

# PTme

Mobile App Concept

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# PTme

## About PTme

PTme is an iPhone app that helps physical therapy patients meet their treatment goals. Peer-reviewed medical studies show that the largest barrier to recovery for physical therapy patients is lack of exercise completion. Many factors prevent exercise completion, and PTme is situated to address several of these factors using evidence-based strategies, such as:

- Information & time management
- Communication & social support
- Progress & pain tracking
- Gamification

## Target Market

The primary market for PTme consists of physical therapy patients of all ages who use smartphones and/or tablets.

## Project Scope

The scope of this project will include user experience design for the patient-facing PTme app for iPhone. Later projects will assess the need for and development of a therapist-facing PTme app.

## Let's Pretend

This mobile app concept was developed under the mentorship of an experienced UX design professional, primarily for the purpose of professional development.

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# Background

## The Problem

Physical therapy patients often have trouble completing exercises because of poor communication practices and a lack of support in making time for and remembering to do their exercises. Current solutions that include key support features require initiation from therapists, leaving patients without a comparable option to take control of their own treatment.

## The Solution

Create a mobile app that will cater primarily to patients, while supporting cooperation with physical therapists. Support patients as they complete exercises, by facilitating communication with physical therapists, storing information to help patients carry out exercises and self-care practices, integrating social support, and allowing patients to schedule exercise times and reminders.

## Background

Physical therapy is challenging enough as it is. The patient may be in pain and facing hard work to improve his or her condition. The methods that most physical therapists use to communicate throughout the course of treatment—photocopied papers, hand-drawn doodles, verbal instructions and reporting—don't always support the patient well. Exercises may be forgotten, papers lost or damaged, or patients may worry that they aren't completing exercises correctly.

On the other hand, therapists don't always receive a clear or accurate picture of the patient's day-to-day progress. But given that 56 percent of American adults own smartphones, there's an evident opportunity to provide better support for physical therapy using a product people carry every day.<sup>1</sup>

PTme will help physical therapy patients achieve their treatment goals by supporting adherence to their exercises. It will constitute an accessible solution for all patients with access to smartphones and other mobile devices. PTme will be a rich, customizable mobile app that provides support during the course of treatment and after treatment. This is an app that patients can return to day after day, year after year, to remain confident in their progress, rehabilitation, and mobility.

## Project Mission

Create an accessible tool to help patients get the most out of their physical therapy treatment.

## Project Goals

- Increase users' adherence to physical therapy courses
- Allow for broad customization to meet each patient's needs
- Extend treatment beyond clinic appointments

## Platform

The initial phase of this project will be developed for iOS 7 and iPhone for a few reasons:

- iPhones comprise 25 percent of the smartphones used by American adults.<sup>2</sup>
- The review process for iOS apps is comprehensive compared to that for Android apps. That process will take longer and allow major issues to be addressed, which may provide insight into the design of PTme's Android counterpart.

<sup>1,2</sup> See <http://www.pewinternet.org/Reports/2013/Smartphone-Ownership-2013/Findings.aspx>, accessed 5 October 2013.

# Literature Review

## Goals

- Understand state of medical research on physical therapy treatment interventions
- Identify factors that help and hinder adherence
- Learn from case studies where apps have been used to aid medical treatment adherence

## Methodology

A total of 24 articles were reviewed and excerpted. Research was categorized according to relevance.

## Results & Conclusions

The literature provided strong justification for:

- The importance of adherence in improvement
- Home exercise regimens leading to better attendance at clinic appointments
- Increased accuracy in self reporting when diaries are updated in the moment
- Success of tracking in general, and in particular the use of apps, in increasing adherence
- Patients' need for control and customization

## Barriers to Exercising

The literature described patients' reasons for lack of adherence. PTme has the potential to impact more than half of these factors to varying degrees:

PTme has moderate to high potential impact	PTme has low/no potential impact
<ul style="list-style-type: none"><li>• Forgetting to exercise, lack of time to exercise</li><li>• Low sense of self-efficacy</li><li>• Poor social support/activity</li><li>• Low motivation, high helplessness, or depression, anxiety at baseline</li><li>• Exercising causes pain</li><li>• Lack of appreciation, attention, encouragement from therapist</li><li>• Lack of education regarding illness, self-care, outcomes</li><li>• Treatment not tailored to patient's needs, pain, or abilities</li><li>• Poor treatment organization and leadership</li><li>• Long term: low in-treatment adherence</li><li>• Overall: strongly perceived and high number of barriers</li></ul>	<ul style="list-style-type: none"><li>• Low socioeconomic status, cost</li><li>• Low degree of hindrance from injury (low reward)</li><li>• Chronic prognosis</li><li>• Difficulty of exercises</li><li>• Perception that treatment is not effective</li><li>• Unwilling to make time, don't value treatment</li><li>• Lower physical fitness/activity at baseline</li><li>• More/worse symptoms at baseline, comorbidity</li></ul>

## The Niche

- PTme can help patients manage their time and organize information
- Videos can empower patients to check their form
- "In the moment" diaries can improve reporting accuracy
- PTme can't address lack of trust in treatment, additional illnesses, or financial status

## Helpful Strategies

The literature also identified strategies that increase adherence. PTme can support all of the following:

Strategies that support interactions with therapist	Strategies that support patient outside of clinic
<ul style="list-style-type: none"><li>• Assessment of barriers, including pain and mental health, coping plans</li><li>• Measurable, functional goals developed with patient</li><li>• Treatment contracts</li><li>• Brief, in-the-moment diaries and progress tracking to aid awareness</li><li>• Consistent, clear, relevant, multi-modal communication with therapist</li><li>• Acceptance commitment therapy</li><li>• Long-term review that allows for patient questions and reassurance</li></ul>	<ul style="list-style-type: none"><li>• Patient choices and control over treatment</li><li>• Social support through group rehab, family and friend involvement</li><li>• Facilitation of relationship with caregiver, relieve caregiver burden</li><li>• Rewards</li></ul>

# Competitive Analysis

A search for physical therapy apps for iPhone revealed:

## 8 Heavyweights

Cost: Free, but clinic pays subscription

These are robust apps that offer many features. Some use gamification, and all use reminders and adherence tracking. While some provide pre-recorded exercise videos for patients, others allow the therapist and patient to record their own videos. The downside is that in all cases, these apps require the clinic to subscribe to the service and the therapist pushes an exercise plan to the patient's account. If the service isn't offered, the patient can't use it. In most cases, pain reporting was not consistent with users' needs articulated in the online survey (see page 7).

Competitor features to admire:

- Exercise screens include a form to rate pain and add notes
- Therapist takes video of patient—patients don't learn as well when watching models
- Progress reports sent to physical therapist



Competitor MyPhysio requires subscription and setup from the physical therapist. The home screen is more concerned with the therapist's logo than it is with directing patients to the next exercise.

## 21 Lightweights

Cost: Free-\$17

Many of these apps put the patient in charge, but they are light on features and customization. They might allow reminders, but the exercise information goes no further than a title. Others consist entirely of a simple timer, or the predefined content is limited to one area of the body.

## 3 Inspirations

- One app for cystic fibrosis exercises included a timer that automatically reset itself and gave an audible countdown. It encouraged patients with simple messages.
- One of the lightweight apps lowered the music volume while the exercise timer was counting down out loud.
- One app used the iPhone's accelerometer for stability tests. This could be an interesting idea to explore for the future.

## The Niche

PTme will be a robust app that puts the control in the patient's hands. Although later phases could incorporate support for a therapist-facing app, the priority is to provide something patients can use regardless of their therapists' technology choices. Additionally, the app will meet patients' expectations for customization and preferences for pain reporting.

# User Interviews

## Goals

- Find out how patients usually communicate with their physical therapists
- Discover what helps and hinders patients in adhering to physical therapy
- Define behavioral patterns in completing exercises

## Methodology

A total of five people were interviewed about their experiences with physical therapy in an informal setting.

## Results & Conclusions

- Patients are frustrated with typical communication methods.
- Patients expressed varying degrees of difficulty in completing exercises.
- Patients devised a variety of reminder methods.
- Patients want a clear personal goal and course of action.
- Patients desired support beyond simple reminders (pain management, tracking progress)

## The Niche

- PTme can help patients know what to ask
- Progress and pain tracking can help patients communicate and cultivate awareness
- Customization is key

## Interview Transcription Sample

Interviewee	Transcription	Notes
Interviewee 1	<p>Too many exercises to keep track of I gave up on one course because it was too much to do two at once and I didn't have a way to manage it all I just get a pile of xeroxed papers that stick together and get ripped after a while They give me a folder at the beginning of each course that eventually rips Some PTs don't give papers and then I can't remember what I'm supposed to do Sometimes they don't have papers for the exercise, then they have to draw it (badly) I don't feel like I know if I'm really improving or not</p>	Need to be able to schedule reminders, patient needs control over app rather than therapist, needs to track symptoms
Interviewee 2	<p>Did PT twice: once for shoulder and once for foot, appts 1-2x week, there was pain at first but improvement and she perceived effectiveness, shoulder: still adhering after 3 years, had goal to play volleyball again, learned new way to serve, pain from sleeping on side and using computer also provides motivation, met goal, sought additional treatment for chest tightness, 3 months to a better shoulder calendar--call doc if not better after, sock with tennis ball was effective if she left it out as visual reminder see it--do it/out of sight, out of mind, learned arm circle ROM test to track progress; foot: 1-2 years ago, foot hurts to walk on, weaker foot, needs arch support, this one has been harder to stick with?; treatment plan communication: gets folder of photocopies with notes from PT, feedback is all verbal no tracking; adherence: likes easier exercises, exercises take so much time and are difficult to schedule, if she goes to gym and doesn't have sheets she doesn't do PT, wishes she had suggestions for other exercises to do while at the gym without PT equipment, some equipment like exercise ball was inconvenient for travel or gym use, if she feels better she forgets to do PT, sometimes forgets how to do exercises/which ones to do, does exercises all at the same time, it's boring, wants to do in am because daytime is precious but forgets, doesn't want to do them when husband is home because she</p>	Occupational tips help patient meet goal, need to know what to do if plan is complete but symptoms still present, incorporate self-tests for progress?, need for alternative exercises, wants more information about non- adherence consequences

Interviews were transcribed and important needs identified.

# User Survey

## Goals

- Define a typical daily workload for physical therapy patients
- Discover what barriers patients encounter most often in adhering to physical therapy
- Learn what aids patients find helpful in adhering to physical therapy

## Methodology

- Link posted in online health forums, left open for one week
- 14 questions; anonymous data collection

## Results & Conclusions

- Forty-six respondents were included in the analysis.
- People find it difficult to manage multiple courses of physical therapy at once.
- Digital aids are not widely used.
- People prefer to describe pain, suggesting a diary may be preferable to a rating scale.
- Most patients complete 10 or fewer exercises per day.
- The preferred order of exercise completion varied widely, customization is needed.

## Helpful Strategies

In addition, the survey identified strategies that patients found helpful during and after treatment. PTme can support many of these strategies.

During Treatment	After Treatment
<ul style="list-style-type: none"><li>• Noticing improvement as a result of exercising</li><li>• Receiving encouragement from friends and family or taking a group class</li><li>• Receiving encouragement from physical therapist</li><li>• Setting a personalized treatment goal</li><li>• Knowing the consequences of not exercising</li></ul>	<ul style="list-style-type: none"><li>• Continuing to complete the exercises</li><li>• Knowing what to do if symptoms persisted</li><li>• Receiving advanced exercises to continue progress</li><li>• Receiving continued guidance from the physical therapist</li><li>• Keeping a history of physical therapy treatments</li></ul>

## The Niche

- PTme will incorporate social interaction that can motivate the patient
- Showcasing improvement can further motivate patients
- Continued guidance after treatment is complete leads to lasting results

10/22/13 Physical Therapy V3 - Google Drive

## Physical therapy survey

This survey was developed to gain insight into what has helped and hindered you in completing physical therapy exercises.  
It should take about 5 minutes to complete. Taking the survey is optional and you can stop at any time.  
This survey is anonymous. No personal information will be used in this research or shared with any outside party.

### Your physical therapy history - Page 1 of 4

Please answer the following questions about your experiences with physical therapy.

1. Have you had physical therapy in the last 10 years?  
Mark only one oval.

Yes

The survey was created and administered using Google Forms.

10/22/13 Physical Therapy V3 - Google Drive

11. Please rate your satisfaction or dissatisfaction with the following strategies for staying motivated to complete your exercises.  
Mark only one oval per row.

	This made it harder to do exercises	This did not help	This helped a little	This helped a lot	Not applicable: I did not try this/it was not available
I noticed improvement in my condition as a result of exercising.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends or family encouraged me to complete the	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The survey asked patients to rate their satisfaction with various evidence-based strategies for staying motivated.

# User Personas

## Primary Persona

**Maude** is a 70-year-old grandmother who broke her ankle on a recent trip abroad. She had surgery to fix the joint, but needs physical therapy for rehabilitation. Maude feels hopeful about therapy but worries that her body will take a long time to heal.

Comfort with technology: low; has a smartphone but has difficulty using all but basic functions



## Primary Persona

**Jeff** is a 28-year-old soccer player with sciatica. He injured a disc in his lumbar spine while trying to make a goal. His doctor sent him to a physical therapist to help treat the disc and alleviate the sciatica. Jeff is highly optimistic about recovery and feels capable of completing therapy.

Comfort with technology: moderate; has a smartphone and uses it frequently for email and social media, as well as games and other apps with reasonable competence



Experience Goals	End Goals	Life Goals
<ul style="list-style-type: none"><li>Remember the exercises</li><li>Know that she's doing exercises properly</li><li>Feel like she's making progress</li><li>Feel encouraged to continue, even while experiencing pain</li></ul>	<ul style="list-style-type: none"><li>Have restored functionality and range of motion in her ankle</li><li>Be able to walk and perform daily life activities</li><li>Be ready for her upcoming hiking trip</li></ul>	<ul style="list-style-type: none"><li>Feel young</li><li>Play with grandchildren</li><li>Travel</li></ul>

Experience Goals	End Goals	Life Goals
<ul style="list-style-type: none"><li>Remember to do the exercises</li><li>Be aware of his pain</li><li>Stay focused on the treatment plan</li><li>Feel like he's being coached</li></ul>	<ul style="list-style-type: none"><li>Play soccer in the upcoming finals</li><li>Reduce or eliminate pain</li><li>Have restored movement in his leg</li></ul>	<ul style="list-style-type: none"><li>Stay active</li><li>Get into a competitive soccer league</li></ul>

## Primary Persona

**Cheryl** is a 36-year-old mother of two with a genetic disorder that causes hypermobile joints. She is a frequent physical therapy patient to help maintain mobility and keep pain down. Cheryl isn't sure that therapy will help, but she doesn't know what else to do. She often feels overwhelmed by all the exercises.

Comfort with technology: high; has a smartphone and uses it regularly for multiple purposes with a high level of competence



## Secondary Persona

**Adam** is a 42-year-old physical therapist who sees 5-6 patients per day. Some patients visit 2-3 times per week, some visit once a week, and others visit less frequently. With 15 years of experience, Adam feels capable as a therapist. But he sometimes has trouble finding time to take notes on each patient, and is worried that not all of them complete their exercises. He wishes he could help them keep on track and stay motivated.

Comfort with technology: moderate; has a smartphone and uses it regularly for texting with reasonable competence



Experience Goals	End Goals	Life Goals
<ul style="list-style-type: none"> <li>Feel like her schedule is manageable</li> <li>Stay focused on form</li> <li>Feel like she's doing the right thing</li> <li>Feel supported and encouraged</li> <li>Keep track of past physical therapy</li> </ul>	<ul style="list-style-type: none"> <li>Reduce pain and increase mobility</li> <li>Feel like she can do things to help herself</li> <li>Ride a bike for 5 miles</li> </ul>	<ul style="list-style-type: none"> <li>Care for her children</li> <li>Complete daily activities</li> <li>Have energy</li> </ul>

Experience Goals	End Goals	Life Goals
<ul style="list-style-type: none"> <li>Assemble treatment plan with desired exercises and reps</li> <li>Communicate plan to patient</li> <li>Track patient's progress and pain levels</li> <li>Find new exercises</li> <li>See patient's current treatment plans, history of physical therapy</li> </ul>	<ul style="list-style-type: none"> <li>Communicate more effectively with patient</li> <li>Increase patient adherence to treatment plan</li> <li>Waste less time and paper on treatment plans</li> </ul>	<ul style="list-style-type: none"> <li>Improve career skills</li> <li>Feel fulfilled as a therapist</li> <li>Save money</li> </ul>

# Features List

Insights and features from the Literature Review, Competitive Analysis, and User Research were compiled into a list, grouped by related task, and prioritized.

## Features List Sample

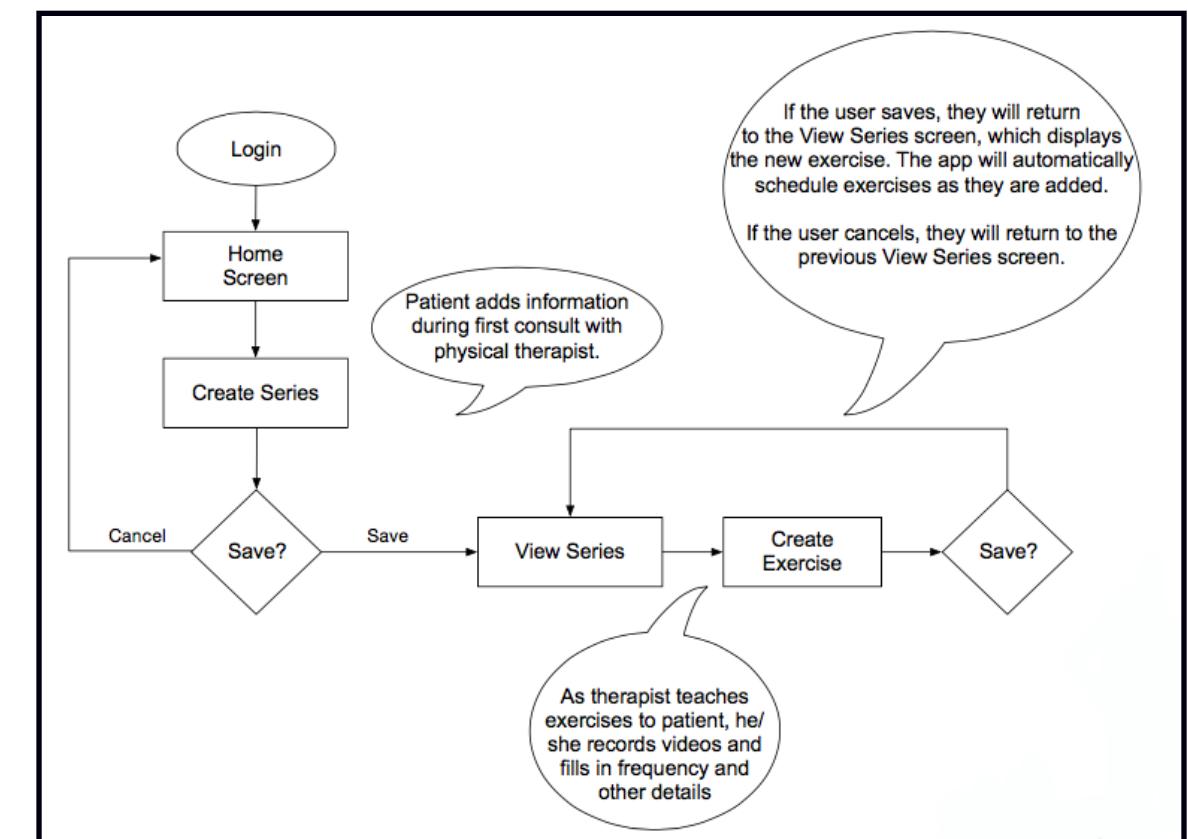
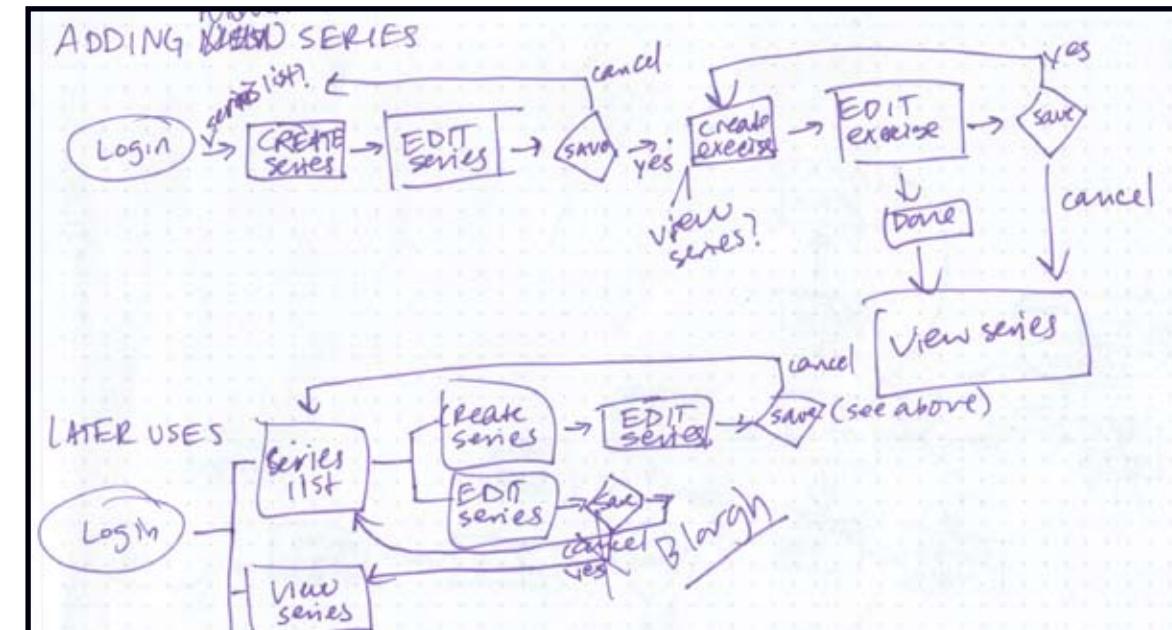
General	Exercising	Scheduling	Feedback	Goal-setting
Receive a list of exercises from your physical therapist	Choose from list of pre-recorded exercises	Set reminders to complete exercises	Receive notes of encouragement to complete exercises	Set personalized goals and verify progress toward them
Be able to use app regardless of whether your therapist offers a digital aid	Add your own exercises with your therapist's help	Schedule exercises throughout the day	Receive feedback from physical therapist	Work toward reward for completing exercises
Customize treatment plan and exercises to fit your own life	View text and pictures describing exercises	Receive alerts when you are near equipment for exercises	Receive encouragement from friends and family	Choose your own rewards for completing exercises
Customize app to give you only the features and feedback you want	Watch videos of how to do exercises	Schedule therapy exercises along with regular exercise program	Get feedback on how to react to increased pain	Agree to treatment contract with physical therapist
Receive information on illness, treatment, and outcome	Watch videos of exercises with open captions		Receive personalized advice to help you cope when it's challenging to complete exercises	Complete guided self-tests to check range of motion or strength (possible later expansion of this to use accelerometer and/or camera)
Receive tips on occupational strategies, self care, and pain management	Hear audio cues while exercising			
Access information on the consequences of not doing your exercises	Use a timer while exercising			
	Find exercise classes and rehab groups			

Features essential to the initial product scope are marked green, while those deemed not essential or not effective based on user research are marked orange.

Features of possible interest that fell outside the “essential” category, such as choosing your own reward, were marked for later phases.

# Task Flows

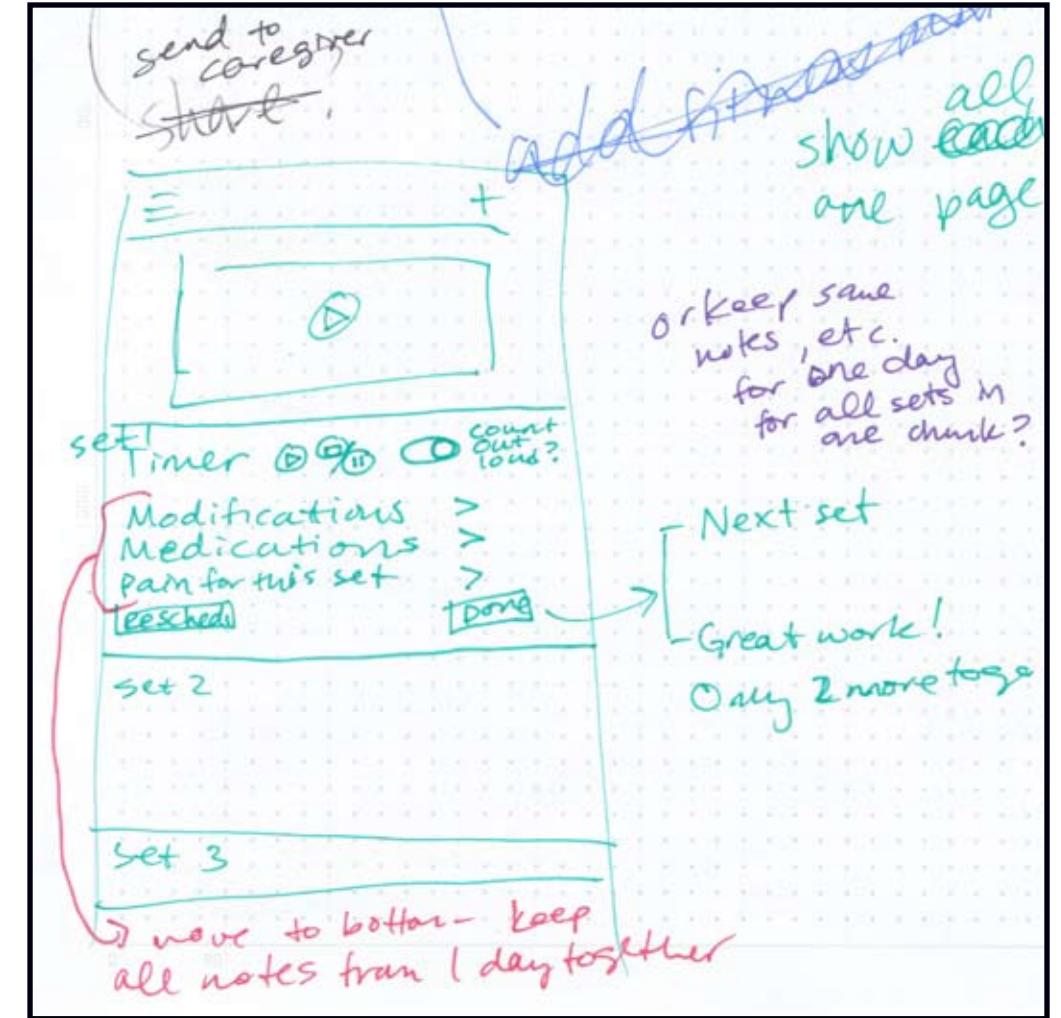
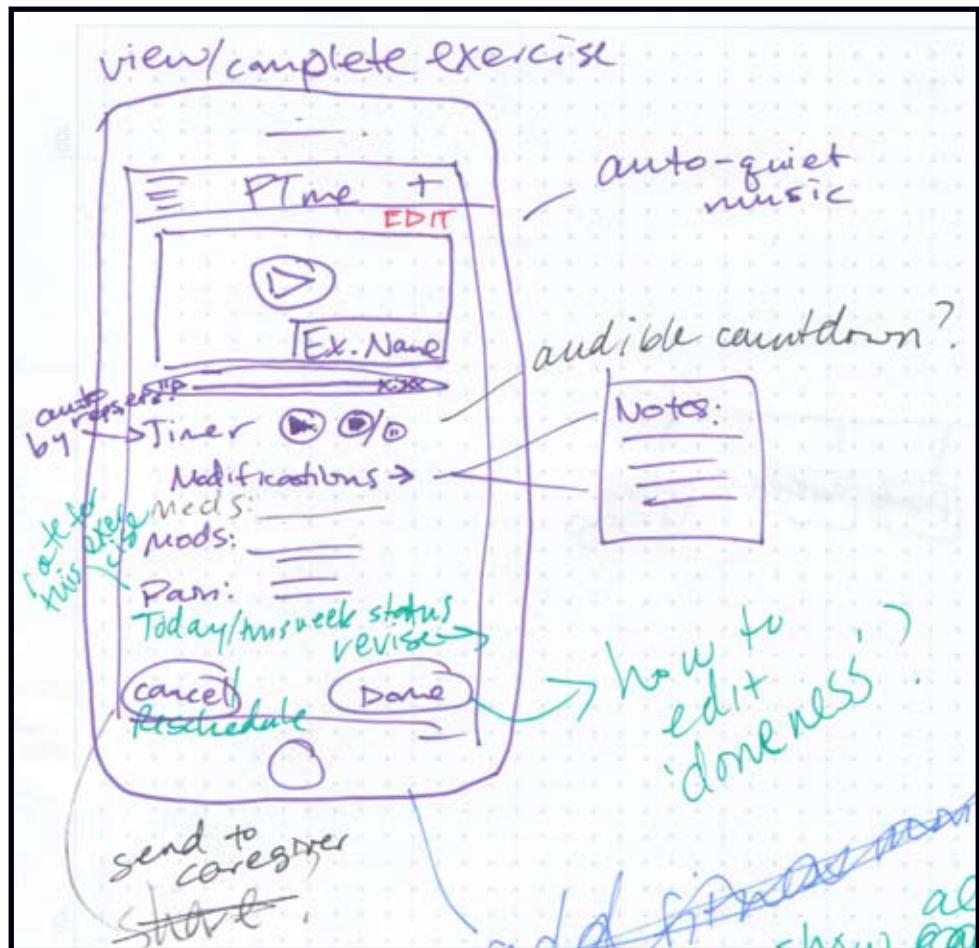
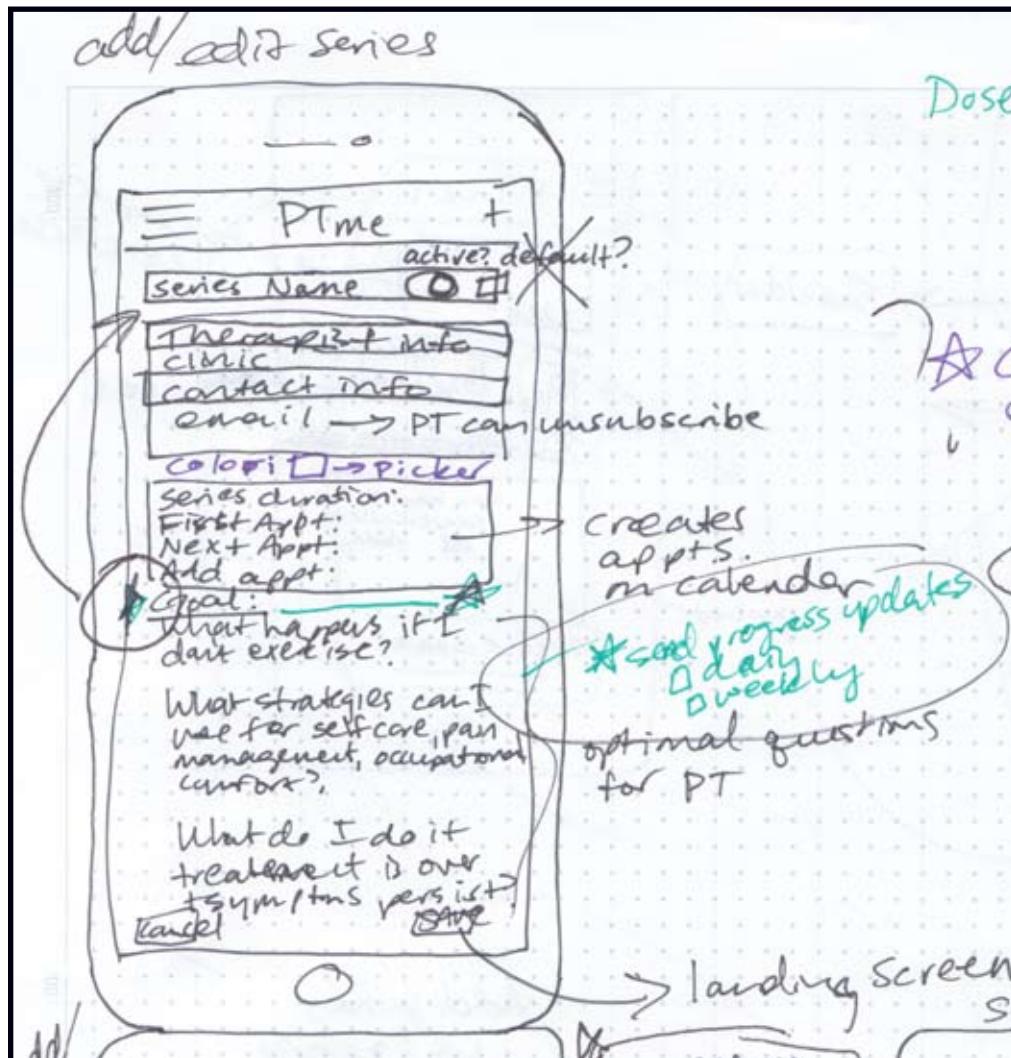
Once essential features were identified, task flow design began. Task flows were sketched on paper and then modeled in Evolus Pencil and Omnigraffle. During wireframe design, task flows were further modified from what is shown here.



These examples show some of the process of task flow design.

# Wireframes

As task flows progressed, wireframes began to be designed alongside them. The wireframes began as sketches and were later designed in Evolus Pencil, an open source UX app. The following pages show the most current iteration of wireframe design.

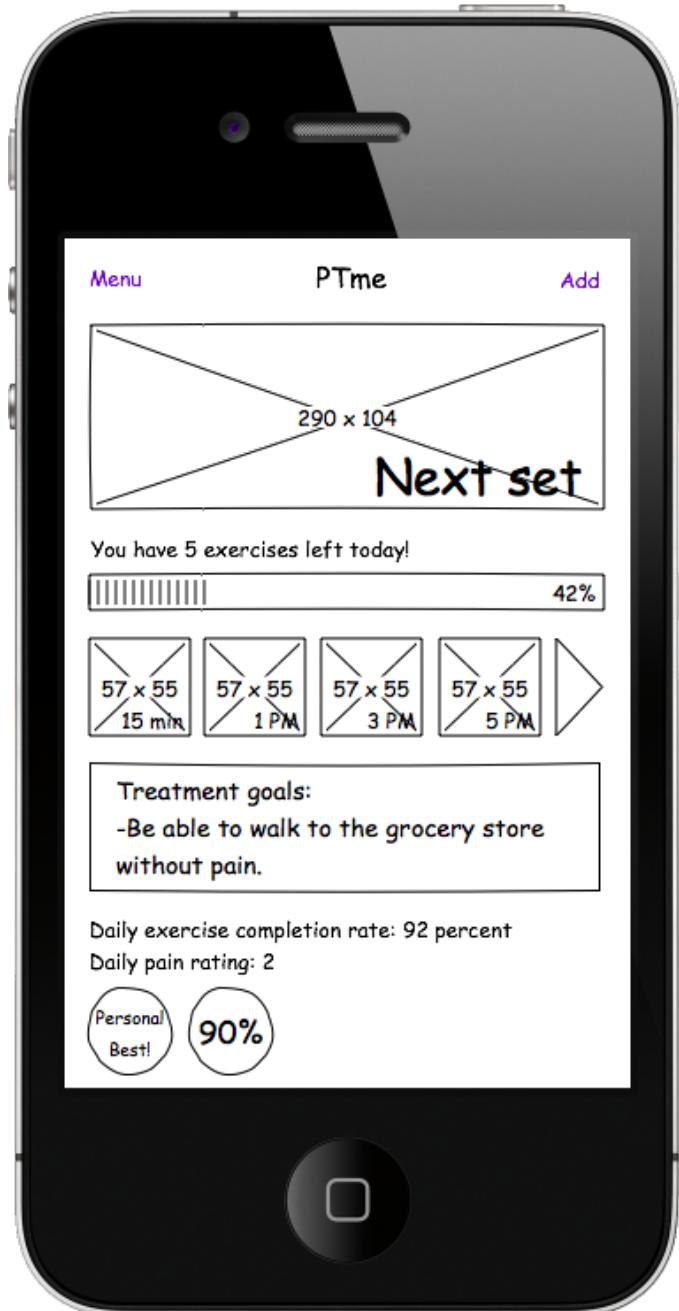


These examples show some of the process of wireframe sketching.

# Wireframes | Basic Navigation

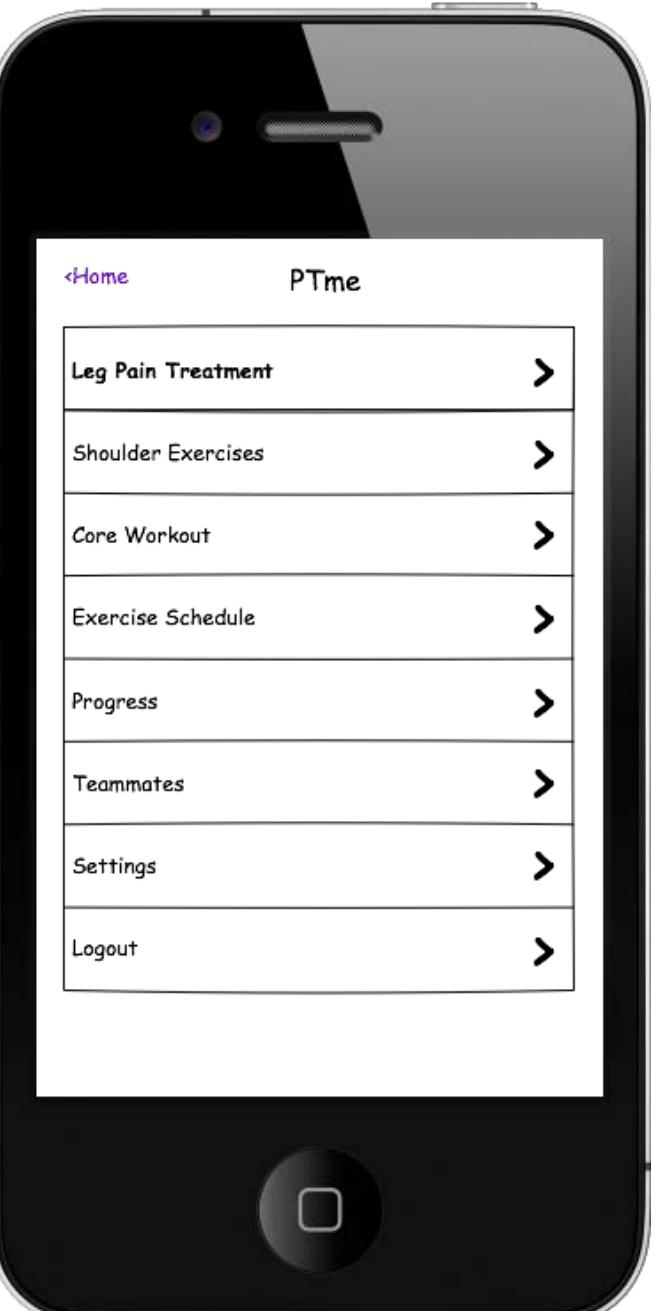
## Home Screen

The home screen directs users to the most important information: upcoming exercises, daily progress, and current goals.



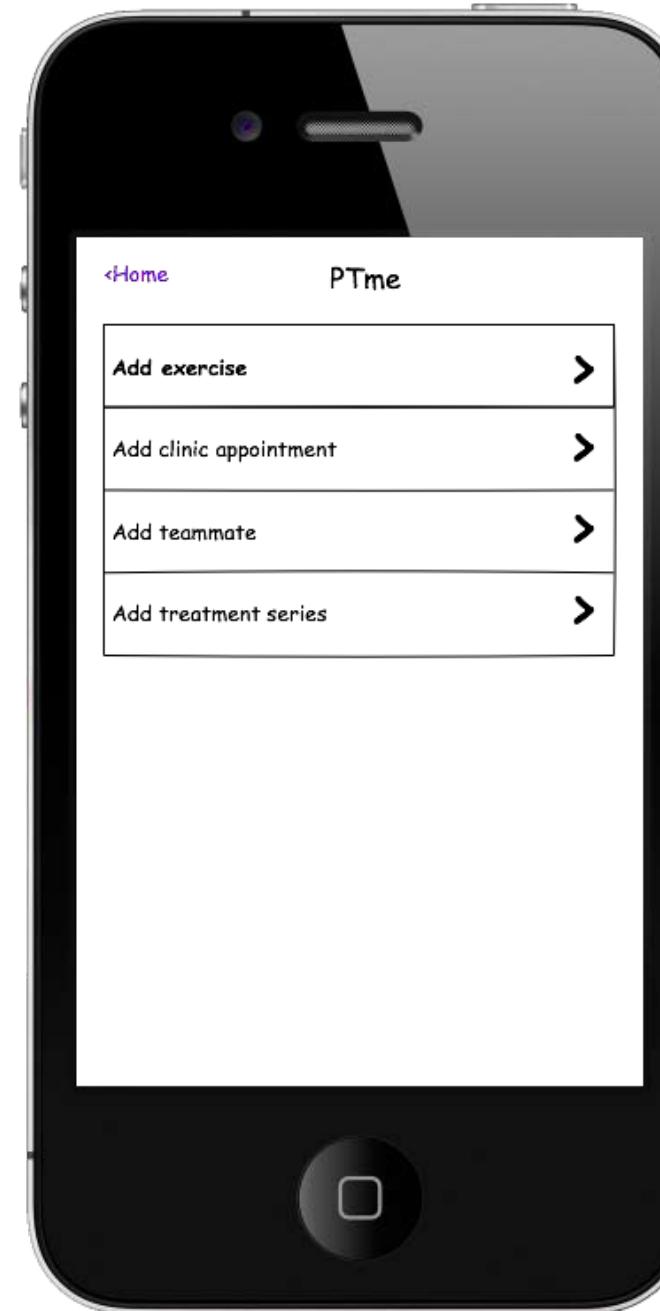
## Menu Sidebar

The menu sidebar allows users to easily navigate and manage information stored in the app.



## Add Sidebar

The add sidebar provides quick links to create new content and connections.



Actions from this sidebar are organized in order of frequency of use.

A treatment series is a collection of exercises, appointments, and other information relating to a single course of treatment.

# Wireframes | Getting Started

## Registration

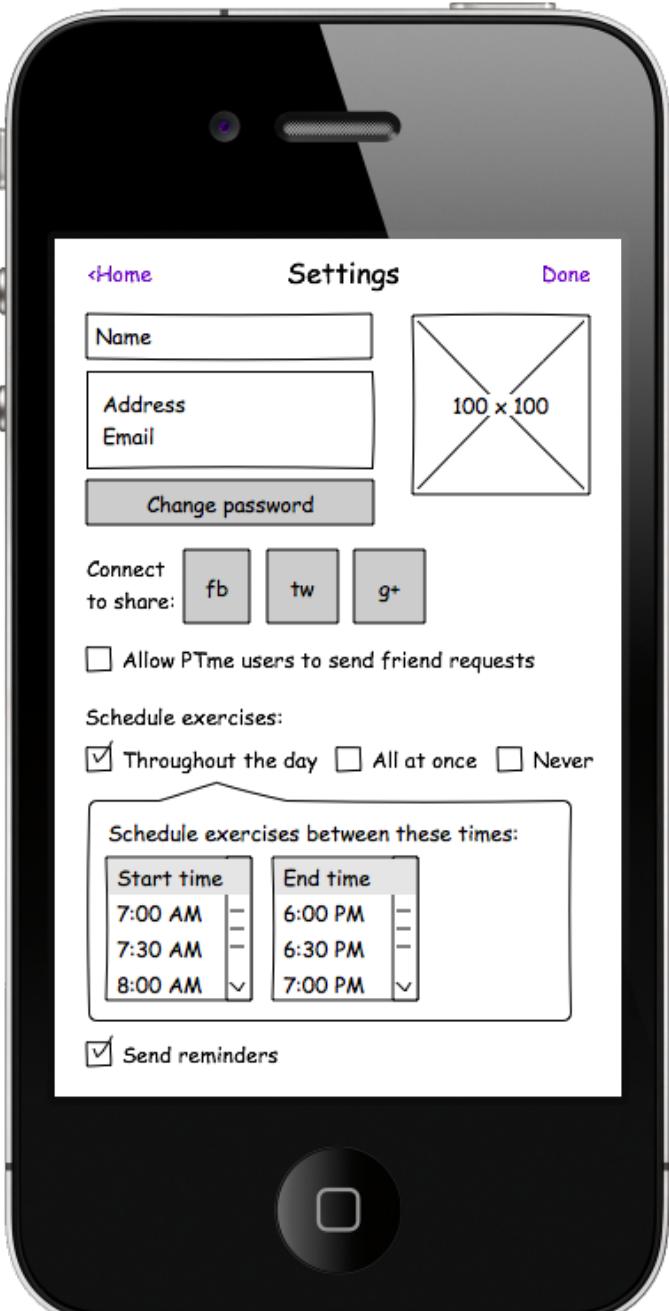
The first time the user opens PTme, they will need to register.



The “Register” link will present the same form with a “Register” button.

## User Settings

Once the user is registered and logged in, they will see the settings screen.



Tapping the image icon will allow the user to take a photo or choose an existing one.

Tapping one of the connect buttons allows the user to link social media accounts for sharing. Each link up asks the user to confirm that they want to share health information.

There are three scheduling options:

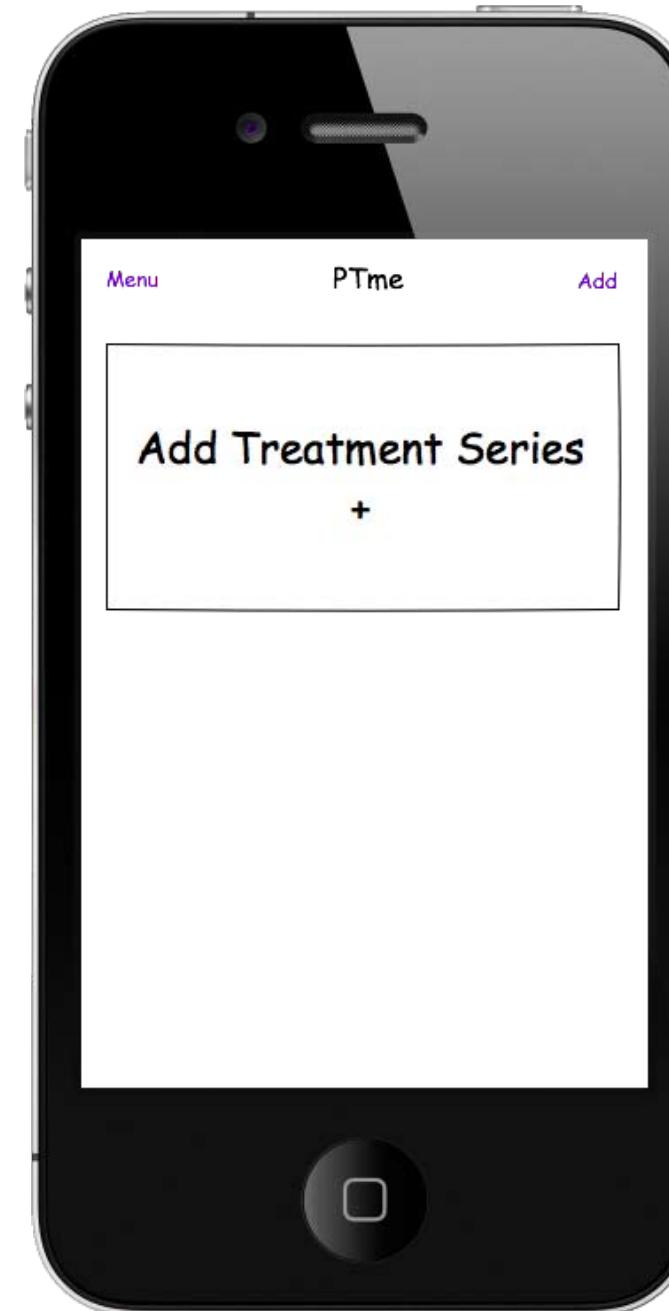
“Throughout the day” automatically schedules exercises at regular intervals within a user-selected time frame.

“All at once” allows the user to choose the time to do all exercises each day.

“Never” schedules no exercises and sends few reminders.

## Add Treatment Series

Once the user has saved their profile settings, they will land on the home screen, which directs them to add a treatment series.



Tapping the “Add Treatment Series” icon will take the user to the “New Treatment Series” screen.

Users can also view the Menu sidebar and the Add sidebar and access those functions.

# Wireframes | Adding Series & Exercises

## Adding a Series

Users can enter details about their treatment series while discussing them with the physical therapist. This screen provides opportunities for customization, which is important for patients managing large amounts of care information.

The 'New Series' screen allows users to input basic information about their treatment plan. It includes fields for the series name, treatment goals (with an example of 'Walk to the store without leg pain.'), physical therapists (Adam Smith), caregivers (Sally Brown), appointments (March 13, 2014 at 7:45 AM), and a section for things to ask the physical therapist, such as 'What happens if I don't exercise?' and 'What can I do for self care, pain management, work comfort, etc.?'. A note field at the bottom is labeled 'Add'.

“Active” defaults to being selected. Unselecting that option will make the series dormant—exercises won’t be scheduled.

Adding a goal inserts a text field.

When users tap the button to add a Physical Therapist or Caregiver, the app takes them to a separate screen to enter contact information. These contacts are managed using the native Contacts app.

Caregivers are friends or family members who help the user complete their exercises.

Adding an appointment brings up a scheduling screen. Appointments are added to the native Calendar app.

Adding a note inserts a text field.

## Viewing a New Series

After adding the series, the user sees the series with prompts and links to add exercises. The series screen organizes all the information about a single course of treatment in one place.

The 'Leg Pain Treatment' series screen displays the details of the previously created series. It shows treatment goals ('Walk to the store without leg pain.'), physical therapists (Adam Smith), caregivers (Sally Brown), and an appointment on March 13, 2014 at 7:45 AM. The 'Exercises' section contains a prominent 'Add Exercise' button. Other sections include 'Progress' (add exercise to view progress), 'Pain' (add exercise to view pain report), and 'Notes' (text fields for symptoms like 'If I don't exercise, the pain will return.' and 'I can take ibuprofen and prop my foot up, but I should not apply heat--only cold.').

Tapping the “Add Exercise” icon will take the user to the “New Exercise” screen.

## Adding an Exercise

This screen allows a great degree of customization for recording details about exercises.

The 'New Exercise' screen is used to create a new exercise entry. It includes fields for the exercise name, an 'Active' checkbox (which is checked by default), an activity monitor icon, and a video recording icon. The exercise is scheduled with 'Every day' and 'Twice a week' options, and it includes '1 set' and '2 sets' of '1 rep' and '2 reps'. There are checkboxes for selecting days (S, M, T, W, R, F, S) and radio buttons for scheduling sets in one group or separately. A section for 'Things to ask the physical therapist' includes questions like 'When/how should I modify this exercise?' and 'When should I avoid this exercise?'. A note field at the bottom is labeled 'Add'.

“Active” defaults to being selected. Unselecting that option will make the exercise dormant—it won’t be scheduled and it will appear grayed out and at the end of the list on the “View Series” screen.

Tapping the video icon will display a small modal of hints for recording a successful video. Tapping “OK” allows the user to record the video.

Activity monitors include a variety of pedometers and heart rate monitors. Users can link the monitor here and then sync it when exercising.

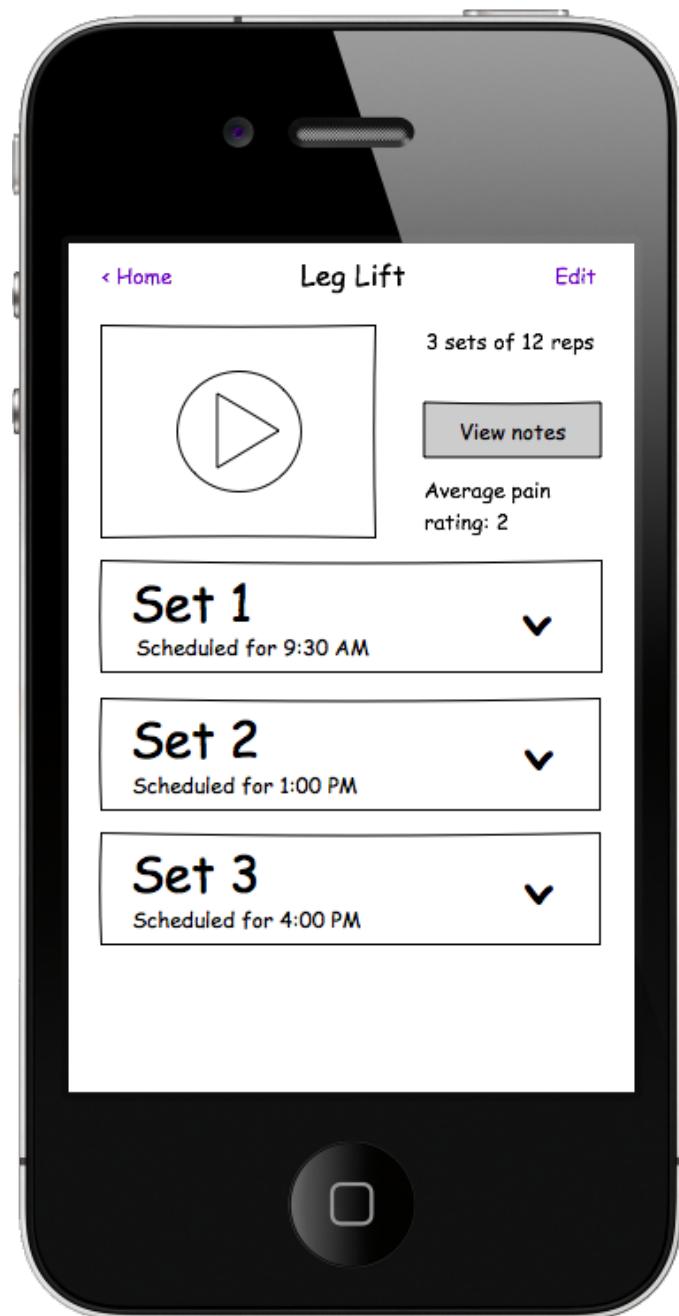
As users add exercises, the sets will be automatically scheduled according to their settings. Users can adjust the schedule using the “Exercise Schedule” screen.

“Delete exercise” only appears when editing an existing exercise (title will change to “Edit Exercise.”)

# Wireframes | Completing Setup

## Viewing a New Exercise

Once the user has saved the exercise, they see it summarized and scheduled on this screen. Clicking “<Home” takes the user to the home screen.



Tapping on the video icon will play the video.

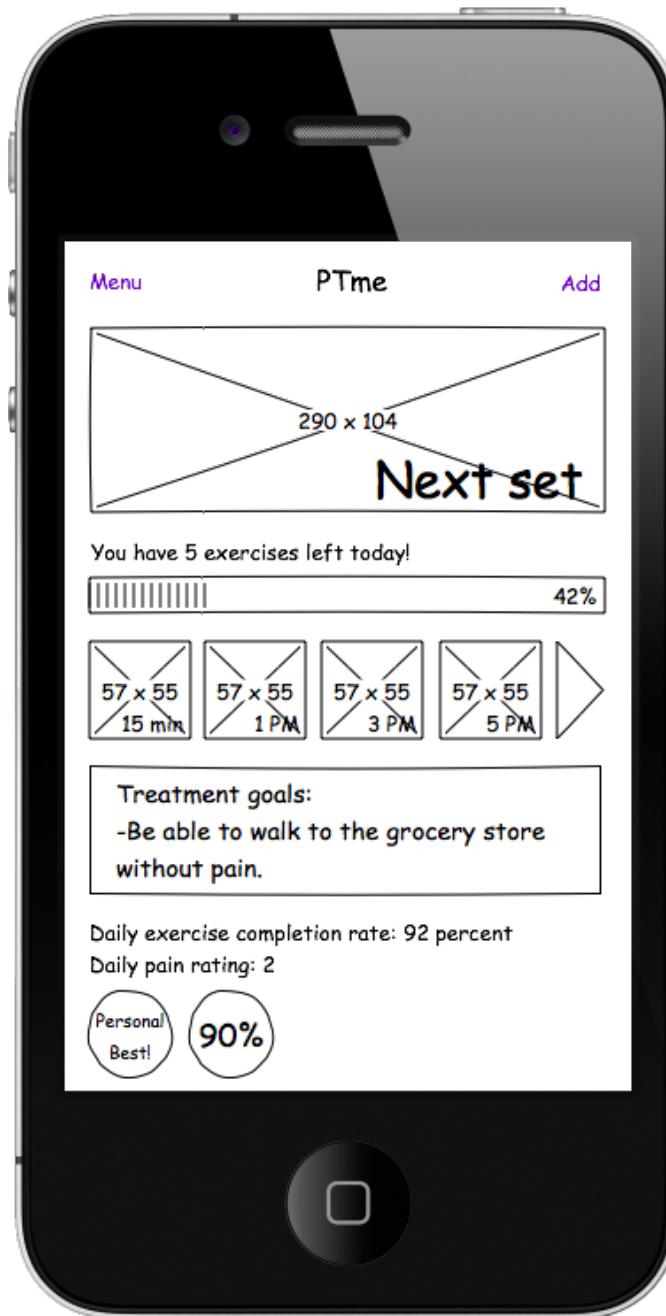
Tapping on one of the sets will reveal details about that set, including a timer.

The status of each set is listed for that day and resets for the next day at midnight.

Thumbnails are automatically created from the videos and used to represent each exercise.

## The Home Screen

This is what the user sees upon opening PTme when there is an active series with exercises.

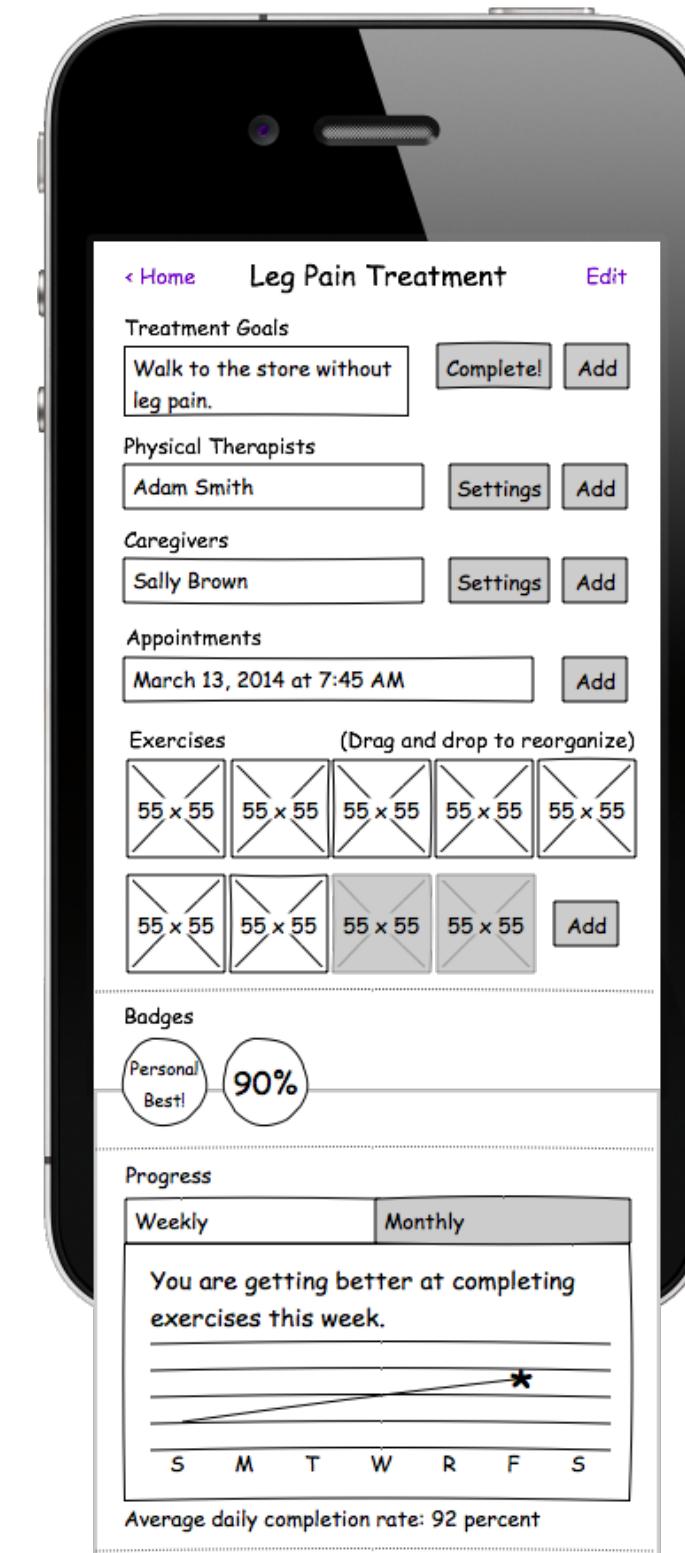


Tapping the large exercise thumbnail with the phrase “Next set,” as well as any of the smaller exercise thumbnails, will take the user to the related exercise screen (see previous wireframe for example).

The user can swipe the row of smaller thumbnails to the left to reveal all remaining exercises for the day.

## Viewing a Series with Exercises

The user can view an individual series from the home screen by tapping the “Menu” sidebar and tapping the name of the series.



As exercises are added and completed, the “View Series” screen displays badges, progress, and pain tracking.

Below the reports, the user can see their notes.

# Wireframes | Completing Exercises

## Getting a Reminder

When an exercise is scheduled to be completed, the user receives a push notification.



Tapping snooze delays the exercise by 10 minutes.

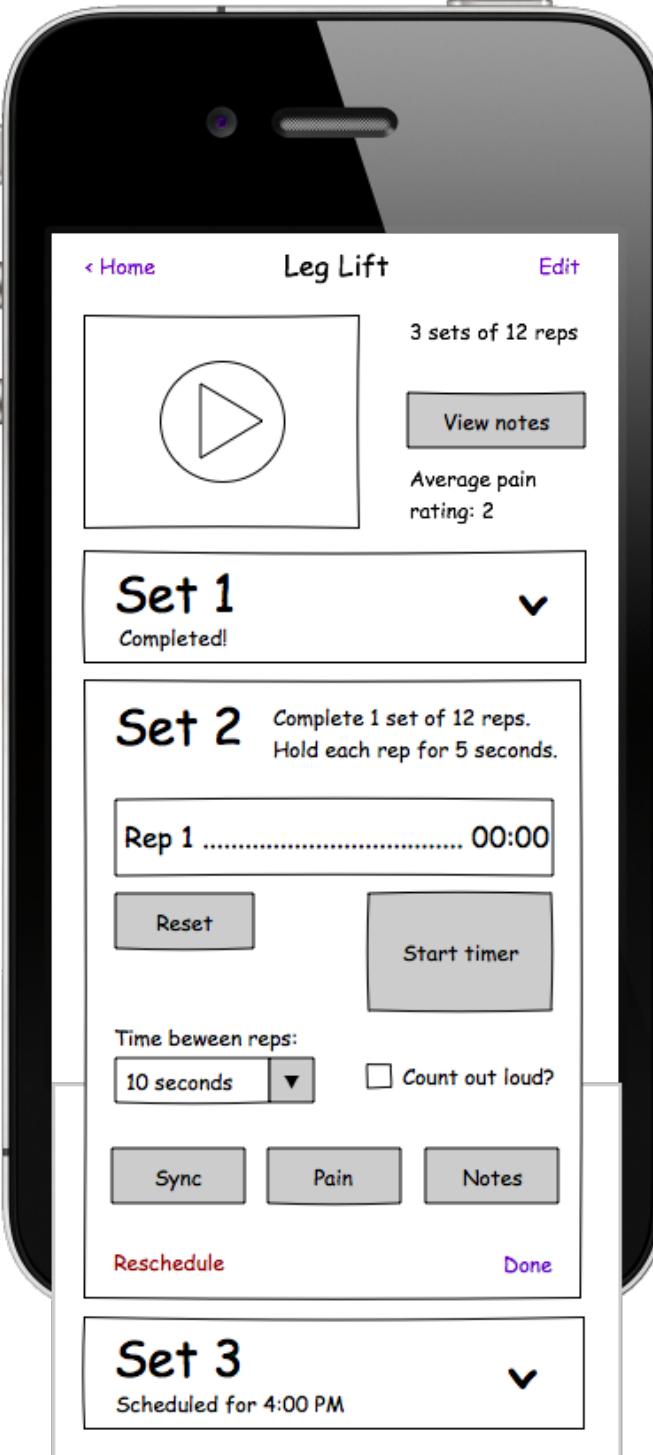
Tapping "Exercise" takes the user to the exercise screen with the scheduled set ready for completion.

Users who choose the option to schedule exercises "All at once" on the "Settings" screen will receive a reminder once a day to complete their exercises.

Users who choose the option to never schedule exercises will not receive a reminder. They can complete exercises from the home screen. The exercises will appear in the order shown on the "View Series" screen.

## Completing an Exercise

From this screen, the user can view the video and notes for the exercise, use an exercise timer, sync an activity monitor, rate pain, and add notes.



PTme creates a custom timer for each set, which automatically incorporates a rest period between each rep and can count out loud.

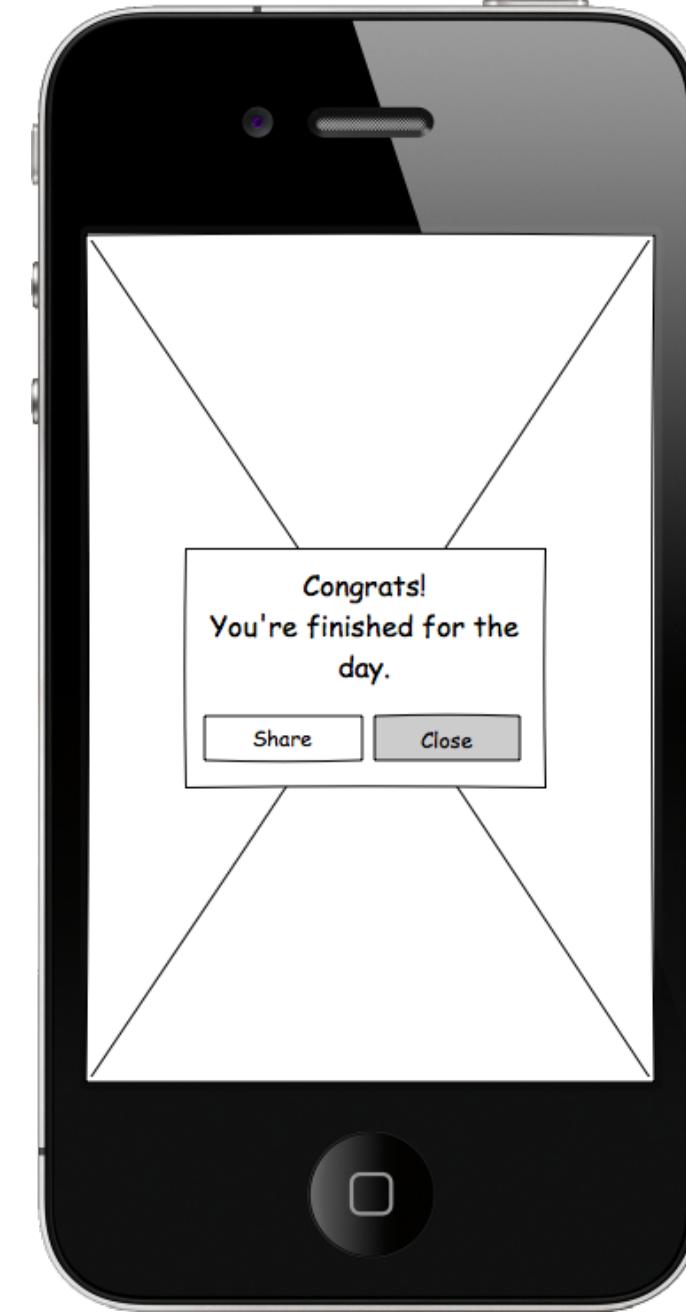
If the user is listening to music, PTme automatically lowers the volume when the timer is counting out loud.

"Reschedule" takes the user to the exercise schedule, where they can move the exercise to a more convenient time.

Tapping "Done" marks the exercise as completed, but this can be reversed later if needed.

## Done for the Day

When the user has completed all exercises for the day, they will receive a push notification with congratulations.

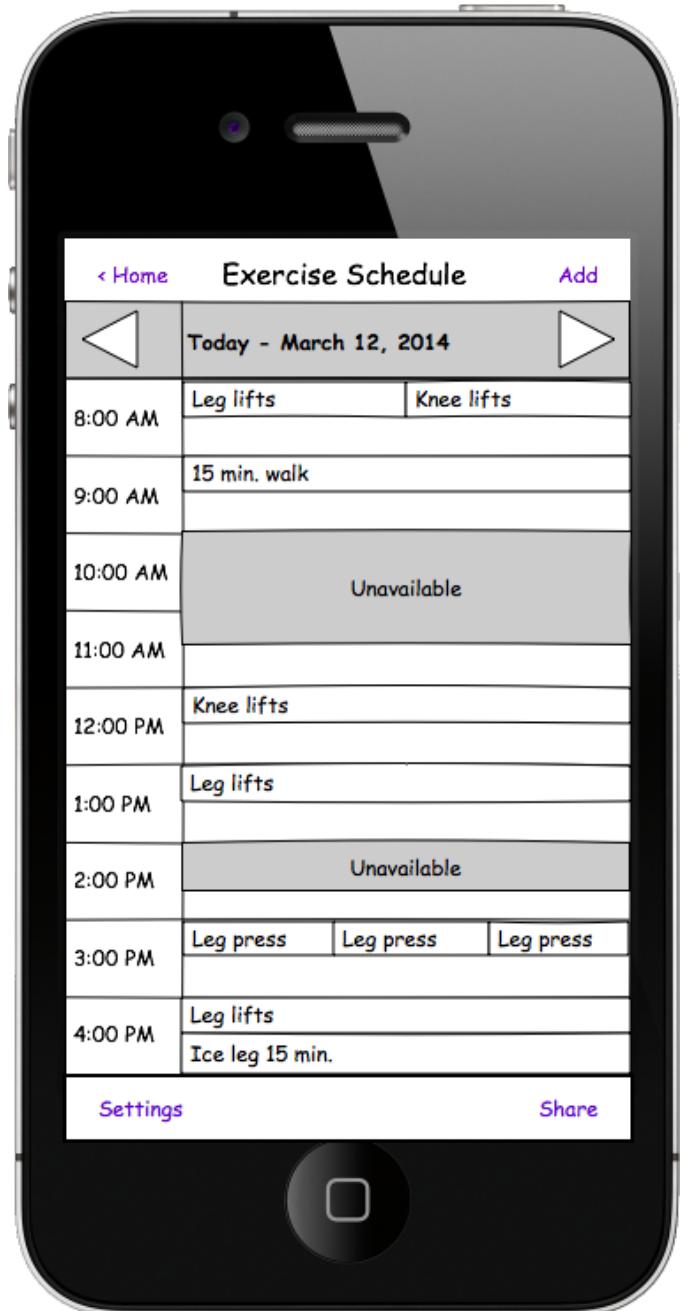


Share allows the user to post about their progress on Facebook, Twitter, Google+, or any other social media accounts they have linked to their PTme profile.

# Wireframes | Scheduling Exercises

## Exercise Schedule

On this screen, users can easily rearrange their exercise schedule.



Users can drag and drop individual exercises to suit their preferences.

The arrows allow the user to navigate through days of the week.

PTme consults the native Calendar app to find out when the user has scheduled appointments. These times appear grayed out and the app will not schedule exercises during those times.

Scheduled exercises will also appear in the native Calendar app.

Note: The schedule feature requires some iteration to determine how it works in relation to the native Calendar app and how it deals with recurring appointments.

## Adding a Clinic Appointment

Users can add an appointment from the "Add" sidebar or from the "View Series" screen.

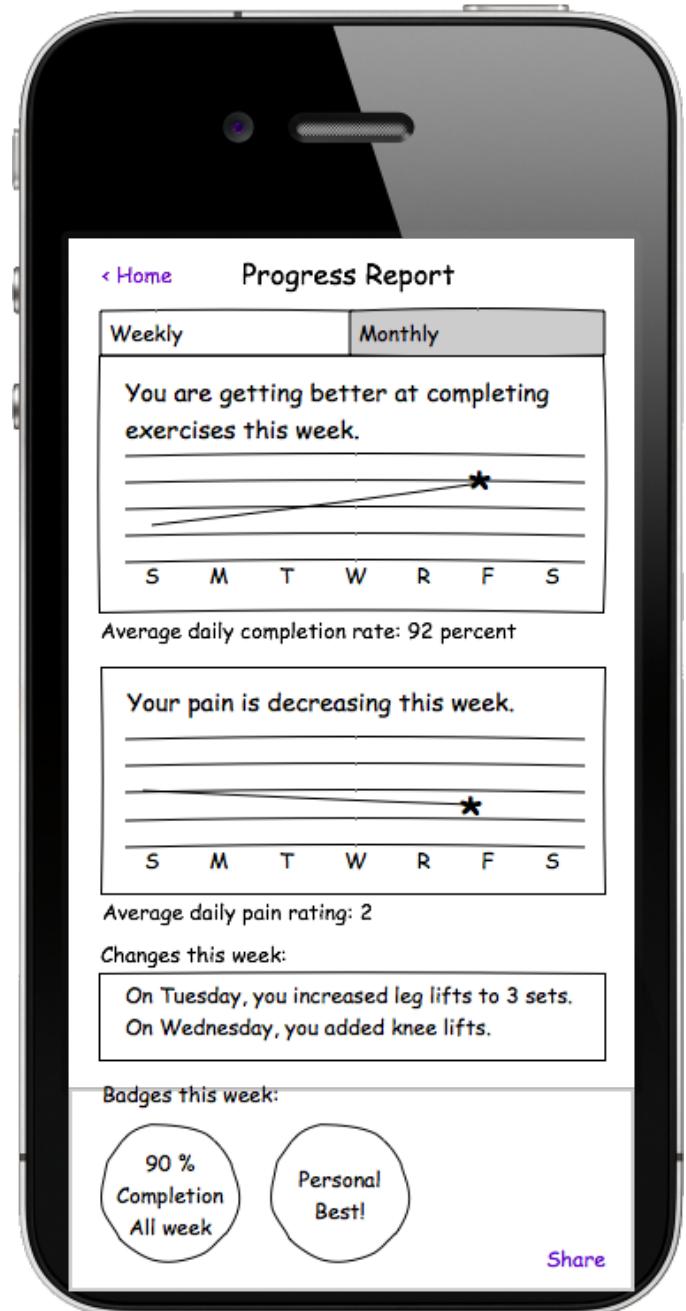


Scheduled appointments will also appear in the native Calendar app and reminders will be managed by Calendar.

# Wireframes | Tracking Progress

## Monthly & Weekly Progress

In addition to the simple daily progress bar on the home screen, users can access more detailed progress reporting through the “Menu” sidebar.



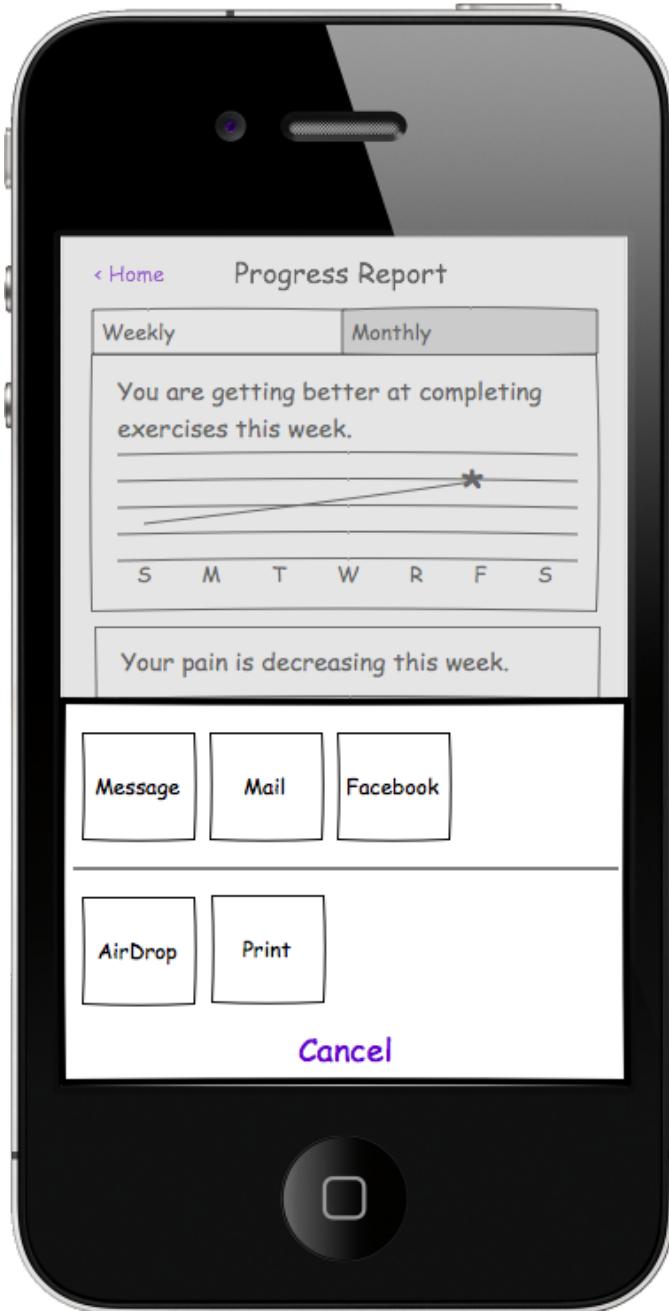
This progress report graphs the user's progress through the week as a percentage of total exercises completed each day. The pain graph shows changes in the user's daily average pain rating over the week. The report also lists changes to the treatment series and exercises, as well as any badges earned that week.

Swiping to the left or right allows users to navigate through previous weekly progress reports.

Tapping the “Monthly” tab will show the same report for the past month. Swiping will allow navigation through previous reports.

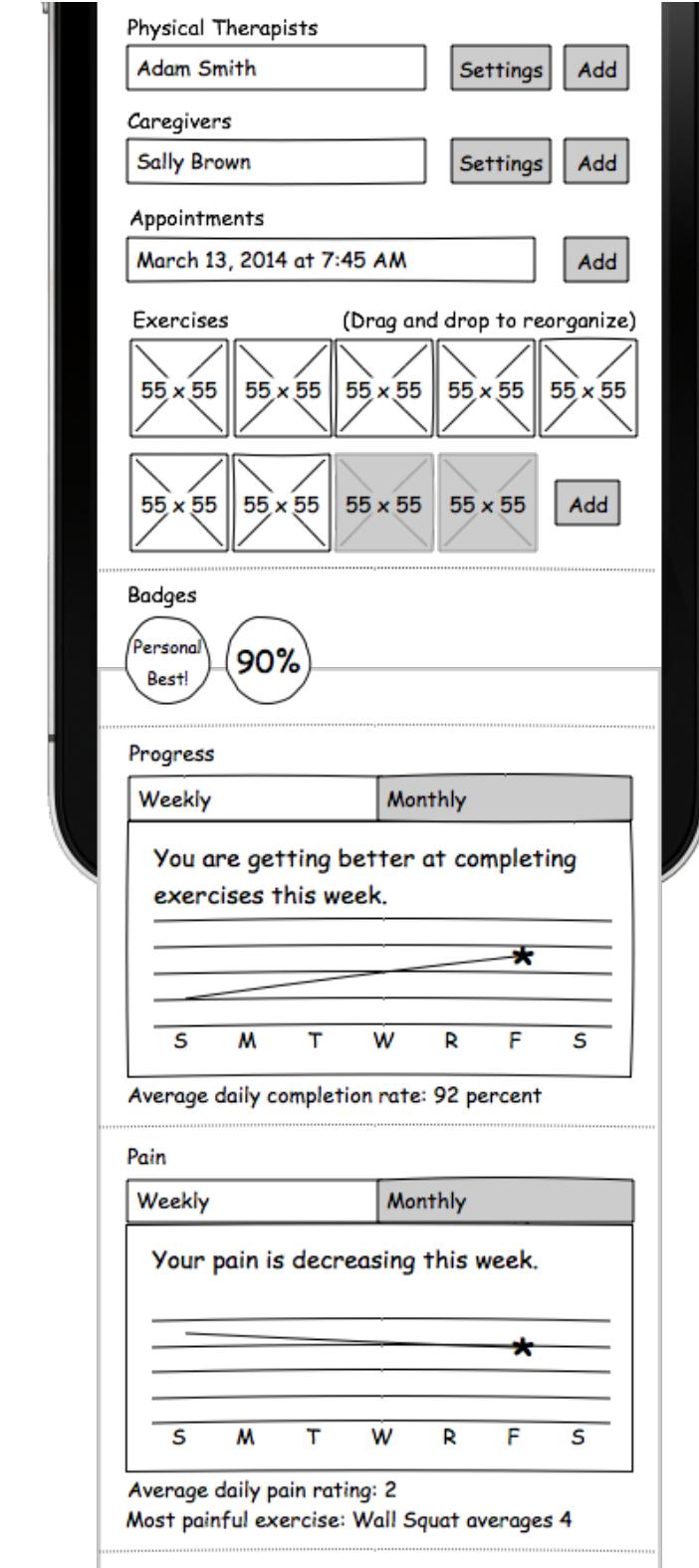
## Sharing Progress Reports

Users can choose to share their progress in a variety of ways.



## Progress by Series

Scrolling down on the “View Series” screen, users will see similar reporting for the series rather than an overall report.



Reports and other treatment information are automatically sent to physical therapists and caregivers. This reporting is managed by tapping the “Settings” button beside the person listed.

Swiping to the left or right allows users to navigate their progress and pain reports and badges.

## Wireframes | Progress Badges

### 90 Percent Completion

When the user reaches 90 percent average daily exercise completion for a treatment series, they will receive this badge.



Badges will appear on weekly and monthly progress reports, as well as on the "View Series" screen and home screen.

### 100 Percent Completion

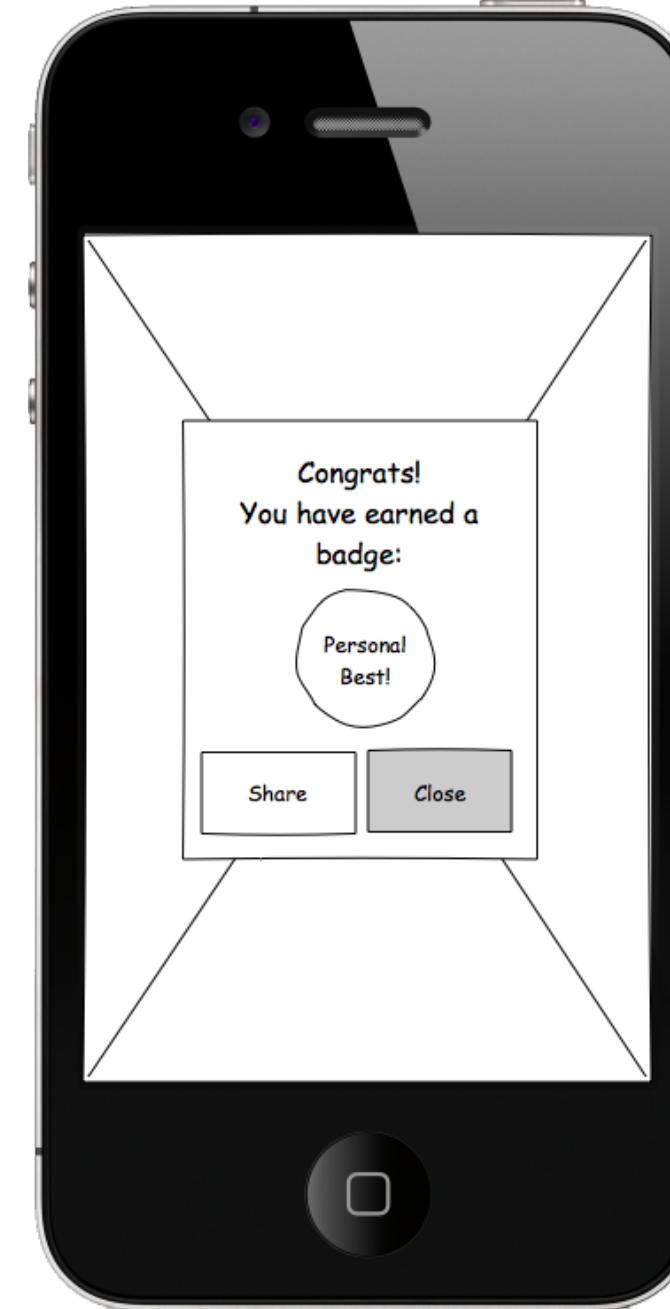
When the user reaches 100 percent daily exercise completion for a treatment series, they will receive this badge.



Share allows the user to post about their progress on Facebook, Twitter, Google+, or any other social media accounts they have linked to their PTme profile.

### Personal Best

When the user beats the previous week's average daily completion rate, they will receive this badge.



Users can earn the same badges week after week if they keep up the good work.

# Wireframes | Improving Exercise Completion

## Almost There

This push notification reminds users to complete all their sets for the day.



Tapping snooze delays the exercises by 10 minutes.

Tapping "Exercise" takes the user to the exercise screen with the next set ready for completion.

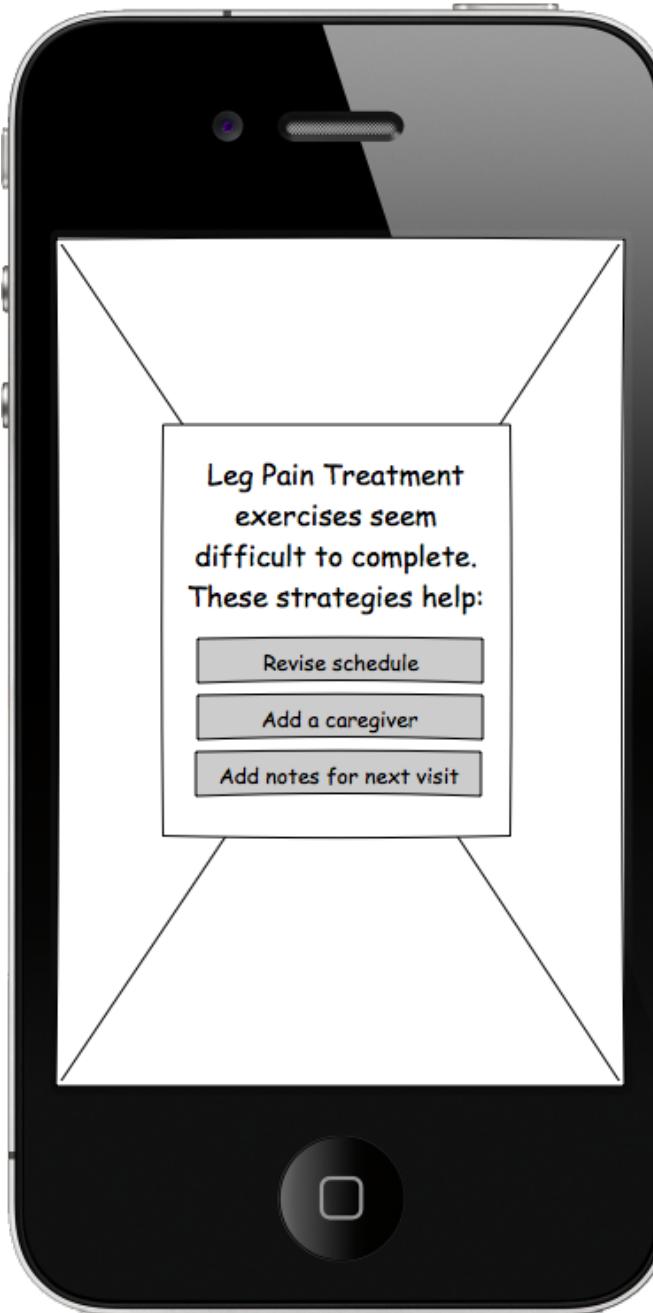
Regardless of their scheduling settings, all users who have reminders enabled will receive this notification.

For users who choose to schedule exercises "Throughout the day," this reminder appears an hour before the end of the scheduled exercise window.

For users who choose to schedule exercises "All at once" or "Never," this reminder will appear at 11:00 pm.

## Low Exercise Completion

This screen appears when the user's average daily exercise completion rate for one treatment series falls below 70 percent for one week.



Tapping "Revise schedule" takes the user to the "Exercise Schedule" screen, where they can drag and drop sets to reschedule them at more convenient times.

Tapping "Add a caregiver" takes the user to that screen, where they can add contact information for someone who will help them exercise. The user can also send reports and other information so that the caregiver is better equipped to help.

Tapping "Add notes for next visit" takes the user to a screen where they can describe their difficulties in completing exercises. This information will go to the physical therapist along with the weekly report before the next clinic appointment.

## High Pain Ratings

This screen appears when the user's average daily pain rate for one treatment series remains above four for one week.



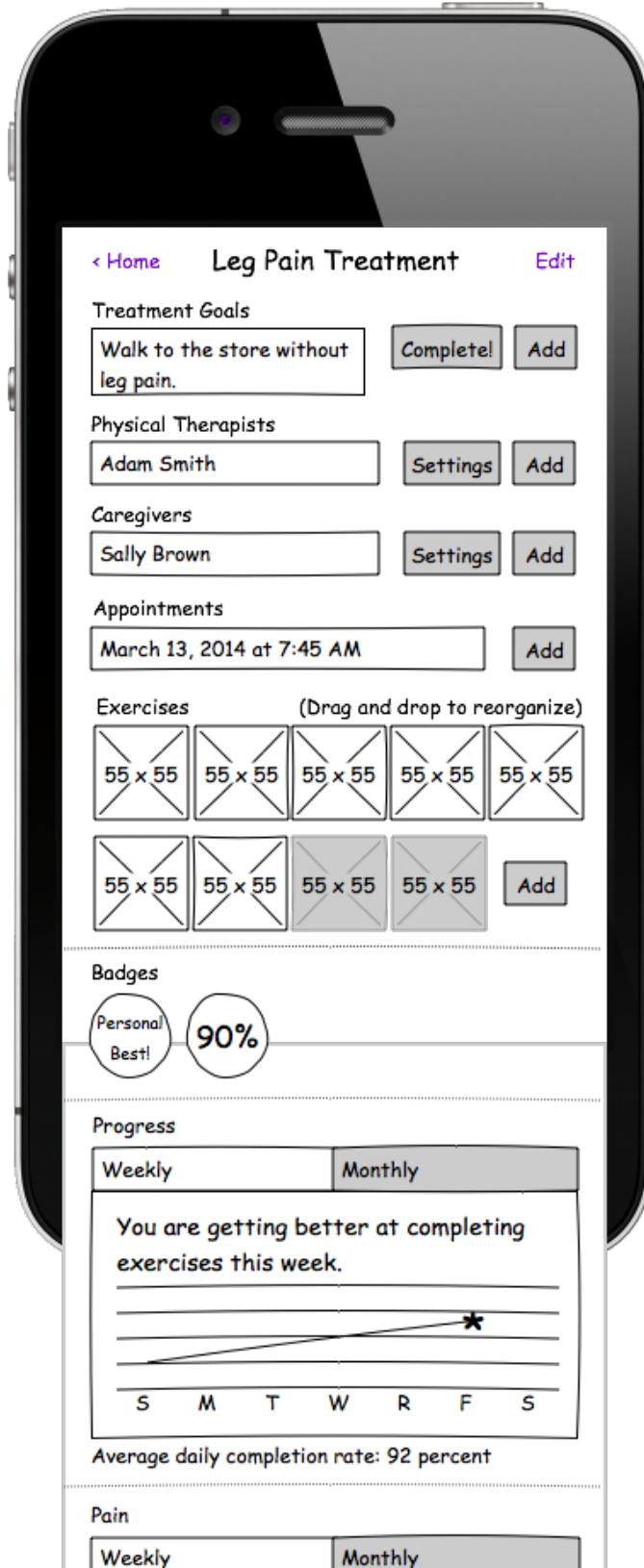
Tapping "Review series notes" shows notes taken during the clinic visit. These notes may include information about alleviating pain that the user has forgotten.

Tapping "Call physical therapist" dials the number associated with the physical therapist for that treatment series. The user can ask the therapist for help treating pain.

# Wireframes | Social

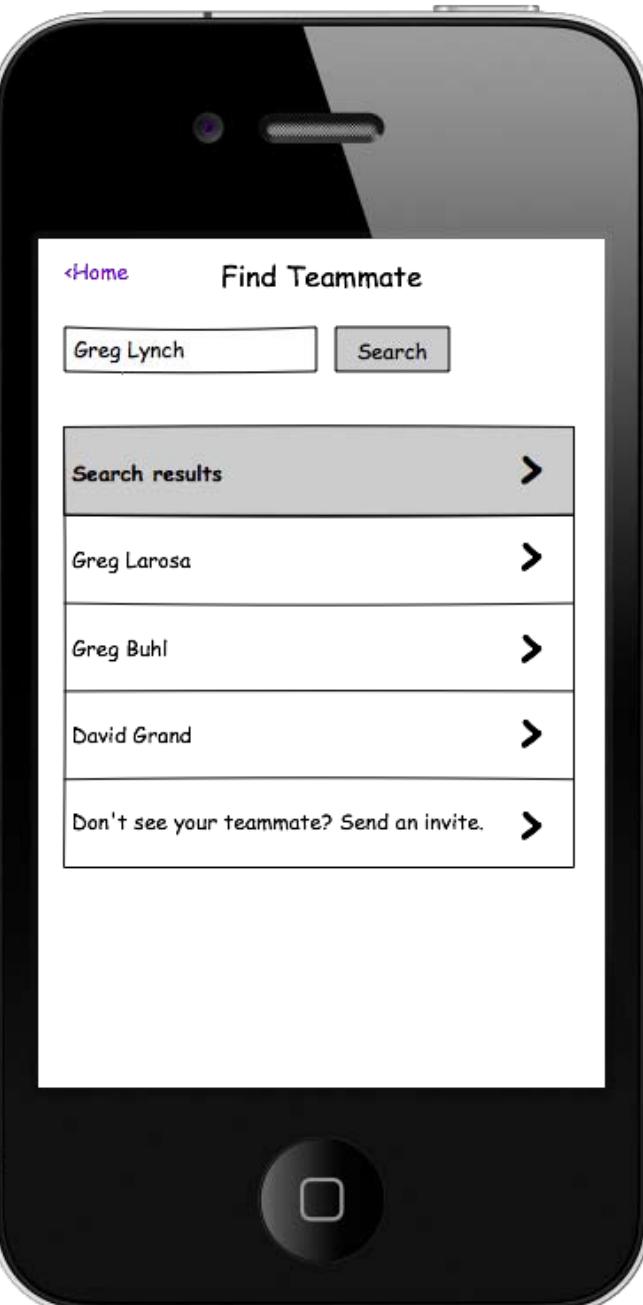
## Physical Therapists & Caregivers

Users can add physical therapists and caregivers on the “View Series” screen. Caregivers are usually friends or family members that help the user complete exercises.



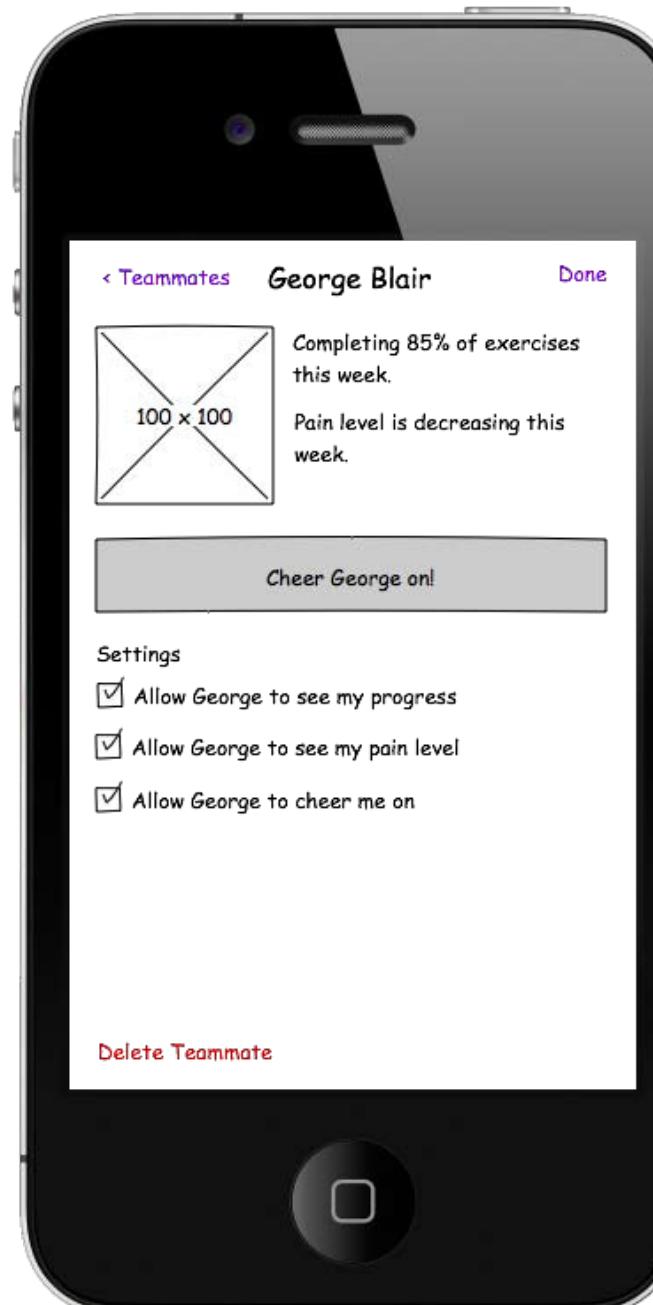
## Add Teammates

Users can add teammates to create a mutual support group for the app. There is a link to add a teammate in the Add sidebar.



## View Teammate

Adding teammates creates a sense of companionship so that patients don’t feel like they have to go it alone. When teammates cheer each other on, the users know that other people care about their success and healing.



The “Cheer on” button sends a push notification to the other user, which says, “Chery cheered you on. Go George!”

Settings allow the user to control access to their health information.

No other reports or information items are sent to teammates unless the user chooses to send them.

Teammates who do not use PTme receive weekly updates and can cheer the user on via email.