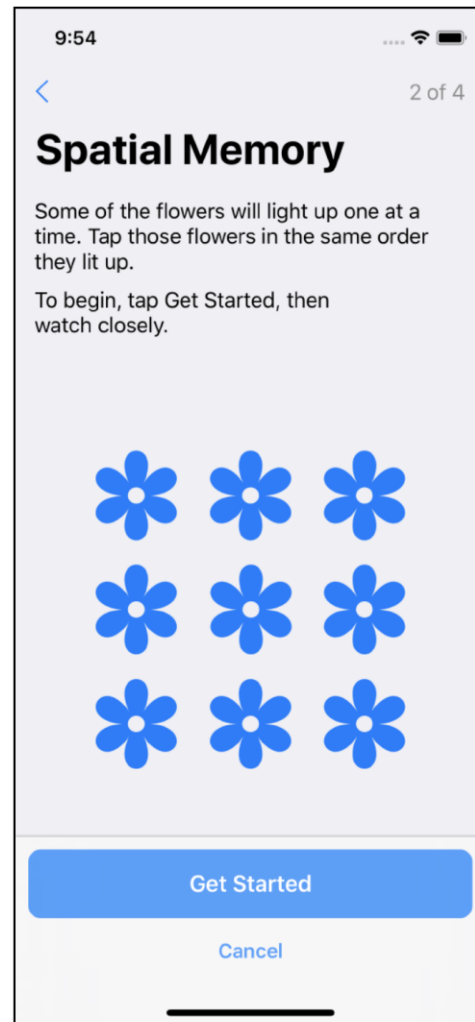| Task	Sensor	Data Collected
Fitness	GPS Gyroscope	Device motion Pedometer Location Heart rate
Timed Walk	GPS Gyroscope	Device motion Pedometer Location
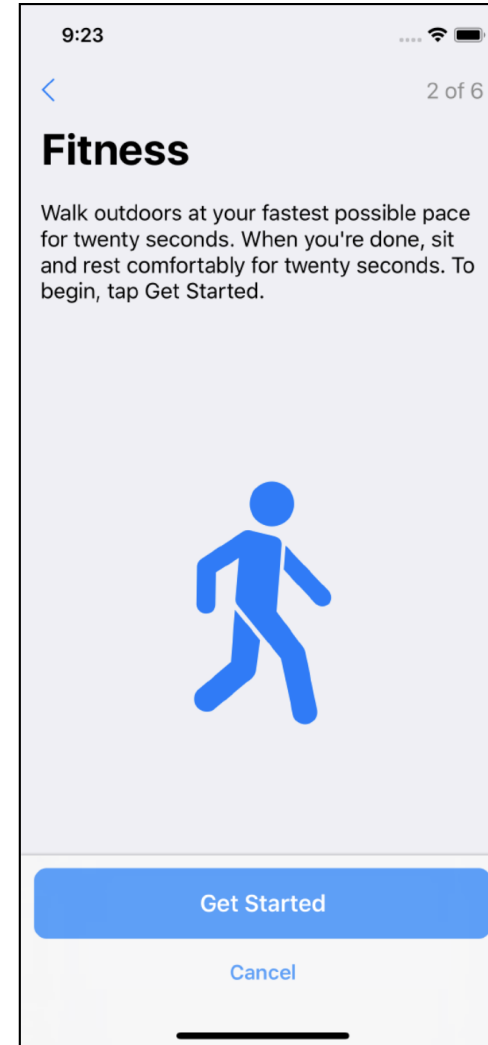
Instruction step introducing the task
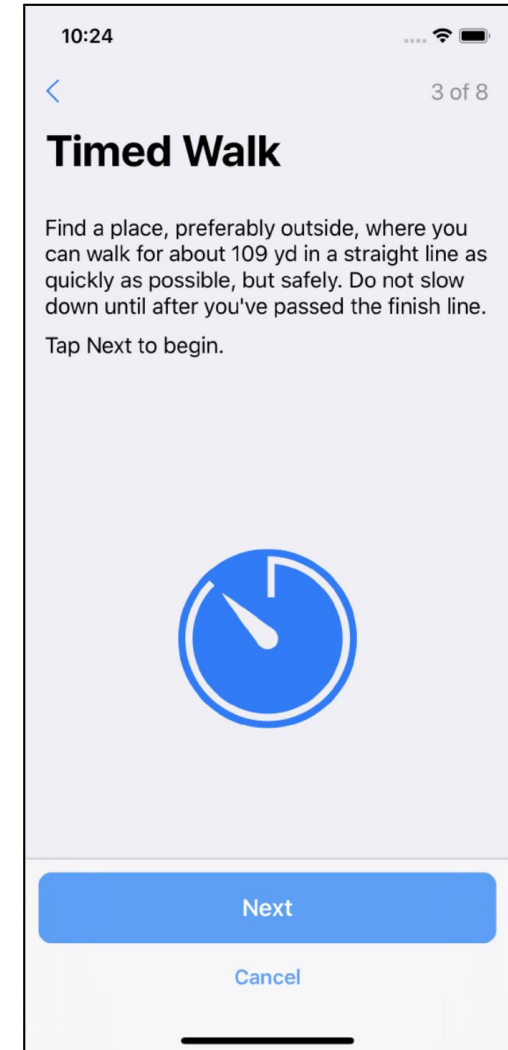
Instructions on how to perform the task

Active Tasks

Cognition

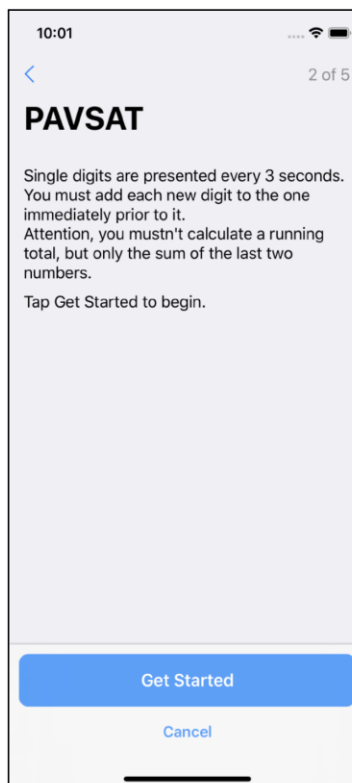| Task	Sensor	Data Collected
Spatial Memory	Multi-Touch display Accelerometer (optional)	Touch activity Correct answer Actual sequences
Stroop Test	Multi-Touch display	Actual color Actual text User selection Completion time
Trail Making Test	Multi-Touch display	Completion time Touch activity

Active Tasks

Cognition Cont.

Task	Sensor	Data Collected
Paced Serial Addition Test	Multi-Touch display	Addition results from user
Tower of Hanoi	Multi-Touch display	Every move taken by the user
Reaction Time	Accelerometer Gyroscope	Device motion

There are three variations of this test:
- PASAT: Paced Auditory Serial Addition Test - the device speaks the digit every two or three seconds.
- PVSAT: Paced Visual Serial Addition Test - the device shows the digit on screen.
- PAVSAT: Paced Auditory and Visual Serial Addition Test - the device speaks the digit and shows it onscreen every two to three seconds.
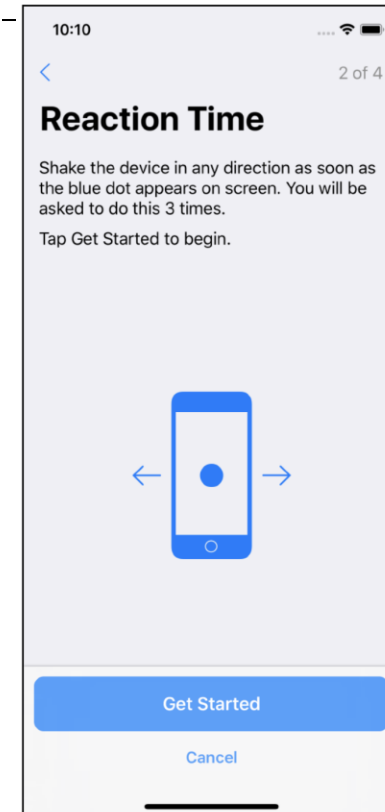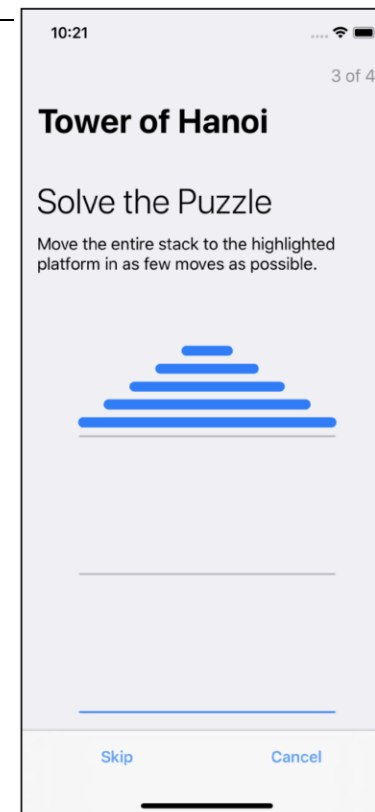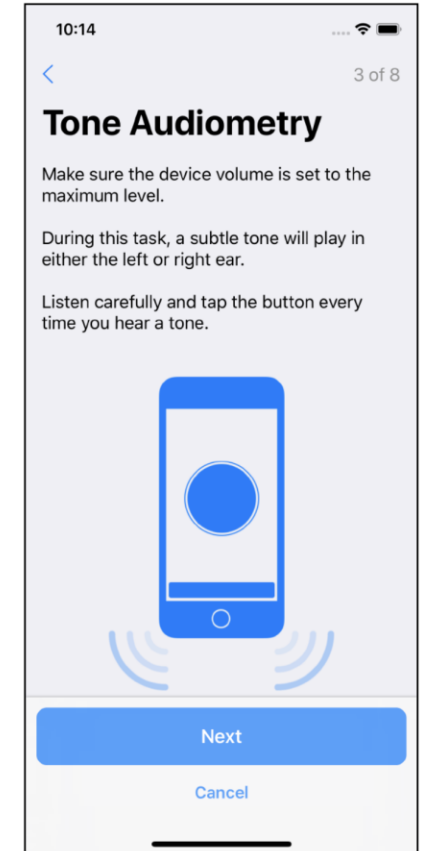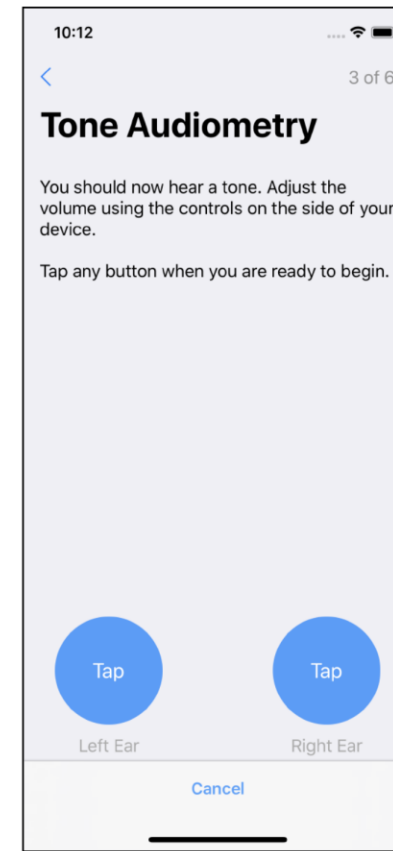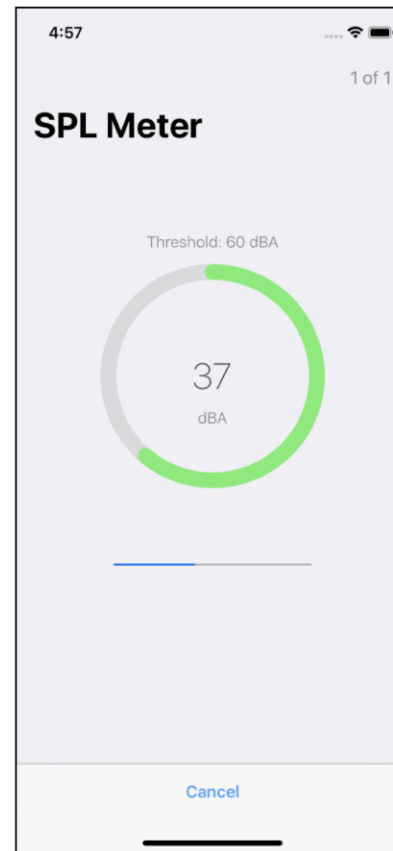
Active Tasks

Speech

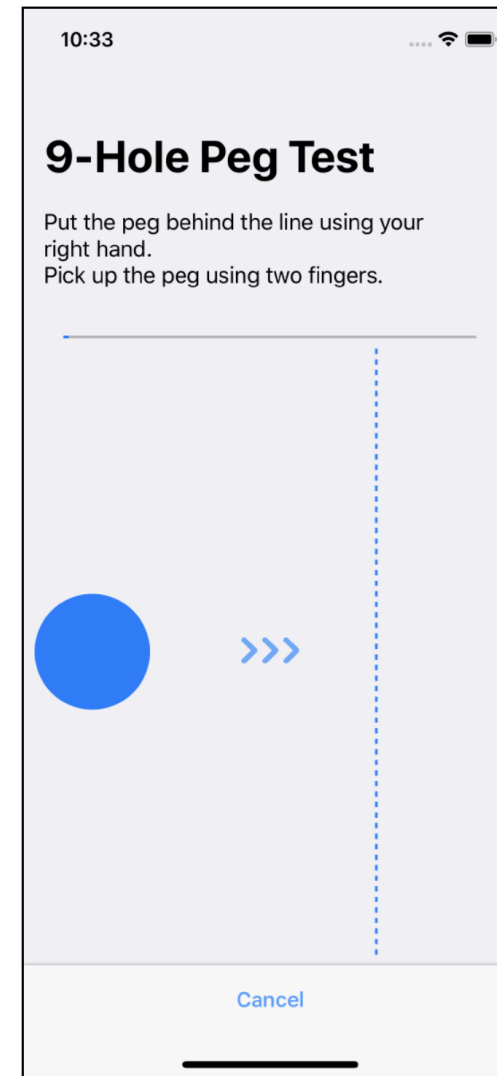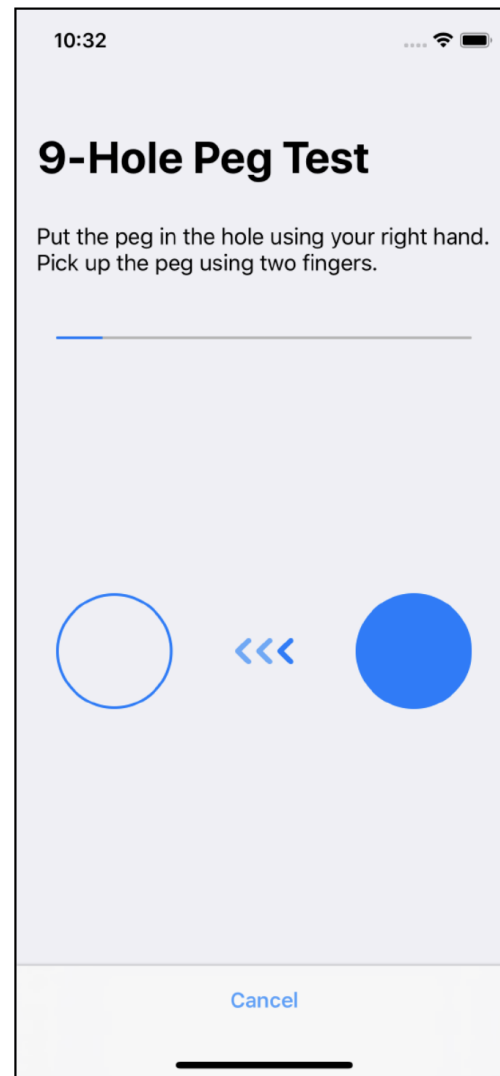| Task	Sensor	Data Collected
Sustained Phonation	Microphone	Uncompressed audio
Speech Recognition	Microphone	Raw audio recording Transcription in the form of an SFTranscription object. Edited transcript (if any, by the user)
Speech-in-Noise	Microphone	Raw audio recording Transcription in the form of an SFTranscription object Edited transcript (if any, by the user). This can be used to calculate the Speech Reception Threshold (SRT) for a user.
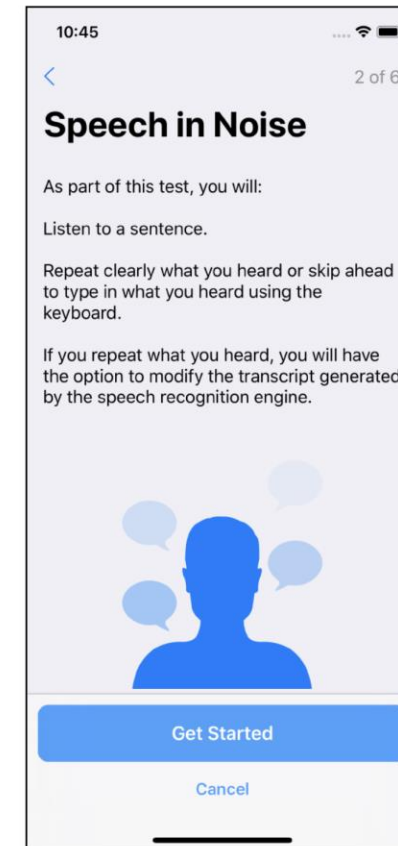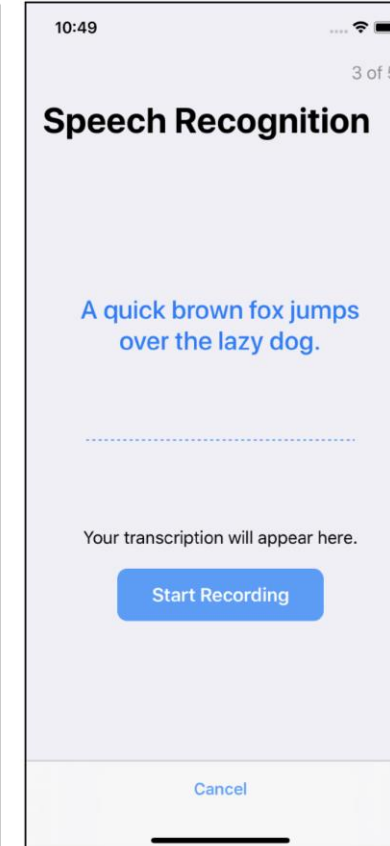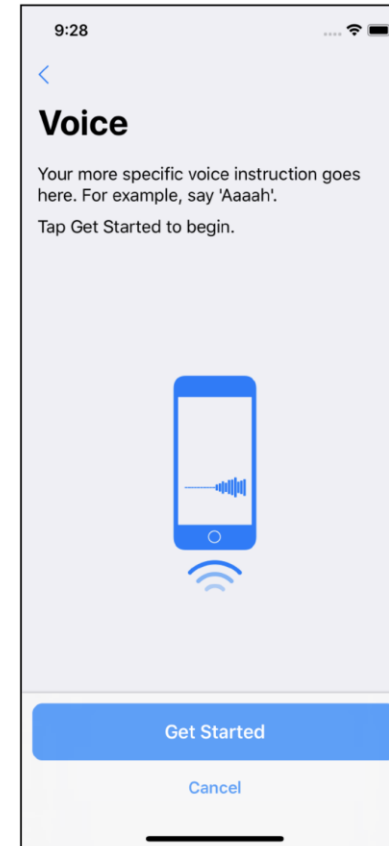
Active Tasks

Hearing

| Task	Sensor	Data Collected
Environment SPL	Microphone	Environment sound pressure level in dBA
Tone Audiometry	AirPods Headphones	Minimum amplitude for the user to recognize the sound
dBHL Tone Audiometry	AirPods Headphones	Hearing threshold in dB HL scale User response timestamps

Active Tasks

Hand Dexterity

Task	Sensor	Data Collected
9-Hole Peg	Multi-Touch display	Completion time Move distance

Active Tasks

Vision

Task	Sensor	Data Collected
Amsler Grid	Multi-Touch display	Touch activity Eye side Areas of distortions as annotated by the user
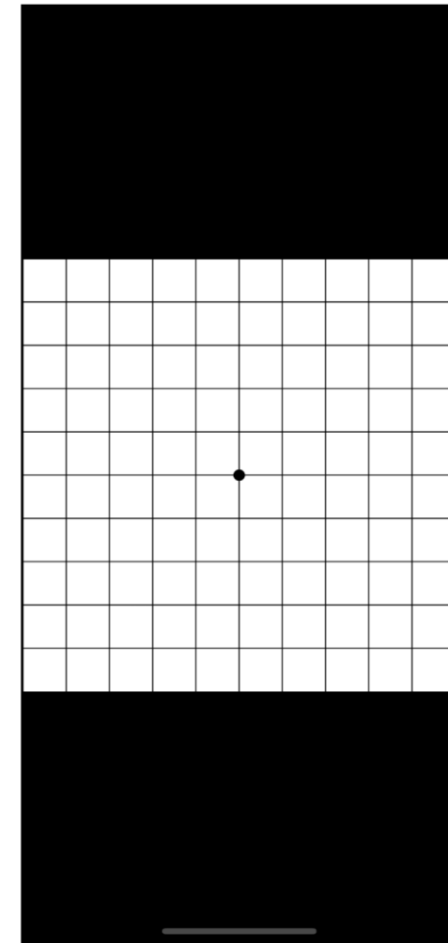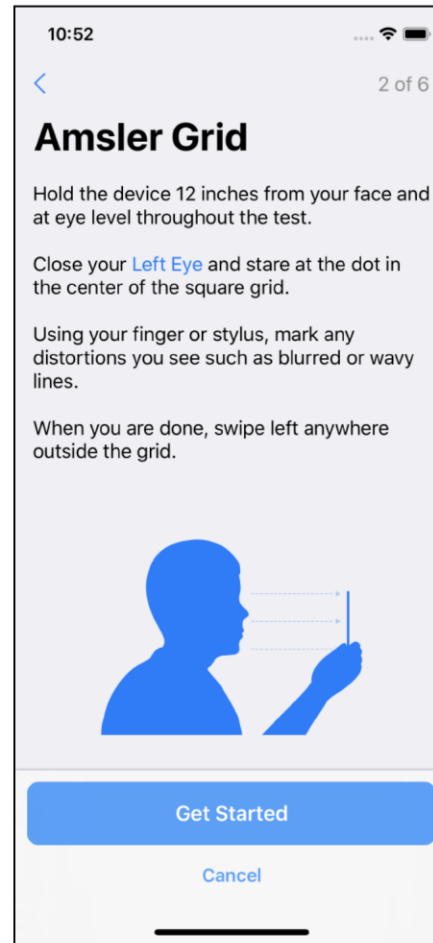
MyCap

Participant Requirements

- Pre-identified set of study participants
- One participant per device
  - If multiple people in household are participating, each needs a separate device
  - Currently developing multiple profile options for future
- One device per participant
  - Not recommended to login on different devices

MyCap

Communication with Participants

- The research team can communicate with the study participant via secure text messaging system at no cost

- MyCap uses its internal messaging system. It is not using a third-party service. There are no data charges

- The participant will see the message 'You have a secure message waiting' displayed. When the participant clicks on that push notification, MyCap calls REDCap database for the message

MyCap

Setup: Participants

- Add New participant
- Edit participant

- Scan QR code (or send link via email), view Install and Baseline Dates, and message participant directly

To read more about sending via email: https://projectmycap.org/wp-content/uploads/2022/02/QRCodeOverview-Quick-Guide_20210611.pdf

New Participant

First Name *

Last Name *

CREATE   ‹ BACK

First		Last		Install Date		Baseline Date		Actions
Amanda		Carroll						✏

Amanda Carroll

PROFILE   MESSAGES

Edit Participant

First Name *
Amanda

Last Name *
Carroll

Install Date

Baseline Date

SAVE   ‹ BACK

Participant QR Code

MyCap

Participant Experience

1. After providing consent (completed in a separate project), a survey participant receives a QR code from the research team
2. Participant goes to the app store on their device and downloads the MyCap app
3. Participant opens the app and is prompted to scan the QR code
4. Participant receives push notifications when they need to complete a task
5. Participant opens app and completes tasks on calendar
6. When the study is completed, the participant uninstalls the MyCap app from their device (or, if participating in multiple MyCap projects, deletes the project from their MyCap app)

MyCap

Setup: Publish

- If/ When you make edits to your live MyCap project you will need to "push" your edits live. To do this, use the "Publish" section.

- This will create a new version with your edits

Version 8

PUBLISH NEW VERSION
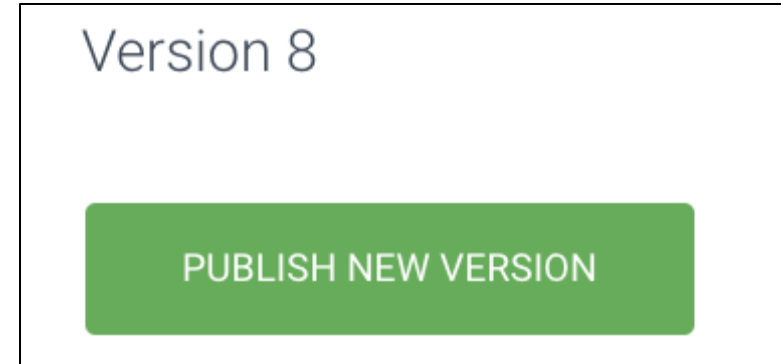
MyCap

Demo

- If you would like to learn more about MyCap and/ or Demo MyCap to see if it would fit your needs, go to https://projectmycap.org/ and scroll to the bottom

- Getting Started Quick Guide: https://projectmycap.org/wp-content/uploads/2022/04/Getting_Started_Quick_Guide.pdf

Announcements

- **REDCap Upgrade**
  - July 25 from 7am-12noon
  - Please expect all servers to be offline during this time

- **Monthly Training**
  - July 27 at 12pm
  - Design Part 2

- **Grand Rounds**
  - August 9 at 11am
  - Overview of New REDCap Version and Reporting in REDCap