

Leslie Black lesliemarieblack@gmail.com
Brooks Clayton brookstone16@gmail.com
Claudia Zacharias claudia.zacharias@gmail.com

Table of Contents

| | |
|------------------------------------|-----|
| Executive Summary | 3 |
| Business Model Canvas | 9 |
| Competitive Brand Matrix | 10 |
| User Interview Discussion Guide | 12 |
| User Interview Notes | 14 |
| Affinity Mapping | 21 |
| Research Synthesis | 22 |
| Persona | 23 |
| User Journey | 25 |
| Competitive Feature Analysis | 29 |
| Feature Prioritization Matrix | 30 |
| MoSCoW Mapping | 31 |
| Design Studio | 32 |
| Insights to Features | 33 |
| Scenarios + User Tasks | 35 |
| Mid-Fidelity Wireframes | 36 |
| Usability Testing Discussion Guide | 50 |
| Usability Testing Round One | 53 |
| Usability Testing Score | 58 |
| Usability Testing Round Two | 61 |
| Usability Testing Score | 66 |
| Task Detail + Test Analytics | 69 |
| Mobile Mockups w/ Annotations | 75 |
| Prototype Links | 98 |
| User Experience Analytics | 99 |
| Mobile Mockup Recommendations | 101 |
| Desktop Mockups | 107 |
| Recommendations + Conclusion | 115 |

Executive Summary

HYPOTHESIS

As users we have grown so accustomed to readily available contact with everybody we know. On a constant basis we check our devices to see who has reached out to us, commented on a photo, sent us an email or meme. We don't think twice about how accessible we are to each other, in fact we often take it for granted, never really considering how much this constant communication has become embedded into our daily lives.

We are gifted with excellent technology that facilitates the quick transfer of information however, sometimes this technology enabled by devices falls short. We have too many applications, accomplishing a variety of tasks that while created to make our lives more streamlined and efficient sometimes just magnify issues by adding extra unnecessary steps to a process that needs simplification.

On a personal level when an application isn't functioning the way it is intended or when an individual we are trying to connect with feels out of reach it is simply an annoyance, unless there is a special circumstance or emergency. In certain professions and industries though, communication is the nexus of each and every process and in no arena is this more true than health care. The amount of communication that takes place in every hospital, practice and medical facility is constant, time sensitive and of extreme importance. Doctors, nurses, technicians, staff of all kinds are relying on systems to be quick and effective. Without proper tools to foster consistent and timely communication procedures and processes are put on hold, whether it's for an hour, five minutes or a day, in the medical field that's simply unacceptable. Patients require and expect that communication is fluid between the individuals who are caring for them, their well being literally depends on it.

ASSUMPTIONS

While one would expect that the medical industry is ahead of the curve in all aspects of technology, that is simply not accurate. In fact, somehow when it comes to an industry that we all fully depend on, our doctors, nurses and technicians are seemingly stuck with completely antiquated systems and processes. Each hospital and practice utilizes a completely different set of software and tools to communicate and operate. A simple answer to a simple question may go through such an elongated series of steps one can only shake their head and wonder why it has taken an industry that has undergone so many advancements so long to have a common system in place for simple communication and directives.

INITIAL PROBLEM STATEMENT

How might we provide access and communication throughout the medical professional and field?



Executive Summary

TARGET AUDIENCE

Our target audience is the user who is most aligned with our product intention and solution. In some cases the target user for a product casts a very wide net, the more users the better. However, there are times when a product has an extremely targeted user set and that is the case with this product. With the launch of this product we hope to alleviate pain points and address the needs and wants of a specialized group, in this case, individuals in the medical profession.

The ideal is that this product is utilized by all doctors, nurses and hospital staff that need to communicate with each other on a common platform, to enable them to quickly, effectively and securely interact with each other.

OPPORTUNITY

The opportunity space for this product is massive. Hospital systems are expanding at a constant rate, the health care industry grows each day. The product is suitable for use in every hospital, clinic and medical building whether is a public or private institution. The daily users of this product, if adopted, is the millions of individuals who are reliant on communicating in the medical field, every doctor, nurse and technician will have access to this product.

PROBLEM SPACE/SCOPE OF WORK

Individuals in the medical industry, whether they be in a large hospital system or in a small clinic, need to communicate with each other regularly. These interactions are often across different teams, different specialties and in different buildings. Though this collaborating and communicating is essential to a job well done in the medical field, it is often hindered by a variety of factors. Our research has shown that often users in the medical field do not have easy access to their associates contact information, when they do have a phone number there is often still a gatekeeper and lack of direct contact. On top of that, there is a lag in response time and no way to indicate the level of importance in correspondence, medical professionals are using antiquated means of communicating. Often this doesn't impact the quality of care for a patient whatsoever, but sometimes it means that a patient may not receive the liver they've been waiting for months for or that an individual may require another round of invasive tests. There has to be a way to ensure that medical professionals have easy and quick access to each other.

REVISED PROBLEM STATEMENT

How might we provide users within the medical profession a way to have access to each other that allows for system wide communication?

Executive Summary

METHODOLOGY

- **Business Model Canvas:** Our team created a business model canvas to give us insight into what our organization actually does, we aren't just creating a product, we are developing insight into an entire company effectively; the business model canvas is a visual representation of the business plan which helps us understand the problem we are solving for
- **Competitive Brand Matrix:** In order for our team to realize and research the industry in which we are building our product it is paramount that we understand who our competitors are. We create a list of actual and potential competitive brands, from there we put each brand into a table to visually represent how aligned they are with our vision or how general of a product they've developed. This gives us an interpretation of research that enables us to clearly see where our product fits in the sphere of the industry we are designing in.
- **Competitive Feature Analysis:** To elevate our product and most effectively consider the features that our application will have we have to consider those that our competition has within their product. As designers we create a table of our top competitors and take a deep dive into what features they provide the user. When we are able to see and evaluate what they have, what features users are relying on and also what features users don't seem to interact with much we are able to determine what features we will build into our product.
- **User Interview Discussion Guide:** The discussion guide is our map and script for conducting interviews, by having a set narrative we are able to deduce the data we collect. The questions are target specific for our participants on both sides
- **User Interviews:** We conduct user interviews to gather data and insight into the users situation in both general and product specific categories. From user interviews we are able to learn about our target user, find out what is working for them and what areas create friction for them. This helps us address potential pain points as well as needs and wants of our user. Interviews also enable us to determine what will create the most enjoyable experiences for our user
- **Research Synthesis:** Affinity mapping, which is a visual way to pull out themes and patterns from our interviews, is the method we used to synthesize our user interview research. This helps determine the key takeaways so we can best address the goals, needs and pain points of our users
- **Persona:** Our team built two separate persons, these are fictional representations of our target user, this helps to humanize our user while creating empathy. By referring to our persona throughout the process we keep in mind who will use our products versus building the product for ourselves which designers as human beings have a tendency to do
- **User Journey Map:** The user journey map creates a visual display of the sequence of events a user would have to go through to complete a task in the space that we are creating a product for. This is a way to identify the emotions a user experiences, as well as noting their highlights and pain points. Our goal is to alleviate the friction that a user experiences throughout their process



Executive Summary

METHODOLOGY CONTINUED

- **Feature Prioritization Matrix:** This is a visual representation of the features that we feel are most necessary to include in our first iteration of the product. We base these features off of the research we have gathered from user interviews. This shows us what is considered paramount as well as what features can wait
- **MoSCoW Map:** This modality for compiling feature piggybacks off of the feature prioritization matrix but gives more structure into the timeline in which features will be introduced to the product using categories "must, should, could, won't"
- **Application Programming Interface:** We research and utilize application programming interface during our research phase to determine whether or not the product we are building is actually possible. APIs inform the design process because they are the backbone of communication in all things across the world wide web, if an API doesn't exist then we cannot build a product around it
- **Design Studio:** As designers we utilize a mechanism that we refer to as "Design Studio" this is the act of each team member sketching their initial ideas of what the product should look like as far as layout goes. We share our sketches with each other, take out the bad, steal the good and repeat this process until we create a design everybody feels not only good about but that also takes care of the needs of our users
- **Mid-Fi Wireframes:** Mid-fi wireframes are grey scaled drawing or computer generated first glances at the design, they help us sort out the layout and content for the product, we utilize this methodology because it is quick and costs very little
- **Usability Testing:** To ensure that our mid-fi and hi-fi wireframes (described below) are intuitive and usable for our audience, we run a round of testing with five users, giving them four tasks to complete
- **Mobile Mockups:** Mobile mockups, also referred to as hi-fi wireframes are the beginnings of the final step in the design process. These designs have the color and typography that we will use in the final design. They are the most comprehensive design, they introduce our minimum viable product, that we then test again
- **UX Analytics and Key Performance Indicators:** As a team after we have reached a product that we feel is suitable for launch we utilize UX analytics and KPIs to measure the success of the application that we've built. The metrics inform the success of our product.



Executive Summary

WHAT WE LEARNED

When we think of the medical field, our first inclination is to assume that the individuals taking care of our health would have access to the most revolutionary tools available, or at least we'd like to believe that is true. However, we've all been to a new doctor and realize every time that we have to regurgitate our medical life story to them every time and we all think 'isn't there a better way?' This same story reigns true with doctors and medical personnel when they are trying to simply communicate with each other. It is unfortunate but seemingly true that people in the medical profession have a harder time communicating with each other than those in almost every other industry. Don't they deserve more? Don't they deserve the best?

We found that doctors, nurses and technicians are sometimes still utilizing a Rolodex for contact information, somebody on our team is too young to even know what a Rolodex is. We learned that the medical industry, while advancing us in a multitude of ways, is also still communicating internally by landline and taking notes on loose pieces of paper. They utilize a call center to get contact information, then they leave a message, after about five more steps an individual gets a response to their simple direct question.

HOW IT INFORMS OUR WORK

What would reduced lag time during communication look like for the medical profession? Would patients receive better care because doctors could focus fully on them instead of trying to track down the phone number of a referring physician? We honestly don't know, we haven't gotten there yet but we feel by creating a platform of pure and fluid communication between medical personnel that we are taking a leap in the right direction.

Our goal was to develop a thoughtful design that was respectful of the medical profession and all that they do for us. We wanted to give them the best technology available all within the palm of their hand, on their device that they are already comfortable with, that they already have a relationship with. We chose colors that are purposefully friendly and calming, they welcome the user to a place where they can chat with their teams, get the information they need to have a more efficient line of communication and be overall more effective throughout the day.

Business Plan

Business Model Canvas



PURPOSE

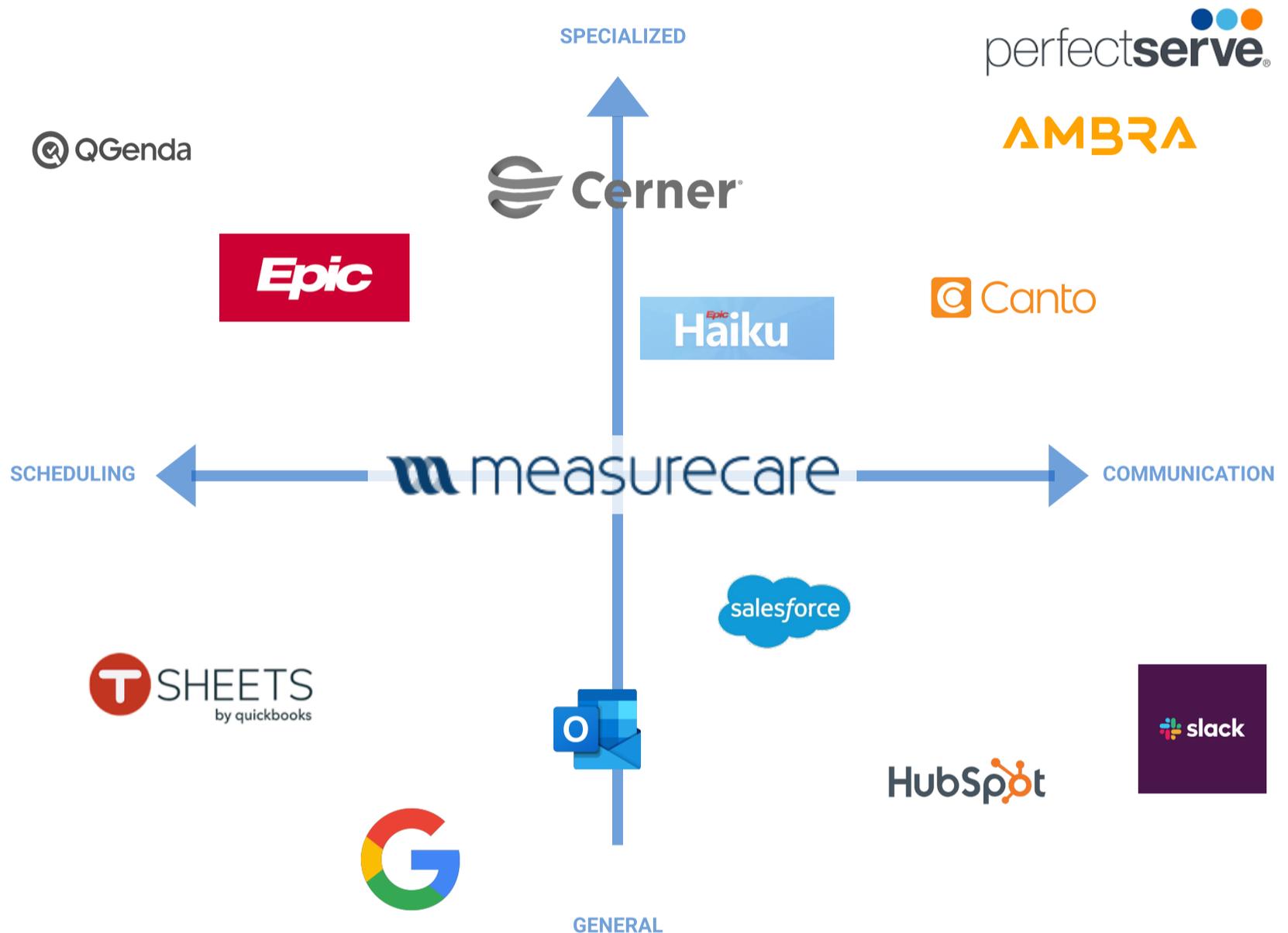
As a team, we created a Business Model Canvas of MeasureCare to give a visual representation of our business plan. This depicts our value, customer base, key activities as well as who benefits from the organization and what goals we are trying to achieve. This put us on a platform to best make decisions going forward with which product to create.

KEY TAKEAWAYS

From the business model canvas we were able to extrapolate the key insights into the company as a whole and focus on where our product can contribute to the revenue stream as well as create the best customer relationships. We have now gathered where MeasureCare will be utilized and by whom.



Competitive Brand Matrix



PURPOSE

We utilize a modality called a Competitive Brand Matrix to help us create a product that isn't just a duplication of an existing product. By researching brands in our industry space we can see how specialized their product is or how broad, what user set they are going after and where there is a lacking in user base. It enables us to position ourselves in the middle or to throw ourselves in a very specific direction to hit on a niche market.

KEY TAKEAWAYS

MeasureCare is uniquely positioned to facilitate both communication and scheduling equally and against its competition is suited to overtake the market in the arena of medical software. By maintaining the goal to create a product that is specialized for medical personnel its appeal will not waver.

Data Collection

User Interview Discussion Guide

1. Objective

Hello, our objective today is to talk to you about current communication processes in the medical field and gain insights on how we can improve upon your user experience.

2. Introduction

We are a team of user experience designers and we're interviewing individuals to assess how you currently use the app and what works or doesn't based on your needs and experiences.

- Today we're focusing on cross network communication in the medical field, how it is currently utilized as well as areas of friction
- Everything you say here is confidential between you and this team. Is it ok for us to record this chat?

3. ENTICE: Framing Opening Questions

- How long have you been practicing/working in medicine and what is your field?

4. ENGAGING: Specific Questions

- How often are you engaging in network wide communication?
- Does your employer provide communication devices with built in software? What is that software?
- What does it do, specific tools you use often?
- (If their network doesn't provide communication tools--What do they use for communication with other people in their field/networks?)
- Tell us about a time recently when you had to quickly get in touch with fellow medical personnel in another group.
- How easy or difficult do you find it to communicate outside of your direct team or practice?
Why?

User Interview Discussion Guide

- How do you currently manage scheduling with other medical groups or teams?
How about your direct team?
- What is your preferred method to communicate with other medical personnel?
Why?
- Is there anything in your current communications tools that you can't do now that you wish you could?
- How do you communicate insights around locations, practices, doctors etc. with your team?

5. EXIT: Final Thoughts

- Is there anything regarding communicating or scheduling across teams/locations that we haven't touched on that you'd like to talk more about?
- Are there any final thoughts you'd like to share?
- Do you have any questions for our team?

6. Extend: Follow up & Next Steps

- From here we'll speak to other interviewees and synthesize responses to find themes and pain points around communications and scheduling among your peers
- Feel free to email any of us, our contact information is in the emails we sent earlier
- Can we follow up with you if we have additional questions?
- Again, thank you so much for your time, we really appreciate the input and feedback.

PURPOSE:

The user interview discussion guide is our map and script for conducting our user interviews. The questions are target specific and help give insight into the current process the user is experiencing. It is carefully constructed to deliver questions that will help give insight into our target users needs, wants and pain points without being leading. By having a set narrative we are able to deduce a conclusion from the data we collect.

User Interview Notes

Rohan

Radiologist : Practicing for 11 years

Key Observations

- Primarily uses phone to communicate; it is quick
- Relies on call center and PACS communication system the most to speak with other doctors
- Tends to not do much texting

Behaviors

- Uses email daily to communicate
- Uses tools directly tied into PACS software; communicate through PACS for imaging, peer review
- Texts people sometimes (not much)
- Calls individuals directly

Quotes

- "Software has to be set at the lowest common denominator in healthcare setting; whole variety of physicians of different ages and capabilities for computer use; almost spoon-fed"
- "Calling clinicians is a whole other story, that's generally done by phone"

Process/Products

- Calls into call center; they get in touch with whomever he is trying to reach, either connect call or forward call to him later on
- Never uses Cerner to 'chat'
- Atlassian Confluence: created intranet for internal communications and resources
- Phone list is a big google sheet with different tabs
- Primordial software in PACS will get a doctor to him during business hours
- Qgenda for scheduling

Likes/Dislikes

- EMR doesn't work for everybody; some smaller private practices don't have it
- Hospital doctors are the hardest to reach, nurse-nurse-phone of doctor-doctor calls back "very painful"
- Non ideal situation after hours, no call center
- Needs a better way to reach clinicians

User Interview Notes

Patrick

Radiologist : Practicing for 25 + years

Key Observations

- Has the hardest time getting in touch with the referring physician
- Hard to keep straight all of the people and where they are and when

Behaviors

- 3 to 5 times daily in communication with colleagues
- Works in sub specialized group; when problem case he just calls somebody
- At a computer almost the entire day
- Has several phone numbers of physicians memorized and just calls them when there is a problem case

Quotes

- "It would be really useful to have cell phone numbers of referring physicians"
- "Wherever we're calling, we get a call report, have to go through front desk, they see if somebody can take the call. That eats up time"

Process/Products

- Sometimes uses Measurecare app
- Utilizes Qgenda from desktop for schedule; uses it to see where people are
- Uses personal devices
- Does not use app to contact physicians outside of his group; but will use it to contact ultrasound technician at another facility
- Rarely uses call center service
- Will email if very busy so he doesn't have to wait on hold

Likes/Dislikes

- Can look up specific ER care team; that is when app directory is most useful
- Having to call the front desk and go through gatekeeper currently; dislikes
- Everybody chips in and helps each other out in their workplace
- Like having an email which reaches all of the doctors

User Interview Notes

| | |
|--|---|
| Isabel | |
| Liver Transplant Specialist : Practicing for 18 years | |
| Key Observations <ul style="list-style-type: none">• People will physically find her on the floor; prefers in person communication• Wants a centralized platform for communication | |
| Behaviors <ul style="list-style-type: none">• Constantly communicating with staff and colleagues• Face to face communication is best; text loses a lot of details• Inter-professional team; they travel in a pack• Scheduling is through desktop, pre-populated list with providers she already uses | Quotes <ul style="list-style-type: none">• "Phone is saving grace"• "Face to face communication is best; text loses a lot of details"• "Communication can be really impactful for care, could delay care and patient could end up in hospital for several more days" |
| Process/Products <ul style="list-style-type: none">• Used to regularly use pagers; now she has it forwarded to her phone• EPIC- Electronic medical record system within her hospital; patient info for other doctors is here• Haiku for chats/texts with colleagues; nurses• In person communication and by phone with colleagues• Referring and primary doctor linked to patient file• Pages somebody to find out where a doctor is | Likes/Dislikes <ul style="list-style-type: none">• Communication challenges can delay care• Everything gets forwarded to her phone• She manages her own communication• Can't order any tests on mobile; must be done on desktop• EPIC will send her communication but it is very watered down• Email can be tone deaf or misconstrued |

User Interview Notes

Janice

Registered Nurse : 17 years, PACU

Key Observations

- Has to go through a gatekeeper to get a doctors number; their office determines whether its critical enough that the doctor be reached directly
- Busy all of the time, uses her computer system to reach doctors, waits for them to respond

Behaviors

- Constant communication while at work
- Has a laptop on wheels that she brings with her everywhere
- Phone is preferred method of communication; the person on the other end may need more info than she's given
- If there's something urgent she picks up the phone and dials 611; tells them what she needs and an operator will announce it over speaker system

Quotes

- "Scheduling? We don't do scheduling at all. There's a call out to recovery and whoever doesn't have a patient at the time gets it"
- "Putting in a call or leaving a voice message is better than relying on a computer"
- "Theres a rolodex at the front desk."
- "Our unit unique, nurses on the floor don't have doctors numbers"

Process

- Employer provides devices with built in software; Cerner
- Inputs patient info into Cerner for doctors; who then read it
- Pages doctors through the computer when needing to communicate
- using Perfect Serve, will page doctors, then wait at terminal to see if they text or call back
- Sometimes just picks up landline or a hospital cell phone

Likes/Dislikes

- Will just call unit number and have them find who she needs to talk to
- Needs to be able to quickly communicate back and forth
- Has access to doctors numbers based on built relationships with them over time

User Interview Notes

Lorraine

Registered Nurse : 10 years, Labor & Delivery

Key Observations

- No way to tag a communication as 'urgent'
- Outside of patient issues; doesn't feel like there is a centralized place to address concerns other than staff meetings

Behaviors

- Every second of day at work in communication
- Company provides devices
- Most frequently emails or via phone communicates
- Must speak to every patients primary doctor
- Encouraged to communicate through hospital email because it is encrypted

Quotes

- "A bit challenging if doctor isn't physically in the building; relying on phone or email to communicate"
- "There's always that limiting factor of missing information"
- "Did they really comprehend the full picture of what you're trying to communicate?"

Process/Products

- Two different softwares; Centricity and Carecast for patient info
- Texts or calls doctors outside of facility
- Email; list of emails for doctors on hospital intranet website
- Printout of contract info for doctors located on the hospital floor
- Schedules for all staff are in the intranet and also printed out

Likes/Dislikes

- There is a lag with communication; may not see email or text right away
- Prefers face to face communication
- If there's a complete emergency; you can page the overhead system
- Feels like there needs to be a fine tuning of the systems they currently have in place
- Different people/different personalities, there's always a gap; potential for missing information

User Interview Notes

| | |
|--|--|
| Jon | |
| Radiology for 28 years; recently became Practice Director | |
| Key Observations <ul style="list-style-type: none">• Prefers email but cannot dictate his "groups", he has to have an administrator set that up in Outlook• Relying on PACS system for most doctor communication | |
| Behaviors <ul style="list-style-type: none">• Basically business operations for radiology center• Daily interaction with internal team• Utilizes PACS systems for communication and imaging• Emails and uses his cell phone• Will revisit emails for conversations he's had in the past | Quotes <ul style="list-style-type: none">• "Email is his preferred method of communication, business formatted"• "Hard to remember all of the interactions he's had, email keeps it as record" |
| Process/Products <ul style="list-style-type: none">• Trying to coordinate communications between all of the imaging sites• Uses Qgenda for scheduling• Use their own personal phones for communication• Using PACS system Clario• Clinicians themselves are in charge of handling their schedules | Likes/Dislikes <ul style="list-style-type: none">• Don't have an emergency management type of system in place• Uses Measurecare to get doctors phone numbers• His previous experience has always been using a phone roster• Phone calls are good for personal approach• Needs a better way to communication to the entire group |

Data Synthesis

Research Synthesis

iStatements >>>

- I prefer phone communication so I know information isn't misconstrued
- I need an easy and quick way to find colleagues contact information
- I sometimes need immediate responses and have no way of dictating urgency
- I only use text or chat for quick/short messages, not detailed communication
- I dislike always having to go through a gatekeeper to get in touch with a doctor
- I get frustrated when the referring physicians number isn't obviously noted on scripts
- I like email because I can save messages and have reference for communication
- I need to quickly and efficiently communicate with a wide variety of peers
- I have too many applications and programs in use
- I need a way to communicate that I am unavailable for a block of time

>>> Insights

- Users need their communication to be clearly articulated
- Users need to quickly access affiliates contact information
- Users need a way to convey urgency of messages or communication
- Users need text modality for quick communication
- Users need a clear access channel to doctors
- Users need immediate access to referring physicians contact info
- Users need the ability to archive communication for future reference
- Users need a way to mass communicate with their teams/colleagues/and other groups
- Users need single modality for their communication needs
- Users need the option to not be disturbed

PURPOSE

As designers, we utilize a process of research synthesis in which we create "I-statements" and allow them to inform our product and feature insights. I-statements are directly pulled from our affinity map groups and trends. This process helps us design for the user, keeping them at the forefront throughout. These insights directly inform our personas.



PURPOSE

It is really important as designers to develop a product for our user versus creating a product for ourselves, which we all tend to do whether we realize it or not. A persona is a fictionalized, ideal user of our product based off of our synthesized research. We create a story about them, write down their goals, needs and frustrations, this creates empathy for our intended user and assists in our effort to build a product which offers them a solution.



Persona 1

"I want to be totally present for my patients, to do so I need other processes to be as seamless as possible."



Leighton

42
Oncologist
New York, NY

Leighton is an oncology specialist at Lenox Hill in New York. She began her residency at Lenox Hill and has stayed there during her fellowship and into her current practice.

She is passionate about her patients and providing the best patient care and outcomes for them and their families. She relies on her staff and her support team to provide the best patient outcomes and intercommunication is paramount to their care.

She is frustrated when she needs specific lab results in a timely manner but they get held up if clinicians need clarification on her orders. This can result in patients needing to repeat tests and, in some cases, extended hospitalization.

Leighton is...

Compassionate

Driven

Meticulous

Playful

GOALS

- To efficiently provide the best patient care
- To support her team
- To minimize time patients spend in the hospital

MOTIVATIONS

- Efficiency
- Communication
- Time Management
- Good Patient Outcomes

FRUSTRATIONS

- Redoing tests on patients due to lag in patient flow
- Tracking down colleagues to communicate in person
- Waiting to hear back after leaving messages
- Going through gatekeepers to communicate

NEEDS

- Mobile communication access
- Timely responses
- Fast test results
- Uninterrupted time

Persona 2

"Wherever I make a call, I get a call report, have to go through front desk, and they see if somebody can take my call. It really eats up my time."



Luke

56
Radiologist
New York, New York

Luke is a radiologist at Mount Sinai Beth Israel hospital in New York City. After studying at University New Mexico School of Medicine he moved to New York to pursue his residency.

He is curious to constantly learn and develop his skill set while caring for patients needs. It is paramount to him to consistently have updated technology and access to the new gadgets and devices that will make his job both easier and better for the patient.

When reviewing images it is important for Luke to be able to easily reach the sonographer or technician who took the actual image as sometimes there are questions that arise.

Luke is...

Data Driven

Conscientious

Organizer

Social Activist

GOALS

- To provide quality & consistent treatment to his patients.
- To deliver the best, most accurate readings of all the images that come across his desk

MOTIVATIONS

- To communicate clearly with his colleagues.
- To respond to physician requests as timely as possible.

FRUSTRATIONS

- Not being able to easily reach a technician when there is an issue with an image
- Sitting in a dark room for the entire day

NEEDS

- Needs an integrated communication system within his existing software
- A way to present information that is critical as an urgent message

User Journey



SCENARIO Journey of an ultrasound scan

Patient goes for annual visit to her OBGYN and her physician detects a mass. She is sent for further testing.



OB/GYN



Mammographer



Radiologist



Ultrasound Technician



Oncologist

GOALS & EXPECTATIONS

- Diagnostic procedures to identify risks related to discovered mass
- Actionable, detailed test result analysis so oncologist is best prepared to render patient care medical course

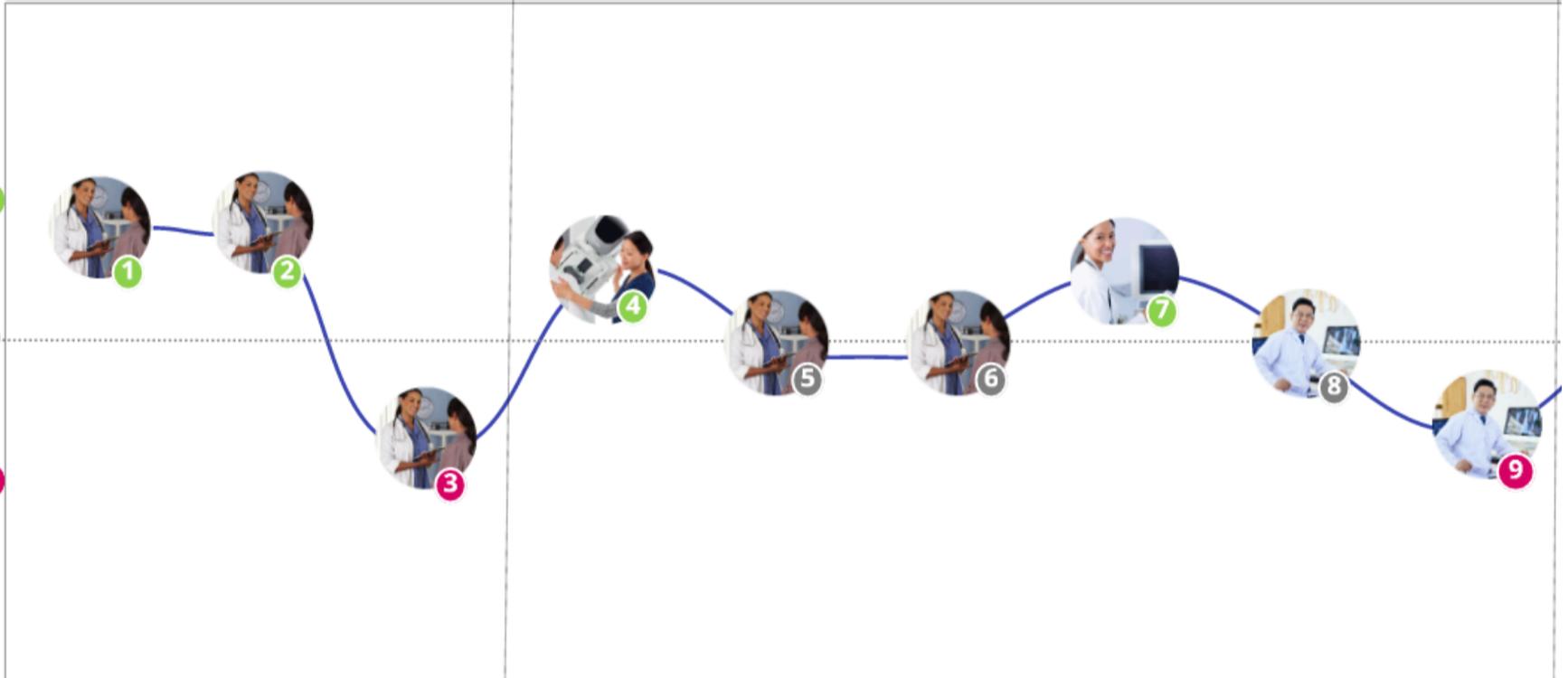
Discovery

- Patient goes to OB/GYN annual appointment
- Patient receives breast exam at OB/GYN
- OB/GYN detects mass and orders mammogram

Imaging

- Patient receives mammogram
- Mammogram results inconclusive (tissue density)
- OB/GYN orders diagnostic ultrasound
- Ultrasound scan performed
- Ultrasound Image sent to Radiologist for interpretation
- Radiologist has question about patient positioning

EMOTIONAL TIMELINE



HIGHLIGHTS & PAINPOINTS

- 1 Patient attends annual OB/GYN appt
- 2 While in appt, patient receives breast exam
- 3 OB/GYN detects mass; has to call in mammo tech to perform mammography

- 4 Patient goes to other medical building for mammogram
- 5 Radiologist determines the results are inconclusive
- 6 The radiologist has to call the technician & OB/GYN to inform them of findings

- 7 Sonographer then performs a diagnostic ultrasound
- 8 Ultrasound image then sent to Radiologist for interpretation
- 9 Radiologist sees issue with image; needs to verify the positioning of the patient, puts in call to sonographer, waits for call back

journey continues on page 28



Opportunity

Quick search to find the contact information for tech

Send a message or speech memo with urgency to sonographer

User Journey



SCENARIO Journey of an ultrasound scan

Patient goes for annual visit to her OBGYN and her physician detects a mass. She is sent for further testing.



OB/GYN



Mammographer



Radiologist



Ultrasound Technician



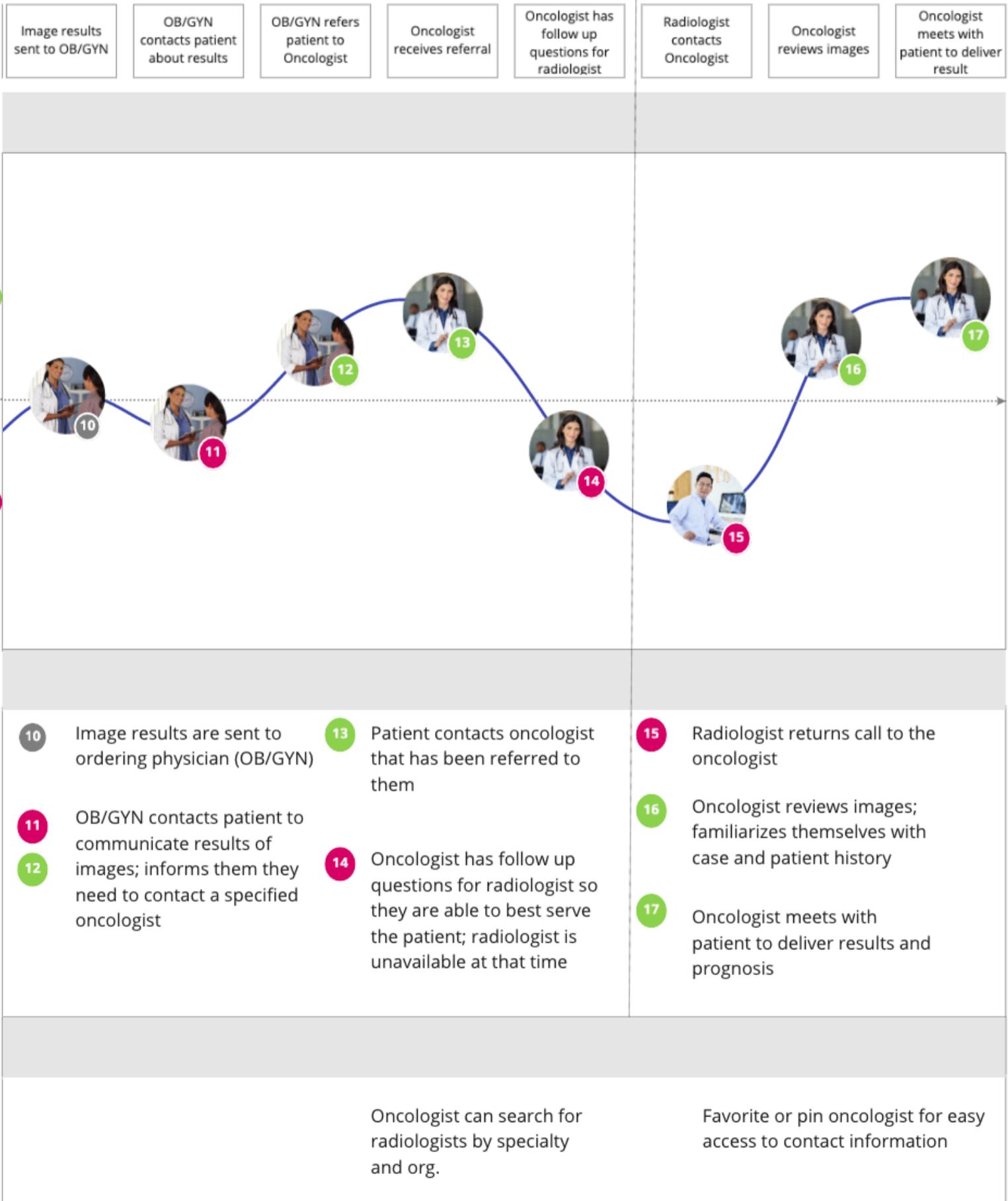
Oncologist

GOALS & EXPECTATIONS

- Diagnostic procedures to identify risks related to discovered mass
- Actionable, detailed test result analysis so oncologist is best prepared to render patient care medical course

Diagnosis

Delivery



User Journey

PURPOSE

The journey map is used to understand and visually communicate the customer needs and pain points by breaking up the sequence of steps taken to complete a task. Journey mapping creates a holistic view of the experience and allows our team to take a close look at the steps taken to achieve a goal in our problem space. At this stage, before responsive design development, we are looking at the journey of a scan and all the individuals and points of contact or communication that happen as they occur along a timeline. We use journey mapping as a way to understand and communicate gaps in customer needs and identify the specific pain points. We also use journey mapping so that our team has a shared, unified vision of communication decisions and pain points, informing our next steps to achieve a solution that improves the user experience.

GOAL

The goal of this journey map is to use our existing qualitative data from our interviews to accurately narrate the potential customer's experience from start to finish. We also look to discover what features might be needed/missing and what works well to better understand what we should take into account as we ideate.

METHODOLOGY

A journey map is a visualized timeline of the process that a person takes in order to achieve a goal. The map covers each step taken inside and outside a product to complete, in this case, the scans journey to completion and informing patient care. The journey also maps the emotional state of the user and highlights frustrations and high points each person will experience as the task progresses. Our journey map is made up of the scan image, the scenario the scan is in that leads through the task, and goals and expectations. Additionally, the journey map includes the actions and communication moments taken by the OB/GYN, Mammographer, Radiologist, Ultrasound technician and finally the Oncologist. We also include the emotional experience, which is presented in a graph, as well as the pain points and opportunities discovered during the journey from start to finish.

Design Studio

Competitive Feature Analysis

| FEATURE |  measurecare™ |  QGenda |  Cerner |  perfectserve. |  Epic Haiku |
|-------------------------------------|--|--|--|---|--|
| EMR EHR Integration | ✗ | ✓ | ✓ | ✓ | ✓ |
| Speech to text/voice memos | ✗ | ✓ | ✗ | ✓ | ✓ |
| Public Notes | ✗ unintentional in # field | | ✗ | * | ✓ |
| Peer Schedule View Access | ✓ | ✓ | ✗ | ✓ | ✗ |
| Call and or text System Integration | ✗ | ✓ | ✗ | ✓ | ✓ |
| Peer Review | ✓ | ✗ | ✗ * | ✗ | ✓ |
| Editable Custom Schedules | ✗ | ✓ * | * | ✓ | ✗ |
| Secure Chat | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cloud Based Services | ✓ | ✓ | ✓ | ✓ | ✓ |

* Information not publicly available

Healthcare service and software providers are strategically obscure with public facing product information in order to incentivize systems to contact company for a sales consultation.

PURPOSE

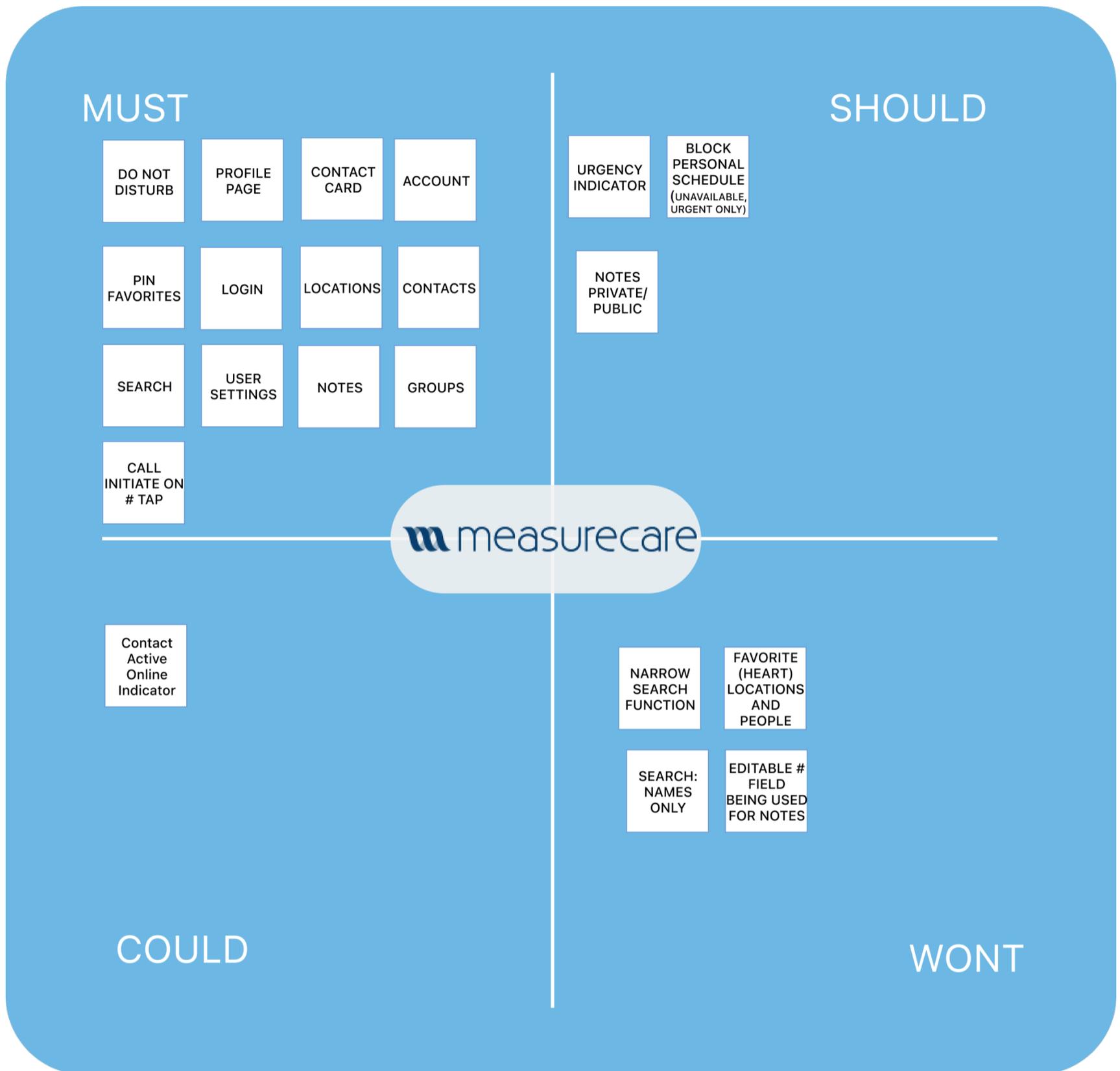
In the competitive analysis phase our team looked at direct competitors operating in the same space as Measurecare and mContacts. In doing this we were able to define the space in terms of understanding the landscape, avoiding "me too's" and finding ways to differentiate.

KEY TAKEAWAYS

From the competitive feature analysis we have gathered that MeasureCare as a product stands out in peer review, it is however lacking in several other features against its competitive. Our team will utilize this data to create a product that literally checks more boxes, for instance a text integration system, speech to text and editable schedules are paramount features that have yet to be included.

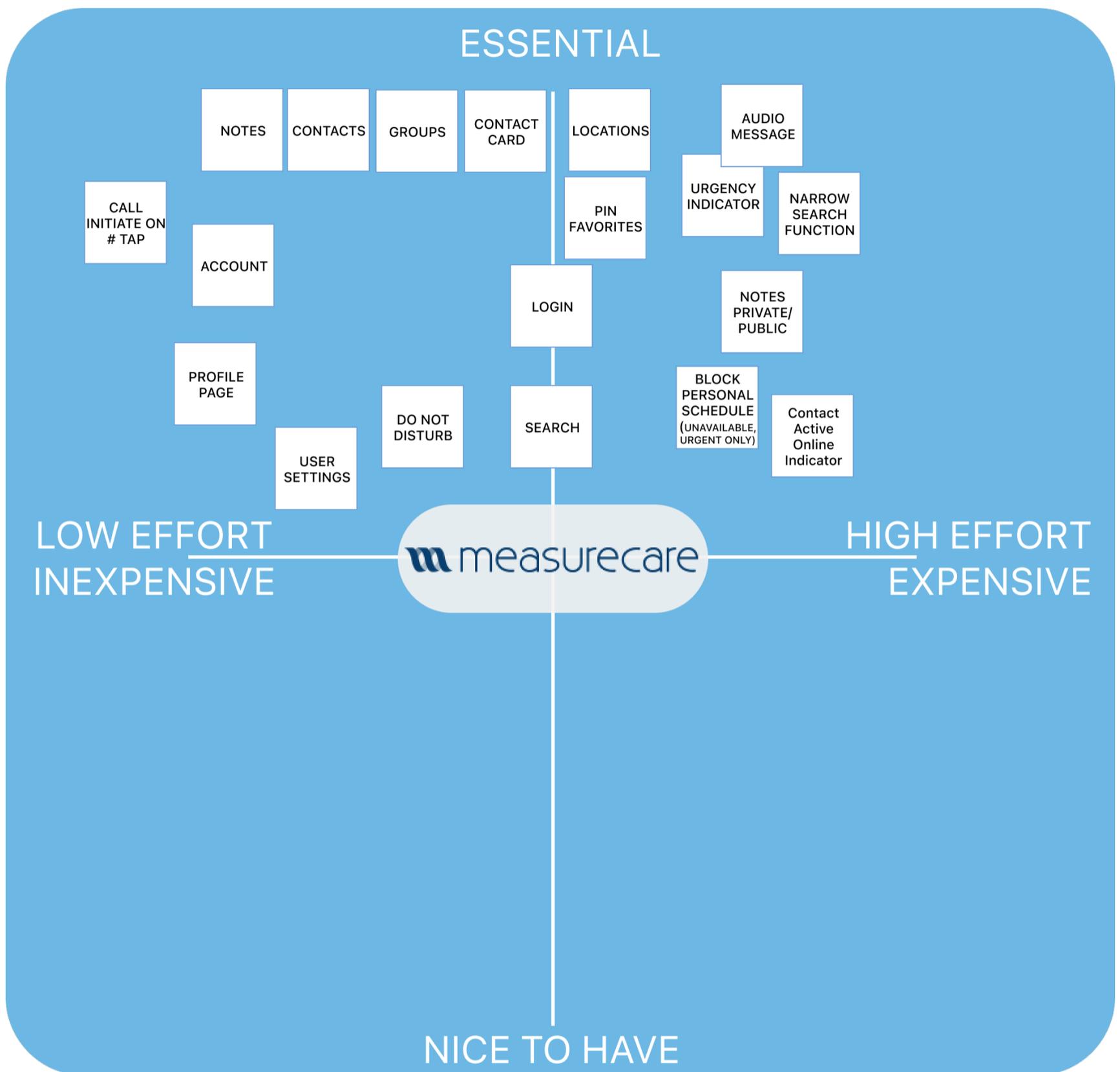


Feature Prioritization Matrix



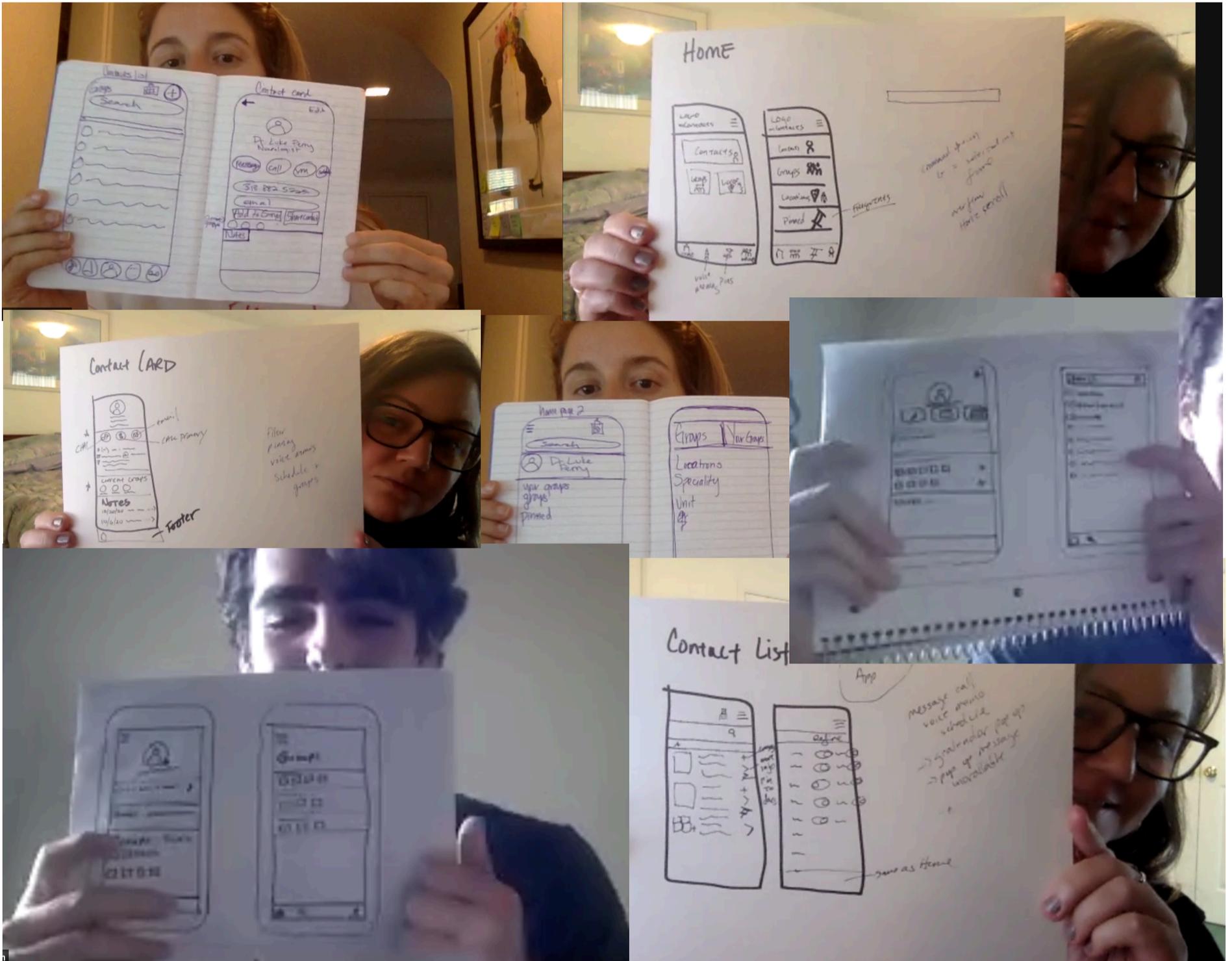
PURPOSE: As designers we utilize a method of research called the feature prioritization matrix, this enables us to visual and map out the features and components that we think are beneficial to our product. We start by making a list of all of the features we would like to incorporate in the product then we organize them by essential, low effort/low expense, high effort/high expense and then finally nice to have. The level of importance moves from the top left corner to the bottom right corner.

MoSCoW Mapping



PURPOSE: In the industry each product is made in different iterations and sprints. While there are many ideas on the table, sometimes introducing them all at once can be tricky, increasing the chances there will be bugs in the product and also creates a learning curve with the user. Really, it's best to start simple and add and subtract as you go. A MoSCoW mapping session drives the car for this, features get sorted into categories "must", "should", "could" and "won't". "Won't" doesn't mean never, it means not right now. The visualization of features, sorted this way, helps us determine what we will design first.

Design Studio



PURPOSE: Designers utilize Design Studio's to quickly ideate features and functions of a design. During the design studio we focus on placement of icons and buttons. We do each sketch period in 2 to 5 minutes and then share with each other what we have sketched, from there we do as many series of design studio as it takes to feel confident in the design and start mid fidelity screens. Design studio is an excellent way to quickly flush out ideas, we scrap things quickly and steal each others best aspects from each other. This is a quick and cost effective way to hone in on what is paramount to the product.

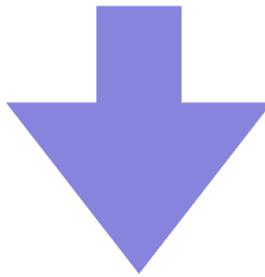
KEY TAKEAWAYS: The team identified key features to incorporate in the product as well as primary navigation functions which included: **Contacts, Filter, Audio Messages, Pin, Schedule and Groups**



Insights To Features

KEY INSIGHTS:

- Users need their communication to be clearly articulated
- Users need to quickly access affiliates contact information
- Users need a way to convey urgency of messages or communication
- Users need text modality for quick communication
- Users need a clear access channel to doctors
- Users need immediate access to referring physicians contact info
- Users need the ability to archive communication for future reference
- Users need a way to mass communicate with their teams/colleagues/and other groups
- Users need single modality for their communication needs
- Users need the option to not be disturbed



KEY FEATURES:

- Create a way for users to send quick voice messages (Audio Messaging)
- Filter system that allows for quick contact finding
- Function that allows users to note that a certain message is urgent
- Allows for users to send text messages within the application
- Have direct phone numbers for all members of the application community
- Create a pin function so that users can save all information that is top of mind
- Develop mindful group function for quick communication across teams
- Allow users to make note that they are unavailable for any length of time

Mid-Fidelity Wireframes

Scenario + User Tasks

1: Scenario + Task One (Filter Feature)

Scenario: You're a new Radiologist at Cedars Sinai and want to see what other Radiologists will be on your team.

Task: Find the radiologists affiliated with Mount Sinai.

2: Scenario + Task Two (Pin Feature)

Scenario: Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Task: Tag Dr. Luke Brandon's contact information for easy future access.

3: Scenario + Task Three (Voice Memo Feature)

Scenario: You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Task: Send Dr. Luke Brandon a speech message with urgency.

4: Scenario + Task Four (Schedule Feature)

Scenario: You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Task: Look up Dr. Kelly Taylor's availability for today

5: Scenario + Task Five (Groups Feature)

Scenario: You've just started a new job and need to be able to easily communicate with your team.

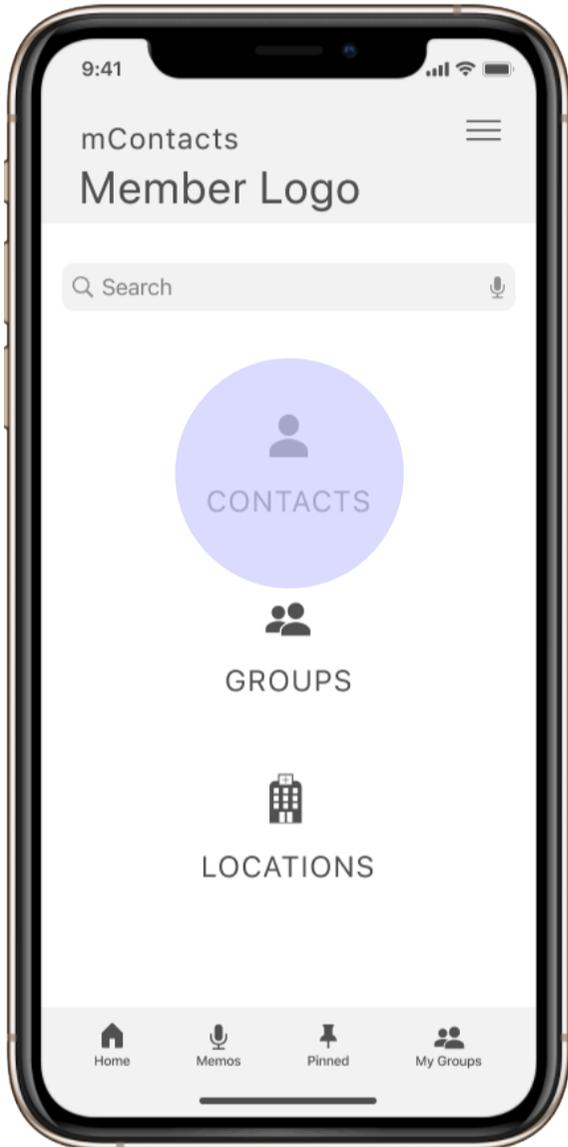
Task: Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

PURPOSE: We create and utilize various scenarios and tasks to exhibit the features and functions of the product we are developing. We leverage these tasks and scenarios to create uniformity in our usability testing. As we observe users during testing, we determine whether the product is intuitive, learnable and enjoyable for our user. Scenarios and their associated tasks allow for a script our users follow while giving us as designers valuable insight into what needs to be changed or better thought out during our next iteration of design.

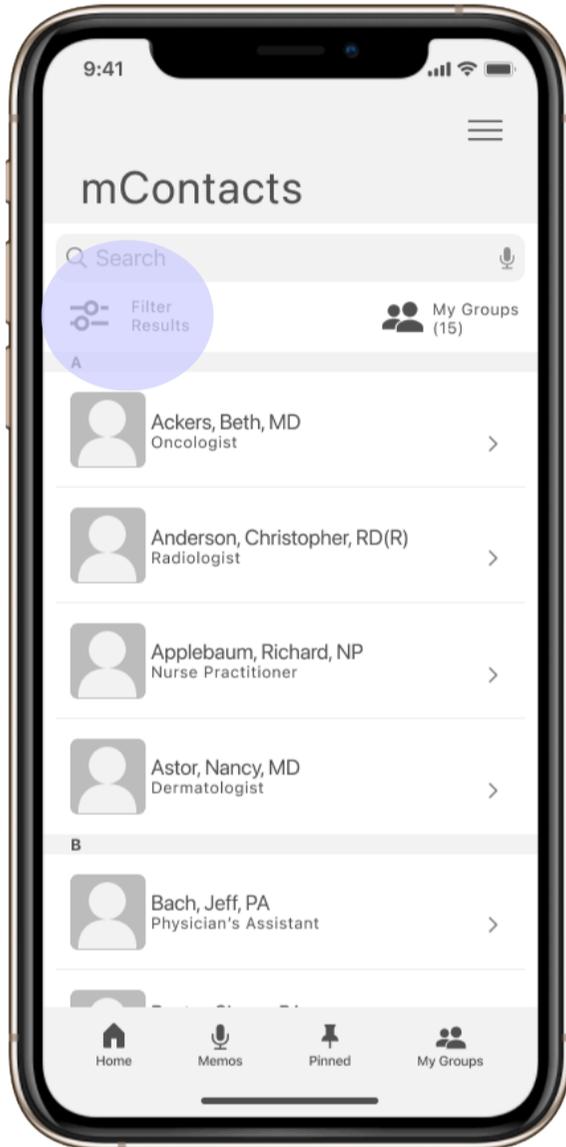


Mid-Fi User Flow - Task One

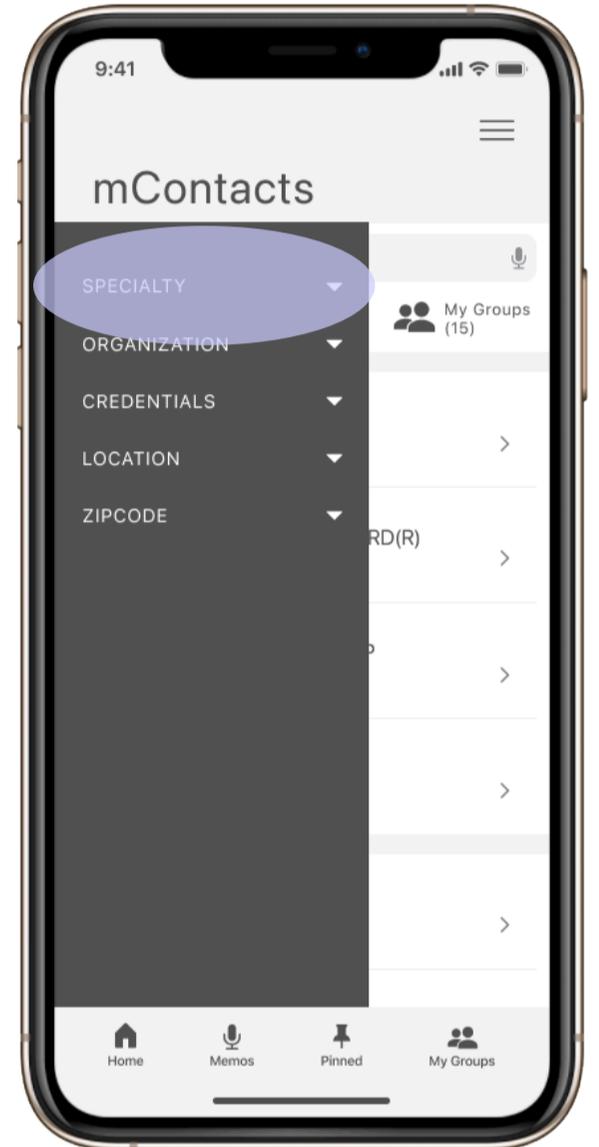
Task: Find the radiologists affiliated with Cedars Sinai.



User taps on 'contacts' icon to access contacts information and begin filtering process



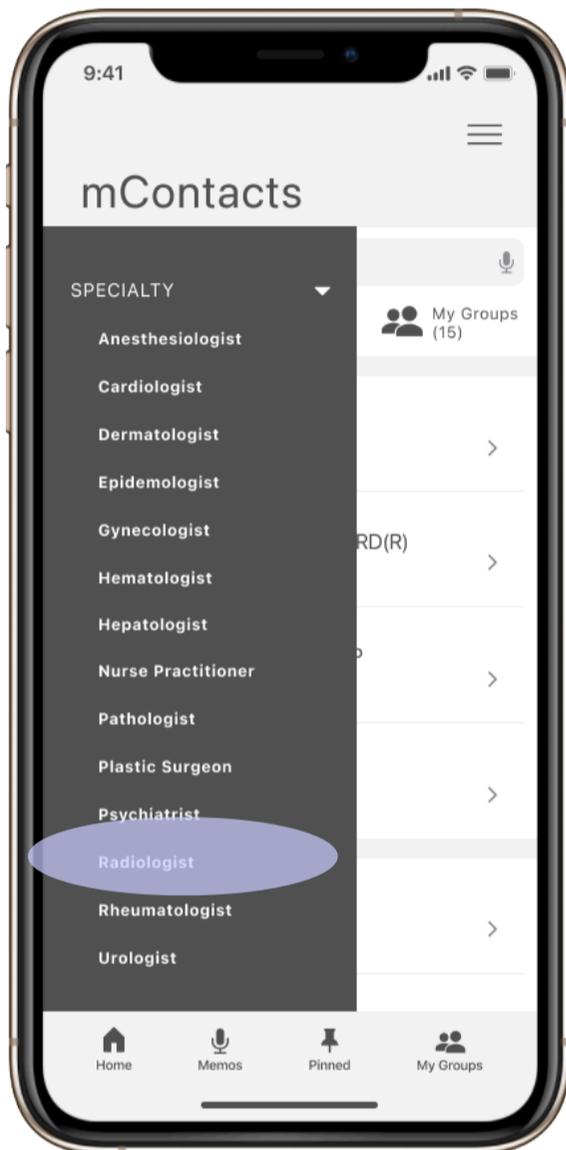
User taps on 'filter results' icon to access filters



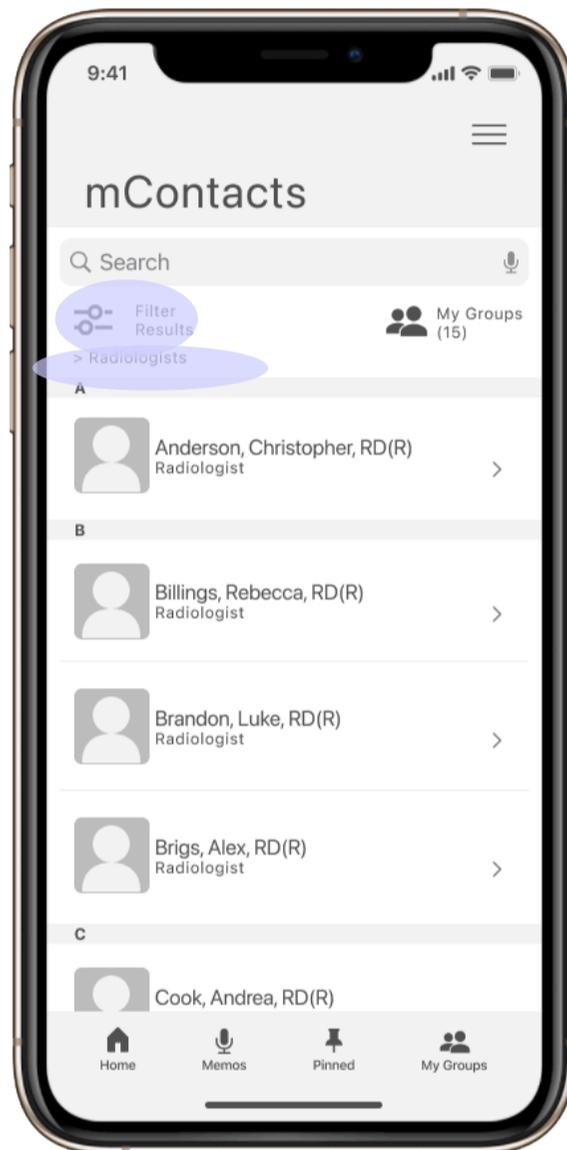
A sidebar menu appears once the user has tapped on the 'filter results' icon. From there the user is able to note which filters they would like applied, in this case 'specialty' which notes an individual's speciality within the medical field

Mid-Fi User Flow - Task One

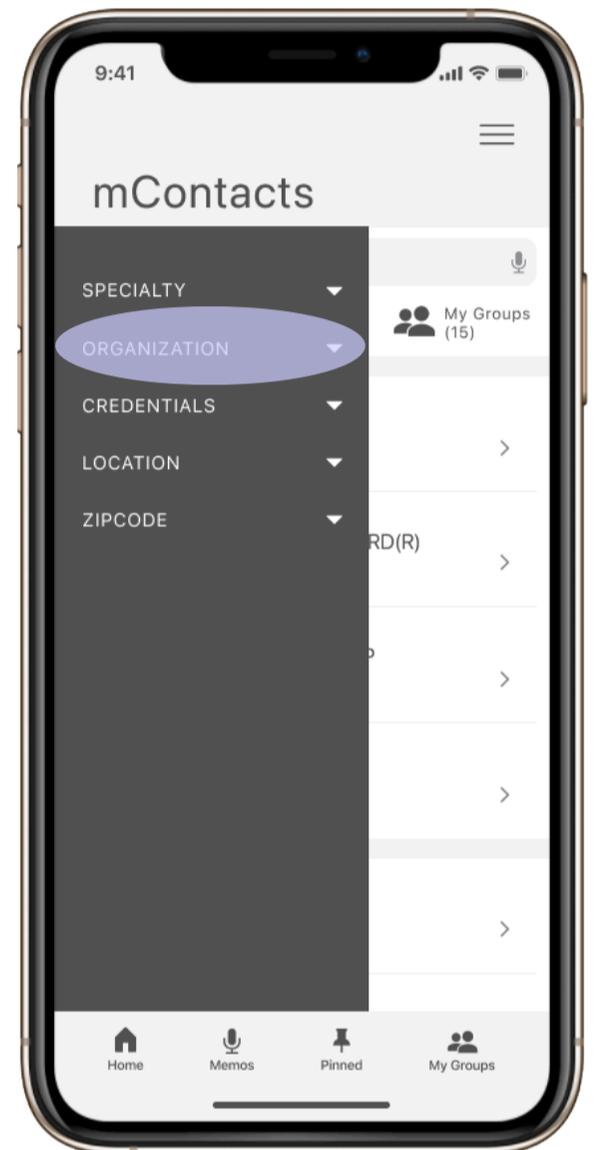
Task: Find the radiologists affiliated with Cedars Sinai.



From the sidebar menu the user taps 'radiologist'



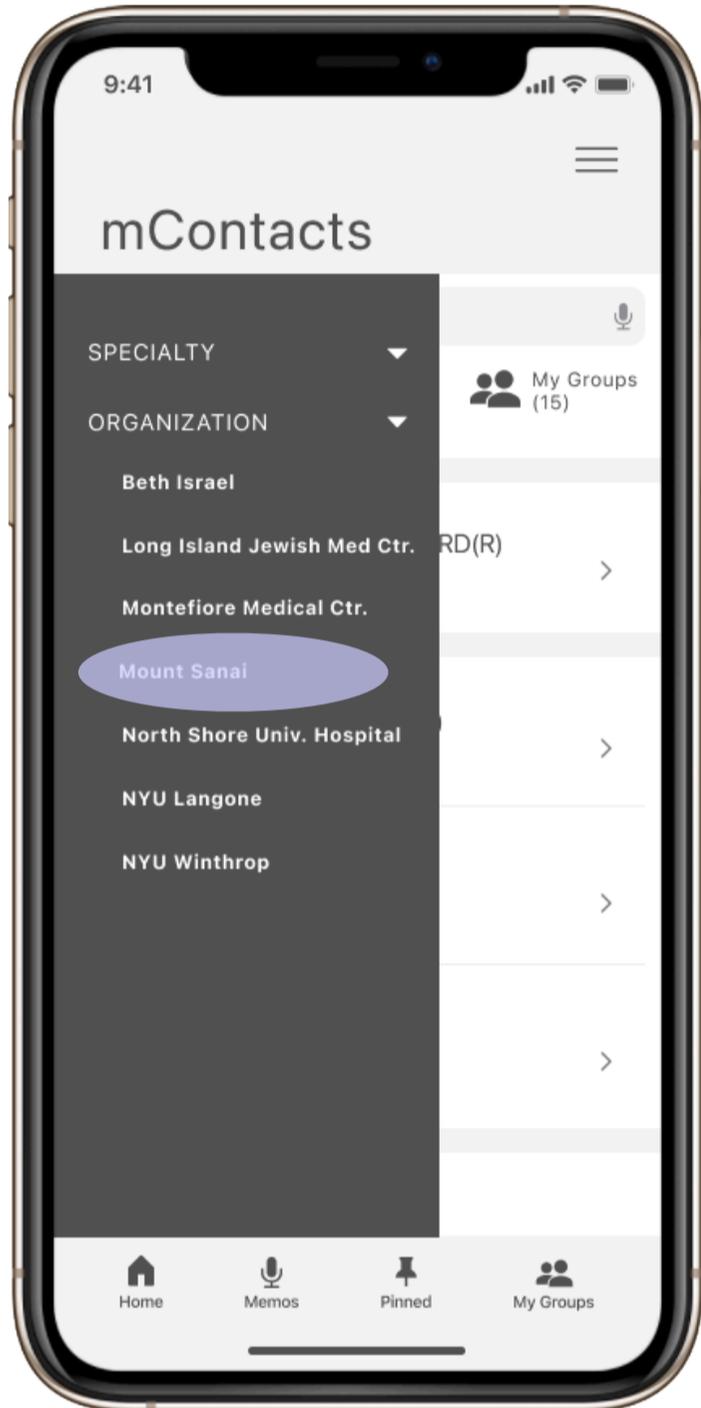
Once the user has selected 'radiologist' it is then noted as a filter selection. If the user has additional filters they tap 'filter results' and the sidebar appears again



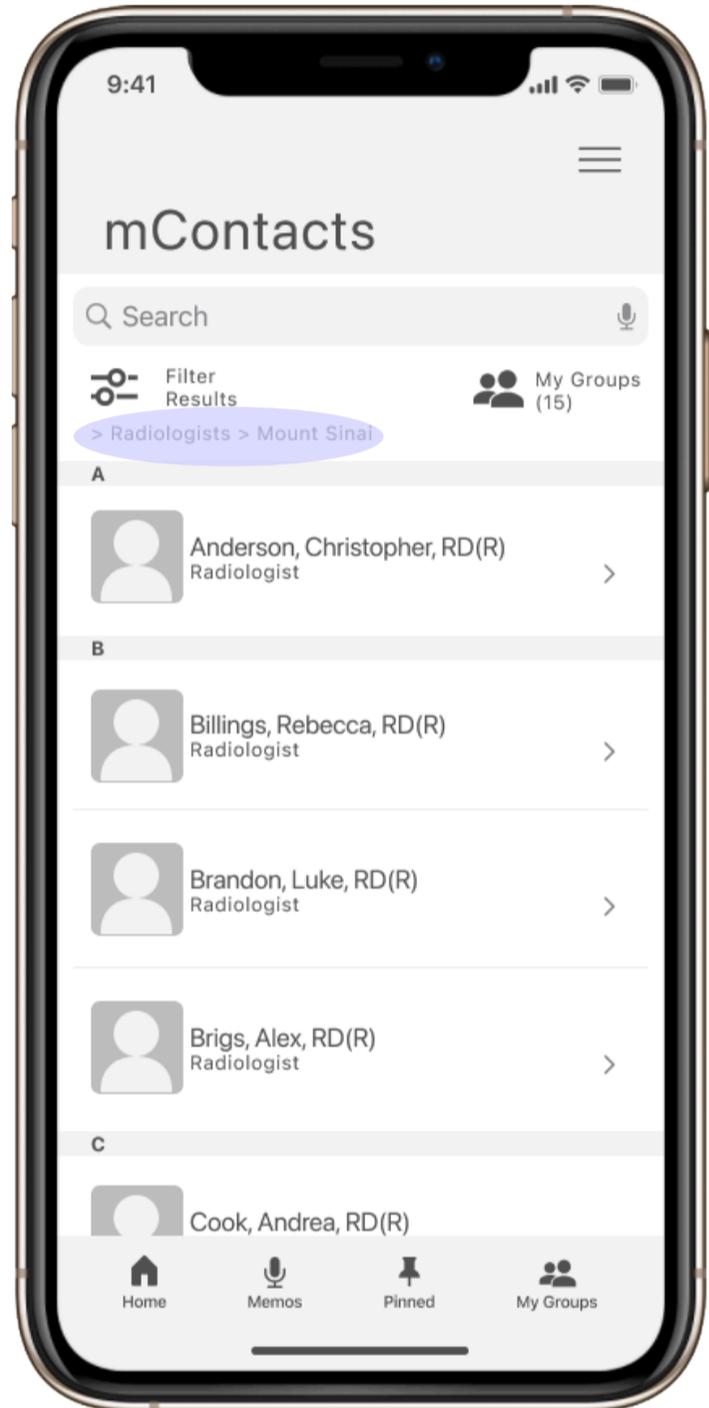
From the sidebar menu the user taps 'organization' to select which group an individual is affiliated with

Mid-Fi User Flow - Task One

Task: Find the radiologists affiliated with Cedars Sinai.



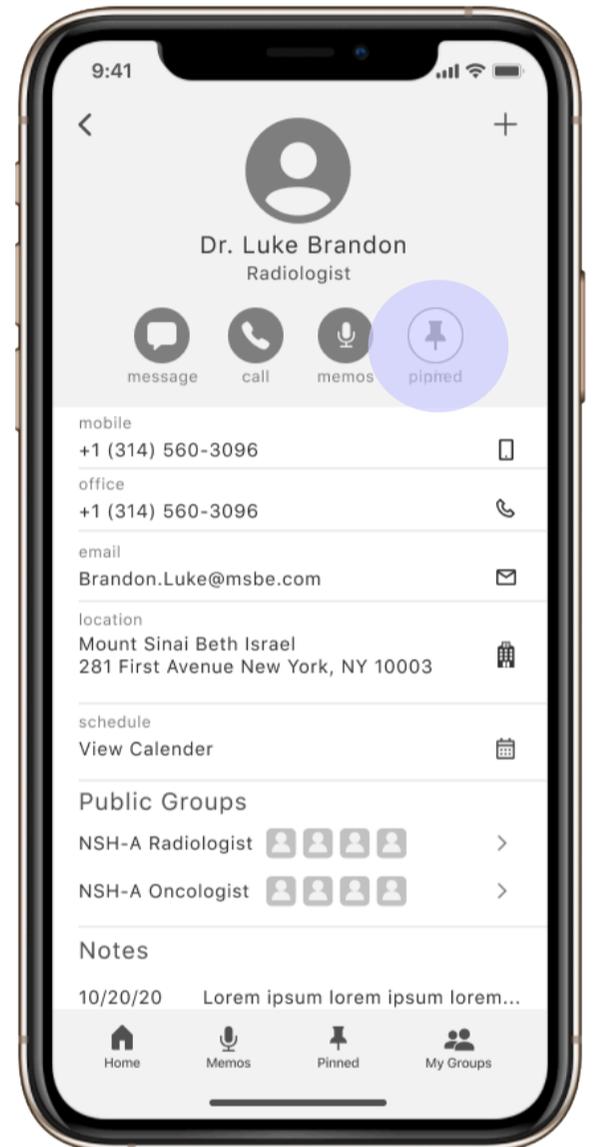
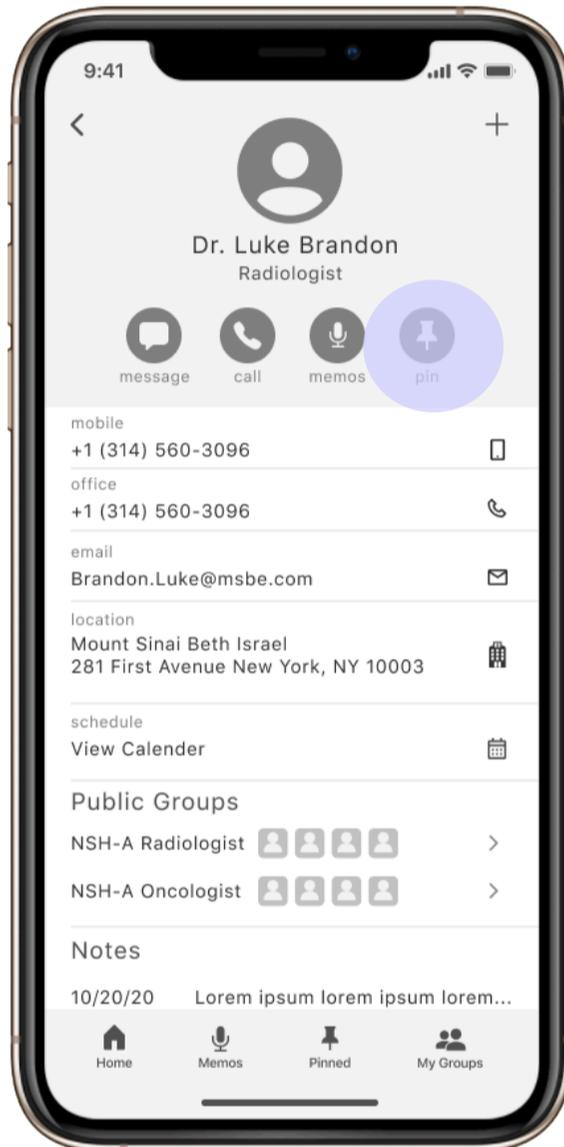
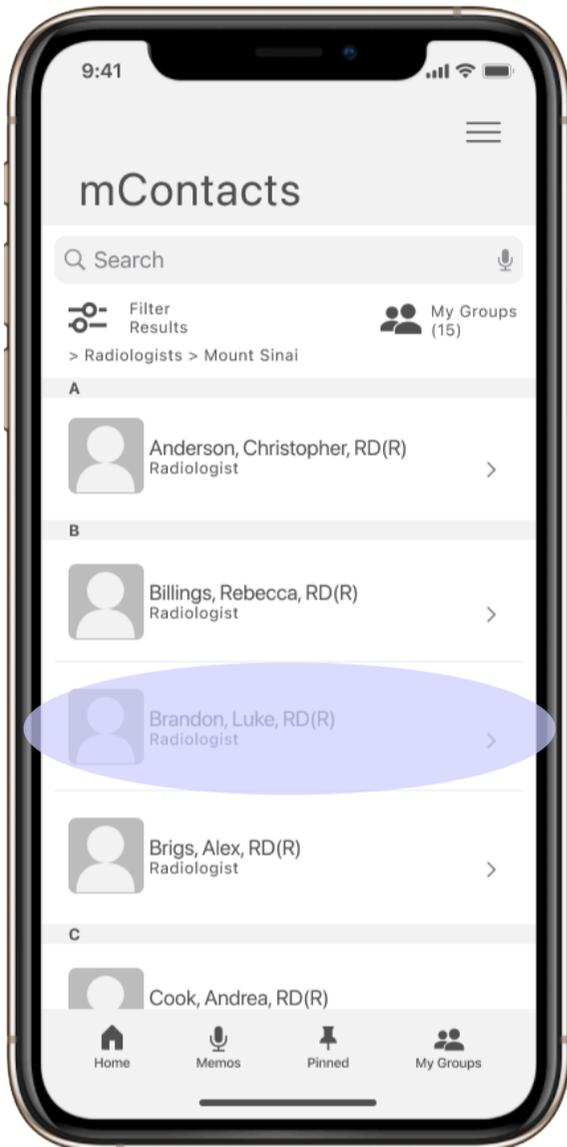
The user taps 'Mount Sinai' to indicate the preference of organization



The filters the user has selected are noted just below the 'filter results' button so that the user has feedback from the platform that their preferences for filtered results have been set

Mid-Fi User Flow - Task Two

Task: Tag Dr. Luke Brandon's contact information for easy future access.



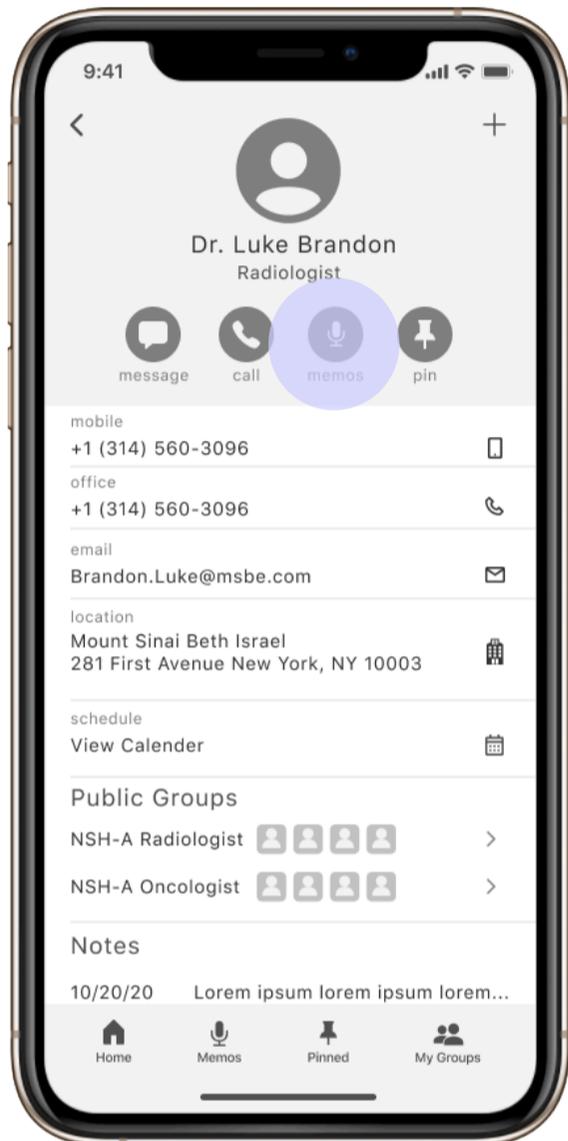
To 'pin' a users contact information which effectively saves it as a frequently used contact. The user taps the contacts name

Once in the contacts 'contact card' the user simply taps the 'pin' icon

The color way of 'pin' icon once tapped shifts to reverse colors so that the user has visible insight that a change has taken place and the contact is in fact pinned

Mid-Fi User Flow - Task Three

Task: Send Dr. Luke Brandon a speech message with urgency.



After reaching the contact card for a contact the user is able to tap the 'audio message' icon to send the contact an audio message



The user is then taken to the message screen, where a microphone icon is used to indicate an audio message. The user taps microphone icon to begin recording audio message.



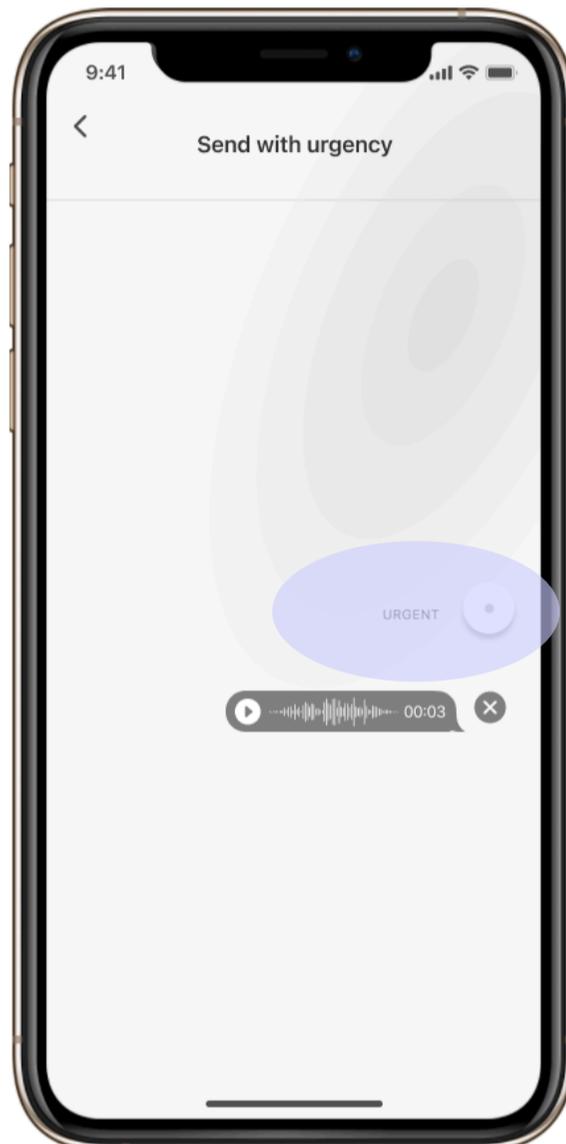
The audio beat is the visual clue for the user that the message is being recorded, with a timer. When the user is done recording their audio message they simply stop holding down the microphone icon

Mid-Fi User Flow - Task Three

Task: Send Dr. Luke Brandon a speech message with urgency.



To complete recording, user stops holding down microphone button



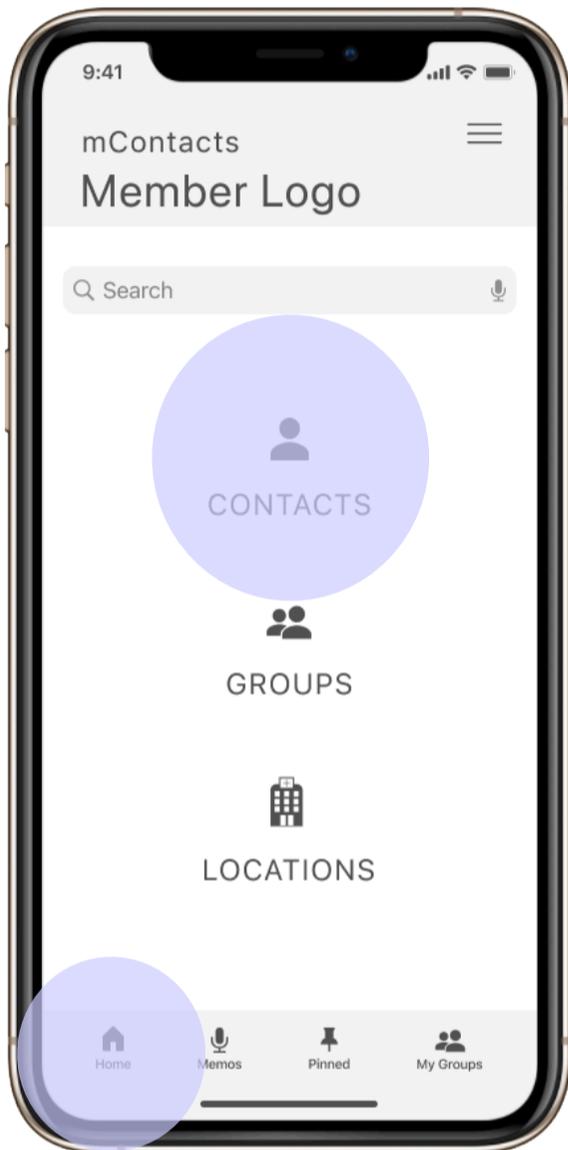
The user is then prompted to send the audio message in either the standard format or with an urgent notification attached



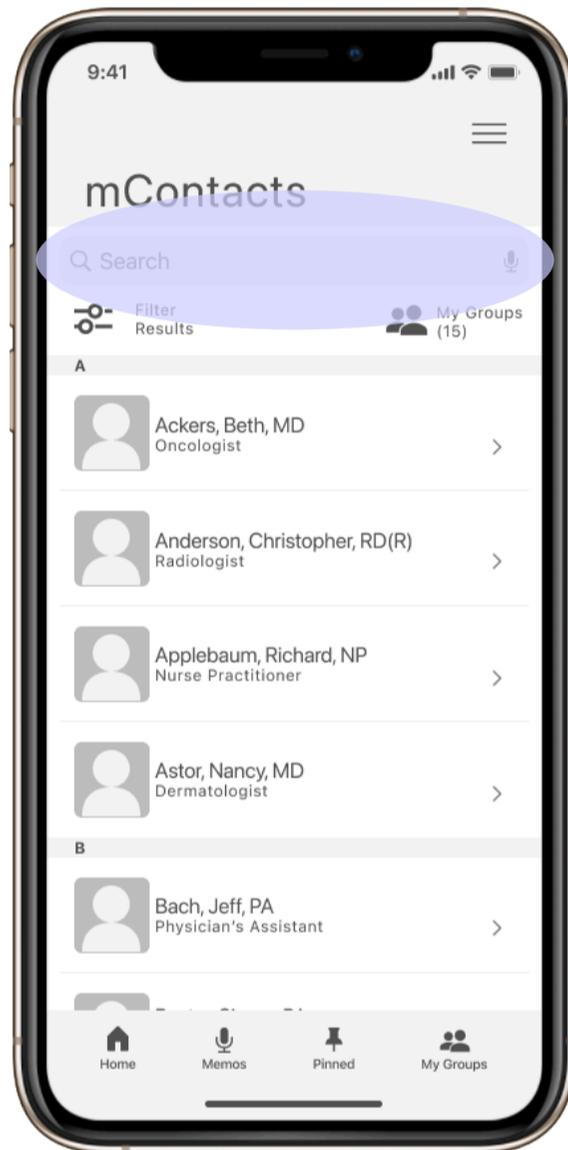
Within the message screen the user is able to see the audio message they've just sent and also the depiction of it being an urgent message as noted by the flag icon next to the message

Mid-Fi User Flow - Task Four

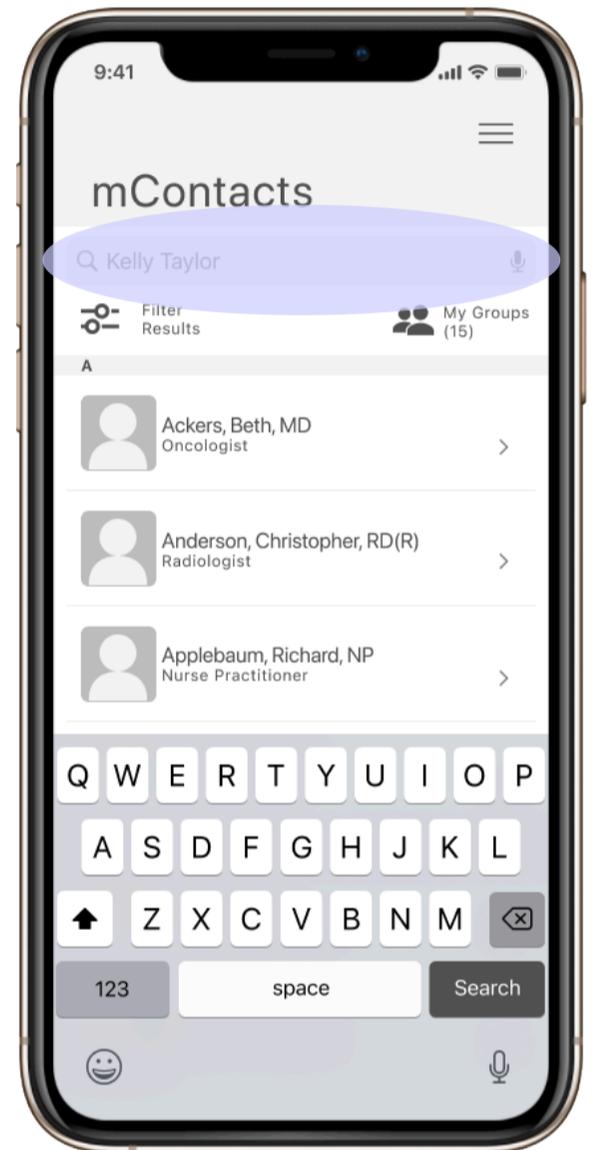
Task: Look up Dr. Kelly Taylor's availability for today



After navigating back to the home screen by simply tapping the home icon the user taps contacts



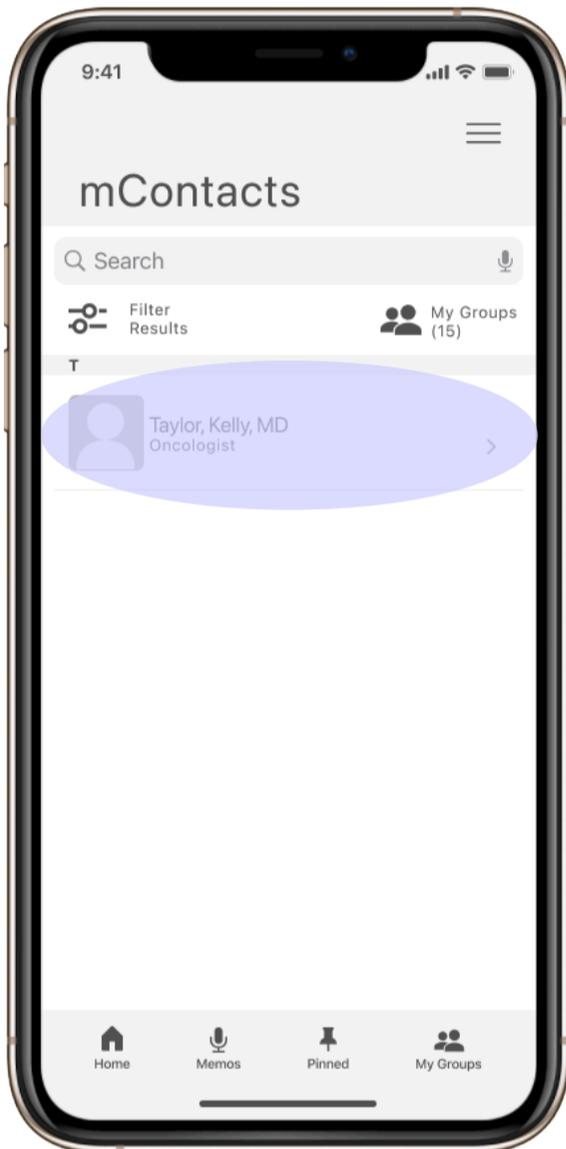
Once in the contacts screen the user is able to easily search for any contact that is in their pre-populated directory



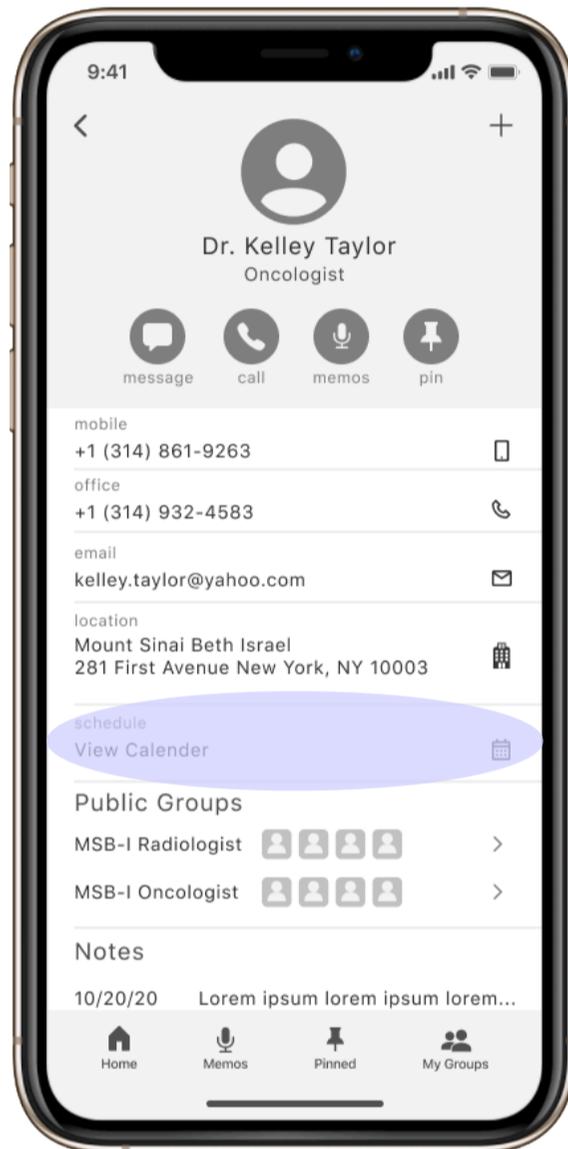
The user types in the name of the contact they are trying to look at the schedule of

Mid-Fi User Flow - Task Four

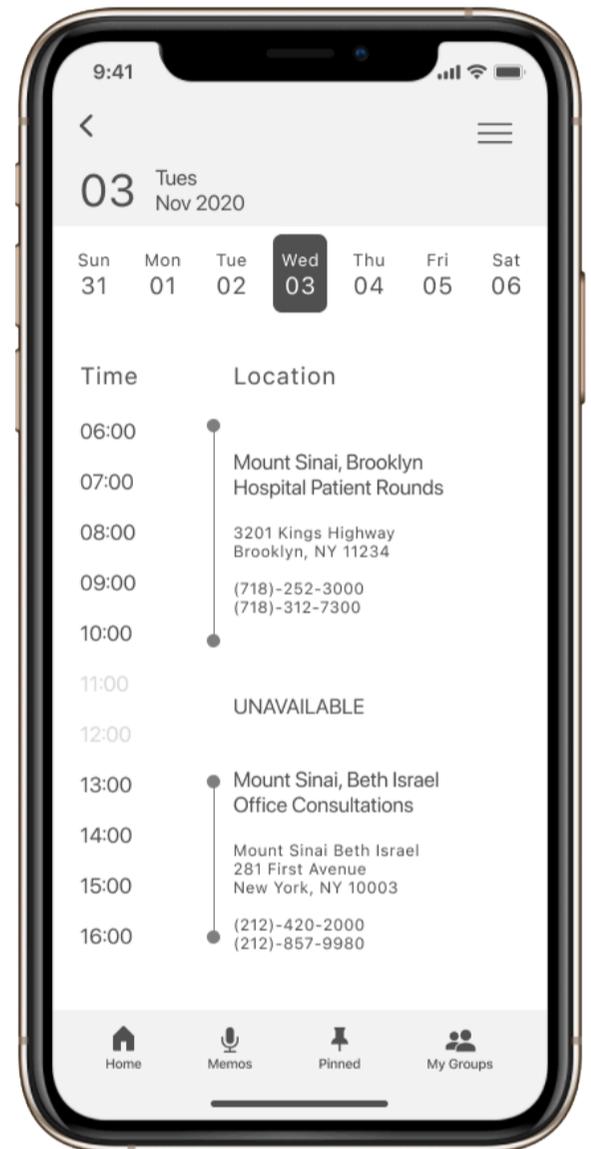
Task: Look up Dr. Kelly Taylor's availability for today



Once the user has found the contact they are searching for, they simply tap the contact's name



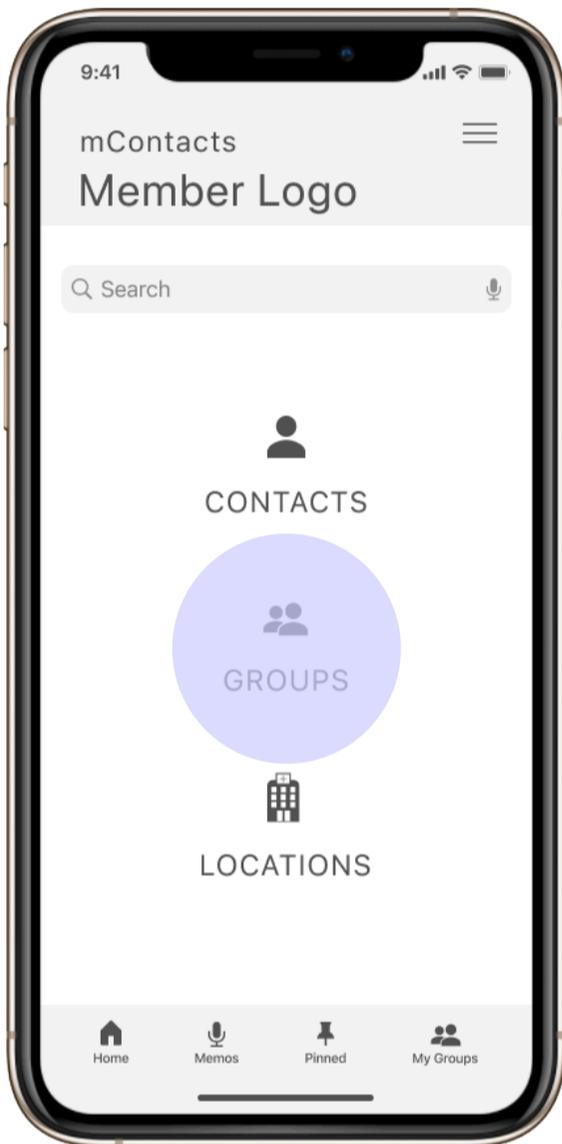
The contact card then comes up and the user is able to review the contact information of the individual as well as tap on the "view calendar" option



The user is then shown the daily schedule of the contact

Mid-Fi User Flow - Task Five

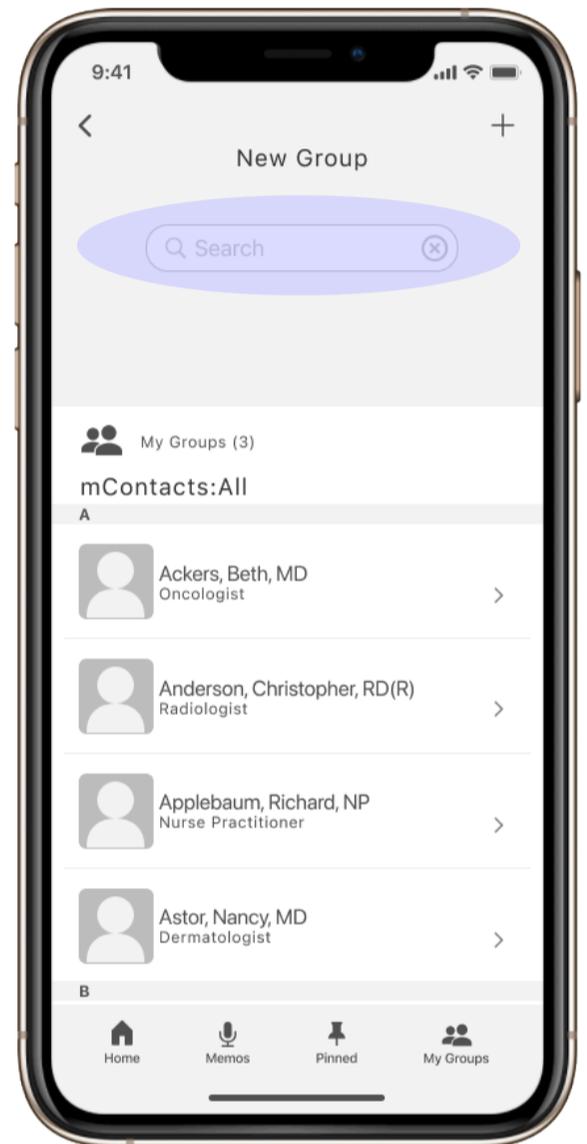
Task: Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.



To create a new group the user taps on the 'group' icon



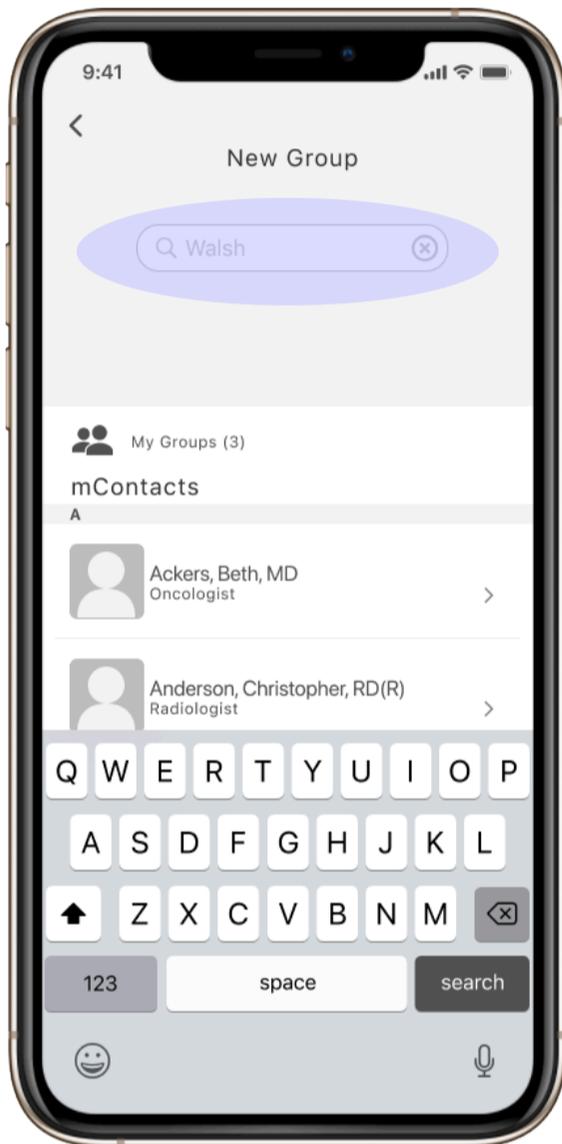
Once on the group page the user taps the 'new group +' icon



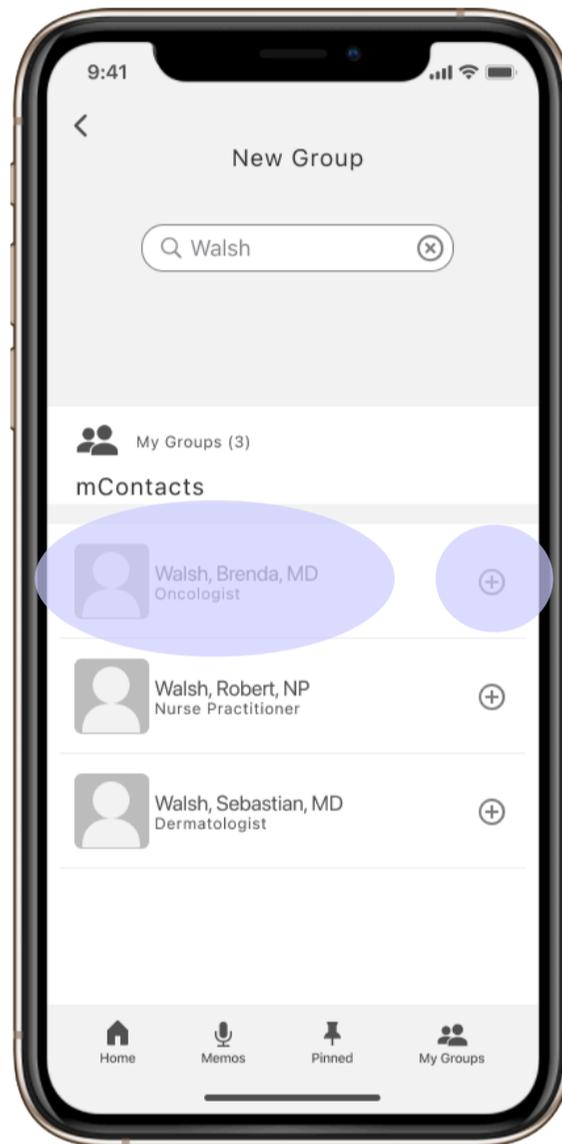
The user is then able to search their contacts to add in specified group members

Mid-Fi User Flow - Task Five

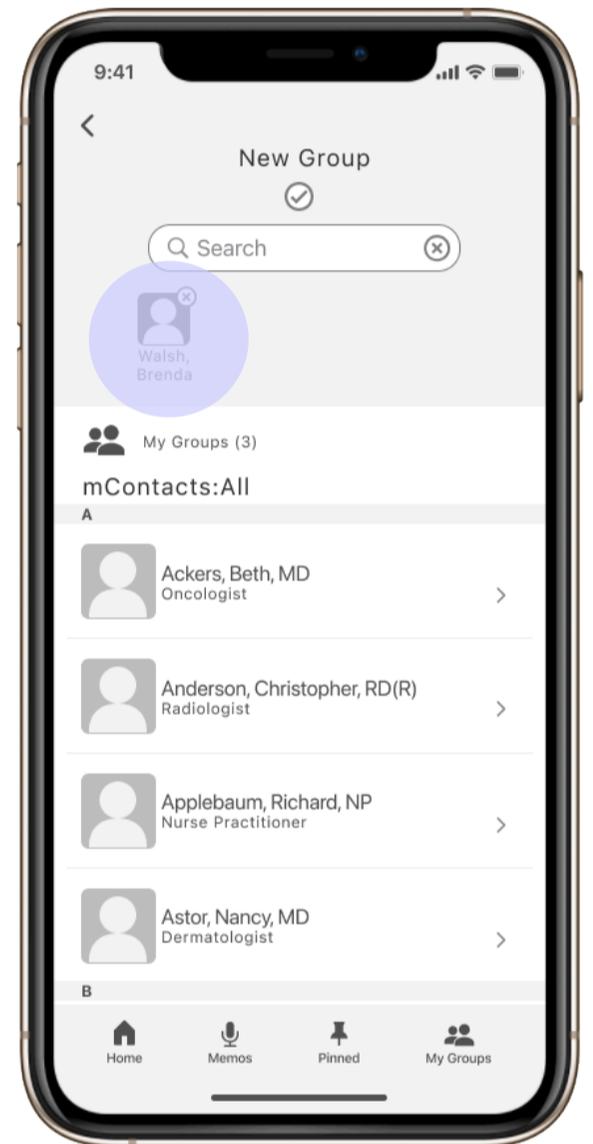
Task: Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.



The user populates the 'search' bar with the name of an individual they'd like to add into a new group



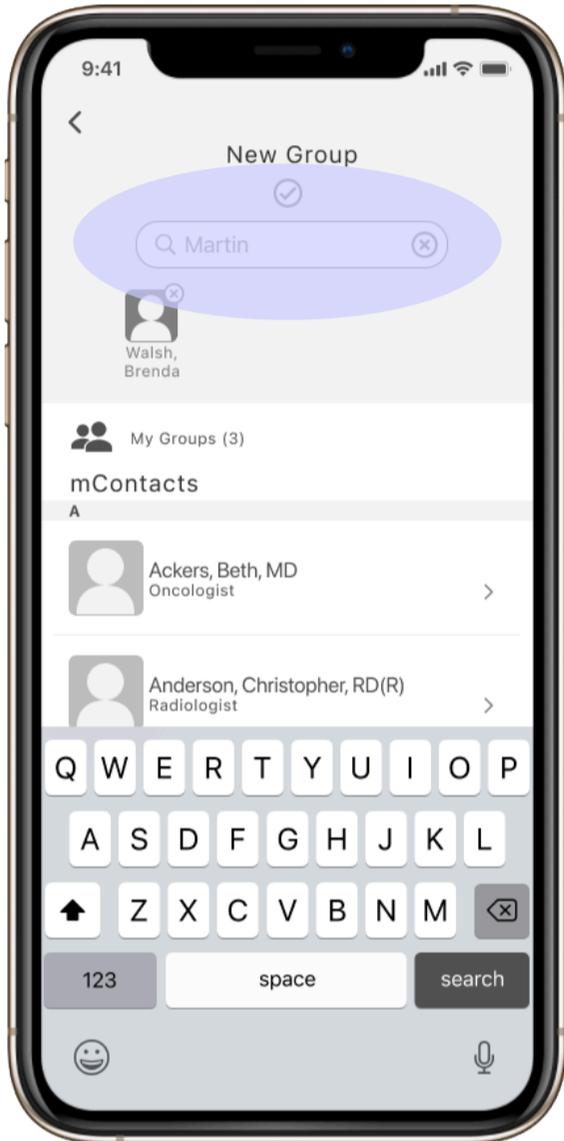
After searching for the last name Walsh, the user taps the '+' icon next to the contact's name



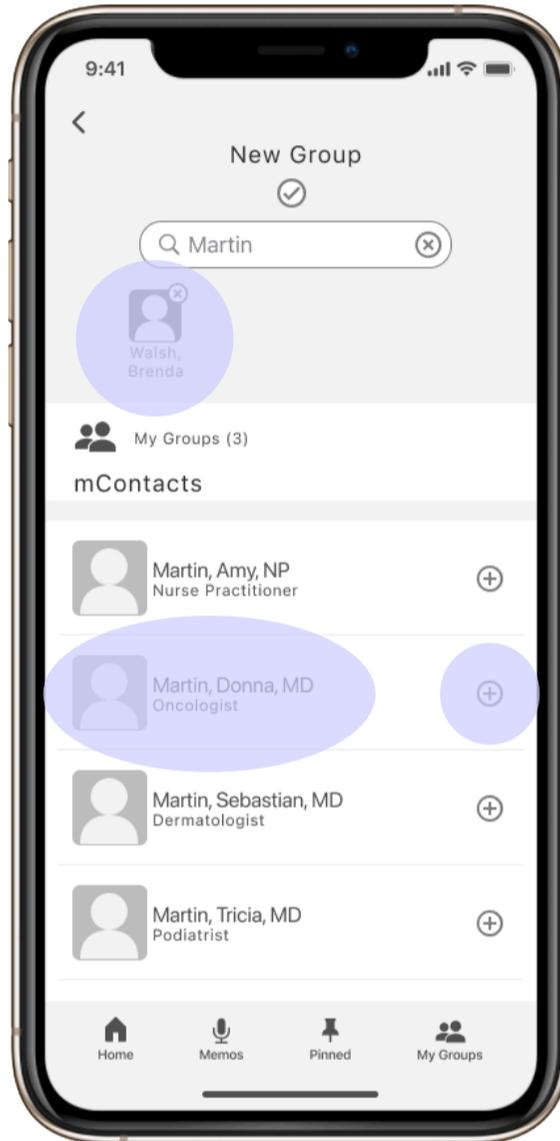
The selected user is then added to the new group which is noted by their contact icon

Mid-Fi User Flow - Task Five

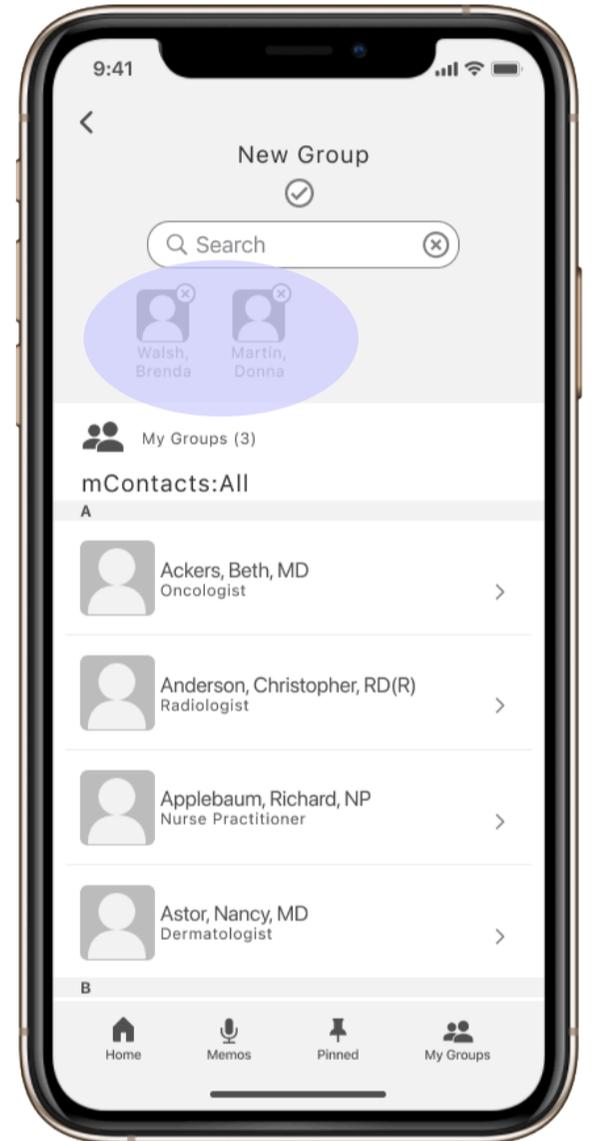
Task: Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.



The user is able to select multiple group members by searching for the individuals name



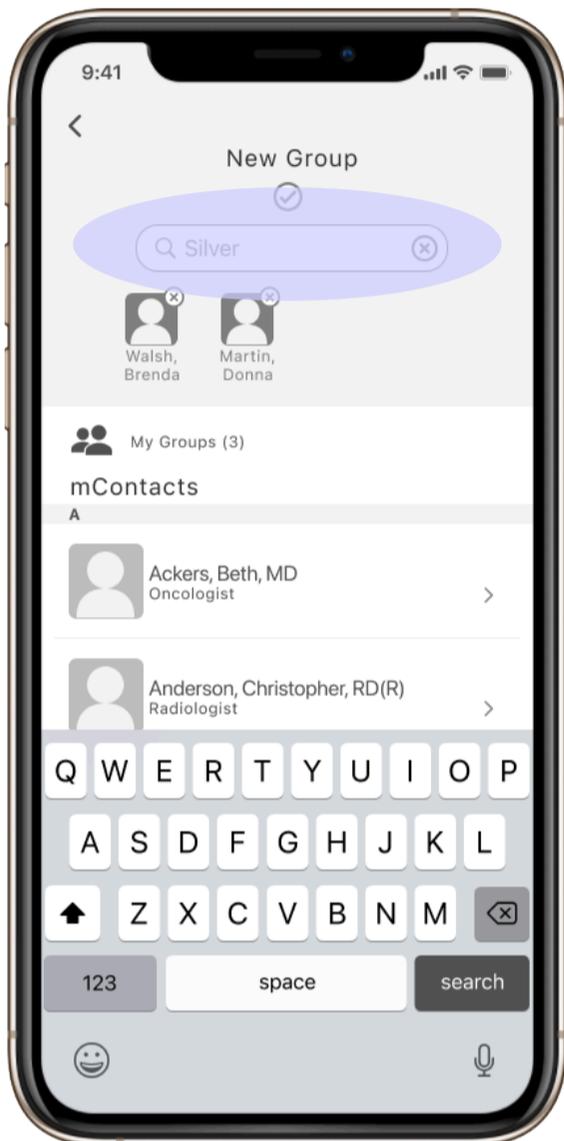
The previously added contacts remain at top of screen to note their selection. The user is able to again tap the '+' icon next to the contacts name to add them to the group



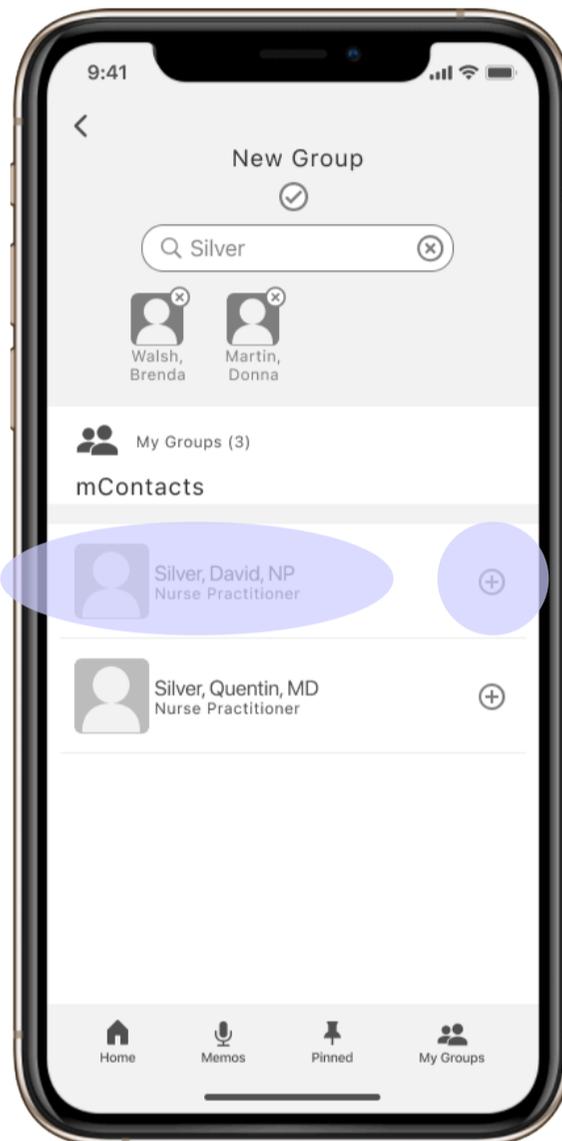
Both selected group members are now noted at the top of screen to visually note that they've been selected

Mid-Fi User Flow - Task Five

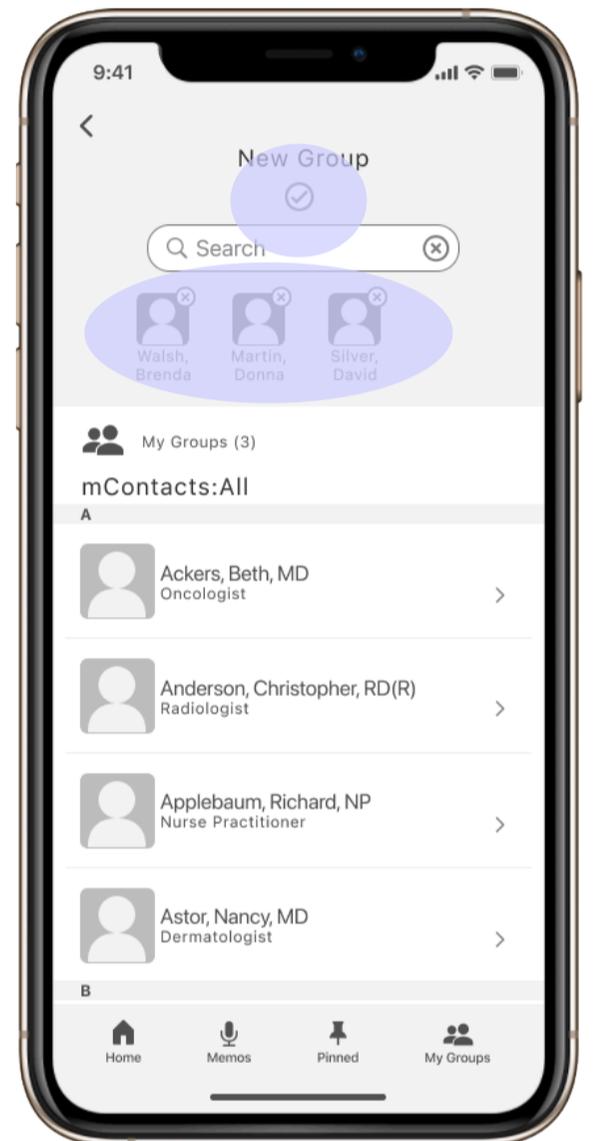
Task: Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.



The user is able to select multiple group members by searching for the individuals name



The previously added contacts remain at top of screen to note their selection. The user is able to again tap the '+' icon next to the contacts name to add them to the group

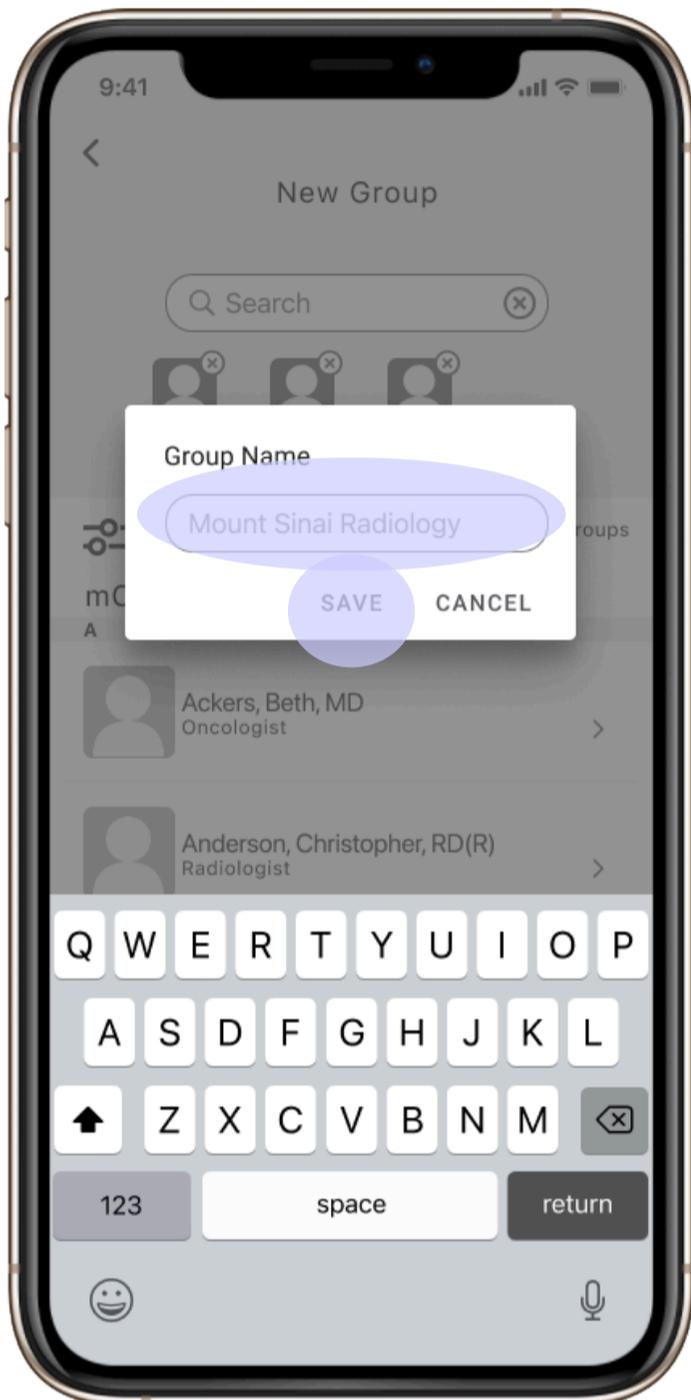


All selected group members are now noted at the top of screen to visually note that they've been selected

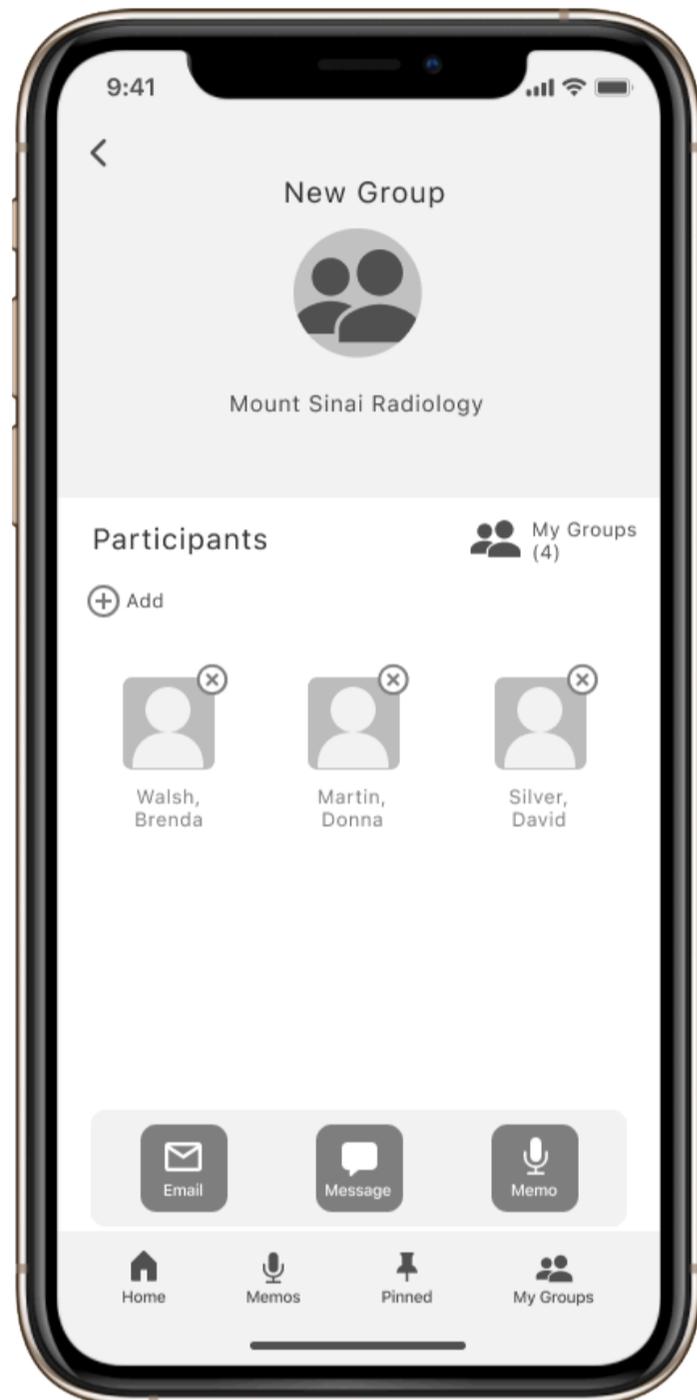
The user taps the 'check mark' icon to confirm group selected, members all here

Mid-Fi User Flow - Task Five

Task: Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.



A window appears after user has tapped the check mark icon. The user is able to name the group and then tap 'save' to save the selection and create a new group



The user is then taken to the group page which shows the user what they have selected and that the group has been saved with its chosen members

Testing Our Design

Usability Testing Discussion Guide

The Goal of Usability Testing is:

- To establish if our Minimum Viable Product provides the user a way to find the contact information of their colleagues
- To realize and understand if the user finds value in the product
- To learn how easy or difficult the user finds the navigation of the task flow and to see potential areas or improvement.

What is considered a “successful” usability test?

- We consider a usability test “successful” when the user completes the task using the direct or ‘happy-path’

OBJECTIVE

- We are testing to see if our mid-fidelity prototype provides users a way to find and utilize the contact information of their colleagues.
- We want to witness the users interacting with the designs to determine what areas need improvement as well as what features are already meeting task requirements

INTRODUCTION

- My name is [insert name] and I am a UX Designer at General Assembly. These are my team members, [state team members’ names], and they will be taking notes.
- First and foremost, I would like to thank you for taking the time to contribute to this research.
- Just to give you some context, we are testing the performance of a website. This prototype is a website that allows you find the contact information of colleagues both in and outside of your organization and use that information to contact them, as well as access schedules.
- I want to let you know that this is a minimum viable product, meaning that this is the bare bones of the website. I want to emphasize that you are not being tested and that honest feedback is the best feedback.
- This interview will take about 15 minutes. If at any point in time you would like to stop and end the interview, please let me know. Anything that you share today will not be shared with anyone and will only be used for research purposes.
- Is it okay with you if I record this interview for our notes? [receive consent before recording]
- Before we start, do you have any questions for me?

Usability Testing Discussion Guide

OPENING QUESTIONS

- Are you familiar with applications that provide access to contact information and communication?
- How comfortable are you with your device currently? What type of operating system is on your device?

FIRST IMPRESSIONS

Now that you have opened the application...

- Without clicking anything, what are your first impressions of the application?
- Is there anything that you notice or that stands out to you? Is there anything that you would like to tap on?

I am going to create several scenarios and from there have you complete several tasks. Please think out loud and narrate your entire thought process as you go through these tasks and features. You can think of it as describing everything to a blind person.

SCENARIO/TASKS

SCENARIO + TASK ONE

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

On a scale of 1-5, how easy/difficult was it to complete your task?

Easy 1 2 3 4 5 Difficult

SCENARIO + TASK TWO

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

On a scale of 1-5, how easy/difficult was it to complete your task?

Easy 1 2 3 4 5 Difficult

Usability Testing Discussion Guide

SCENARIO + TASK THREE

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

On a scale of 1-5, how easy/difficult was it to complete your task?

Easy 1 2 3 4 5 Difficult

SCENARIO + TASK FOUR

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

On a scale of 1-5, how easy/difficult was it to complete your task?

Easy 1 2 3 4 5 Difficult

SCENARIO + TASK FIVE

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

On a scale of 1-5, how easy/difficult was it to complete your task?

Easy 1 2 3 4 5 Difficult

FINAL THOUGHTS

Please feel free to share any final thoughts and feelings you have about the product.

- Did you find this app/site useful?
- How did this compare to the app/sites you usually use?
- Is there anything you'd expect to be able to do that you couldn't do?

Usability Testing Notes

USER 1: Grace

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|------------------|---------------|
| Time: 3:00 minutes | Indirect Success | Difficulty: 5 |
|--------------------|------------------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|------------------|----------------|---------------|
| Time: 10 seconds | Direct Success | Difficulty: 5 |
|------------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|------------------|---------------|
| Time: 12 seconds | Indirect Success | Difficulty: 3 |
|------------------|------------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|--------------------|------------------|---------------|
| Time: 1:18 minutes | Indirect Success | Difficulty: 3 |
|--------------------|------------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|------------------|----------------|---------------|
| Time: 36 seconds | Direct Success | Difficulty: 2 |
|------------------|----------------|---------------|

NOTES:

1. Tried looking in the locations icon on homepage and not mContacts. Thought groups would lead to radiologist listings from hospital to filter out radiologists
2. -
3. Was confused by the start and stop function of the microphone icon. 3 second marker made her think it was completed recording.
4. Once you know where you are in the app navigation is easy. Homepage could use more clarity. It's learnable but confusing at first.

Usability Testing Notes

USER 1: Kendall

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|------------------|-----------------|
| Time: 1:56 minutes | Indirect Success | Difficulty: 2.5 |
|--------------------|------------------|-----------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|-----------------|----------------|---------------|
| Time: 7 seconds | Direct Success | Difficulty: 1 |
|-----------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 13 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|------------------|---------------|
| Time: 29 seconds | Indirect Success | Difficulty: 2 |
|------------------|------------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|------------------|------------------|---------------|
| Time: 38 seconds | Indirect Success | Difficulty: 2 |
|------------------|------------------|---------------|

NOTES:

1. Clicked on groups first to get to "group of radiologists". Second instinct was to sort through the hospital icon on the homepage.
2. Found the pin easy to recognize
3. -
4. -
5. Tried clicking the pin in the footer. Initially assumed it was the path to get to the group.

Usability Testing Notes

USER 1: Oendrila

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|------------------|---------------|
| Time: 1:05 minutes | Indirect Success | Difficulty: 2 |
|--------------------|------------------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|-----------------|----------------|---------------|
| Time: 7 seconds | Direct Success | Difficulty: 1 |
|-----------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 11 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|----------------|---------------|
| Time: 16 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|------------------|----------------|---------------|
| Time: 30 seconds | Direct Success | Difficulty: 2 |
|------------------|----------------|---------------|

NOTES:

1. Went to location. Likes the clean contacts setup. I didn't understand the mContacts, I thought it would be in groups.
2. Doesn't know the purpose to the phone and mobile icon. Cluttered icons in the Public Groups section of the Contact Card. Doesn't need to see that there is more than one person. Icons unnecessary
3. Feels like speech is a weird function. Maybe voice message or voice note instead of "speech". Microphone helps signify but "Audio Note".
Why have two separate icons, one for voice note and another for messaging. In iOS this is all built into the messaging system. Place urgency flag under the message.
4. Instead of memos replace with the calendar at the top under the contact profile image
5. Save option needs to be more obvious as a call to action. Move button and use "Save" language for clarity. Center images field and put save button right underneath contact profile pictures.

Usability Testing Notes

USER 1: Cat

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|------------------|------------------|---------------|
| Time: 30 seconds | Indirect Success | Difficulty: 2 |
|------------------|------------------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|-----------------|----------------|---------------|
| Time: 4 seconds | Direct Success | Difficulty: 1 |
|-----------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 19 seconds | Direct Success | Difficulty: 2 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|----------------|---------------|
| Time: 25 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|------------------|----------------|---------------|
| Time: 35 seconds | Direct Success | Difficulty: 2 |
|------------------|----------------|---------------|

NOTES:

1. Went to location first since she new the hospitals then went back to contacts.
2. "That was great"
3. iPhone function of holding entire time while speaking. Liked the click on, record, clock stop.
4. Felt like she got lost in all of the text in the contact card. Bigger icon's for easier readability and scalability.
5. Once you add the contacts where do you go after to complete adding them to the group? Change buttons to "Confirm Group" or something similar. Not easy to find.

Usability Testing Notes

USER 1: Quinn

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|---------|---------------|
| Time: 1:42 minutes | Failure | Difficulty: 5 |
|--------------------|---------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|------------------|----------------|---------------|
| Time: 11 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 39 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|------------------|---------------|
| Time: 55 seconds | Indirect Success | Difficulty: 3 |
|------------------|------------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|--------------------|------------------|-----------------|
| Time: 1:23 minutes | Indirect Success | Difficulty: 2.5 |
|--------------------|------------------|-----------------|

NOTES:

1. Assumed she would click on groups to see "group of radiologists". Thought groups would be segregated by profession. Also tried locations to find radiologists in Mount Sinai.
2. -
3. Confusion around the sending and the on/off record screen transitions
4. Didn't think to click the search after the search field was autofilled. Thought maybe it would auto populate as she typed in the name. Alpha sort by last name (note: they are currently alpha sorted by last name)
5. Had difficulty finding the "save group" feature. Add sign was too small. Bigger and maybe below and have the save as a pop up. Make that action more obvious.

Usability Testing Scorecard

TASK 1: You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.
> Find the radiologists affiliated with Mount Sinai.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|------------------|--------|-------------------|--------|----------------|------------------|----------------------|--------------|
| | | | | | 3.3 | 1m 38 seconds | 40% |
| Direct Path 100% | | Indirect Path 50% | | Failed Path 0% | | | |

Times on task: 180 seconds, 116 seconds, 65 seconds, 30 seconds, 102 seconds
 Score 1-5 (1 easy, 5 difficult): 5, 2.5, 2, 2, 5 * 1 = EASY 5 = DIFFICULT

TASK 2: Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.
> Tag Dr. Luke Brandon's contact information for easy future access.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|------------------|--------|-------------------|--------|----------------|------------------|----------------------|--------------|
| | | | | | 1 | 7.8 seconds | 100% |
| Direct Path 100% | | Indirect Path 50% | | Failed Path 0% | | | |

Times on task: 10 seconds, 7 seconds, 7 seconds, 4 seconds, 11 seconds
 Score 1-5 (1 easy, 5 difficult): 1, 1, 1, 1, 1 * 1 = EASY 5 = DIFFICULT

Usability Testing Scorecard

TASK 3: You want to relay a quick but detailed comment to Dr. Luke Brandon about one of your new patients.

> Send Dr. Luke Brandon a speech message with urgency.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|---|---|--|---|---|------------------|----------------------|--------------|
|  |  |  |  |  | 1.6 | 18.8 seconds | 80% |
|  Direct Path 100% | |  Indirect Path 50% | |  Failed Path 0% | | | |

Times on task: 12 seconds, 13 seconds, 11 seconds, 19 seconds, 39 seconds
 Score 1-5 (1 easy, 5 difficult): 3, 1, 1, 2, 1

* 1 = EASY 5 = DIFFICULT

TASK 4: You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

> Look up Dr. Kelly Taylor's availability for today

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|--|---|---|---|--|------------------|----------------------|--------------|
|  |  |  |  |  | 2 | 40.6 seconds | 70% |
|  Direct Path 100% | |  Indirect Path 50% | |  Failed Path 0% | | | |

Times on task: 78 seconds, 29 seconds, 16 seconds, 25 seconds, 55 seconds
 Score 1-5 (1 easy, 5 difficult): 3, 2, 1, 1, 3

* 1 = EASY 5 = DIFFICULT

Usability Testing Scorecard

TASK 5: You've just started a new job and need to be able to easily communicate with your team.
> Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|---|---|--|---|---|------------------|----------------------|--------------|
|  |  |  |  |  | 2.1 | 44.4 seconds | 80% |
|  Direct Path 100% | |  Indirect Path 50% | |  Failed Path 0% | | | |

Times on task: 36 seconds, 38 seconds, 30 seconds, 35 seconds, 83 seconds
 Score 1-5 (1 easy, 5 difficult): 2, 2, 2, 2, 2.5

* 1 = EASY 5 = DIFFICULT

Usability Testing Notes

USER 1: Toni

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|------------------|---------------|
| Time: 2:12 minutes | Indirect Success | Difficulty: 3 |
|--------------------|------------------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|------------------|----------------|---------------|
| Time: 12 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 19 seconds | Direct Success | Difficulty: 3 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|----------------|---------------|
| Time: 15 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|--------------------|----------------|---------------|
| Time: 1:05 minutes | Direct Success | Difficulty: 1 |
|--------------------|----------------|---------------|

NOTES:

1. Initial thought is to search then went to locations. Indirect path. locations and organizations cause confusion. First task wished she could search first Filter first then secondary filter would thing search - filter - filter. Search Mount Sinai then filter by radiologists.
2. -
3. -
4. Ultimately a 1 but was inclined to click filter but eventually did search.
5. Pretty straightforward with creating and adding the group.

Thought it would make more sense (Task 1) to click on Mount Sinai as the organization, sub filter by locations in system and then again by radiologist. Having organization and location in the tame hierarchical level tripped her up.

Usability Testing Notes

USER 1: Liz

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|------------------|---------------|
| Time: 1:20 minutes | Indirect Success | Difficulty: 4 |
|--------------------|------------------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|-----------------|----------------|---------------|
| Time: 2 seconds | Direct Success | Difficulty: 1 |
|-----------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 36 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|------------------|---------------|
| Time: 30 seconds | Indirect Success | Difficulty: 2 |
|------------------|------------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|--------------------|----------------|---------------|
| Time: 1:14 minutes | Direct Success | Difficulty: 3 |
|--------------------|----------------|---------------|

NOTES:

1. Thought of Mount Sinai as a location before I thought it was a organization. The overall filter was kind of confusing, but it made more sense the more I used it, I'm also not a doctor so that might be a factor. Filter took a while to use.
2. Way to much information on the Calendar page. I couldn't tell if I needed to use filters to find specific doctor.
3. Used to add people one at a time & save, rather than add all and then save. I had to select the tiny plus sign to add the person, rather than selecting their entire name.

Usability Testing Notes

USER 1: Nichole

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|------------------|---------------|
| Time: 1: 24minutes | Indirect Success | Difficulty: 2 |
|--------------------|------------------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|-----------------|----------------|---------------|
| Time: 8 seconds | Direct Success | Difficulty: 1 |
|-----------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|------------------|---------------|
| Time: 33 seconds | Indirect Success | Difficulty: 1 |
|------------------|------------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|--------------------|------------------|---------------|
| Time: 1:22 minutes | Indirect Success | Difficulty: 3 |
|--------------------|------------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|------------------|----------------|---------------|
| Time: 55 seconds | Direct Success | Difficulty: 5 |
|------------------|----------------|---------------|

NOTES:

1: Tendency to go to locations. Discover contacts is confusing. Not that going to "Directory" speaks to specific organization. Feels it's absolutely learnable.

3: very intuitive

4: thought to look at my groups would search fro home page at start then hamburger menu. Whats still confusing is the difference between who she can find versus their groups. Searching with which groups means what.

5: Very Easy

First impressions communication stop to connect with other people in the medical field. Groups and directory tripped her up.

Usability Testing Notes

USER 1: Chris

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|--------------------|---------|---------------|
| Time: 1:40 minutes | Failure | Difficulty: 5 |
|--------------------|---------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|-----------------|----------------|---------------|
| Time: 6 seconds | Direct Success | Difficulty: 1 |
|-----------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 50 seconds | Direct Success | Difficulty: 2 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|----------------|---------------|
| Time: 50 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|--------------------|---------|---------------|
| Time: 1:40 minutes | Failure | Difficulty: 5 |
|--------------------|---------|---------------|

NOTES:

1. I thought that radiologists weren't Dr.'s but were technicians, so I was confused with task wording, but that was from my lack of understanding.
2. The color of the microphone didn't really pop out that much.
3. I personally don't do group texts a lot. I understood My Groups to be contacts that I have already pinned, or that I already have in my phone, rather than pulling from a global database. I thought I needed to pin their contacts first before I could add them to a group.

Usability Testing Notes

USER 1: Brady

SCENARIO + TASK ONE:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | | |
|------------------|----------------|---------------|
| Time: 51 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

SCENARIO + TASK TWO:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | | |
|-----------------|----------------|---------------|
| Time: 7 seconds | Direct Success | Difficulty: 1 |
|-----------------|----------------|---------------|

SCENARIO + TASK THREE:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.

| | | |
|------------------|----------------|---------------|
| Time: 16 seconds | Direct Success | Difficulty: 1 |
|------------------|----------------|---------------|

Scenario Task 4:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | | |
|------------------|------------------|---------------|
| Time: 31 seconds | Indirect Success | Difficulty: 2 |
|------------------|------------------|---------------|

Scenario Task 5:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | | |
|--------------------|------------------|---------------|
| Time: 1:36 minutes | Indirect Success | Difficulty: 2 |
|--------------------|------------------|---------------|

NOTES:

1. The filter was super simple to use.
2. The "urgent button" on the voice message screen could be a little more clickable, I personally think the flag was far more noticeable than the red dot.
3. At first I didn't really know where I should look to find Dr. Kelley Taylor (Filter) or (No Filter), I also got confused because I couldn't type her name in.
4. In order to add people to groups, I didn't know if I needed to search for people that I already had in previous groups, or how that worked. Maybe change the "plus button" to "start a new group" or something to make it more noticeable.

Usability Testing 2 Scorecard

TASK 1: You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.
> Find the radiologists affiliated with Mount Sinai.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|------------------|--------|-------------------|--------|----------------|------------------|----------------------|--------------|
| | | | | | 3 | 77 Seconds | 50% |
| Direct Path 100% | | Indirect Path 50% | | Failed Path 0% | | | |

Times on task: 72 seconds, 80 seconds, 84 seconds, 100 seconds, 51 seconds

Score 1-5 (1 easy, 5 difficult): 3,4, 2, 5, 1

Round 1 ER: 3.3 Time 1:38 Success: 40%

* 1 = EASY 5 = DIFFICULT

Times on task: Decreased 21 seconds

Score 1-5 (1 easy, 5 difficult): Improve from 3.3 to 3

Success: Improved by 10%

Although all three measures improved in round two there was no significant impact in any of the three areas. To address this we recommend a new home screen (proposed design detailed in the "Future Steps" section of this report).

TASK 2: Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.
> Tag Dr. Luke Brandon's contact information for easy future access.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|------------------|--------|-------------------|--------|----------------|------------------|----------------------|--------------|
| | | | | | 1 | 7s | 100% |
| Direct Path 100% | | Indirect Path 50% | | Failed Path 0% | | | |

Times on task: 12 seconds, 2 seconds, 8 seconds, 6 seconds, 7 seconds

Score 1-5 (1 easy, 5 difficult): 1, 1, 1, 1, 1

Round 1 ER: 1 Time 7.8 s Success: 100%

* 1 = EASY 5 = DIFFICULT

Times on task: Time remained mainly unchanged

Score 1-5 (1 easy, 5 difficult): Easiness rating remained the same

Success: Remained by 100%

User testing round two remained largely unchanged and success remained at 100%

Usability Testing 2 Scorecard

TASK 3: You want to relay a quick but detailed comment to Dr. Luke Brandon about one of your new patients.

> Send Dr. Luke Brandon a speech message with urgency.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|---|---|--|---|---|------------------|----------------------|--------------|
|  |  |  |  |  | 1.6 | 31s | 90% |
|  Direct Path 100% | |  Indirect Path 50% | |  Failed Path 0% | | | |

Times on task: 19 seconds, 36 seconds, 33 seconds, 50 seconds, 16 seconds

Score 1-5 (1 easy, 5 difficult): 3, 1, 1, 2, 1

Round 1 ER: 1.6 Time 18.8 s Success: 80%

* 1 = EASY 5 = DIFFICULT

Times on task: Time increased but only marginally
Score 1-5 (1 easy, 5 difficult): Easiness rating remained unchanged

User testing round two remained largely unchanged and success improved but by 10%

Success: Improved by 10% 

TASK 4: You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

> Look up Dr. Kelly Taylor's availability for today

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|--|---|---|---|--|------------------|----------------------|--------------|
|  |  |  |  |  | 1.8 | 42s | 70% |
|  Direct Path 100% | |  Indirect Path 50% | |  Failed Path 0% | | | |

Times on task: 15 seconds, 30 seconds, 82 seconds, 50 seconds, 31 seconds

Score 1-5 (1 easy, 5 difficult): 1, 2, 3, 1, 2

Round 1 ER: 2 Time 40.6 s Success: 70%

* 1 = EASY 5 = DIFFICULT

Usability Testing 2 Scorecard

TASK 5: You've just started a new job and need to be able to easily communicate with your team.
> Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| USER 1 | USER 2 | USER 3 | USER 4 | USER 5 | EASINESS RATING* | AVERAGE TIME ON TASK | SUCCESS RATE |
|---|---|--|---|---|------------------|----------------------|--------------|
|  |  |  |  |  | 2.4 | 1m 18s | 70% |
|  Direct Path 100% | |  Indirect Path 50% | |  Failed Path 0% | | | |

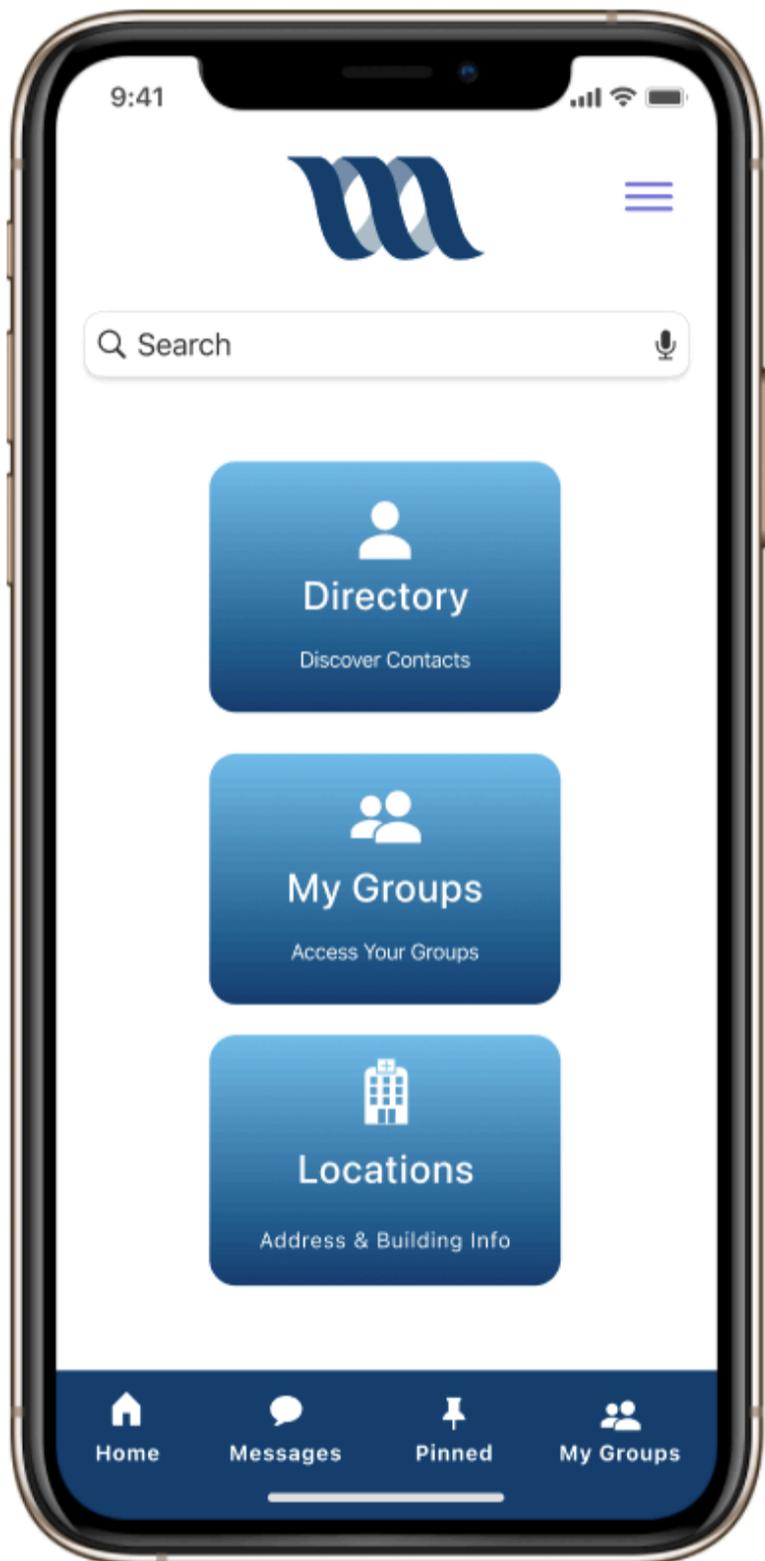
Times on task: 65 seconds, 74 seconds, 55 seconds, 100 seconds, 96 seconds

Score 1-5 (1 easy, 5 difficult): 1, 3, 1, 5, 2

Round 1 ER: 2.1 Time 44.4 s Success: 80%

* 1 = EASY 5 = DIFFICULT

Task Detail + Test Analysis



Task + Scenario One:

You're a new radiologist at Mount Sinai and want to see what other radiologists you will be working with.

Find the radiologists affiliated with Mount Sinai.

| | Easiness Rating | Time On Task | Success Rate |
|----------|-----------------|--------------|--------------|
| Test One | 3.3 | 98 seconds | 40% |
| Test Two | 3 | 77 seconds | 50% |
| Delta | 0.3 ▲ | 22 seconds | 10% ▲ |

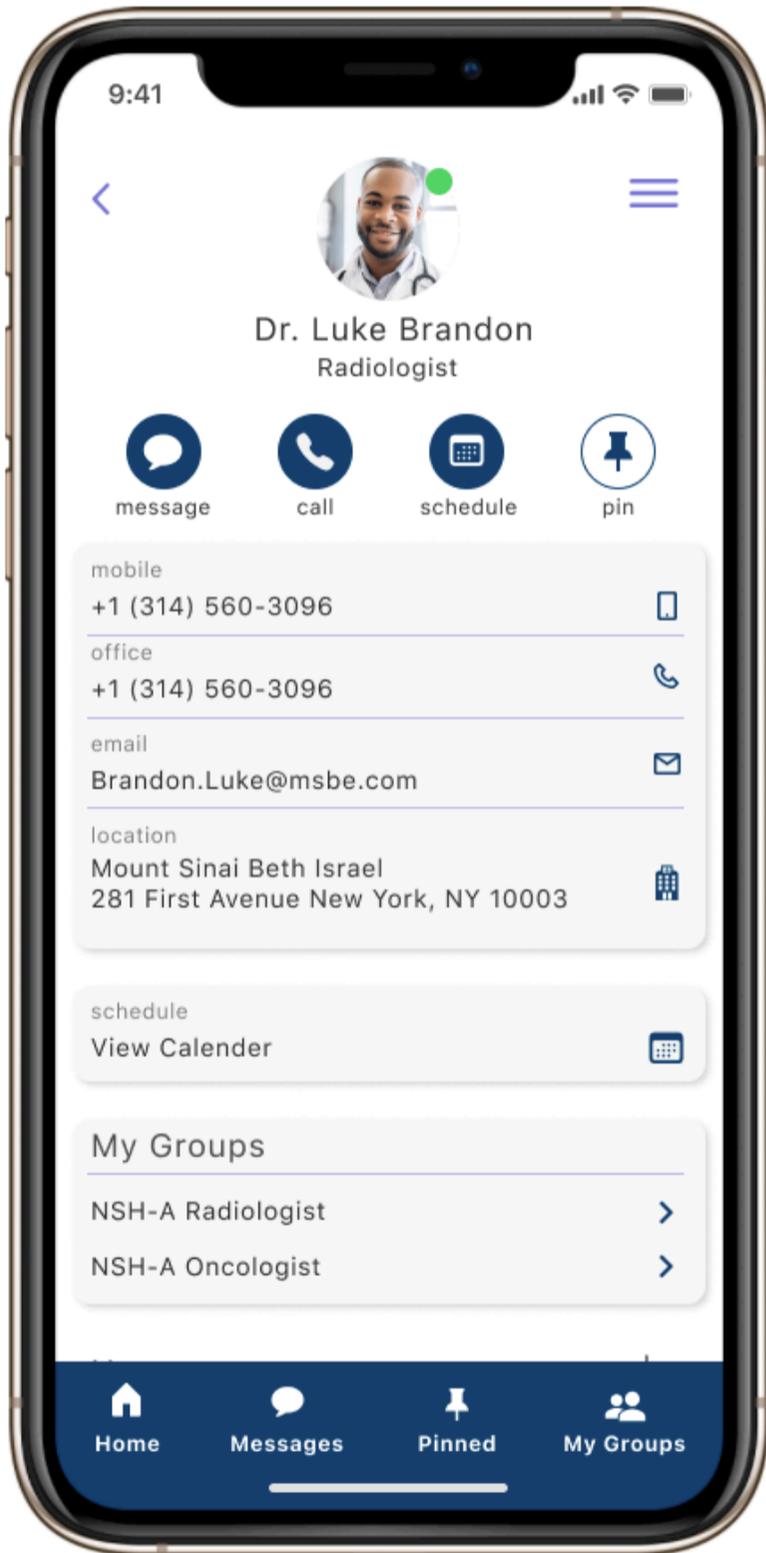
Analysis of Test:

- Users gravitated towards the location button
- Users had a hard time differentiating between home page buttons

Recommendations:

- Employ more testing to discover intuitive terms for users
- Focus on creating filter system that feels natural to the user while accommodating the amount of data to filter

Task Detail + Test Analysis



Task + Scenario Two:

Within this new team at Mount Sinai you know you'll be regularly working with Dr. Luke Brandon and will regularly utilize his contact information.

Tag Dr. Luke Brandon's contact information for easy future access.

| | Easiness Rating | Time On Task | Success Rate |
|----------|-----------------|--------------|--------------|
| Test One | 1 | 8 seconds | 100% |
| Test Two | 1 | 7 seconds | 100% |
| Delta | No Change | 1 second | No Change |

Analysis of Test:

- Users quickly found and tapped 'pin' icon
- All feedback was positive

Recommendations:

- No Recommendations Necessary

Task Detail + Test Analysis

Task + Scenario Three:

You want to relay a quick but detailed comment to a Dr. Luke Brandon about one of your new patients.

Send Dr. Luke Brandon a speech message with urgency.



| | Easiness Rating | Time On Task | Success Rate |
|----------|-----------------|--------------|--------------|
| Test One | 1.6 | 19 seconds | 80% |
| Test Two | 1.6 | 31 seconds | 90% |
| Delta | No Change | 12 seconds | 10% ▲ |

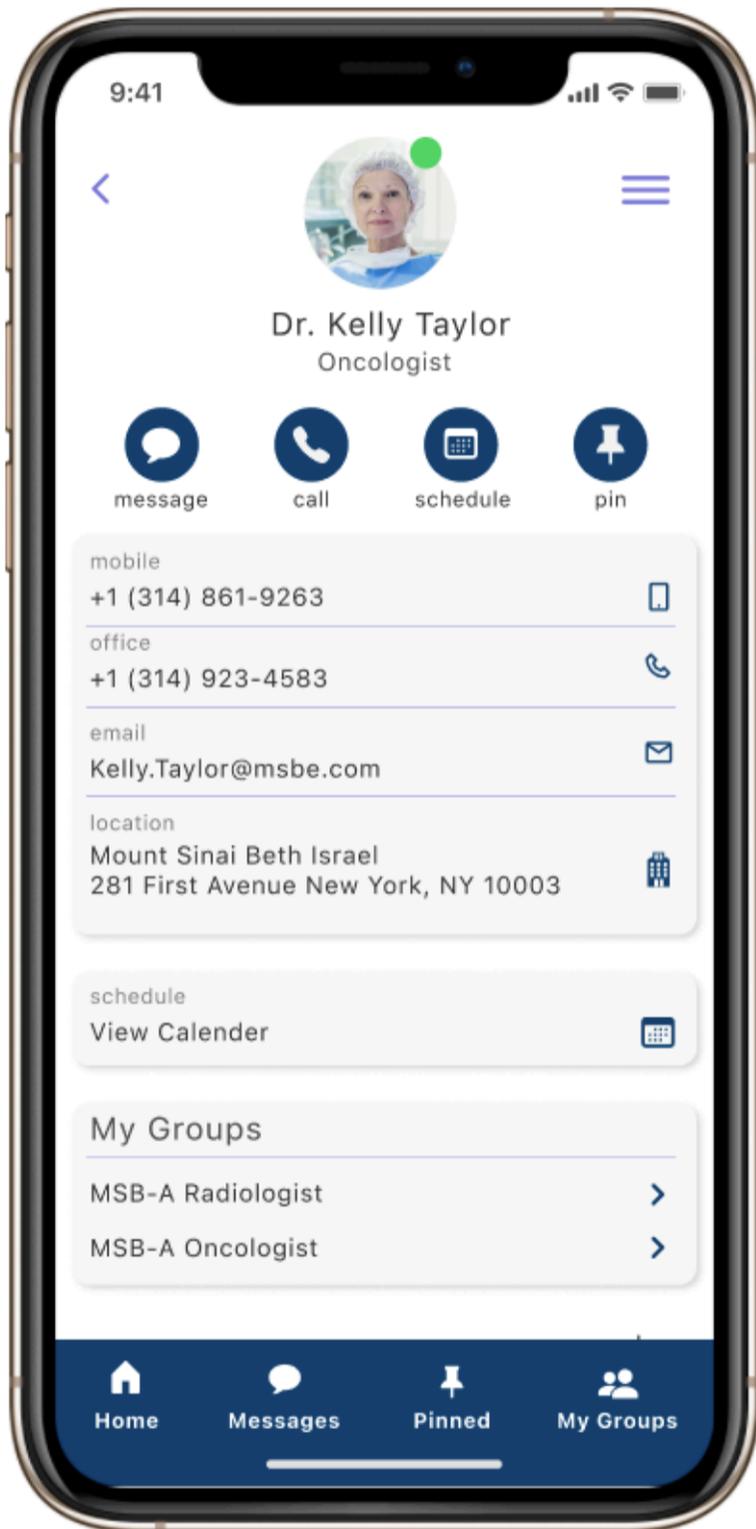
Analysis of Test:

- Users found audio message feature intuitive
- Users easily interacted with urgent message modality

Recommendations:

No recommendations necessary

Task Detail + Test Analysis



Task + Scenario Four:

You're approaching your work shift for the day and know you are working with one of Dr. Kelly Taylor's patients and want to know when she's available for consult throughout the day.

Look up Dr. Kelly Taylor's availability for today

| | Easiness Rating | Time On Task | Success Rate |
|----------|-----------------|--------------|--------------|
| Test One | 2 | 41 seconds | 70% |
| Test Two | 1.8 | 42 seconds | 70% |
| Delta | 0.2 | 1 second | No Change |

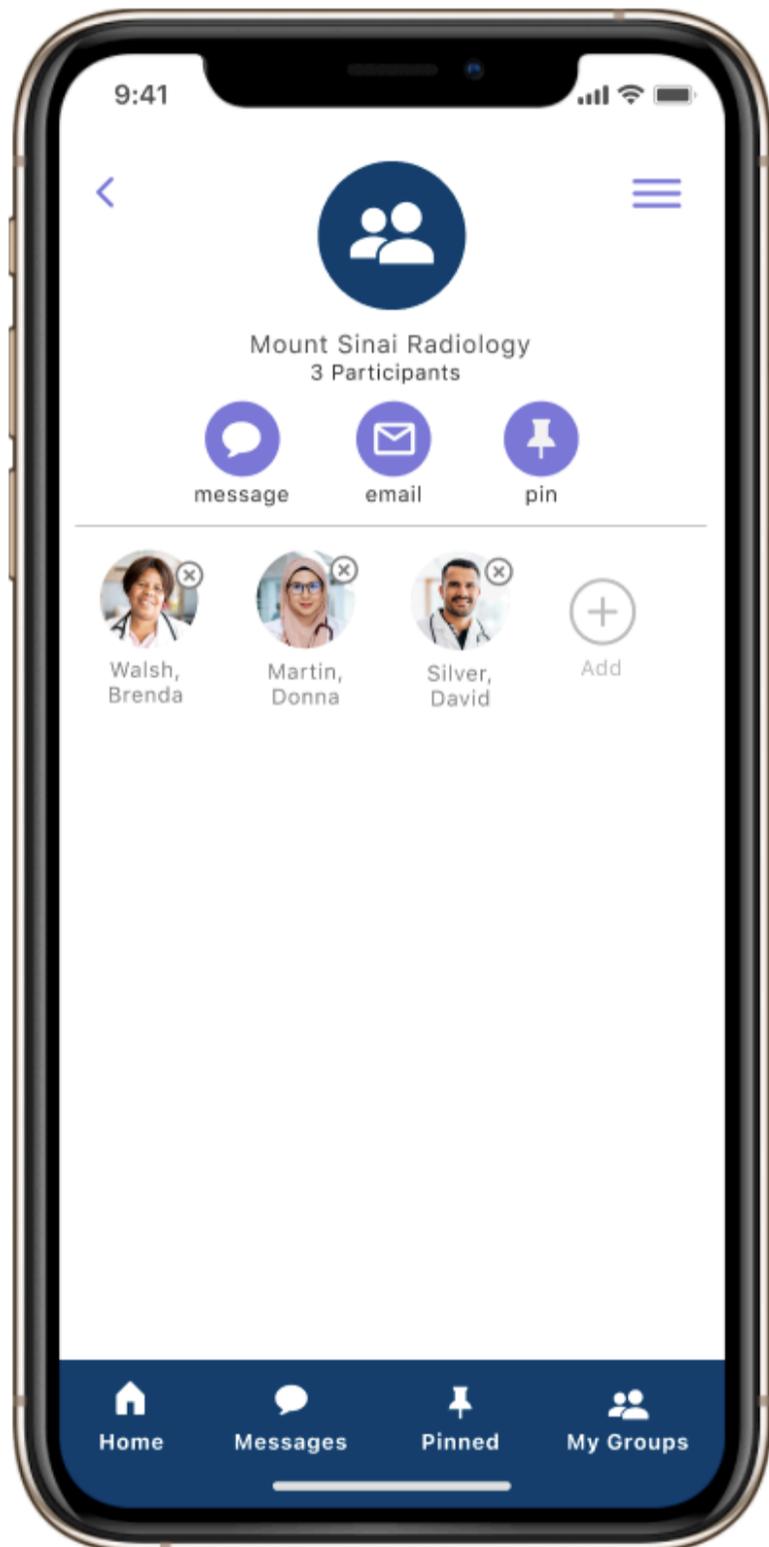
Analysis of Test:

- Users seemed clear on utilizing search bar
- Users again didn't seem clear on the home page how to directly navigate to contact card of individual

Recommendations:

- More usability testing on more navigable home search
- Test which words elicit correct response

Task Detail + Test Analysis



Task + Scenario Five:

You've just started a new job and need to be able to easily communicate with your team.

Add Dr. Brenda Walsh, Dr. Donna Martin and Nurse David Silver to a specified team.

| | Easiness Rating | Time On Task | Success Rate |
|----------|-----------------|--------------|--------------|
| Test One | 2.1 | 44 seconds | 80% |
| Test Two | 2.4 | 78 seconds | 70% |
| Delta | 0.3 | 33 seconds | 10% ▼ |

Analysis of Test:

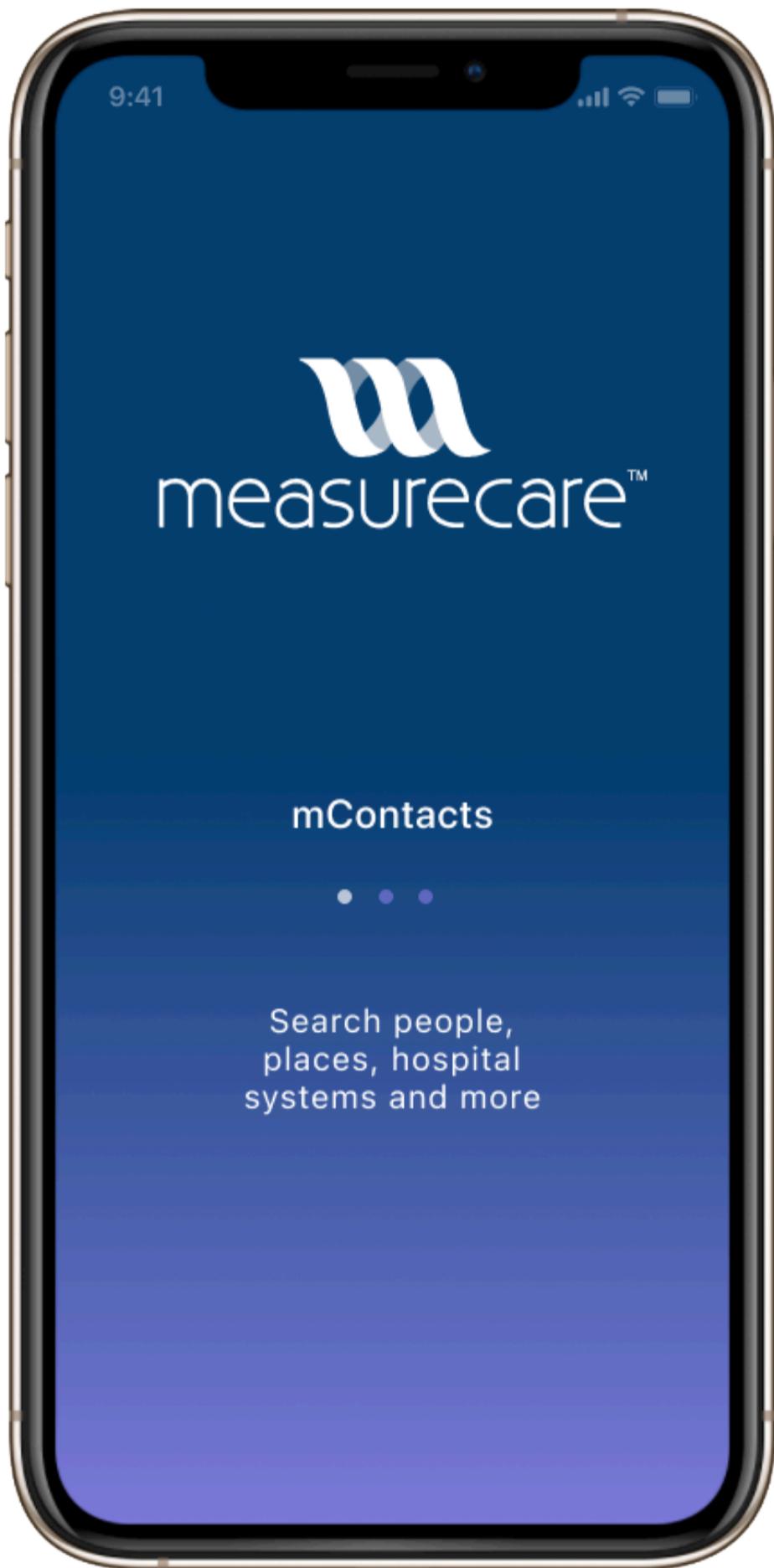
- Users felt the group modality was intuitive and easily learned

Recommendations:

- Sometimes when there are multiple entries for a usability test users forget the descriptions and it creates for slower response times
- Further testing is required to see how the next iteration can be made more intuitive

Fine Tuning the Design

MeasureCare Mockups



PURPOSE:

We wanted to utilize the best features of the existing MeasureCare application and also conduct extensive user research to elevate the product and introduce new features that would help the user achieve productivity throughout the day by reducing time spent in the communication process with colleagues

FEATURES:

- Voice/Text Messaging
- Message Urgency Indicator
- Robust Filter Interface
- Pin Function: People, Places, Messages, etc.
- Create & Edit Personal Groups
- Schedule Feature in Contact Card
- Do Not Disturb in Account Settings

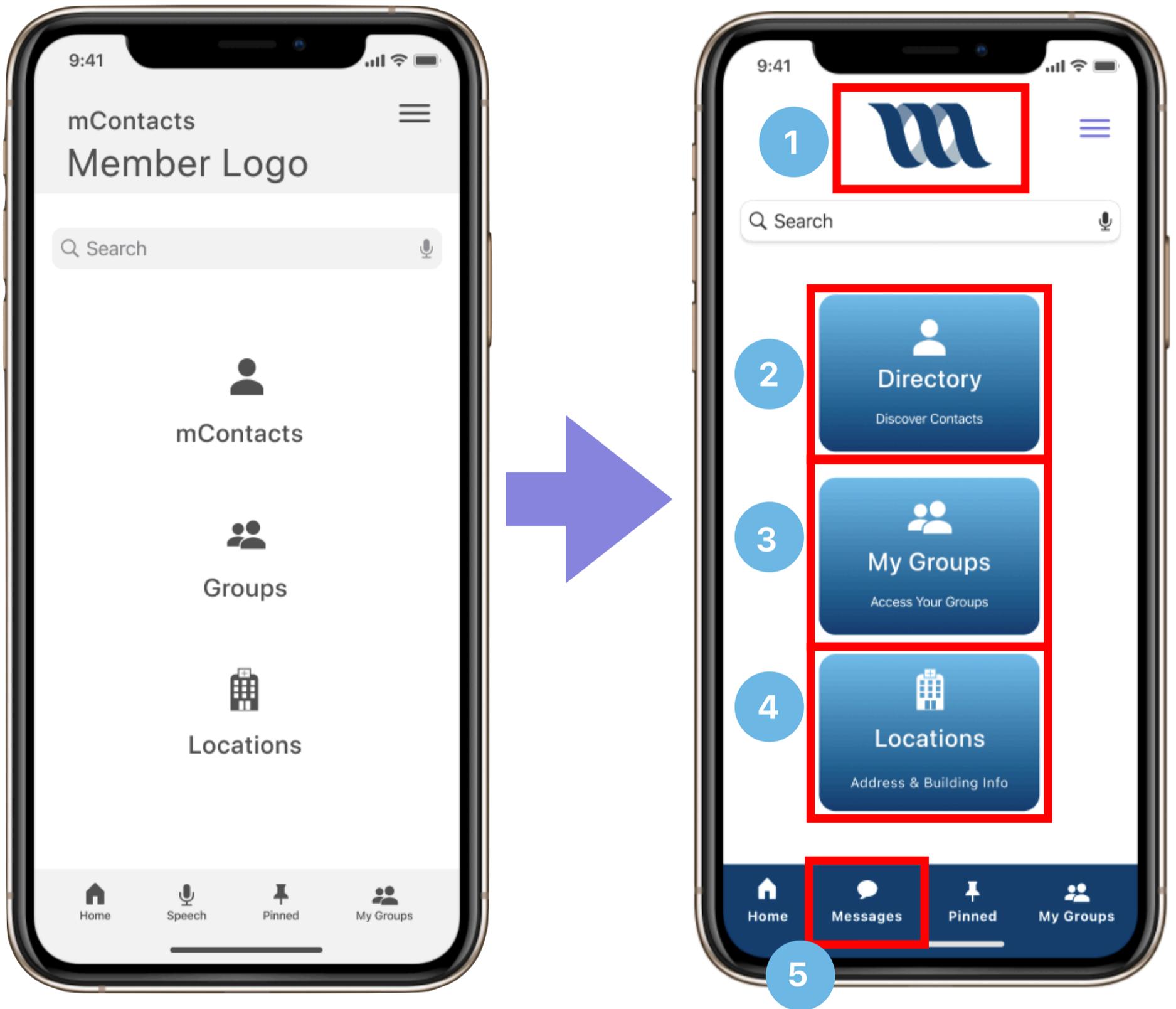
DESIGN COMPONENTS:

Typeface: SF Pro

Color Palette:



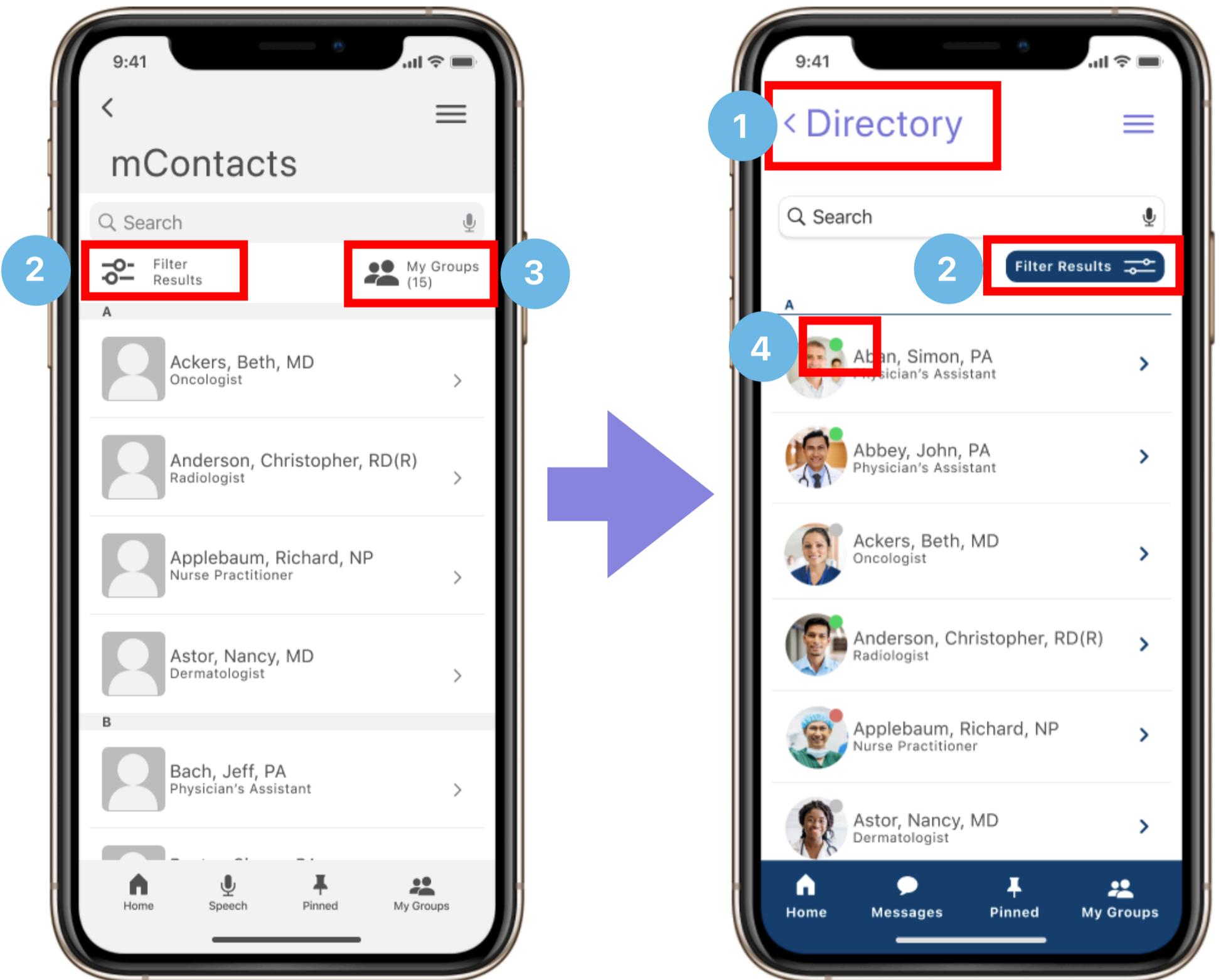
Mobile Mockups



INSIGHT: Design Change

1. Incorporated the MeasureCare logo into the home page design
2. Changed "mContacts" to "Directory" and added context description 'Discover Contacts' for the user to realize the definition of button
3. Changed "Groups" to "My Groups" and added context description 'Access Your Groups' for the user to realize the definition of button
4. Added context description 'Address & Building Info' for the user to realize the definition of button
5. Removed "Speech" icon and added "Messages" as the usability of the speech features is embedded within the messages feature

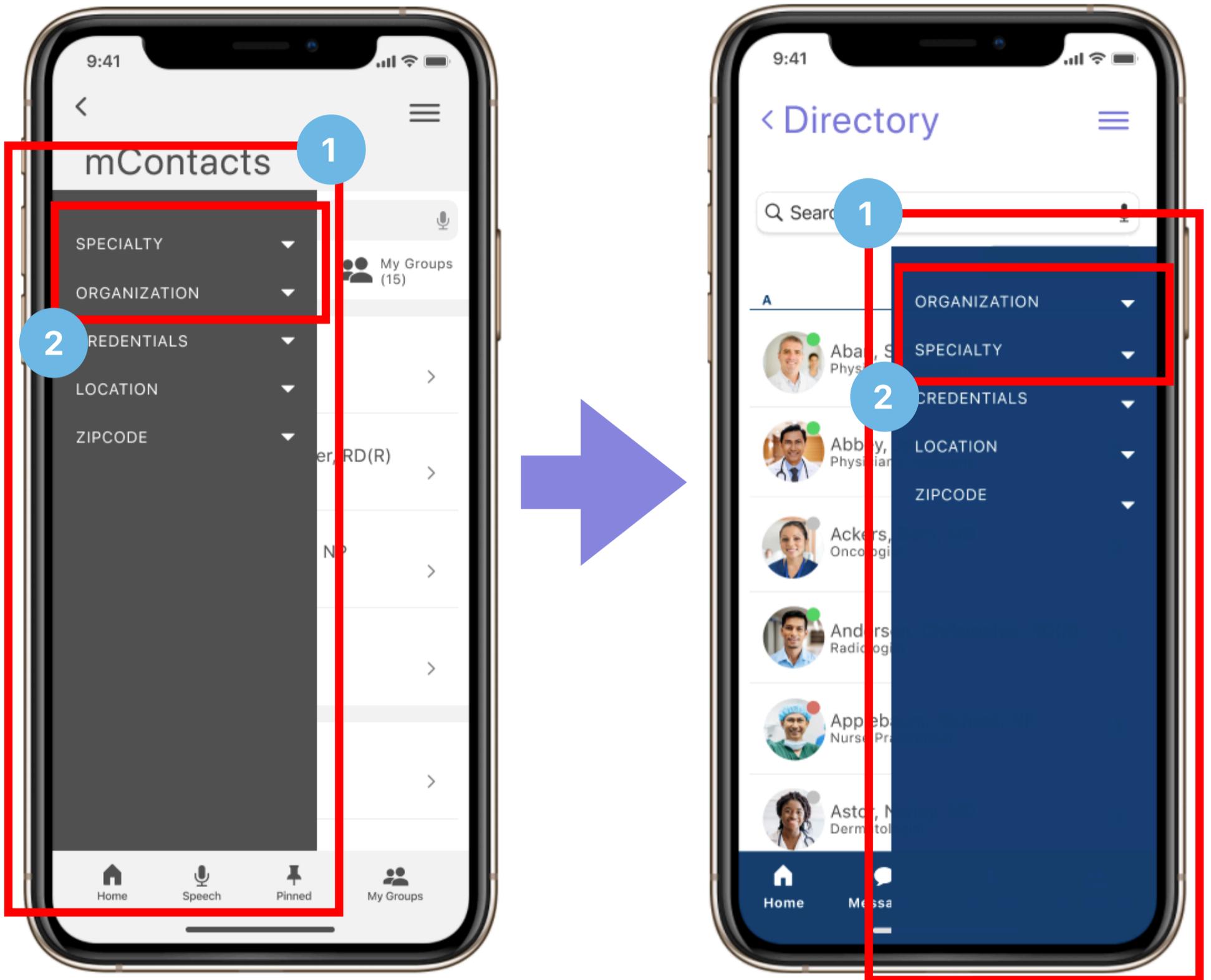
Mobile Mockups



INSIGHT: Design Change

1. For navigational clues the description "Directory" is noted at top of screen
2. Utilized color and a button structure to call attention to the 'filter results' feature; also moved 'filter results' to left side of screen as it felt less cluttered and more visually appealing
3. Removed 'my groups' entirely from top of contacts screen as it is already in the bottom navigation and felt redundant
4. Added a green, red or grey indicator which depicts whether a user is active (green), inactive (grey) or unavailable (red) for consult at this time

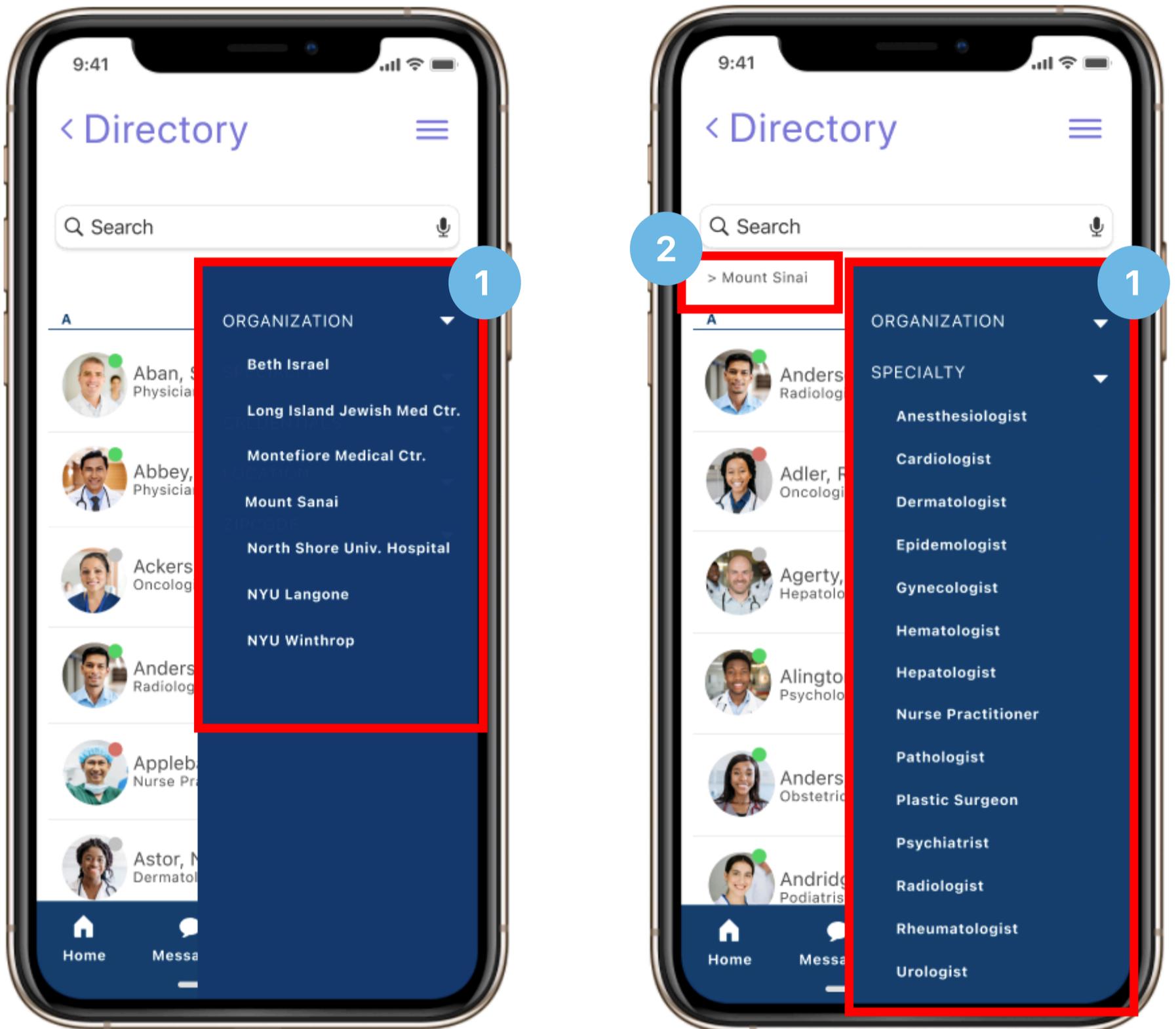
Mobile Mockups



INSIGHT: Design Change

1. The dropdown menu for 'filter results' has been moved from the left side of the screen to the right as the button is now on the right and from a usability perspective that creates consistent design patterns
2. The filter options 'speciality' and 'organization' have been switched in order because usability testing proved that users wanted to filter by organization first

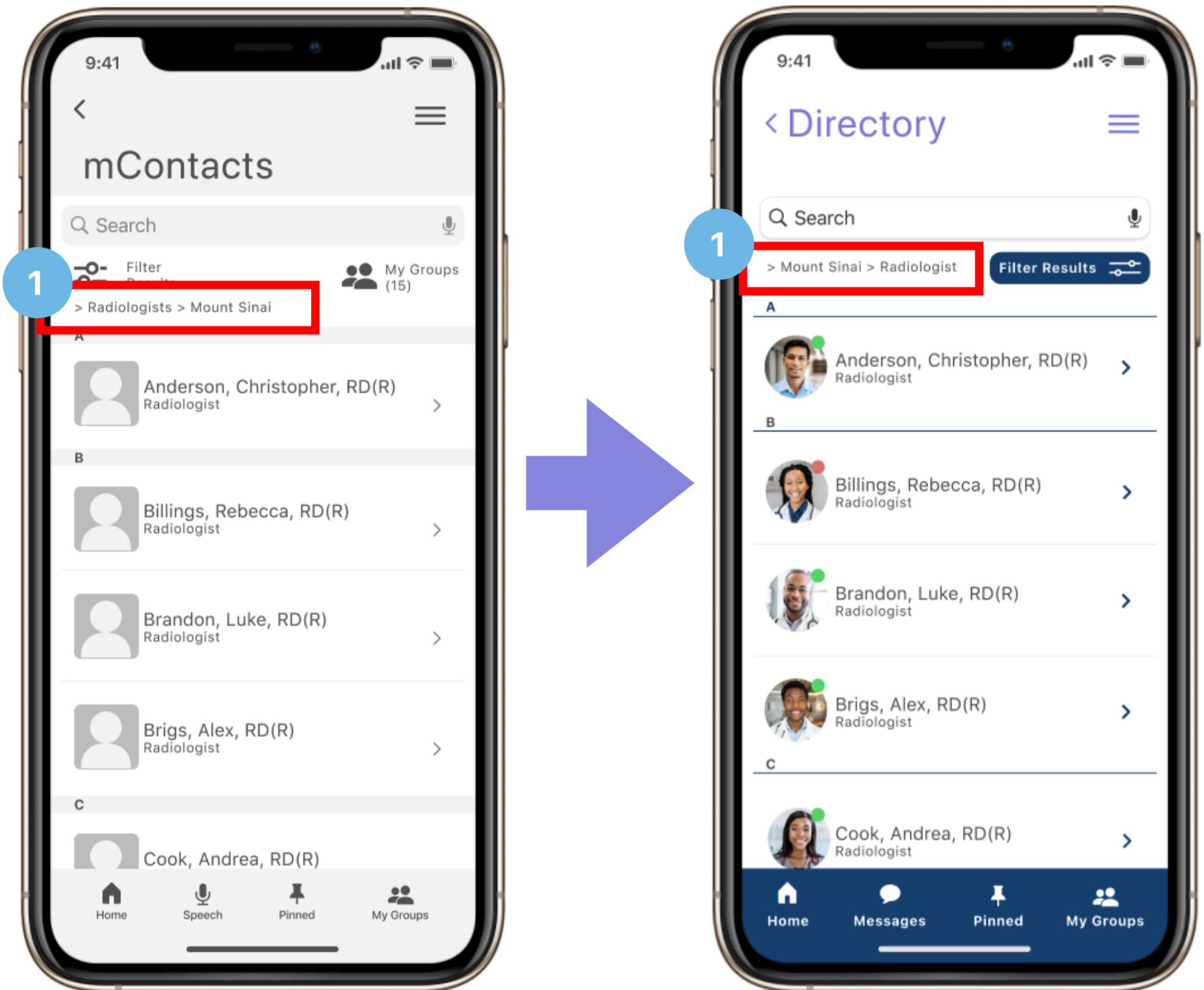
Mobile Mockups



INSIGHT: Filter Results Dropdown

1. The organization options for filtering results as well as the various medical specialties for filter options
2. A carrot indicator is a visual cue to the user that their selections have been inputted correctly and are secured

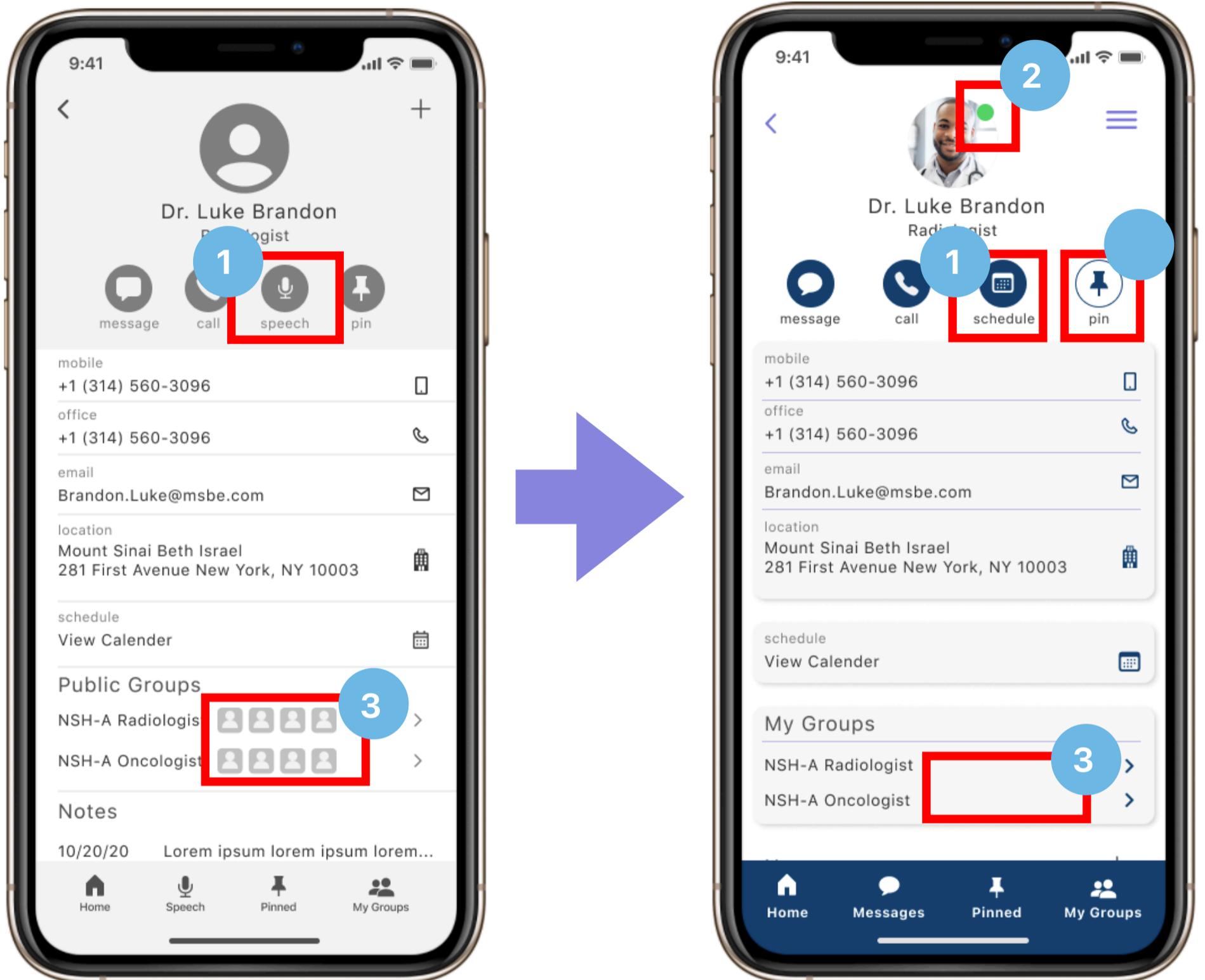
Mobile Mockups



INSIGHT: Design Change

1. The selected filter options have moved from the left to the right of the screen to accommodate the move of the 'filter results' button

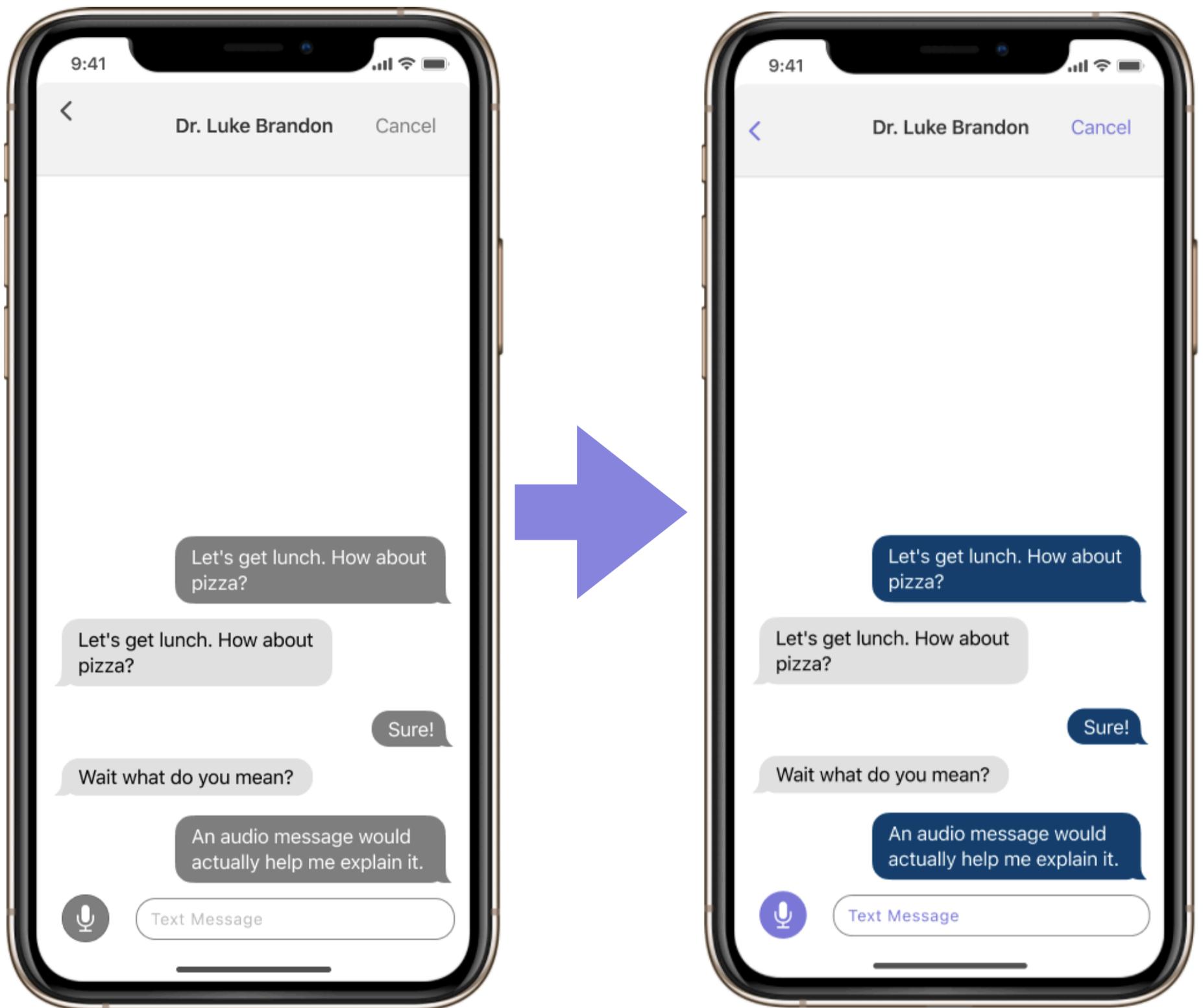
Mobile Mockups



INSIGHT: Design Change

1. Replaced the 'speech' button with a 'schedule' button. The audio message function is built into the messages. During usability testing, participants questioned why the 'speech' button was there and what it meant
2. The 'green light' indicator in the top right of the users image declares that they are currently active in the application
3. The images of individuals in a specified group were removed to reduce visual clutter on the screen

Mobile Mockups



INSIGHT: Mid-Fidelity to Mockup

Color is added from version one to version two

Mobile Mockups



INSIGHT: Design Change

1. The microphone icon was moved to the center of the screen for visual presence. The user can more readily access and engage with the function while it is within thumb reach in the middle of the screen
2. The arrow utilized to send a message was removed because during this step of the audio message task a user would be holding down the microphone to create message

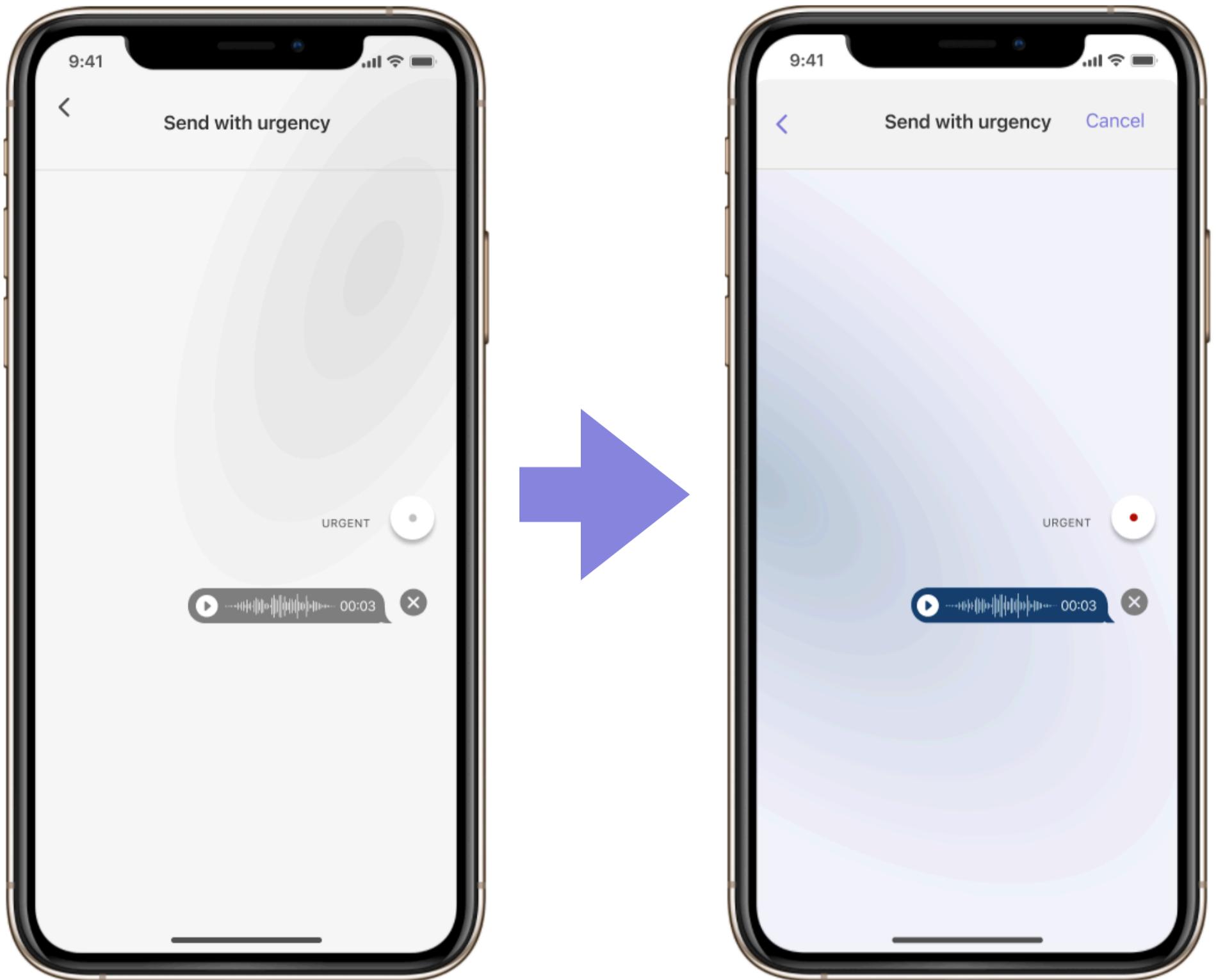
Mobile Mockups



INSIGHT: Design Change

1. The send arrow now reappears once the user has completed the audio message

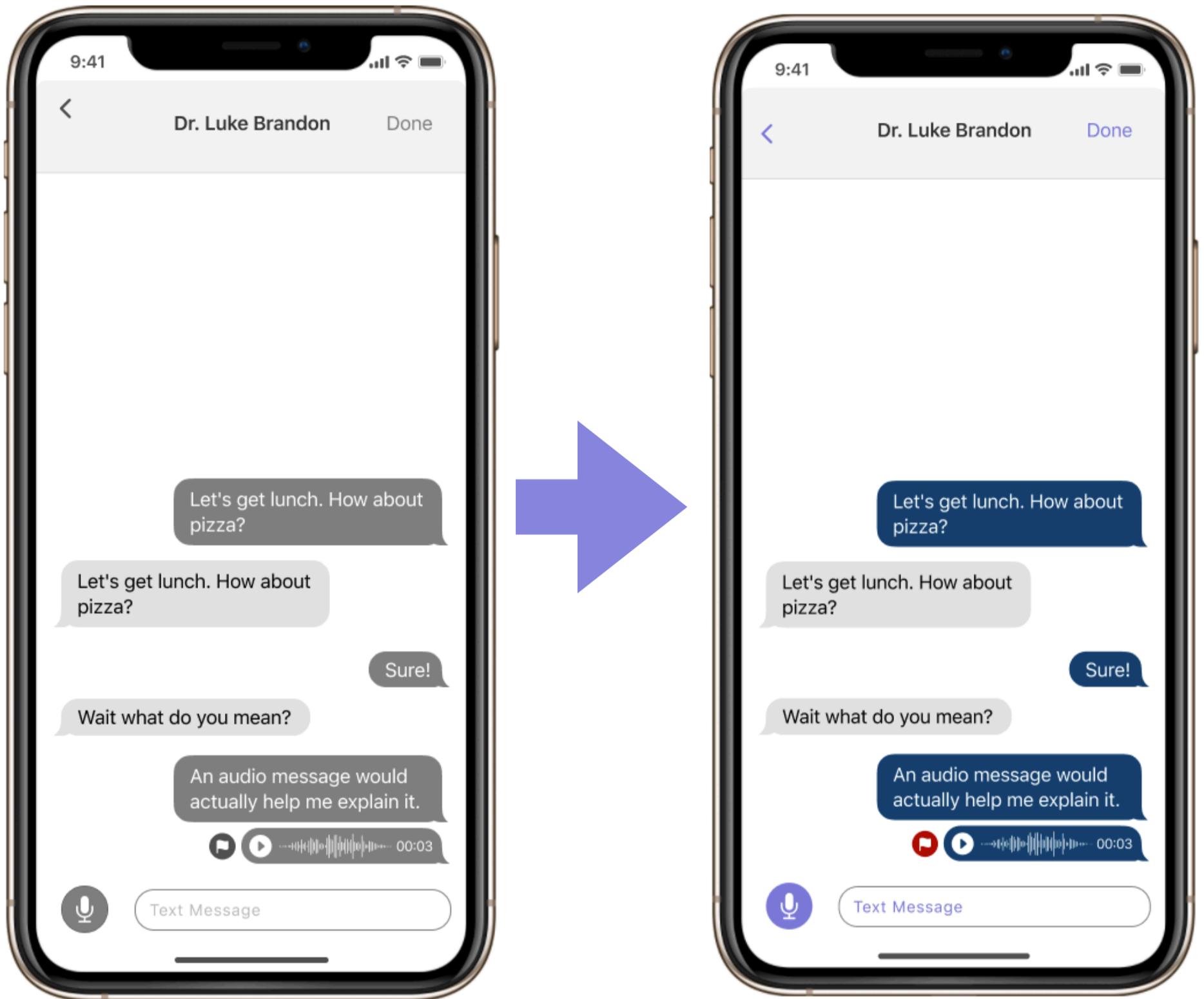
Mobile Mockups



INSIGHT: Mid-Fidelity to Mockup

Color is added from version one to version two

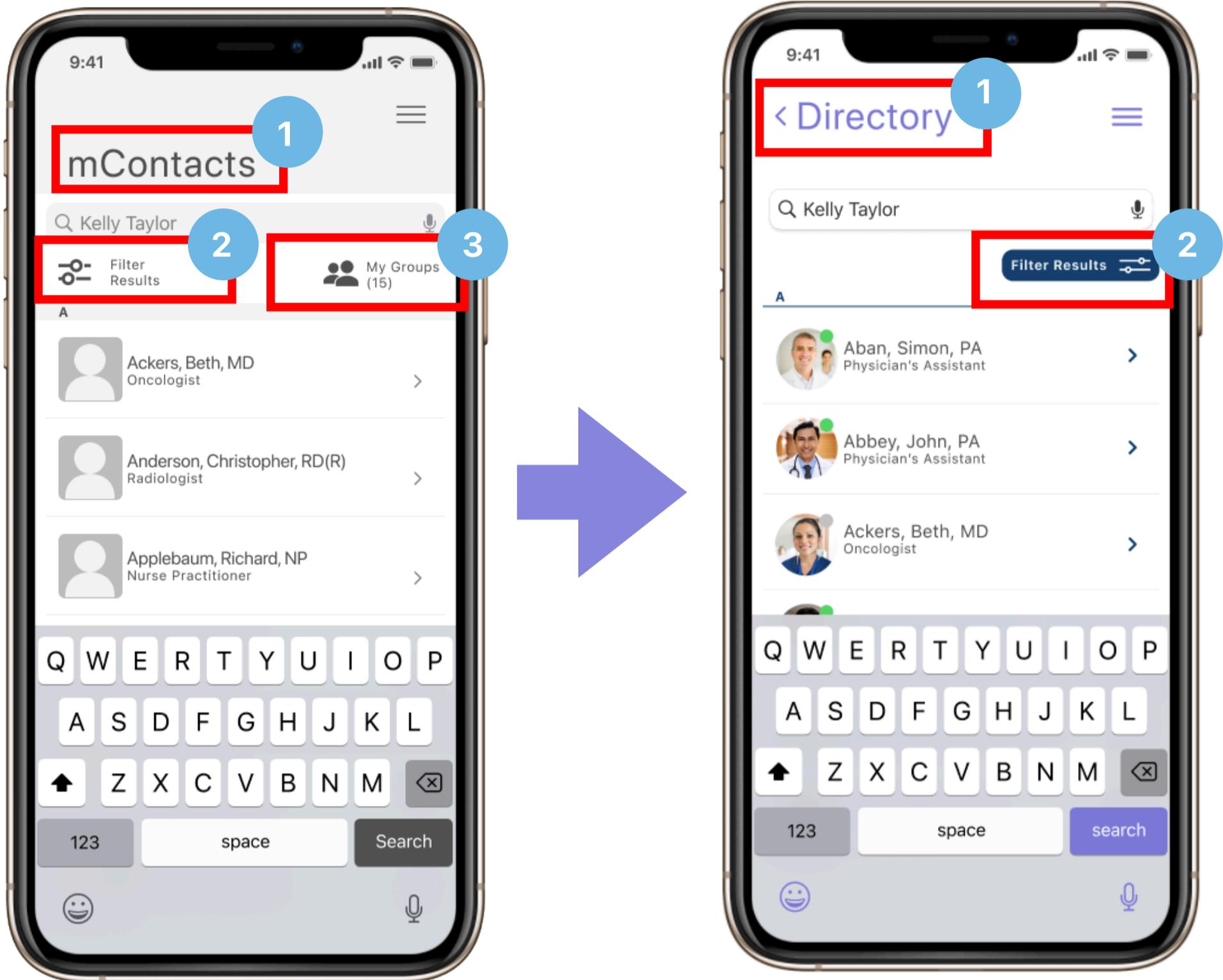
Mobile Mockups



INSIGHT: Mid-Fidelity to Mockup

Color is added from version one to version two

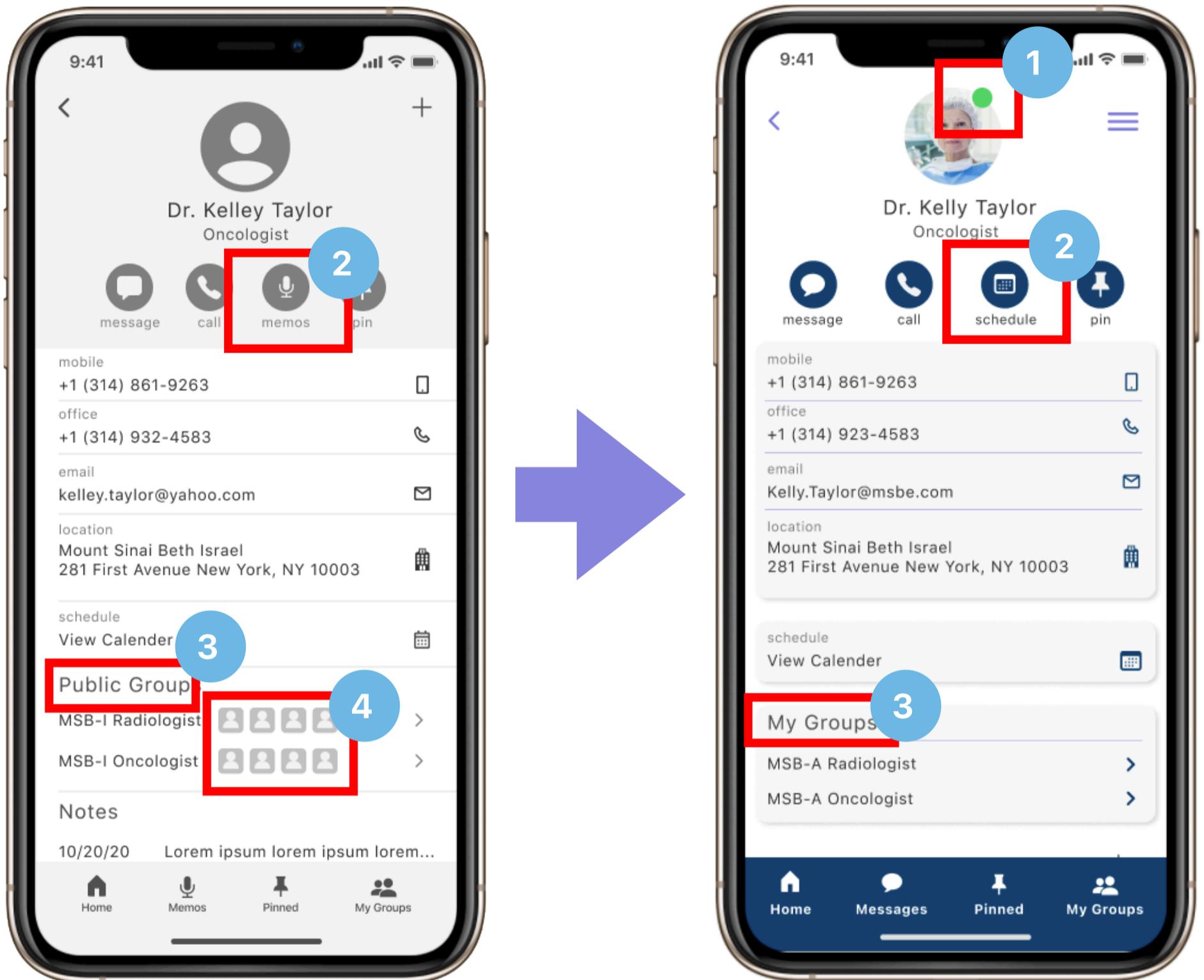
Mobile Mockups



INSIGHT: Design Change

1. Changed mContacts and Directory as users were confused about what mContacts meant
2. Moved filter options to right side of screen from the left
3. Removed 'my groups' from top of page as it created clutter and had minimal functionality from inside directory while a user was using search modality

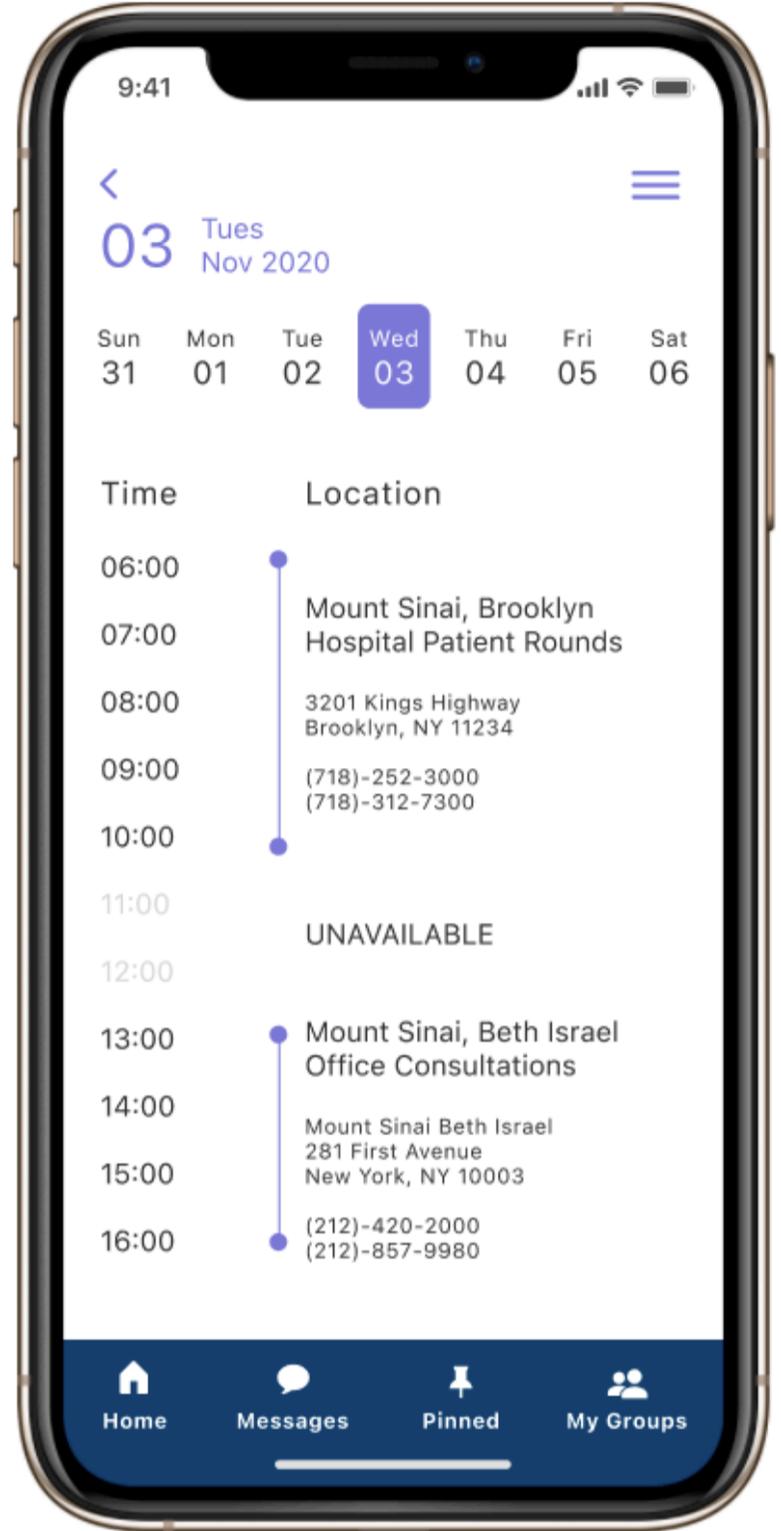
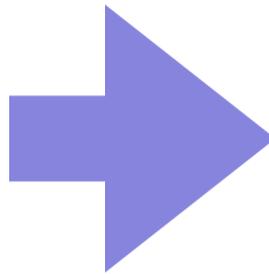
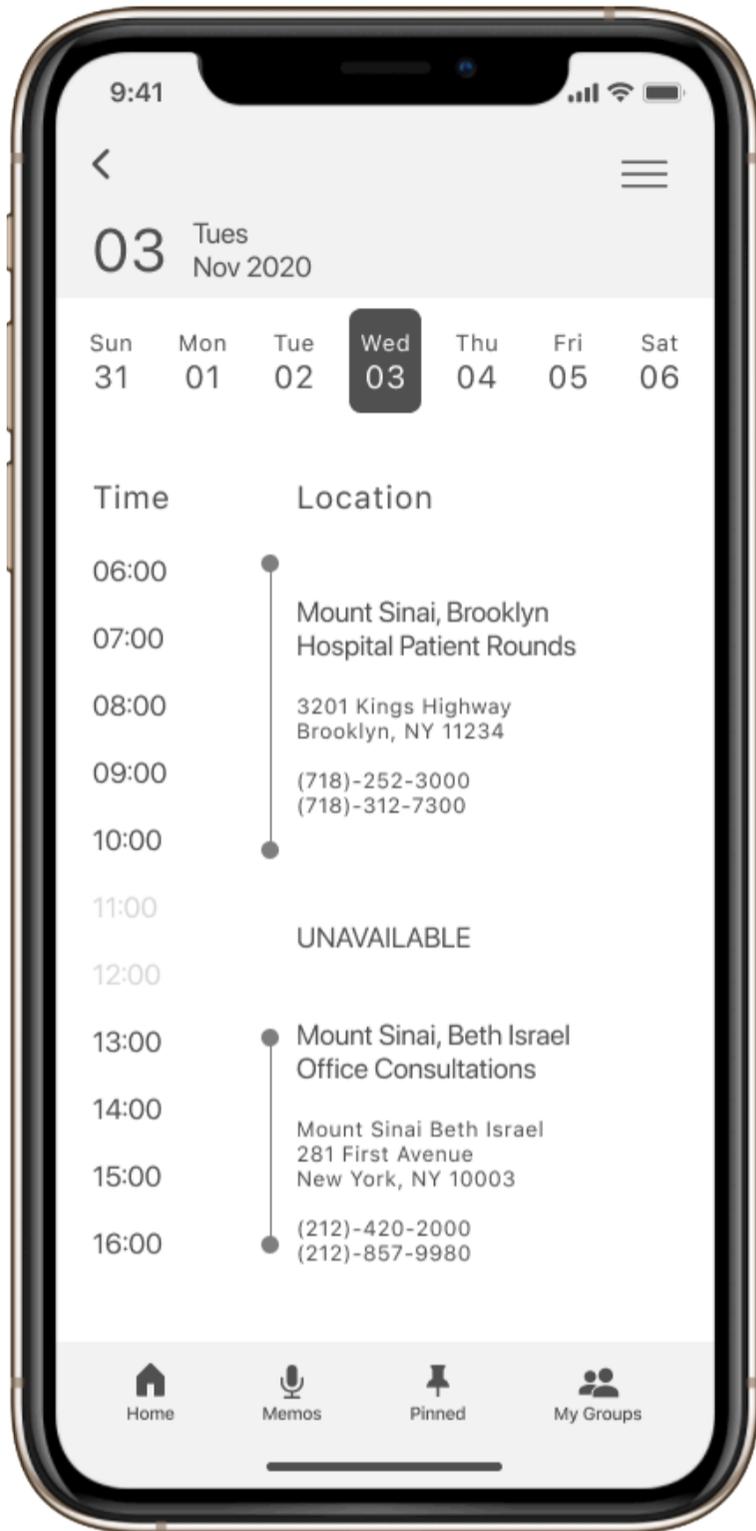
Mobile Mockups



INSIGHT: Design Change

1. Addition of activity indicator on each contacts photo notes whether or not a user is currently active within the application
2. Removed 'memo' button and created a 'schedule' button so that users are able to access a contacts calendar from two different paths
3. Changed the heading of the group information from 'public groups' to 'my groups' this is to give the user a sense of ownership over their contacts and use of application
4. Removed the group member photos to reduce screen clutter

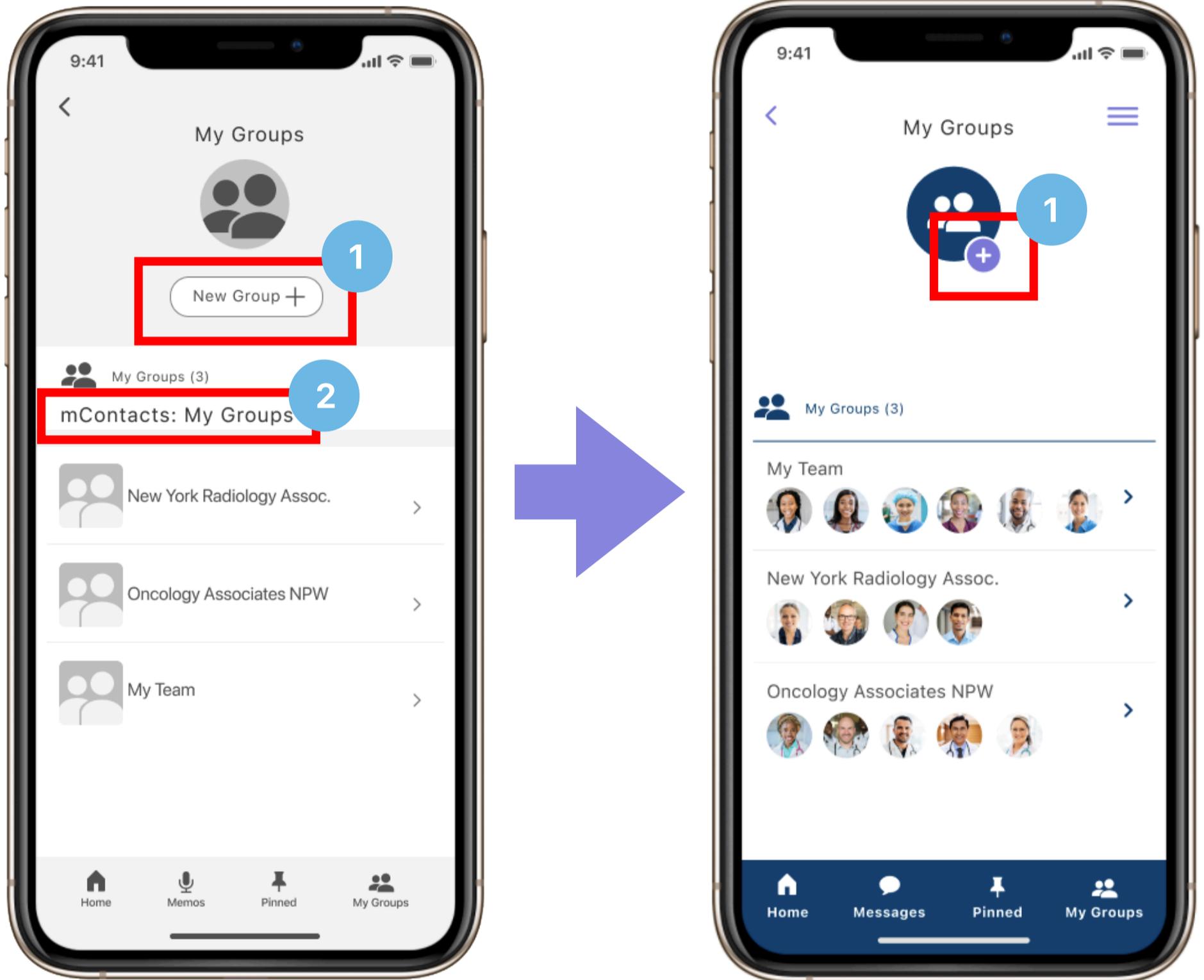
Mobile Mockups



INSIGHT: Mid-Fidelity to Mockup

Color is added from version one to version two

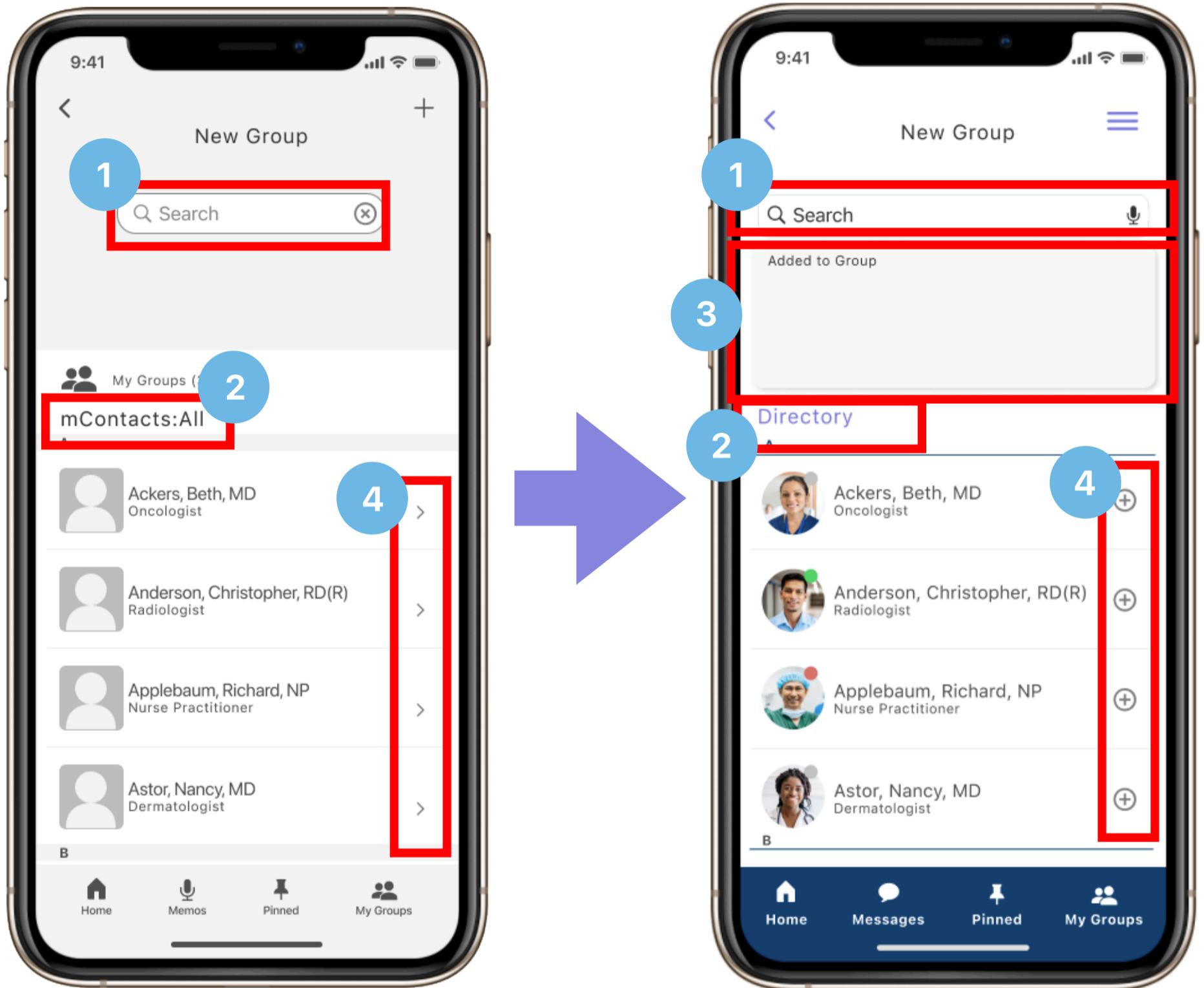
Mobile Mockups



INSIGHT: Design Change

1. Removed the 'new group +' button and replaced it with a '+' button in the bottom right of the group icon
2. Removed 'mContacts: My Group' from page as there are two other indicators of which page the user is on and there was too much redundancy

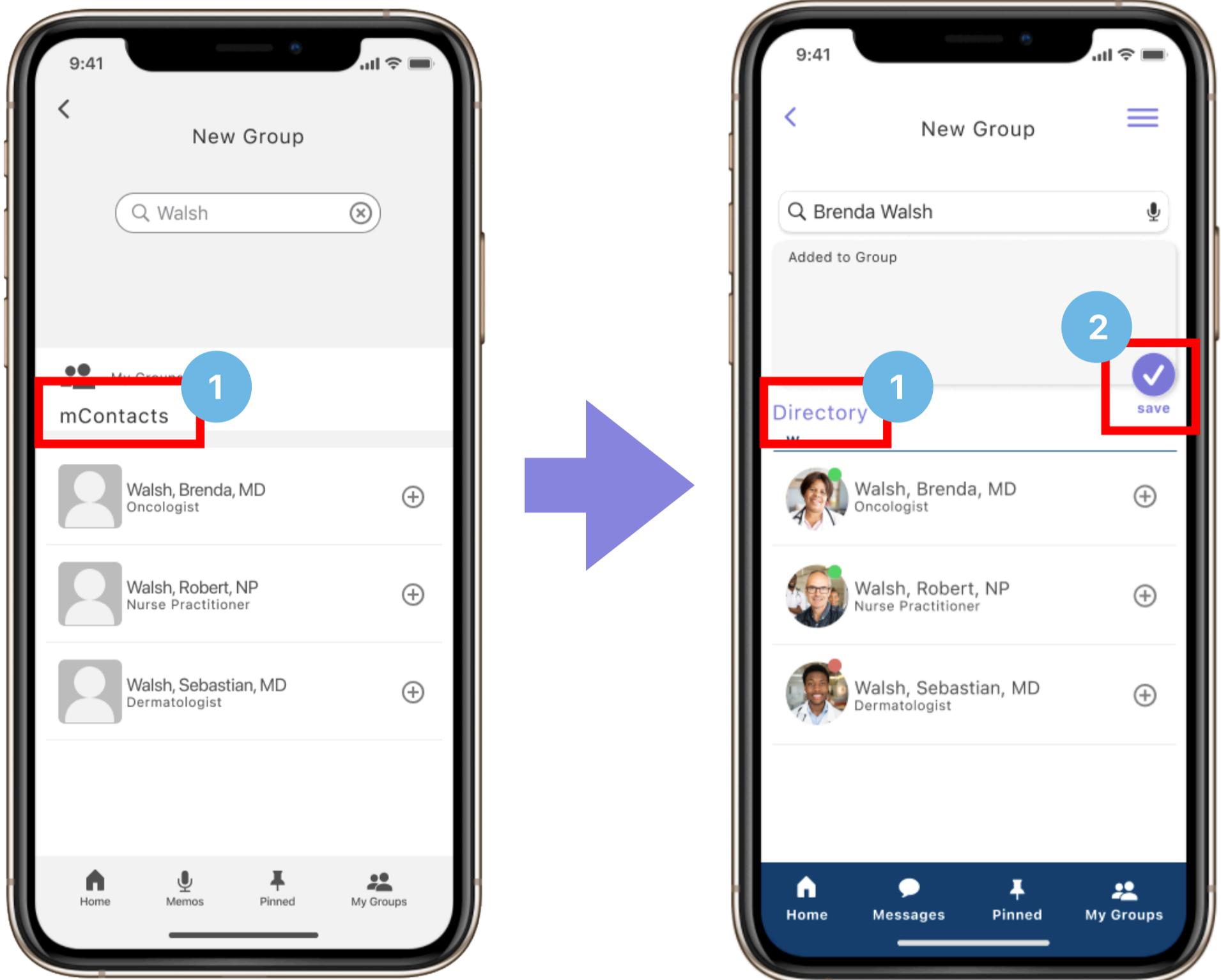
Mobile Mockups



INSIGHT: Design Change

1. Redesigned search bar to mirror iOS GUI guidelines
2. Changed the heading from 'mContacts: All' to 'Directory' as usability testing proved mContacts was confusing for the user
3. The open space at top of page now has a shadow box around it to distinguish space as area where user can expect something to appear
4. Changed the arrows to plus signs to better indicate that the user would be adding contacts to a group

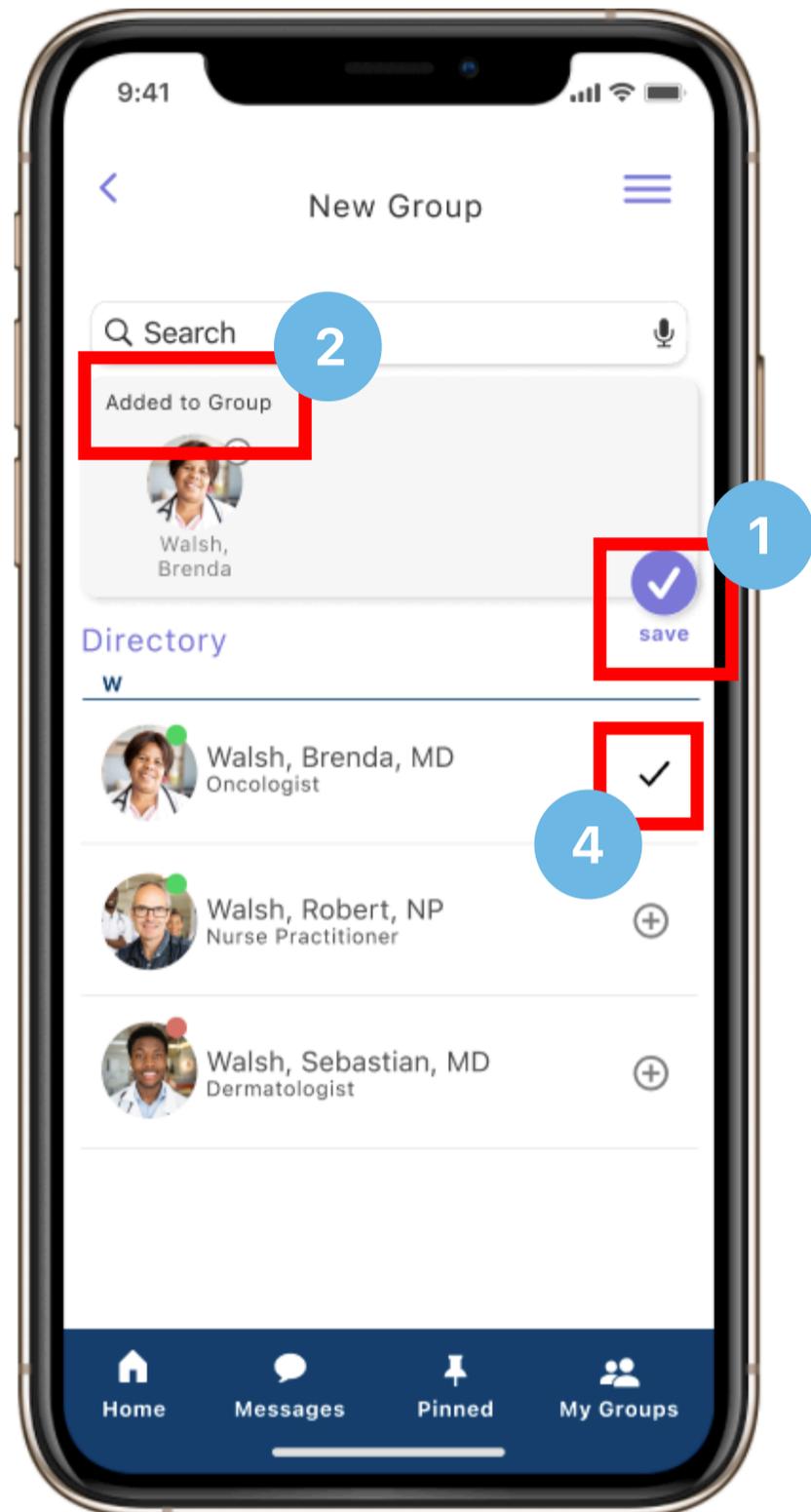
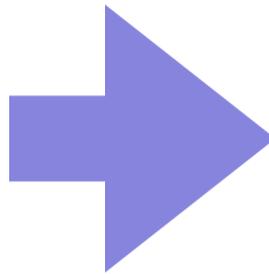
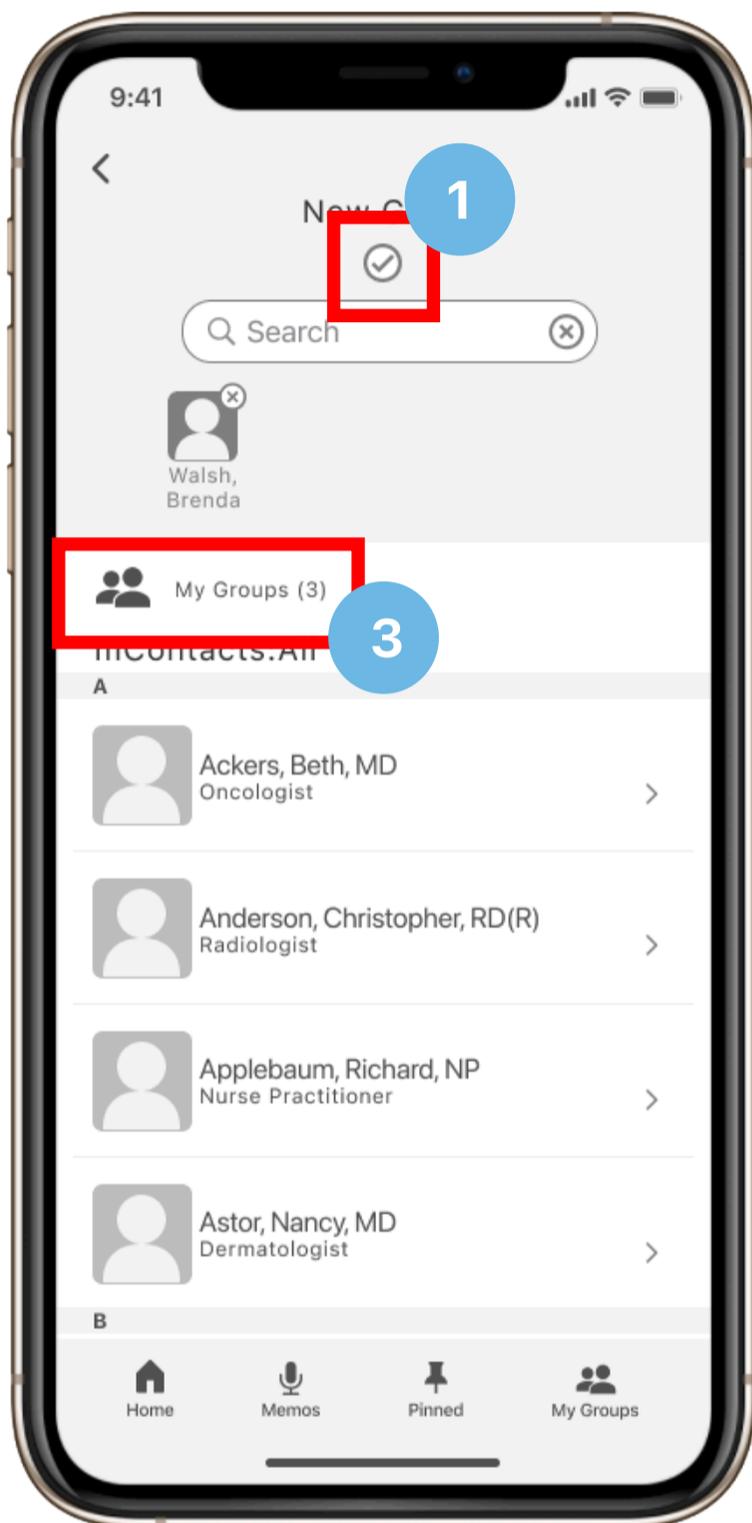
Mobile Mockups



INSIGHT: Design Change

1. Changed 'mContacts' messaging to 'Directory' as it was more clear for the user
2. Added 'check mark - save' button to group screen to indicate to the user that this is what they will tap to save the group they are creating

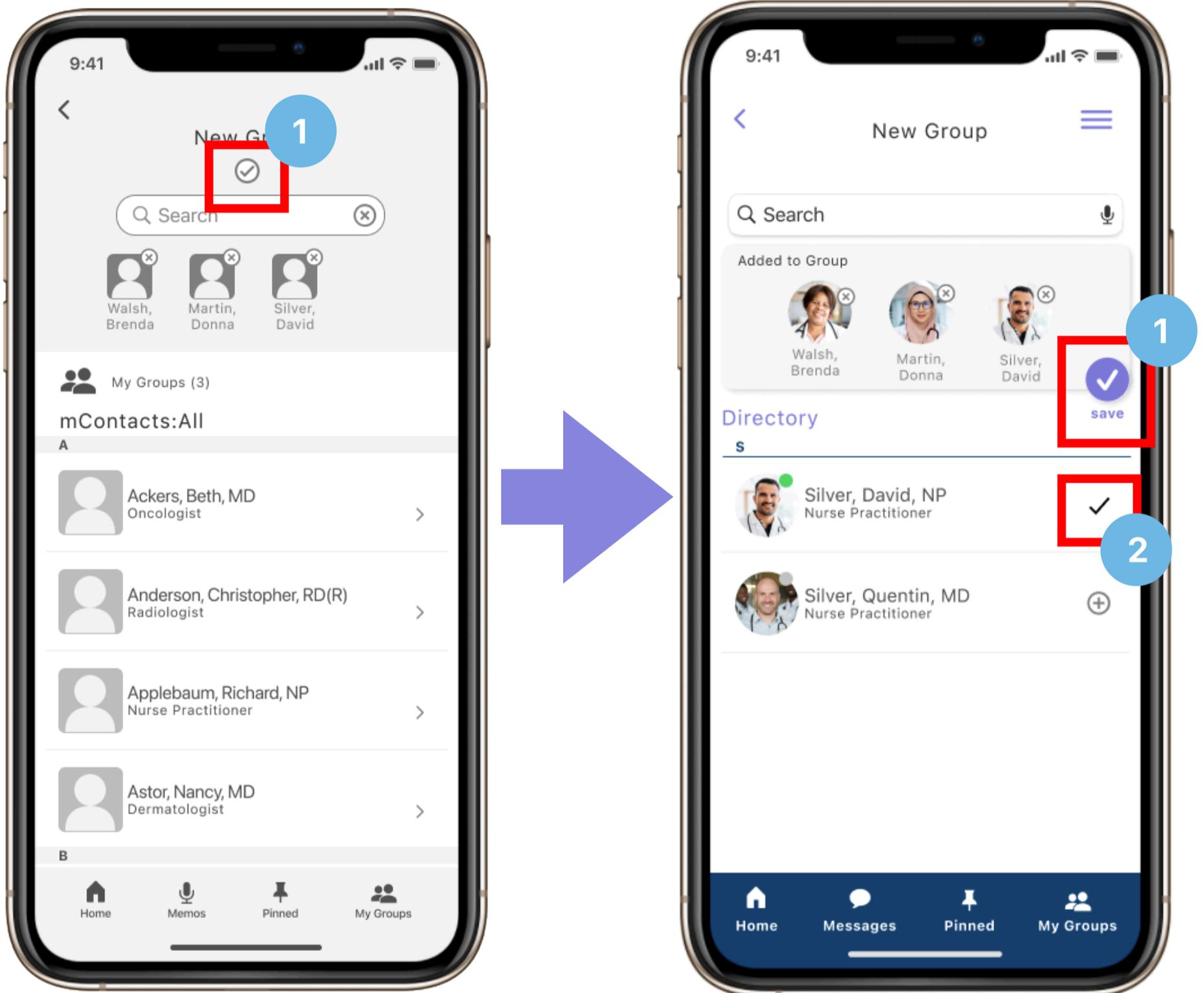
Mobile Mockups



INSIGHT: Design Change

1. Changed the positioning of the 'check mark' from the top middle to the right side, made it larger and also added the description 'save' underneath it to more clearly indicate to the user how they would save a group they're creating
2. Added small description 'added to group' to the top of the shadow box to confirm to users that contacts had been added
3. Removed 'my groups' from the screen as it felt redundant
4. Added a clear check mark next to a contact who has been added to the group, this gives the user two indicators of their task

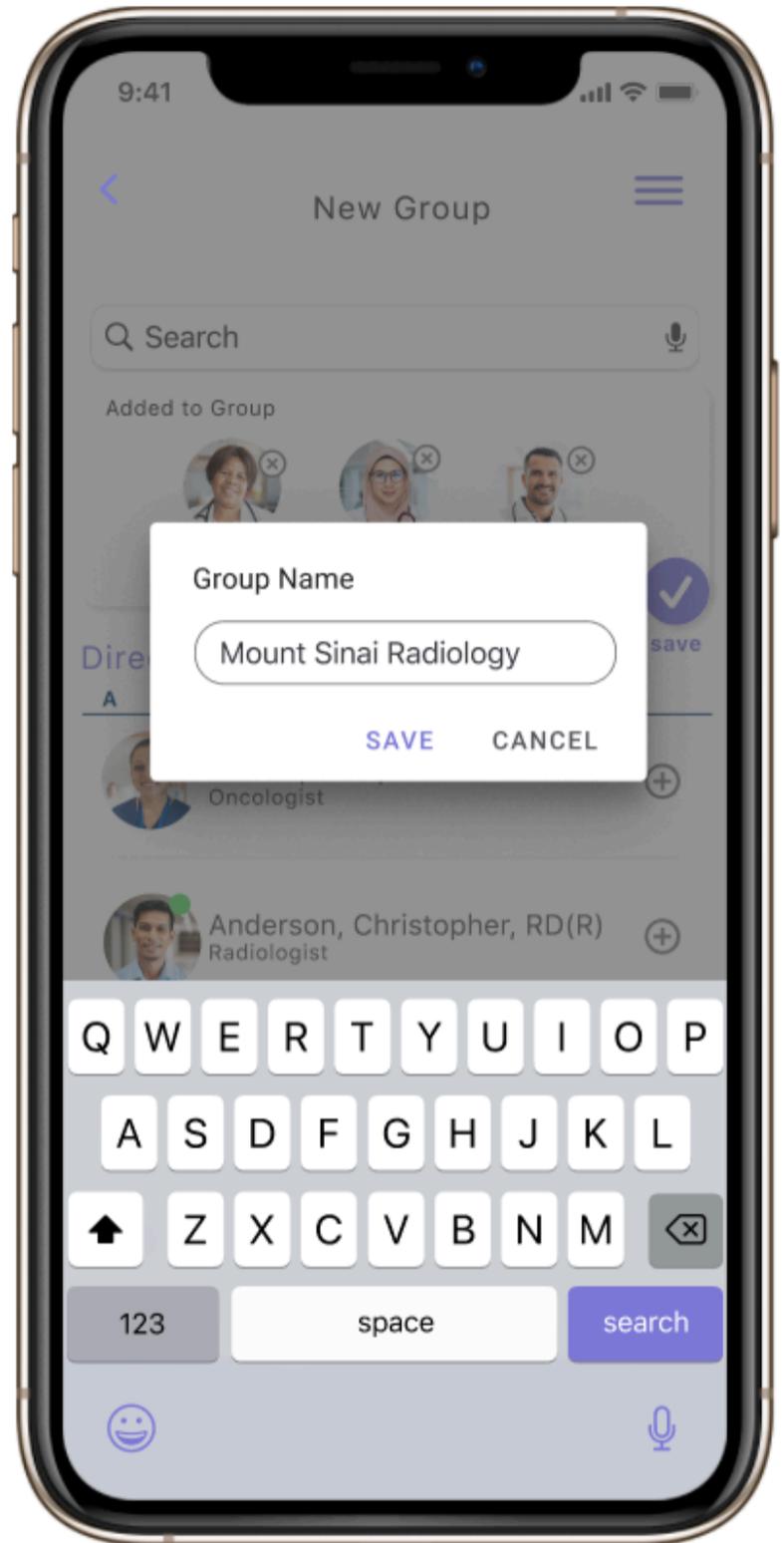
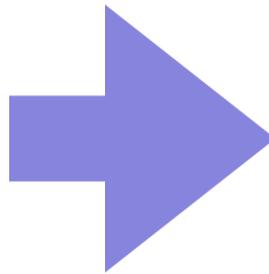
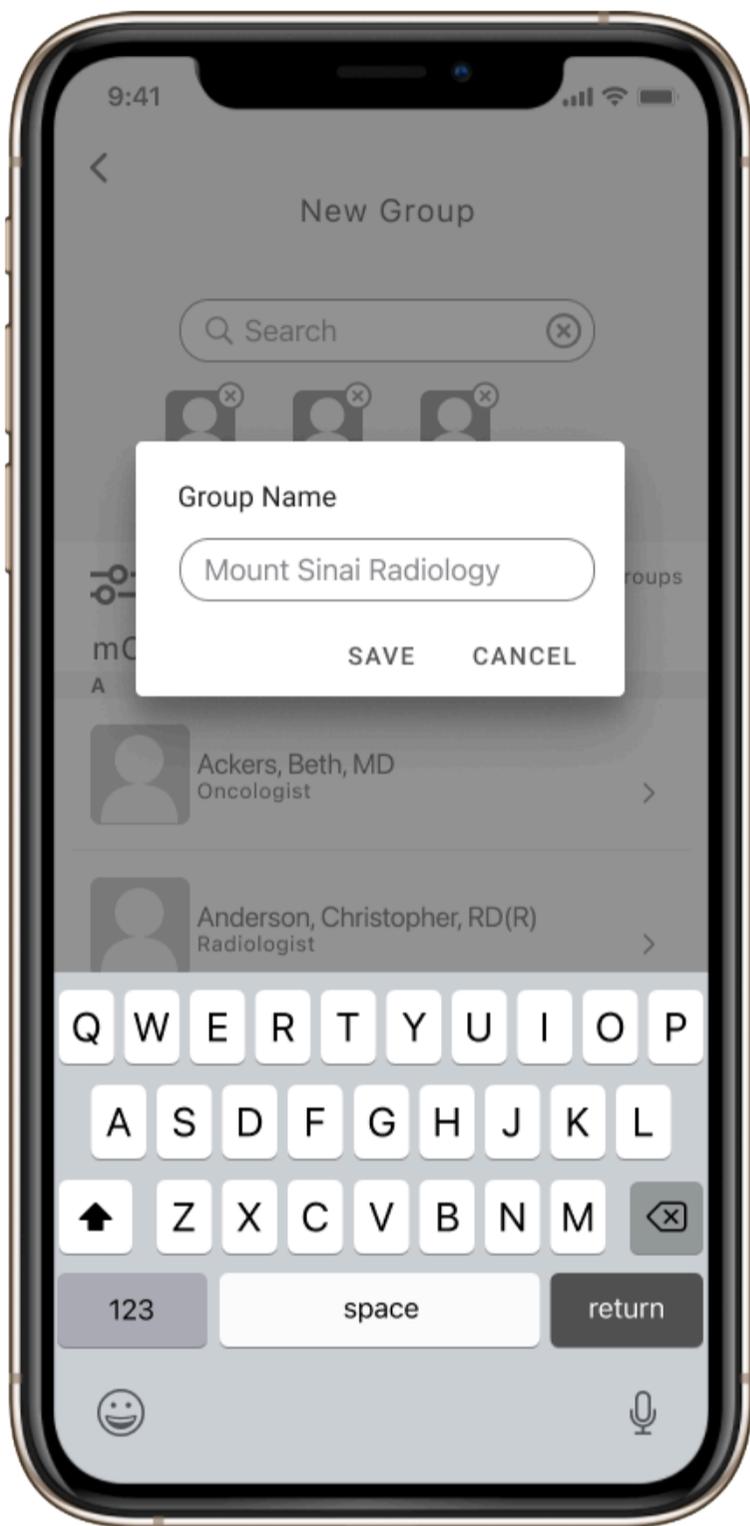
Mobile Mockups



INSIGHT: Design Change

1. Changed the positioning of the 'check mark' from the top middle to the right side, made it larger and also added the description 'save' underneath it to more clearly indicate to the user how they would save a group they're creating
2. Added a clear check mark next to a contact who has been added to the group, this gives the user two indicators of their task

Mobile Mockups



INSIGHT: Mid-Fidelity to Mockup

Color is added from version one to version two

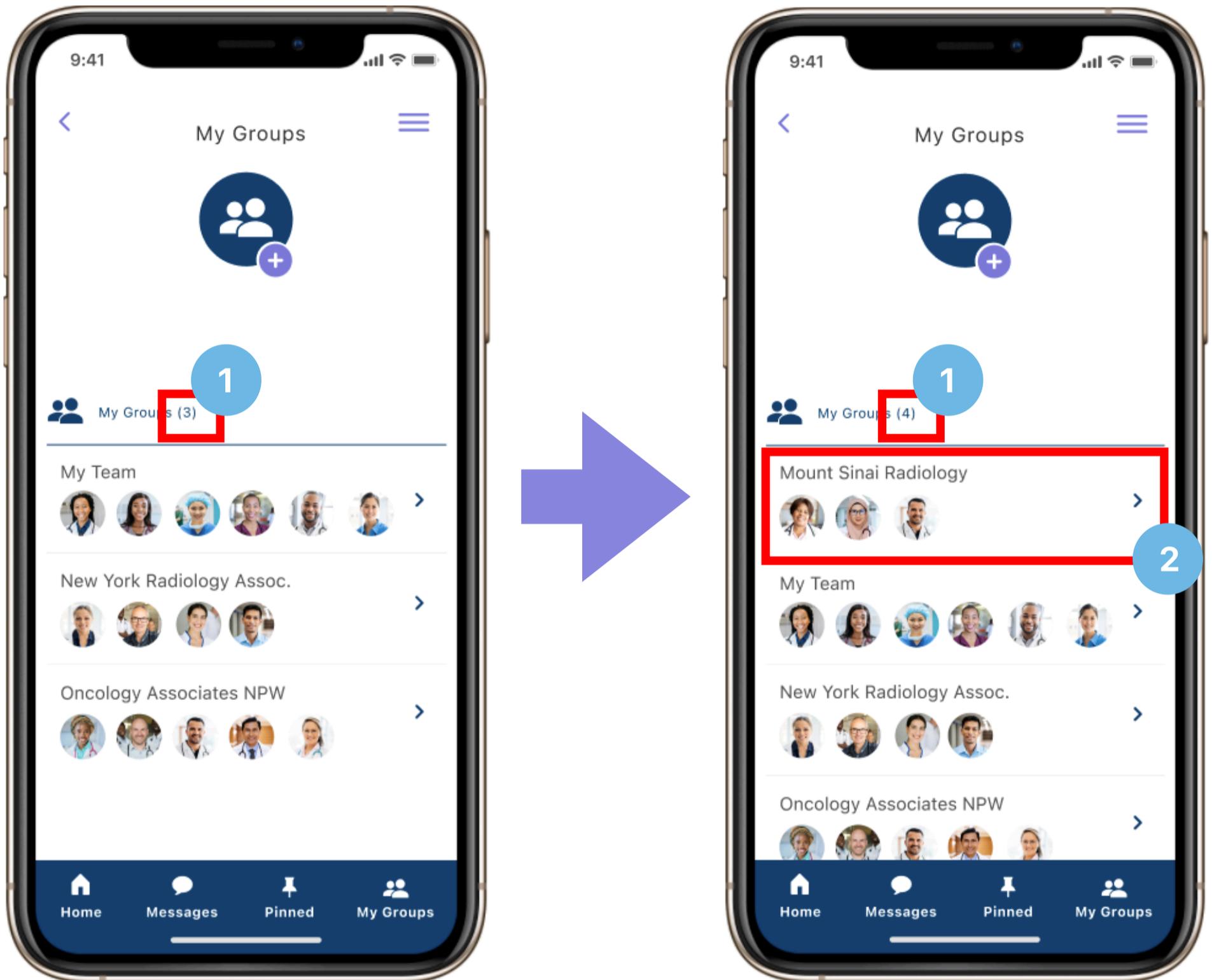
Mobile Mockups



INSIGHT: Design Change

1. Changed the positioning of the 'add +' icon to a more prominent area of the screen, made the icon bigger and placed it next to the existing group members to better indicator that tapping this button would add more group members
2. Moved the communication features from the bottom to the top of page, this provided more clarity and less clutter, as it sitting on top of bottom navigation created clutter
3. Moved participants heading from right to center underneath group title, also added in the number of participants that are in a group
4. Removed 'my groups' from page, to reduce redundancy

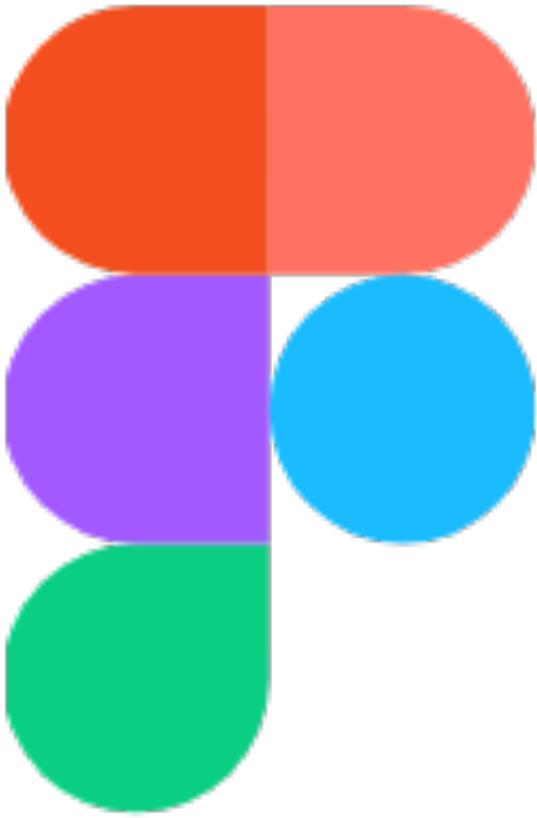
Mobile Mockups



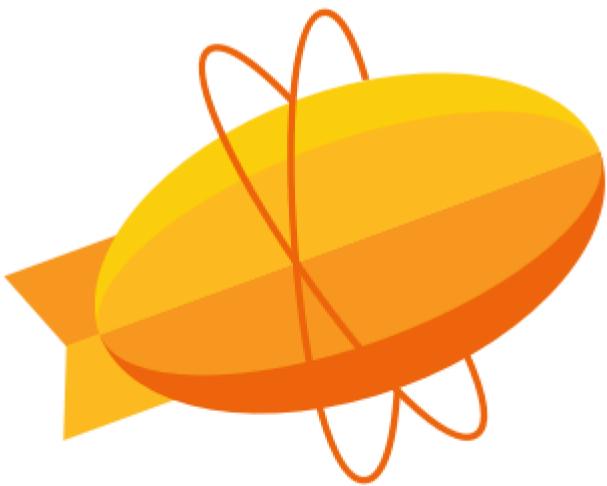
INSIGHT: Design Feature

1. The addition of the new group is noted by the increase in number of groups for the user
2. New group is added to the 'my groups' page in alphabetical order

Prototype Links



[Figma Prototype Link](#)



[Zeplin Spec Link](#)

ZEPLIN

User Experience Analytics

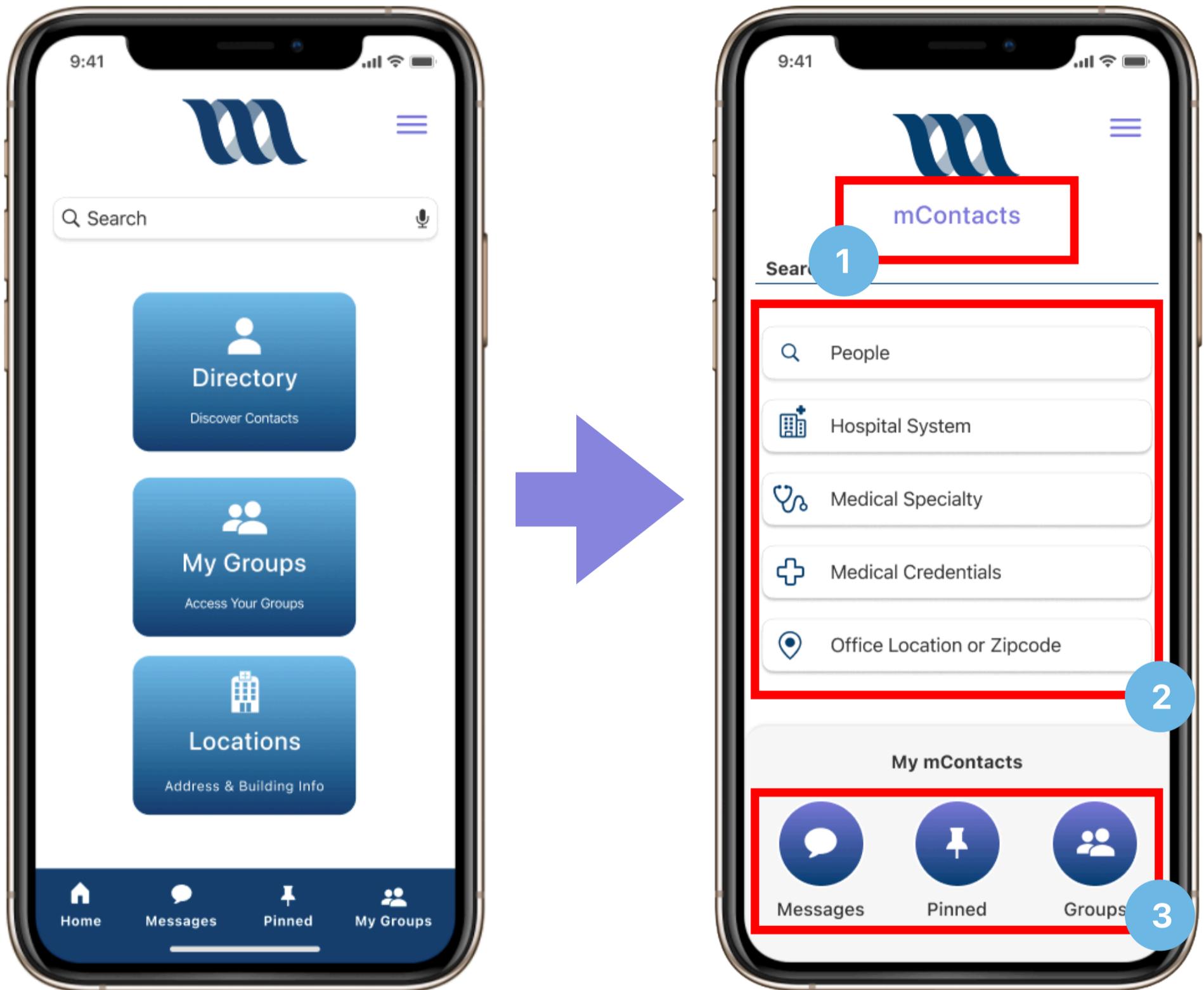
Google Heart Framework

| | Goal | Signal | Metric |
|------------------------|--|---|---|
| Happiness | For users to feel that the app has improved their communications overall | Satisfaction rating from a survey | Survey users and get satisfaction ratings across primary features |
| Engagement | For users to discover contacts, create groups and pin important items | The amount of time people spend on the app | <ul style="list-style-type: none"> - Avg Number of daily users - Avg frequency of daily engagement |
| Adoption | For users to incorporate the app into their daily work routines | Number of new users per day from metrics and new account requests to administrators | <ul style="list-style-type: none"> - New user accounts - Adding new client system groups to mContacts |
| Retention | For users to continue to use mContacts as it grows with more customers | Number of users who download app and lifecycle of use or disengagement | <ul style="list-style-type: none"> - Number of active daily users - Number and frequency of return users |
| Task Completion | For users to find contacts, pin items, create groups | Number of successful task completions from metrics (direct/indirect/fail) | <ul style="list-style-type: none"> - Create groups - Pin frequently accessed notes, contacts, groups, locations - Access contact schedules |

PURPOSE: We utilize various forms of analytics throughout the user experience process after launch. This informs us of how users are responding to the app that we've developed. With this insight we are able to measure the user engagement, amount of accounts created, how long users are interacting with the app as well as how often.

Future Steps

Mobile Mockup Recommendations



INSIGHT: Redesign of Home Screen and Filter Feature

1. Position of the user is clearly indicated by mContacts at top of page
2. Filter options are built out into completely separate buttons the user can choose from
3. The mContacts main features are quickly accessible in the primary navigation

Overall, this is a marriage between the home screen and the filter features. Our hope is to create the most intuitive design possible and we believe that this creates a more natural task flow for the user

Mobile Mockups Recommendations

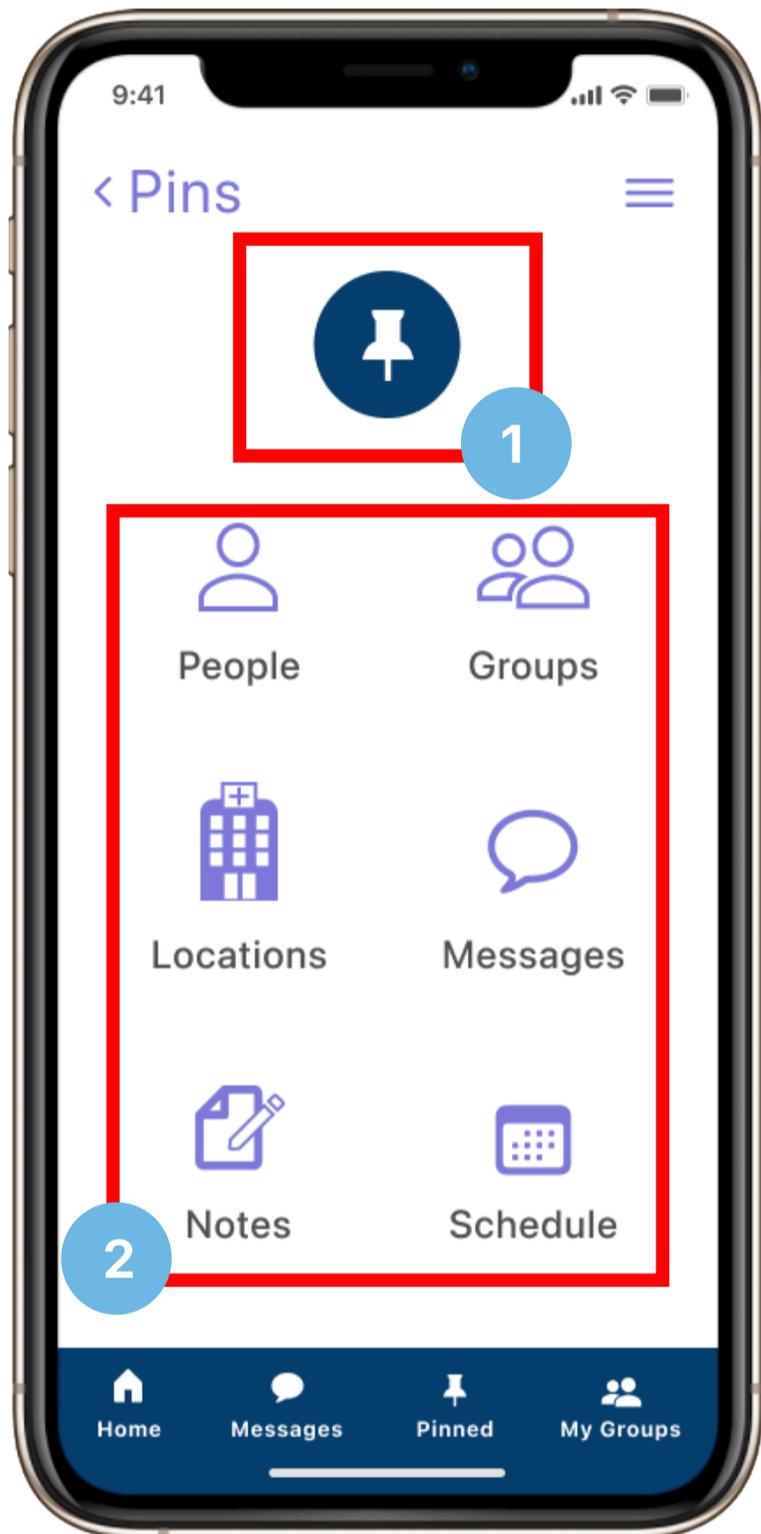


INSIGHT: Design of Splash Screen

Created a splash screen to welcome the user to the application while the application loads to the home page

This is the anticipated location of login features if necessary for new users

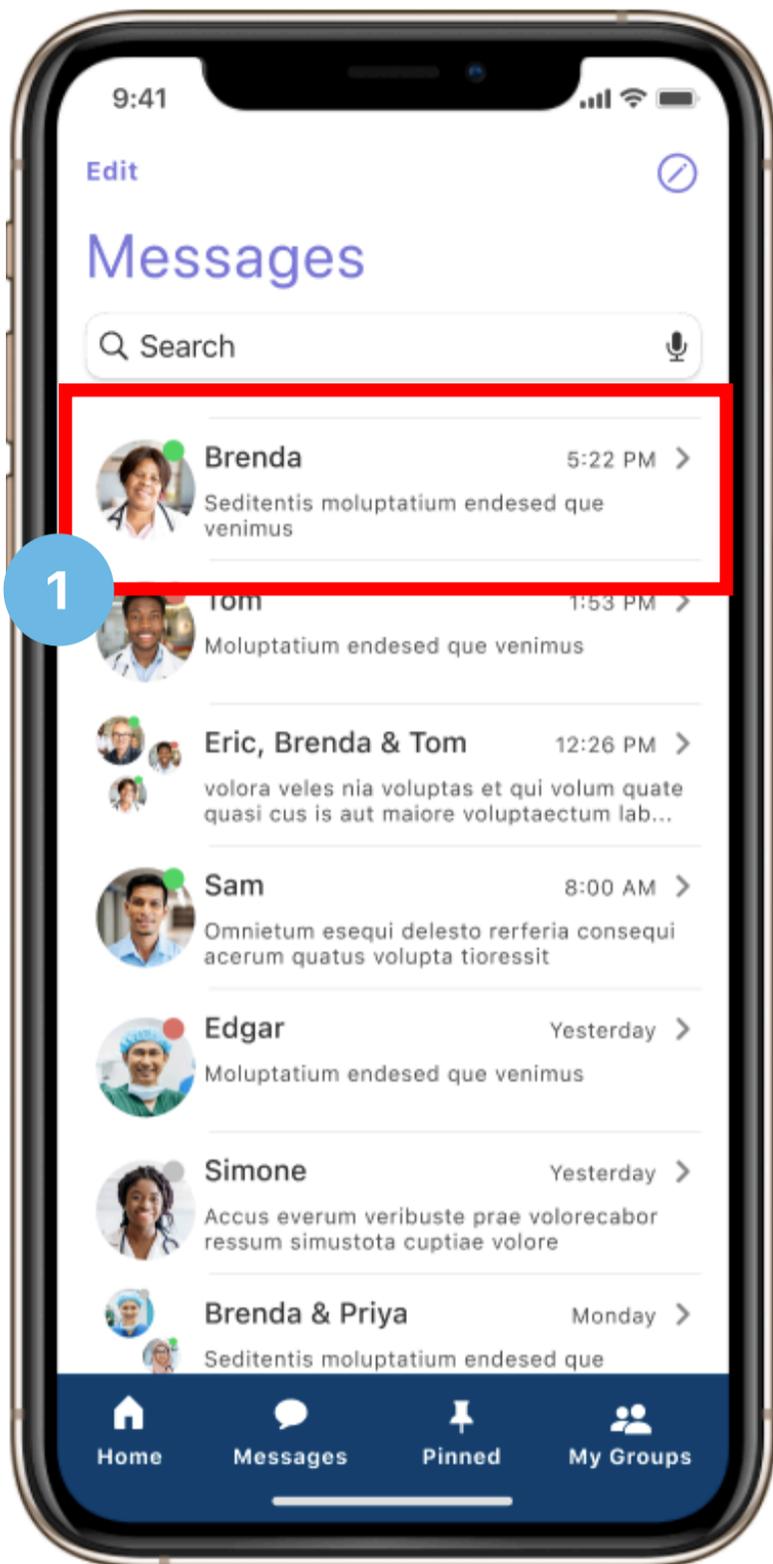
Mobile Mockup Recommendations



INSIGHT: Design of Pins Screen

1. Pin Icon clearly notates to the user that they are within pin feature
2. Users throughout use of application are able to pin items of note in all categories including, people, groups, locations, messages, notes and schedule. This page is their home base for all pinned items from all of those sections

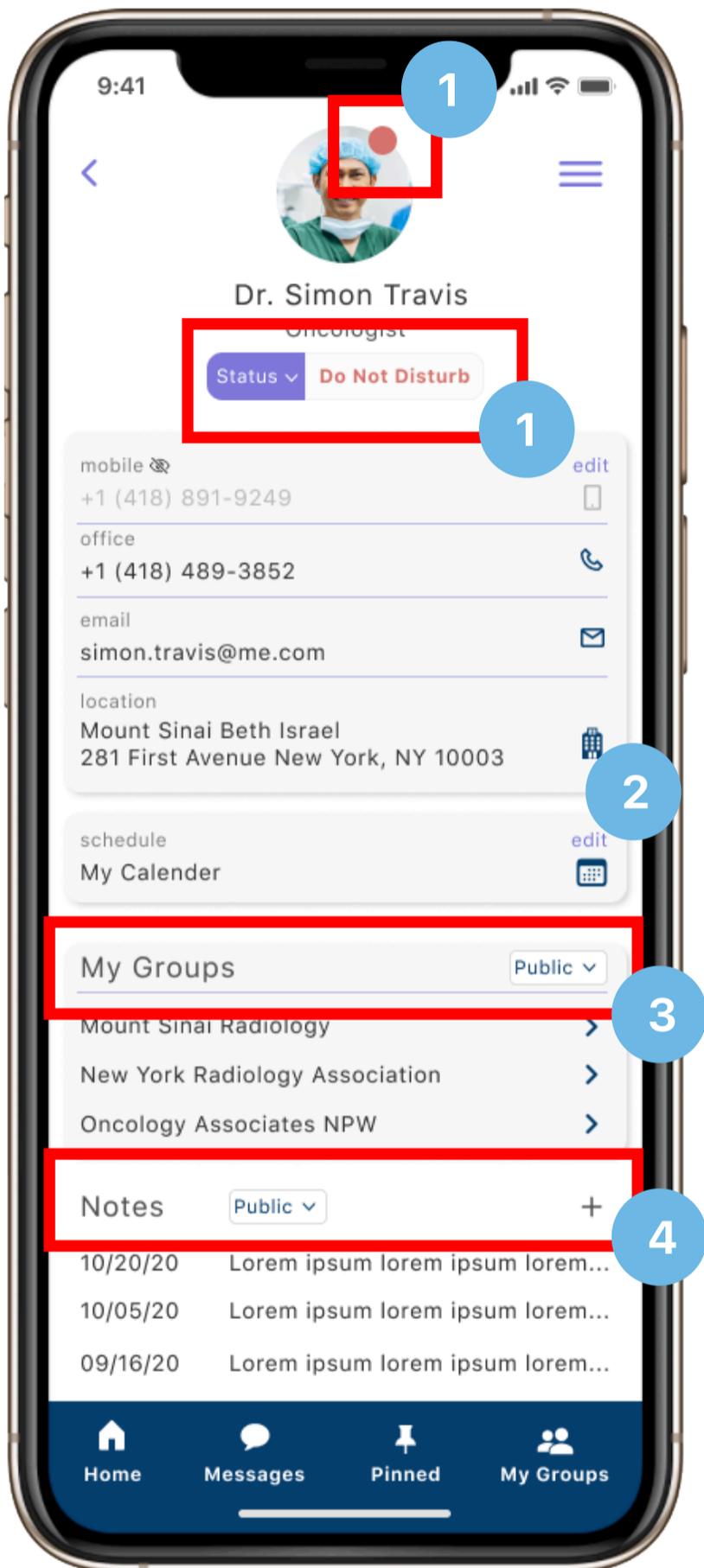
Mobile Mockup Recommendations



INSIGHT: Design of Message Screen

1. User is able to access all of their previous text and audio messages; similarly to iOS, the messages are arranged by contact in the order of last received

Mobile Mockups Recommendations

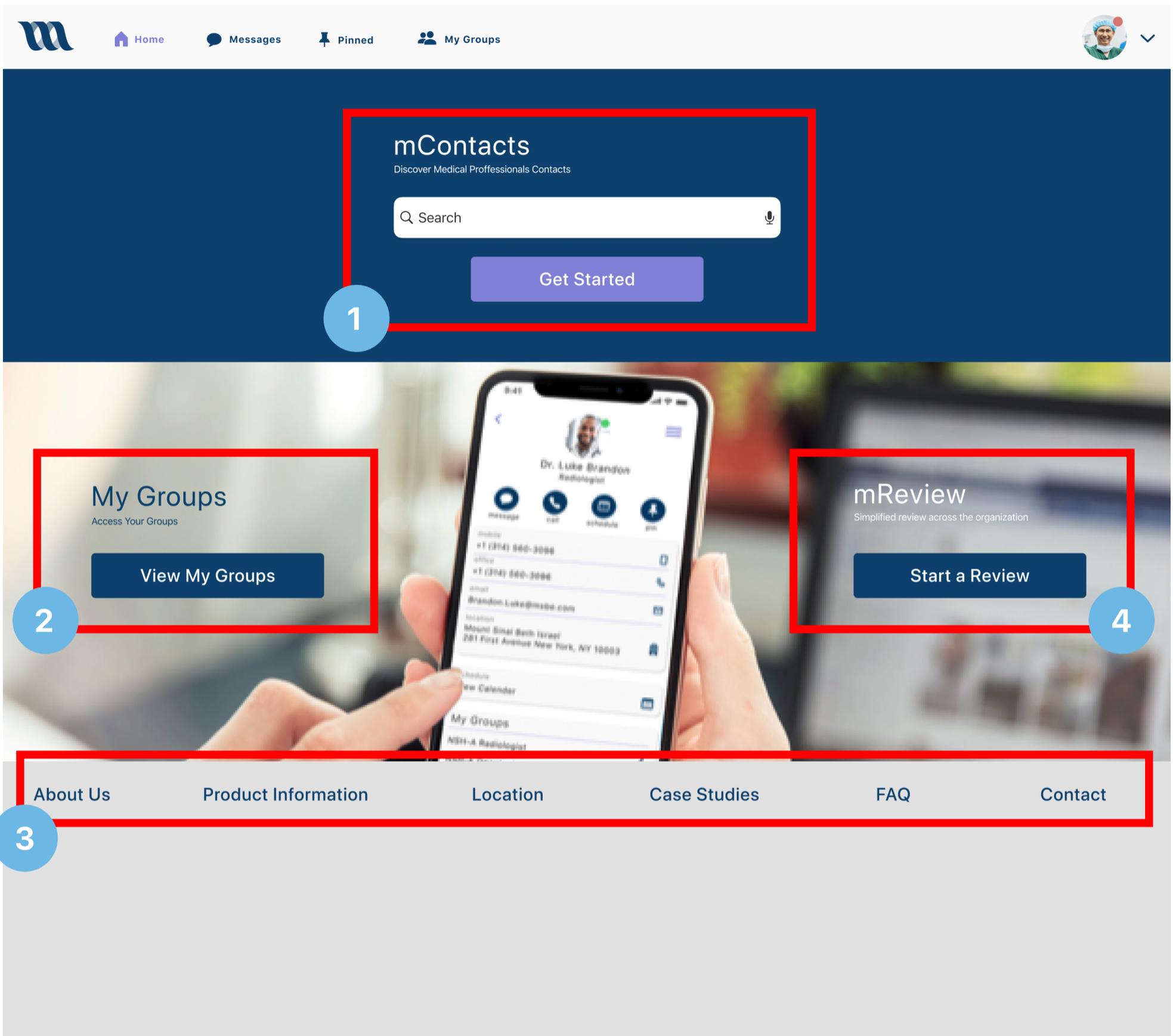


INSIGHT: Design of User Contact Card

1. User is able to indicate what their current status is, whether they are active or in "do not disturb" mode
2. User is able to edit their schedule
3. User can dictate whether their groups are public or private
4. User is able to make their notes public or private, as well as add additional notes from this screen

mContacts for Desktop

Desktop Mockup Insight

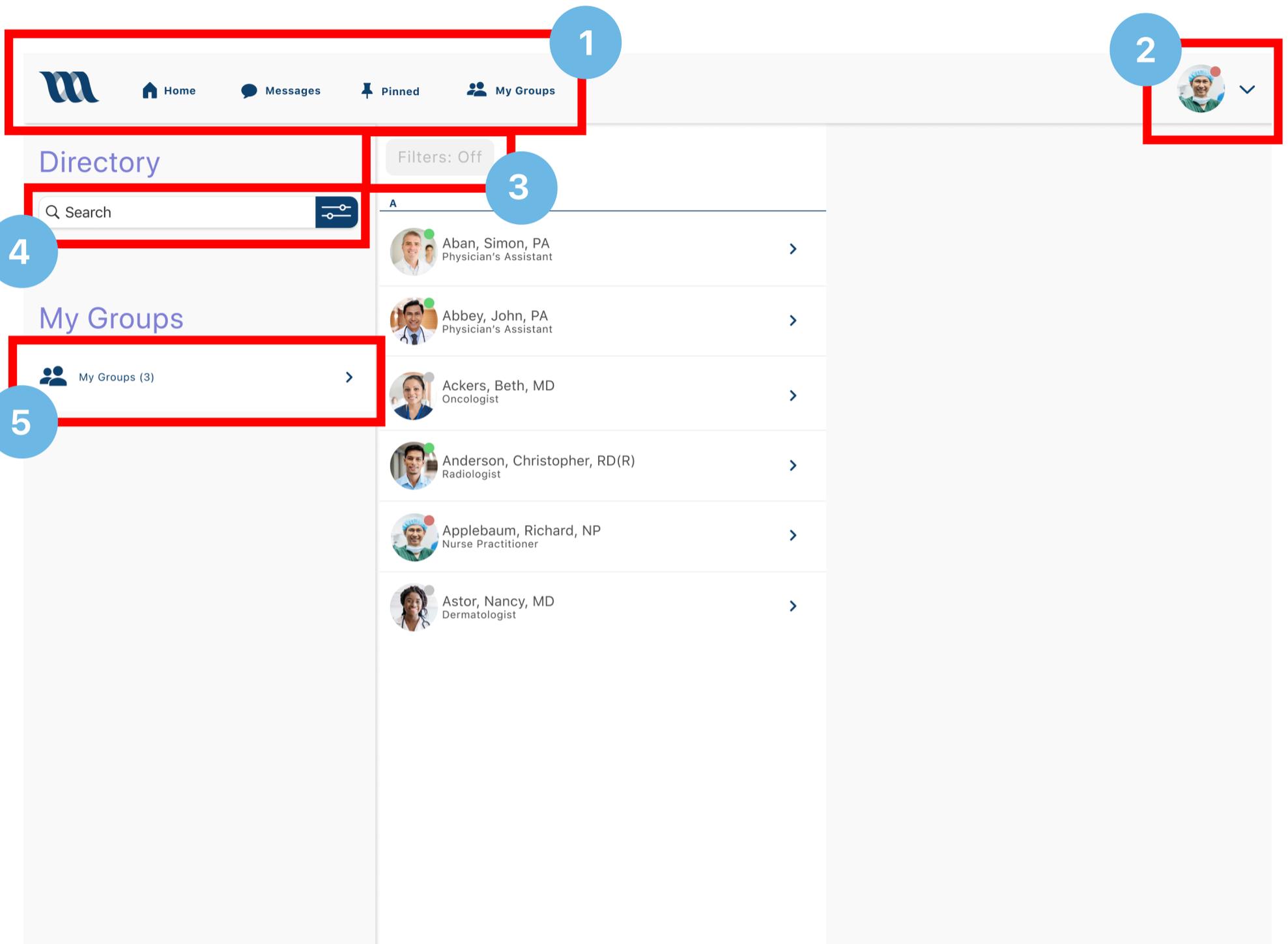


INSIGHT: Desktop Mockup Design

1. The addition of the new group is noted by the increase in number of groups for the user
2. New group is added to the 'my groups' page in alphabetical order



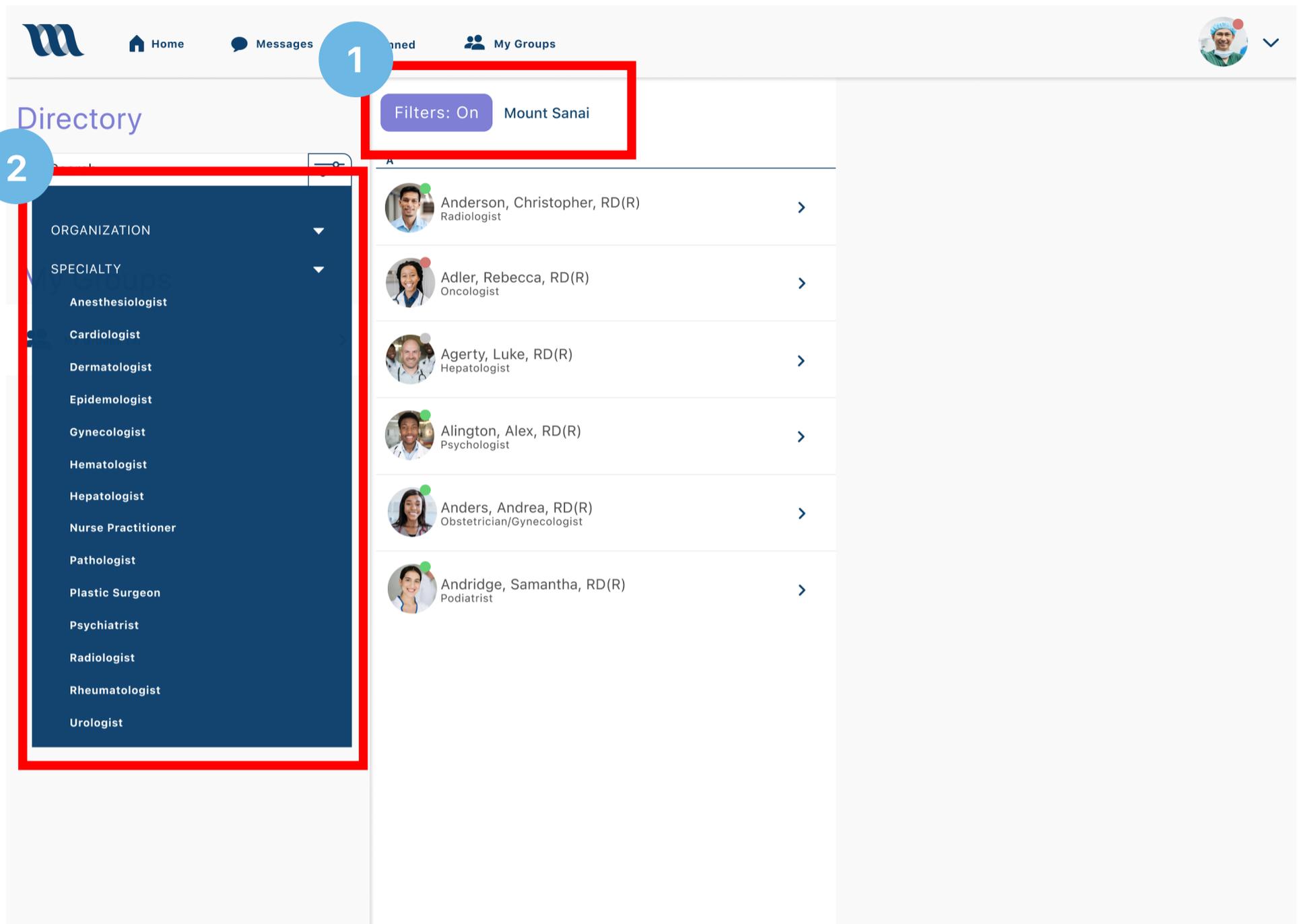
Desktop Mockup Insight



INSIGHT: Desktop Mockup Design

1. Primary navigation includes 'home', 'messages', 'pinned', 'my groups'
2. The users photo indicates their account information in the dropdown menu
3. Greyed out filter menu - states filter off
4. Search bar in the directory
5. 'My Groups' navigation

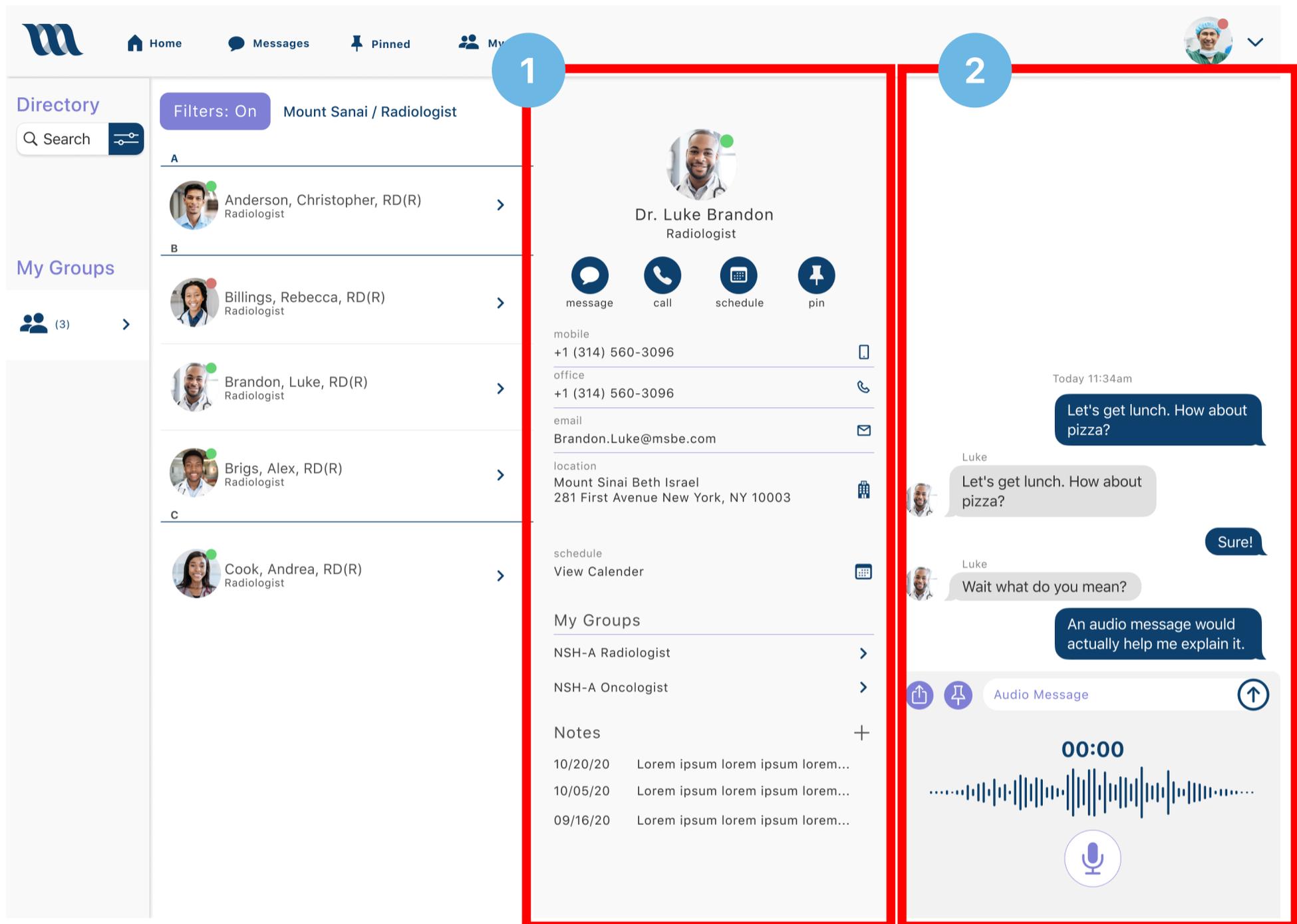
Desktop Mockup Insight



INSIGHT: Desktop Mockup Design

1. Filters on; clearly indicated; user is able to utilize filter function
2. Filter navigation options pop out from side bar menu

Desktop Mockup Insight



INSIGHT: Desktop Mockup Design

1. User contact card is visible once the users name is clicked on
2. User is able to send text or audio message from the desktop

Desktop Mockup Insight

1

2

Directory

Search

Anderson, Christopher, RD(R)
Radiologist

Billings, Rebecca, RD(R)
Radiologist

Brandon, Luke, RD(R)
Radiologist

Brigs, Alex, RD(R)
Radiologist

Cook, Andrea, RD(R)
Radiologist

Dr. Kelley Taylor
Oncologist

message call schedule pin

mobile
+1 (314) 861-9263

office
+1 (314) 923-4583

email
Kelley.Taylor@msbe.com

location
Mount Sinai Beth Israel
281 First Avenue New York, NY 10003

schedule
View Calender

My Groups

MSB-A Radiologist

MSB-A Oncologist

Notes

10/20/20 Lorem ipsum lorem ipsum lorem...

10/05/20 Lorem ipsum lorem ipsum lorem...

09/16/20 Lorem ipsum lorem ipsum lorem...

03 Tues
Nov 2020

Sun 31 Mon 01 Tue 02 Wed 03 Thu 04 Fri 05 Sat 06

Time Location

06:00

07:00 Mount Sinai, Brooklyn
Hospital Patient Rounds

08:00 3201 Kings Highway
Brooklyn, NY 11234 08:12am

09:00 (718)-252-3000
(718)-312-7300

10:00

11:00 UNAVAILABLE

12:00

13:00 Mount Sinai, Beth Israel
Office Consultations

14:00 Mount Sinai Beth Israel
281 First Avenue
New York, NY 10003

15:00 (212)-420-2000
(212)-857-9980

16:00

17:00

18:00 UNAVAILABLE

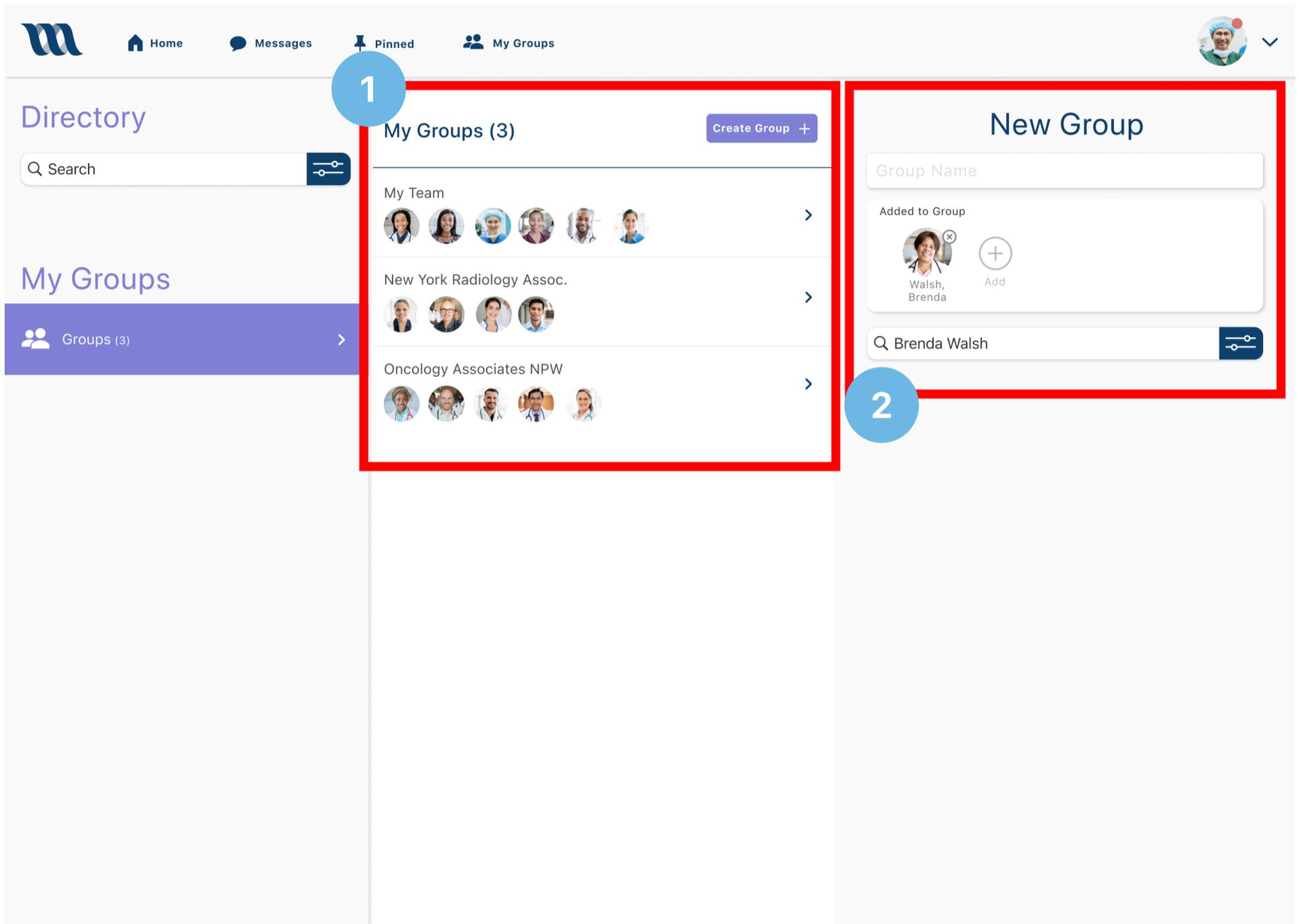
19:00

20:00

INSIGHT: Desktop Mockup Design

1. Search bar for quickly searching for contacts within directory
2. Schedule page for contact

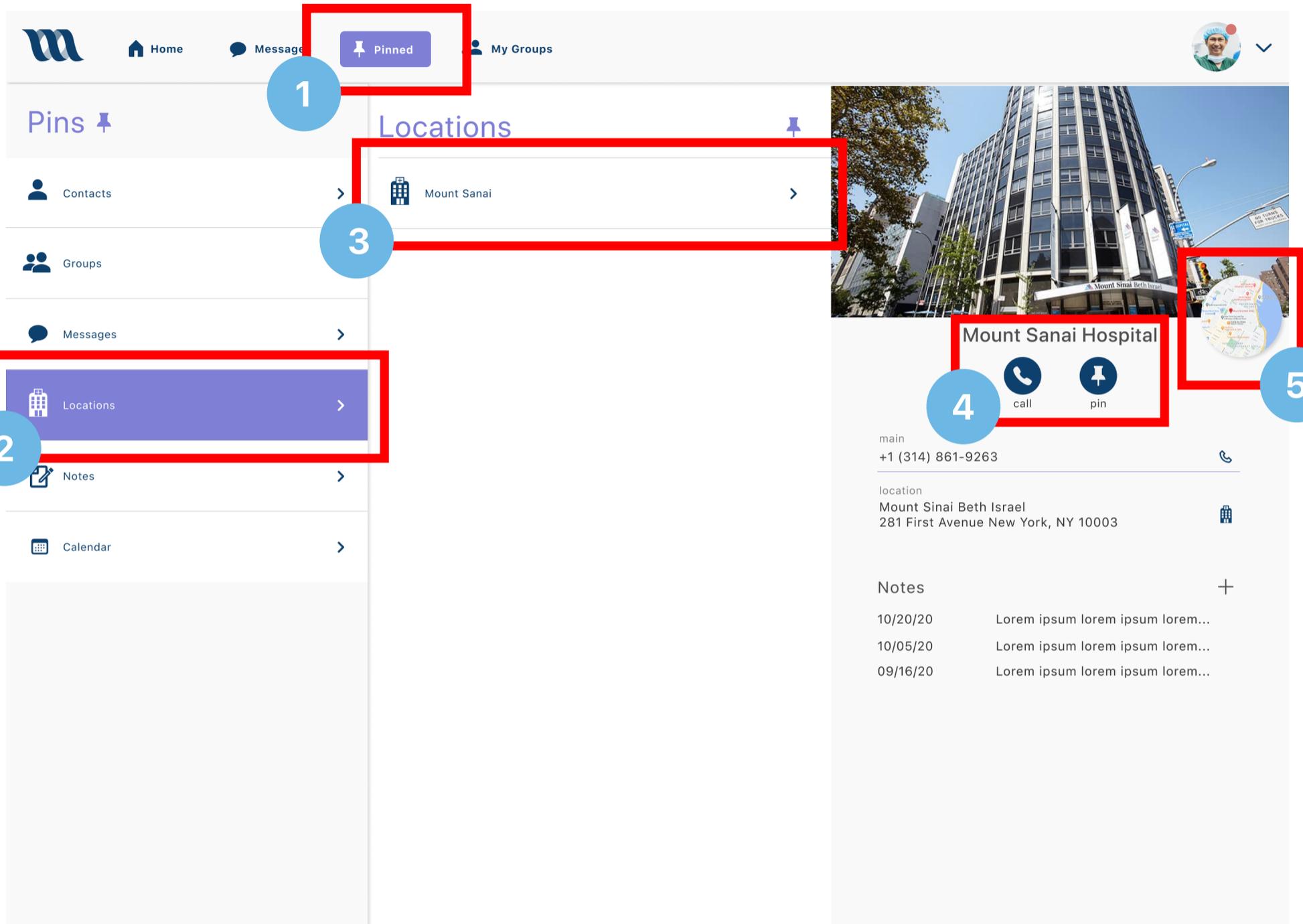
Desktop Mockup Insight



INSIGHT: Desktop Mockup Design

1. User is able to see all of the groups they are a member of or have been added to
2. User is able to easily add a member into a group by searching their name within the directory

Desktop Mockup Insight



INSIGHT: Desktop Mockup Design

1. Pinned items page clearly indicated by change of color
2. User clicks on locations menu navigation option
3. User can quickly and easily see which locations have been pinned
4. User is able to click icons which allow for quick communication to location
5. A map is provided for the user for quick physical direction to specified location

Conclusion

Recommendations + Conclusion

RECOMMENDATIONS:

- Next steps for design are continued user testing for the filter function
- Continued expansion of the desktop site and rounds of testing on the product
- Having as many users as possible utilize this in its desired setting and provide feedback on what needs to be changed in practice
- A discovering of further color palette for mReview and future modalities
- Continued branding efforts to create more robust imagery and custom icons for both application and mobile



measurecareTM

CONCLUSION:

It was with great pleasure that we worked on this product for you. MeasureCare offered amazing insight and knowledge into communications within the medical field. After conducting research we have discovered an absolute need for this product within the industry and by design have found what we hope to be a product that can facilitate this vision. Feel free to reach out at any time with any questions or feedback you have.

