

# PostCare

A web-based app that connects patients with providers in service of creating a customized, comprehensive post-operative care plan.

Spec Status: **Draft** / Mentor Review / Team Review / Complete

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Team Members:

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## Summary

PostCare aims to create a single location where surgery patients can easily access their post-operative instructions, message with their provider, and easily track their healing progress along an appropriate timeline. Through a comprehensive treatment plan and a line of communication with the provider, we strive to empower patients to take their long-term health into their own hands, feel confident in their healing journey, and achieve the best possible results.

## Problem Background

People who have had out-patient surgery often need more comprehensive post-op care than they are given by their healthcare providers.<sup>1</sup> Healing from surgery can take weeks, months, and in some cases, years. As a patient recovering at home, it can be hard to determine a serious complication versus the ups and downs of the normal healing process. Surgeons' time is very limited, and providers may not have the resources to give patients the post-op attention they deserve. Additionally, there are other ways to assist recovery that are not performed by a doctor - such as a healthy diet, exercise, lymphatic massage, and oxygen therapy - just to name a few.

In 2019, there were 11.9 million outpatient surgical procedures performed in the US.<sup>2</sup> In fact, over 70% of surgeries performed in the US occur in the outpatient (ambulatory) setting, according to a 2017 report from the Centers for Medicare & Medicaid Services (CMS).<sup>3</sup> Surgical procedures are on the rise, with hospital stays shrinking due to limited hospital resources and the high costs of hospital stays.

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<sup>1</sup> Based on user data garnered as part of this research

<sup>2</sup> <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb287-Ambulatory-Surgery-Overview-2019.pdf>

<sup>3</sup> <https://www.modernhealthcare.com/assets/pdf/CH111098711.PDF>

With so many people having procedures and returning home with minimal guidance, it can be very confusing for patients to know what to do and when to do it, without waiting for a follow-up appointment to see their doctor again. So, we wanted to investigate: How might we improve the recovery process after being sent home from the hospital? How might we empower patients to take their long-term recovery into their own hands, while ensuring they follow the guidance of their doctor?

## Goals

- To provide patients with easy access to their post-op treatment plan & instructions in one convenient space
- To provide the opportunity to message with the provider regarding questions/concerns along the way
- To allow patients to see a visual summary of their progress in a dashboard format
- To give patients access to a daily to-do list that helps move them forward with their healing journey
- To help give patients confidence that they are healing well and are on the right path to recovery
- Launch MVP V1 with a web app and eventually build out a coordinating mobile platform

## Features

Version 1:

- Secure messaging between providers and patients including text & image sending.
- Daily to-do lists: Patients can create and keep track of their daily to-do lists.
- Access to surgical instructions: a dashboard that shows patients' progress, tasks completed, tasks to do, etc. in real-time.

Version 2:

- Schedule appointments with providers: patients can schedule appointments with providers through the app.
- Reminders for appointments and medication: real-time notification for patients' appointments and medication
- Video consultations with healthcare providers: 1 on 1 video chat between patients and providers using Twilio

## User Stories

- *As a user, I want to check which pills I am supposed to take today so I can complete my medications.*
- *As a user, I want to text my doctor a picture of my incision so she can check if it looks infected.*
- *As a user, I want to be able to text my doctor a question so I can receive an answer quickly.*
- *As a user, I want to see how many more physical therapy appointments I need so I can plan my schedule.*

For V2:

- *As provider (user), I want to be able to check my patient's progress on the to-do list so that I can monitor their recovery process.*
- *As an admin, I want to connect the doctor's account to the patient account so the doctor can input patient instructions.*

## Proposed Solution

PostCare app aims to streamline post-op care in one singular location, working together with the doctor or provider to customize a healing plan based on the specific surgery and individual. Primary goals will be to educate patients on steps to take in the days and weeks following surgery, to allow patients to communicate easily with their provider, and to provide a timeline of progress so patients can plan their schedule accordingly.

## Scenarios

### 1. TO-DO LIST

- *clearly shows a list of things to complete*
- *includes medications, wound care, physical therapy or exercises, doctor appointments, etc*

- allows user to "check things off"
- when user "checks off tasks" they change color to show completed state
- when user "checks off tasks" this updates in the healing timeline
- when user "checks off tasks" this generates notification to provider
- allows user (patient or provider) to add/remove things to the list

## 2. SECURE MESSAGING

- Allows user to send & receive messages
- Allows user to send & receive pictures
- Includes notifications to alert sender & receiver of messages

## 3. DASHBOARD

- Contains access to electronic medical records (such as post-operative care instructions), provider info, patient's personal info
- Allows user to review completed tasks
- Allows user to see upcoming tasks on a daily/weekly/monthly view
- Includes notifications to alert user of upcoming deadlines

## Measuring Success

### Co.Lab Success Metrics

What would you consider success to look like by Demo Day for your team? What would be the definition of done for your product by that point? Note: This should be finalized as a team.

### Product Success Metrics

Consider metrics you'd want to measure to consider the product a success. How would we know if we've solved the problem? What are the things we'd want to measure?

## Milestones & Timeline

- Conduct further research (done)
  - User Interviews (Jan 27th)
  - Competitive Analysis (done)
- Finalize MVP features
  - Features list (done)
- Create user flows
  - Build lo-fi prototype (Jan 13th)
  - Test lo-fi prototype (Jan 27th)
  - Iterate on design, create hi-fi prototype (Feb 3rd)

- Test hi-fi prototype (Feb 10th)
- Build out MVP (Feb 17th)

## Open Questions / Appendix

*Self explanatory?*