

#optumpatientintake

CSC 591, Spring 2022

Stage 1 - Research

Team

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Client

Lennon Youmans, Optum

Long Term Goals

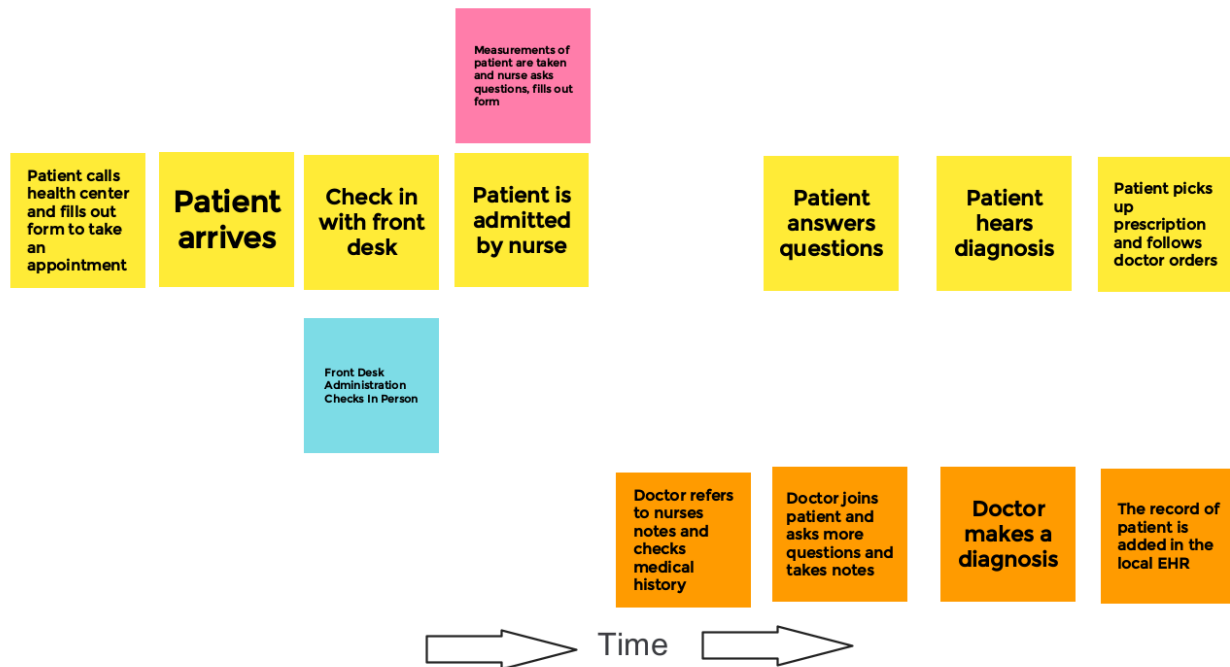
Optum is a healthcare provider and the major goal of Optum is to help people live healthier lives and make the health system better for everyone. The task given to us is challenging yet captivating. We have to design a simple-to-use system for health centers where the process of managing records of patients among various medical platforms. The major goal is to ease this process for all patients and physicians and help the doctors access this information centrally. A system which can be easily used by patients and understands basic natural language will save physician effort.

Challenges/Obstacles

- People will tend to make errors during information input which may not be handled in NLP
- Privacy and data security of the patient's data
- Healthcare professionals are slow to adapt to technology and usually in a rush so the UI should be streamlined
- Maintaining authorizations and access
- People might sometimes forget some of the information related to the lab diagnosis they underwent or any allergies which might be crucial for diagnosis
- Synchronizing patient history with multiple doctors

- Simple UI for a diverse set of patients with differing reading levels, cognitive abilities, physical abilities, languages, and backgrounds
 - May need to include voice to text for multiple languages

Make a map



Talk to experts

- **Summary**
 - Our client is Lennon Youmans who is a UI Designer at Optum owned by United Healthcare group. He explained to us the work and goals of Optum. He gave a good description of how the current system works and what issues and challenges are faced by the doctors as well as patients. He wanted us to design a system which could be a life saver for both the actors in a medical facility which include communication between doctors, patients' note taking and making prescription services easier.
- **Current Solution**
 - Currently, doctors take notes using electronic health records (EHRs) or electronic medical records (EMRs). This process allows physicians and patients to view medical records and supports communication between the patient and physician, but it is a complex one, which can be simplified further through an app.
- **Challenges**
 - It is difficult to handle cases of patients who do not need actual care but want to visit medical facilities for food and shelter.

- Patients have different reading levels due to which lots of errors occur.
- During or after the patient visit, EHRs require much input from the physician about the patient visit. If the doctor types this information during the visit, it distracts them from the patient. If they wait to input the information after, then they risk forgetting details about the patient.
- The routine of physicians gets too busy considering handling patients and their inputs which makes the process very messy.
- **Suggestions:**
 - Looking through the journey map starting from when a patient comes to the medical center to the time they leave and picking inefficiencies that can be improved was suggested as a good starting point.
 - Since getting firsthand information would give most accurate results, we should create surveys to understand the patients' pain points. The solution can be based on the outcome of this survey.
 - The patient needs to wait for a certain amount of time before they can talk to the doctor. Leveraging NLP to facilitate note-taking, in the form of voice notes, at this time was also suggested.

Problems/Opportunities

- **Productivity**
 - How can the UI be designed to save doctor's time while interacting and diagnosing patients ?
 - How might we schedule appointments to respective doctors based on patient entries?
- **Patient Diversity**
 - How might we make UI friendly so that patients feel comfortable to enter their health details?
 - How might we differentiate patients' emotions using NLP?
 - How can the user experience be inclusive of all patients irrespective of their reading levels or disability?

Target

- We want to focus specifically on the interaction between the physician and a patient during an office appointment. We want to assist doctors in taking notes so they can spend more time with their patients and less time typing or looking at their screen.