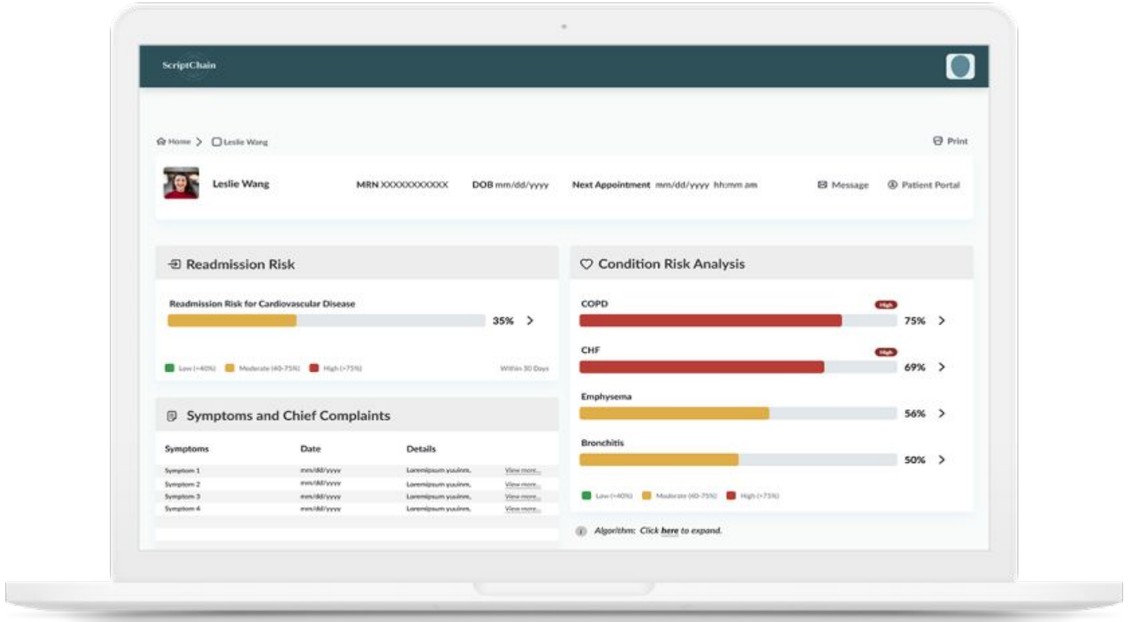
CASE STUDY

Scriptchain LLC



Healthcare + Web-app Design

OVERVIEW

About the project

My Role:

User Research

Visual Design

Usability Testing

Team:

Sukruti(UX design intern)

Business analysts

Engineering Team

CEO

Timeline:

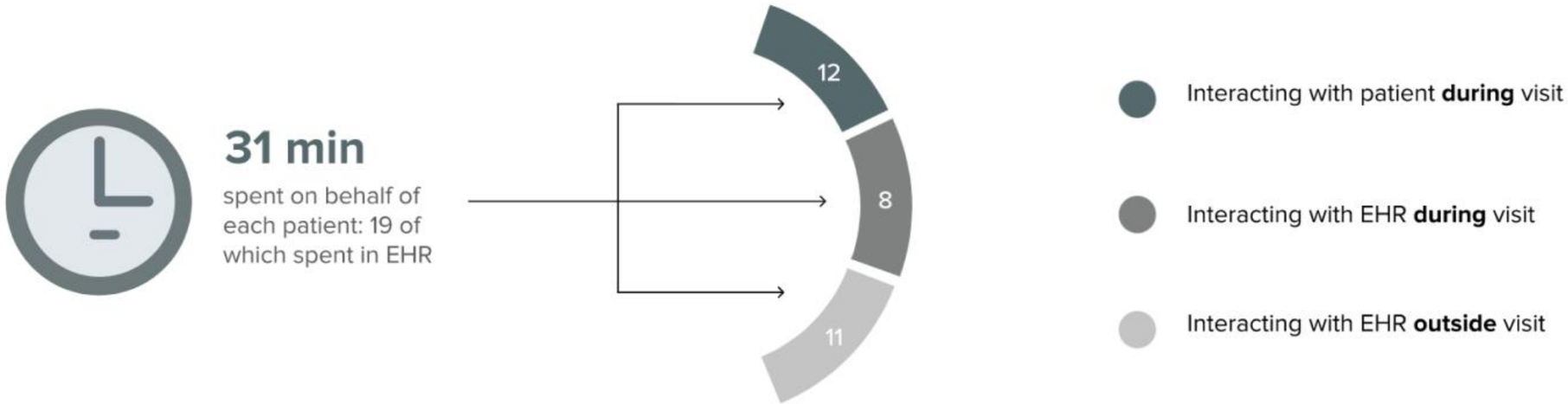
3 Months

Tools Used:

Figma

OVERVIEW

Problem statement

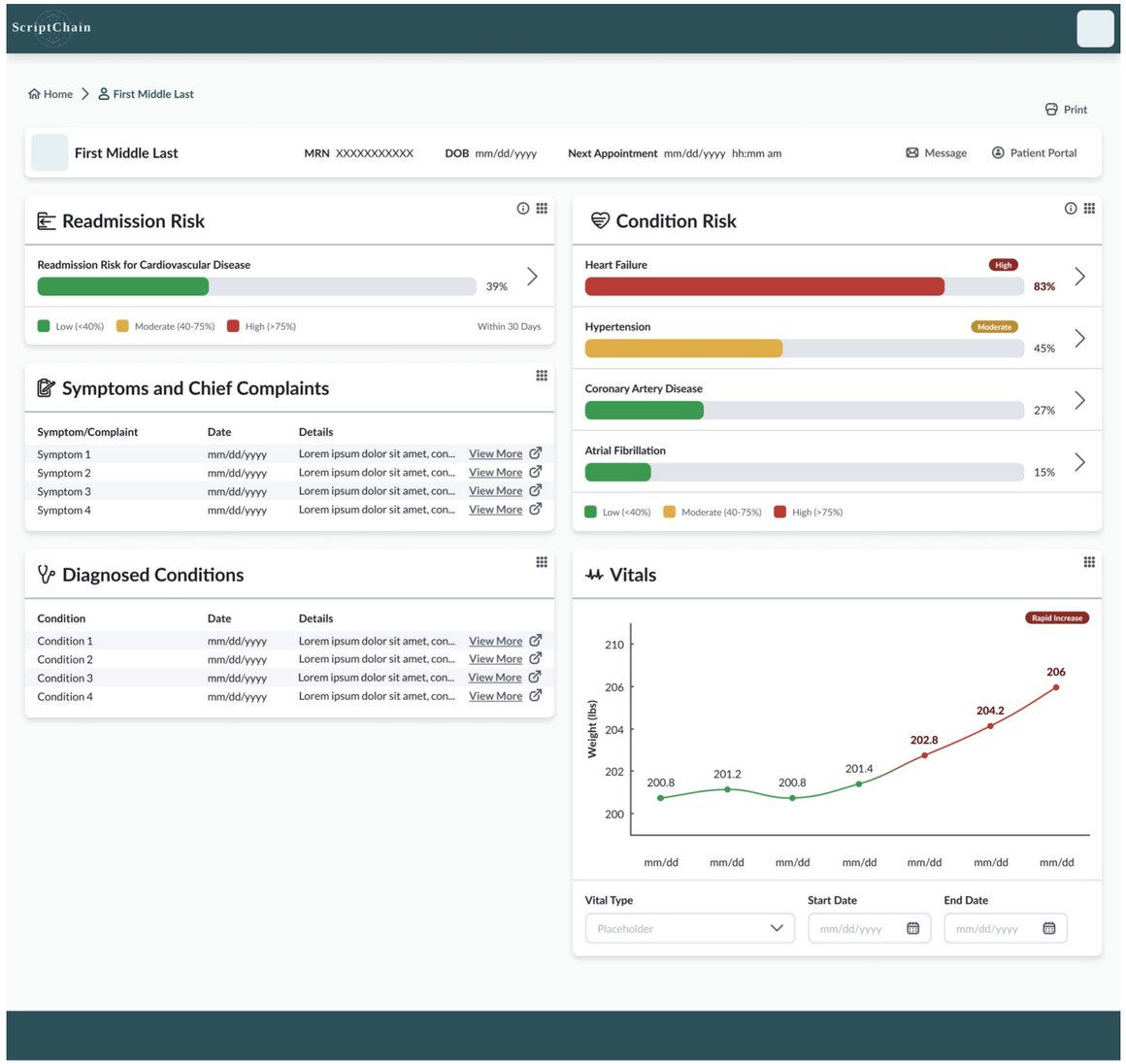


- Stanford medicine

OVERVIEW

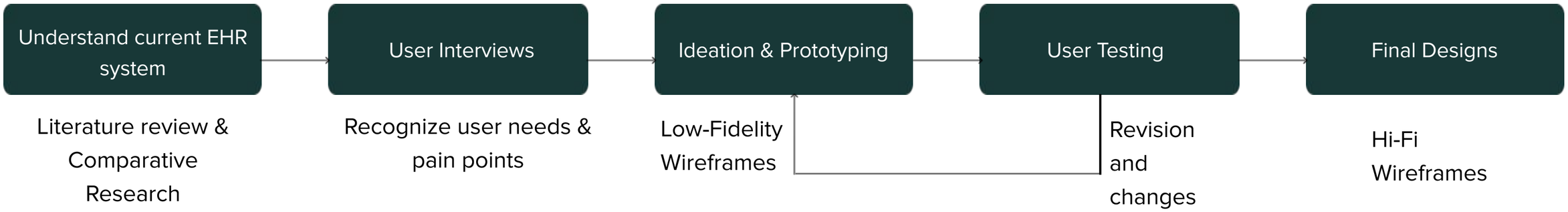
About the product

Web based plugin that predicts patient’s diseases while displaying relevant information to the physicians



OVERVIEW

How did I reach here?



OVERVIEW

Research Methods

1

Surveys

2

Desk research

3

Competitive analysis

4

Interviews

KEY INSIGHTS

What I found?

1. Providers spend more time in front of computers than they do in front of their patients reducing overall patient interaction

2. Physicians struggle with navigating the system and were often seen to be using only a specific set of features potentially due to design debt.

3. Cardiologists have to get information as quickly as possible. The current EHR makes it challenging because of lots of clicks and scrolls within the EHR.

4. The unpleasant look and feel of current EHR make physicians not want to look at the EHRs. It takes way too many clicks to do simple things.

The research led us to think about context of the product

and where it would be best suited

USER PERSONAS

Meet Dr. John - Cardiologist

He is a cardiologist and works in big hospital’s cardiology department and has a lot of responsibilities. Although he has a team of nurses and scribes to help take care of the patients, due to the busy schedule, they need very specific and straightforward information about the patients to make further treatment plans.

Extremely Busy

Rely on nurses

Needs & Goals

- Clear and specific information on the patients (e.g., vitals, heart rates, respiratory rates, etc.)
- Neat layout for the information summary for a quick and thorough review
- A tailored academic reference for their patients if needed

Frustrations

- The current EHR system contains too much information and it’s hard to extract the needed information
- Need to go on different websites for academic references

USER PERSONAS

Meet Dr. Casey - PCP

The PCPs usually practice privately and do not have separate teams of scribes to help them take notes. They are the first ones to see the patients and would examine patients in a much more general sense than the specialists. Because of this reason, they take notes in great details so that the doctors who take over their patients can have a better reference.

In-charge of less patients

Self-dependent

Needs & Goals

- Thorough information from the patients
- Detailed EHR systems with flexible customizations (so that they can input information thoroughly)
- Information on which hospital's specialist is the best fit for their patients (good knowledge on the potential disease + strong network on different specialists and hospitals)

Frustrations

- The current EHR system contains too much information and it's hard to efficiently input information into the system

OBSERVATIONS

User journey map

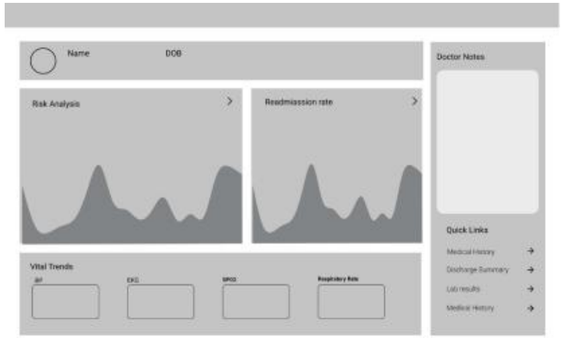
Steps	*Preparing to see the patient* →	*Seeing the patient* →	*Treating the patient* →	*Wrapping the visit* →
DOING	• Physical checks on patients • Check patient's medical record information • Ask patient questions regarding what he said	• Prescribe further labs and exams (if needed) • Listen to patient's descriptions and chief complaints • Educate patient on the 'whys' and 'hows' for prescription	• Review doctor's notes and prescription • Prescribe medication and medical devices • Check on the information scribes log in to EHR	• Have nurses taking care of patient for the following up steps after visit
EMOTIONS & FEELINGS	• How do his vitals look? (Is this an urgent & critical situation) • What does the medical history say? Any labs/ exams I need to check on? • What does his PCP say?	• What is his chief complaint? • Does the symptoms/ labs match his complaint? • Do I see match what was written in the EHR?	• What are the possible treatment plans I can take to treat him? • What should I prescribe to him to treat his condition? • What are the possible outcomes if the treatment doesn't work?	• Did I do everything right? • Did I cover everything in the talk today? • Everything that happened is logged into the system right?
POTENTIAL PROBLEM AREAS	• Navigating and finding relavant patient's information	• Provider is often distracted as they are navigating to find relavant information on EHR resulting in poor interaction with patient.	• Documenting notes into clinical summary of the patient	• Sometimes notes made are confusing or misleading. • Documentation might be incomplete or under detailed

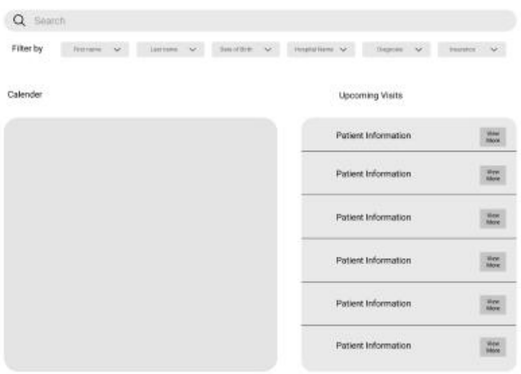
Ideation & Prototyping

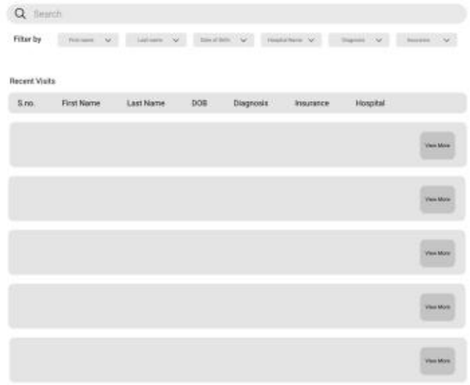
INITIAL ITERATION

Sketching out the product

We started ideating by making some low fidelity sketches. This was mainly done to get some initial feedback.







Different directions of page layout

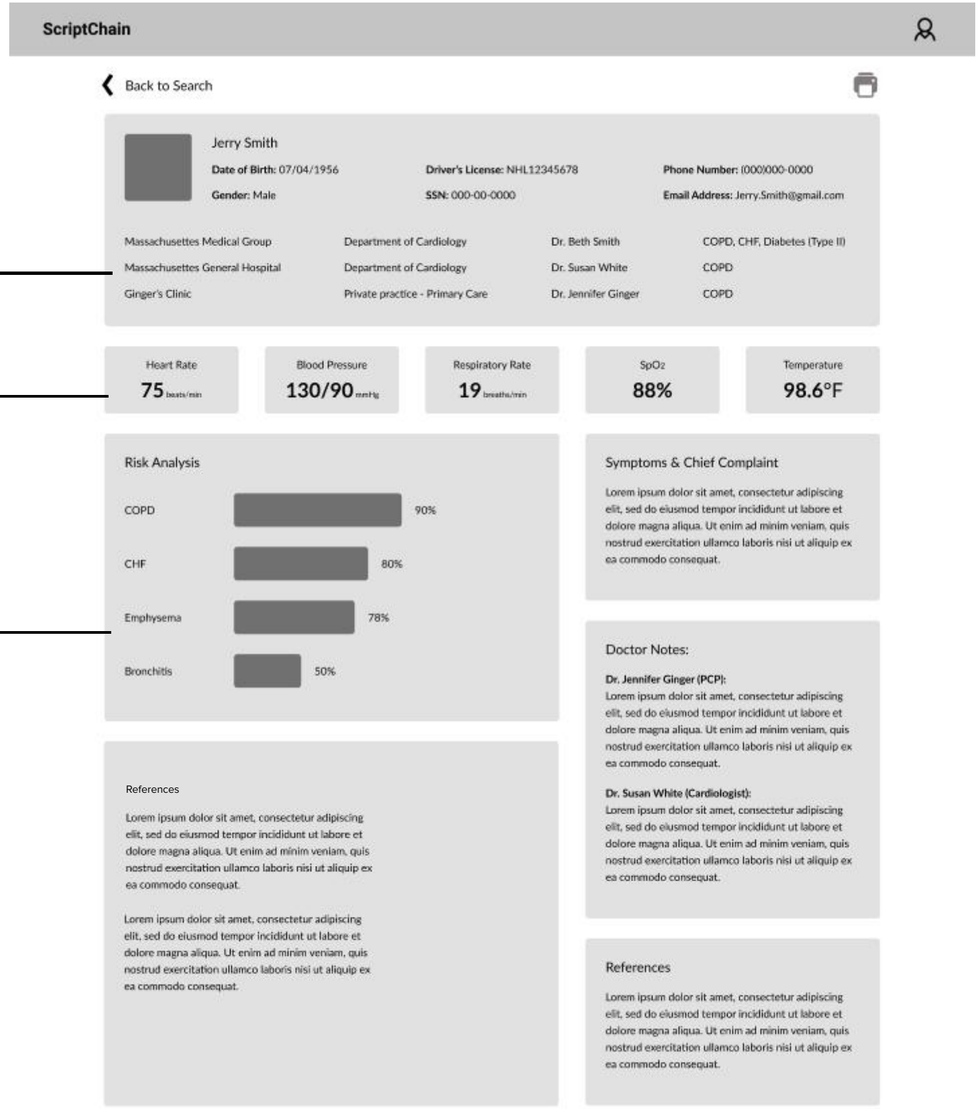
ITERATION 1

Sketching out the product

Patient demographics

Vital information needed during diagnosis

Risk analysis graph to predict patient's diagnosis through AI algo



FEEDBACK

Taking an early feedback

1. Hard to trust the information

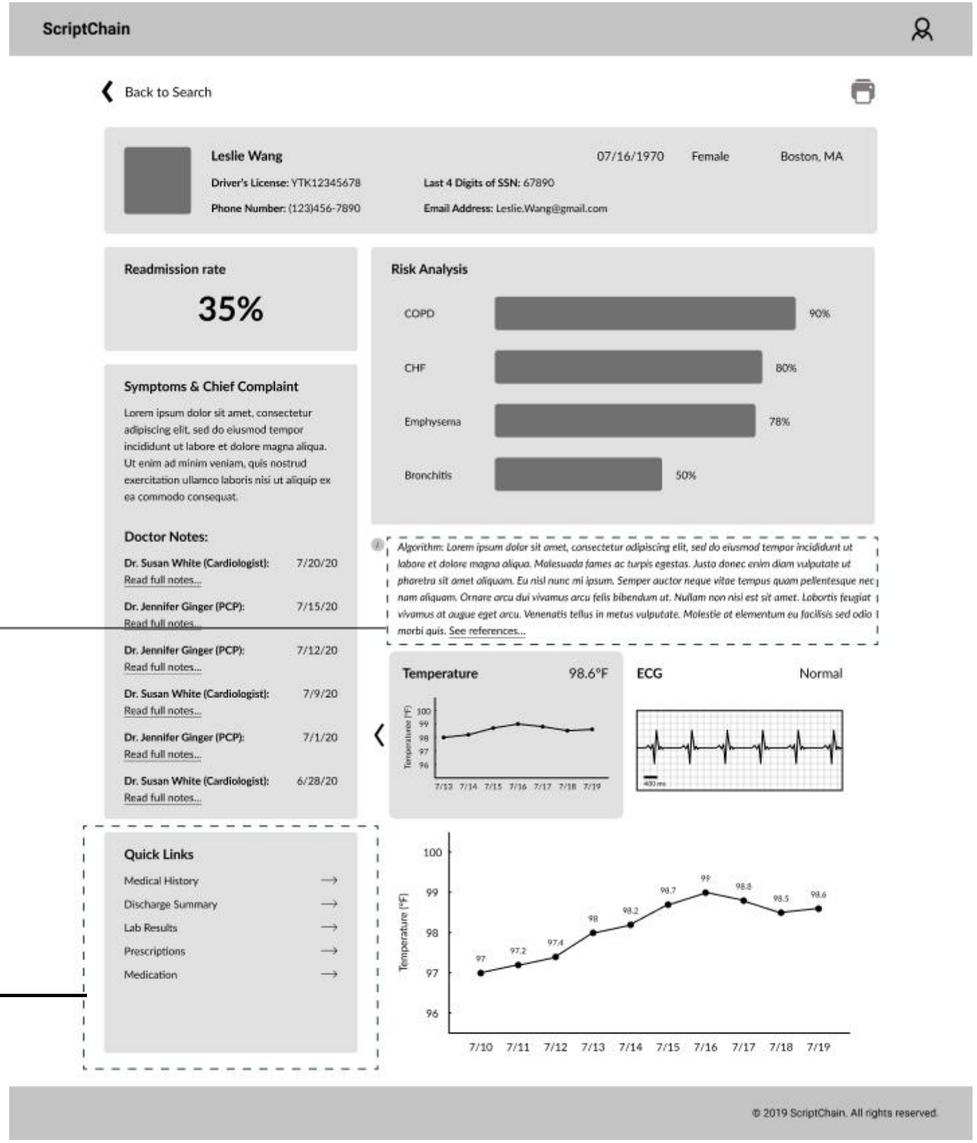
2. A lot of information is still needed

ITERATION 2

Sketching out the product

Algorithm showing what information is received and the outcome

Personalized quick links to get to the information faster.



TESTING

What did users say?

1 **Faster than current software they use**

4/5 participants agreed that this plugin would make their life a lot easier and efficient. The time spent on the EHR to find patient's information would be reduced and they would be able to have more patient interaction

2 **Just numbers are hard to imagine**

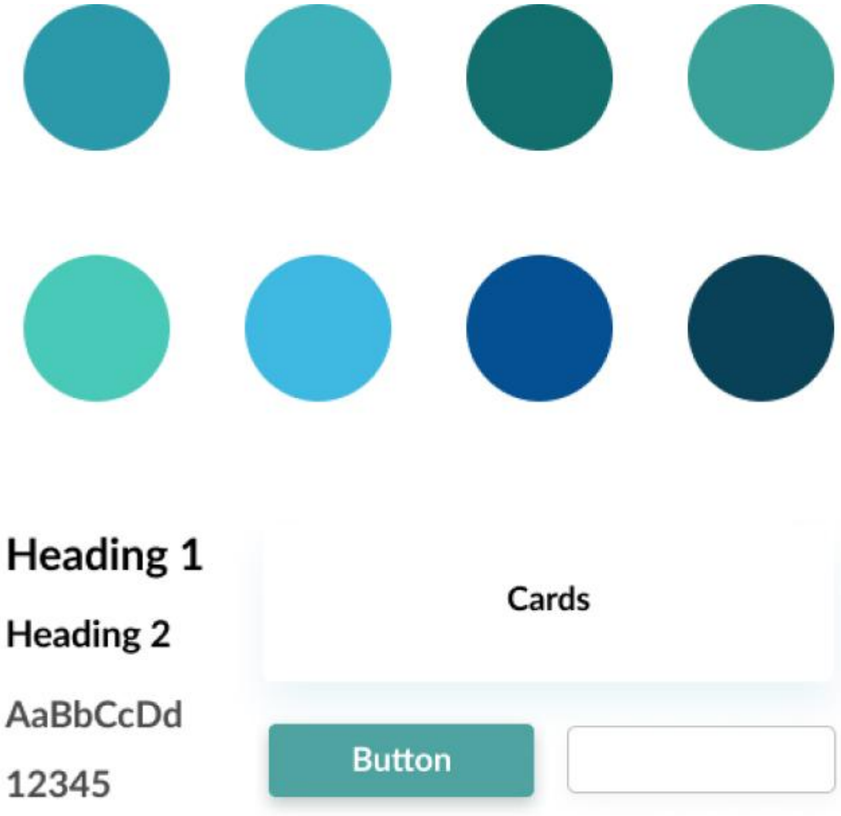
We provided them with the percentage which with which there is possibility to have the disease. However, these numbers were not as transparent to the physicians as they could be.

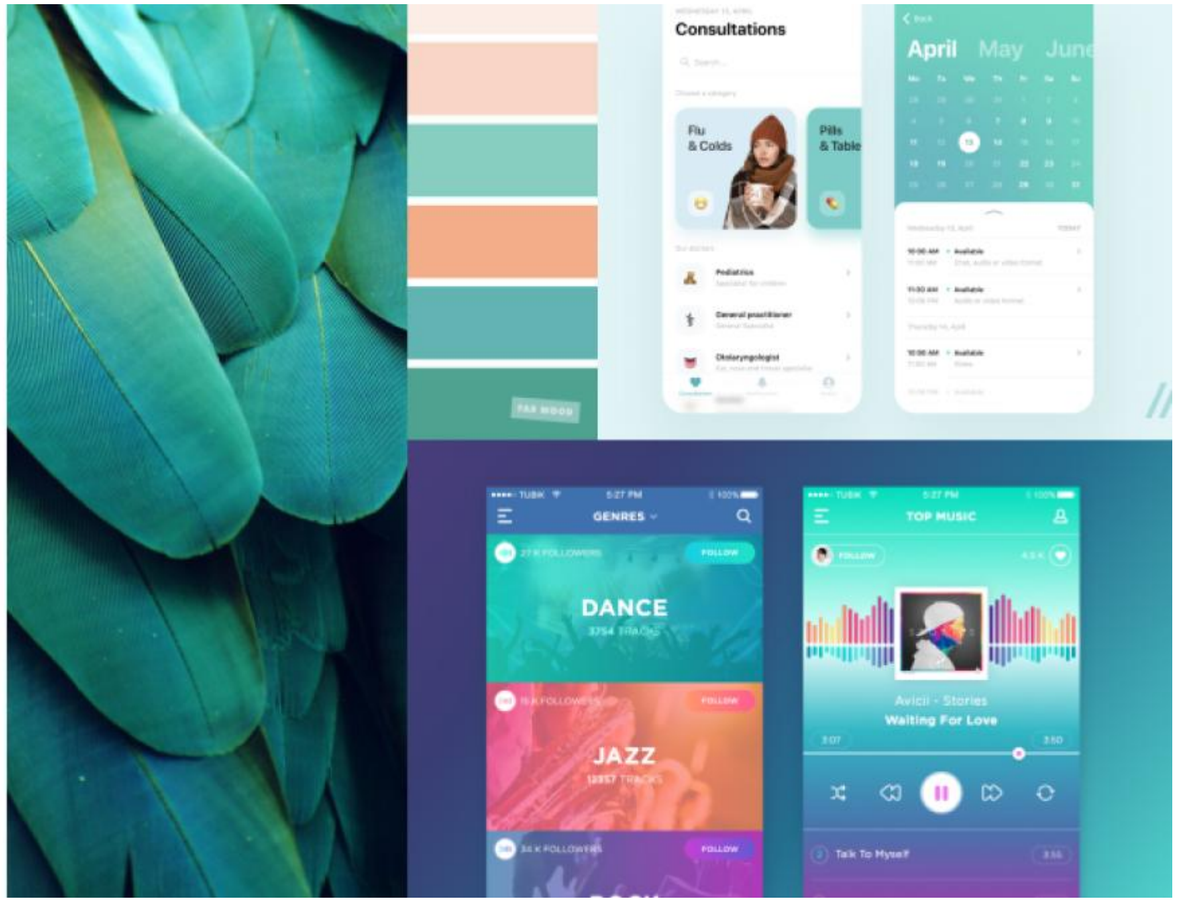
3 **Platform confusion**

Participants were confused as to how it will work inside EHR and how they will jump from one platform to another.

MOODBOARD

Setting up the mood

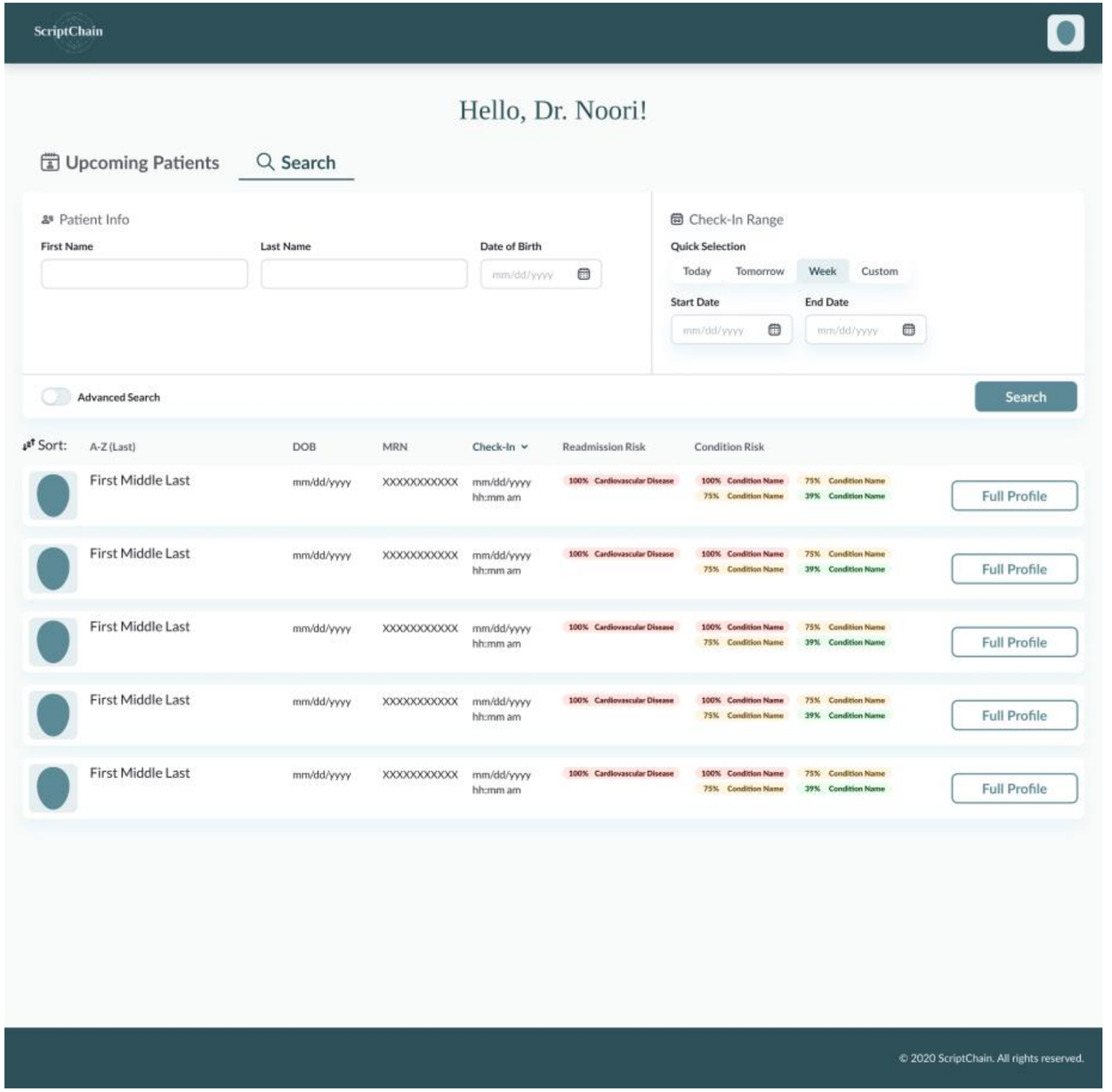




FINAL DESIGNS

Hi-fi designs

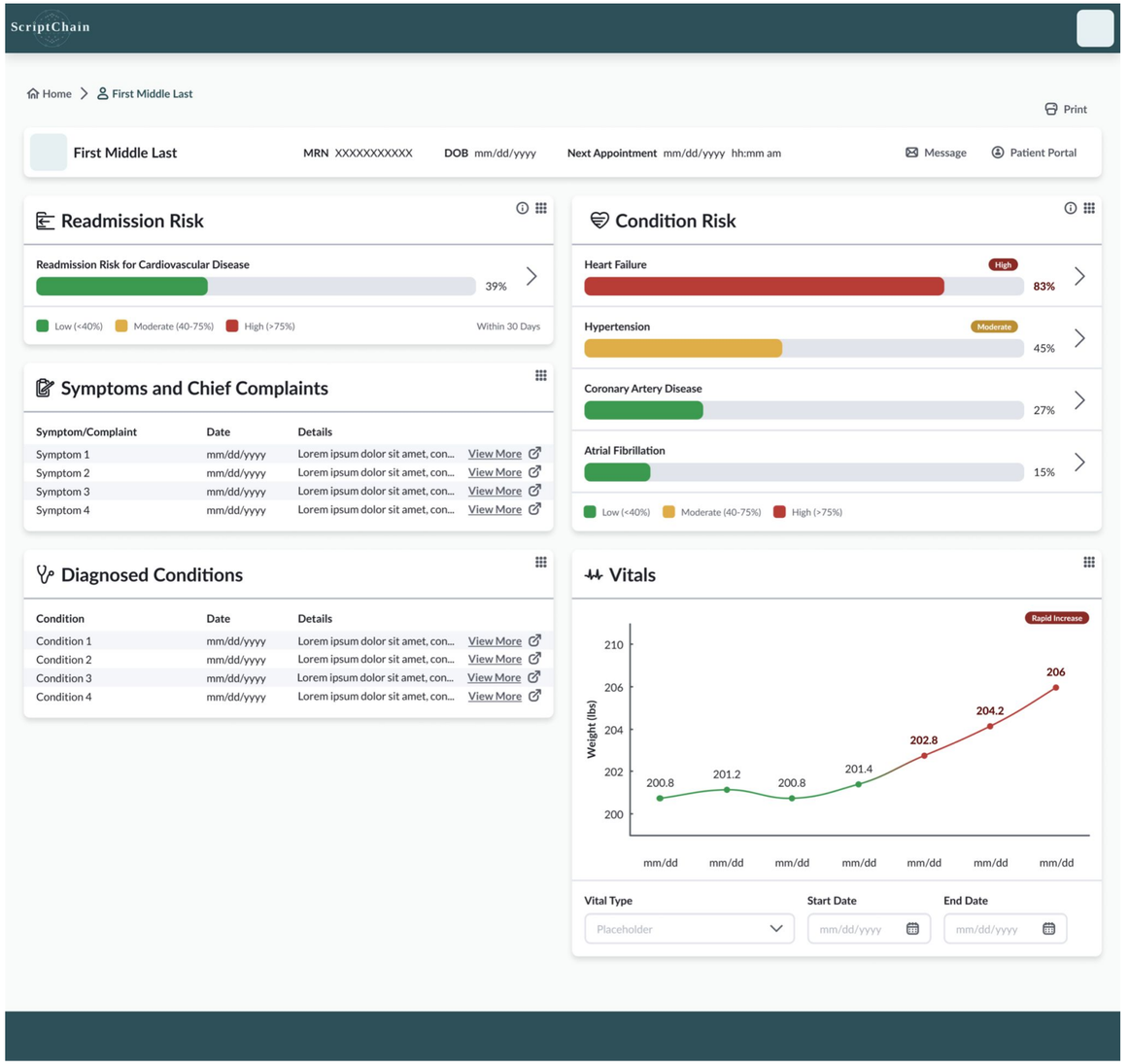
Physicians can filter patient's information and find them according to name, DOB, when they visit



FINAL DESIGNS

Hi-fi designs

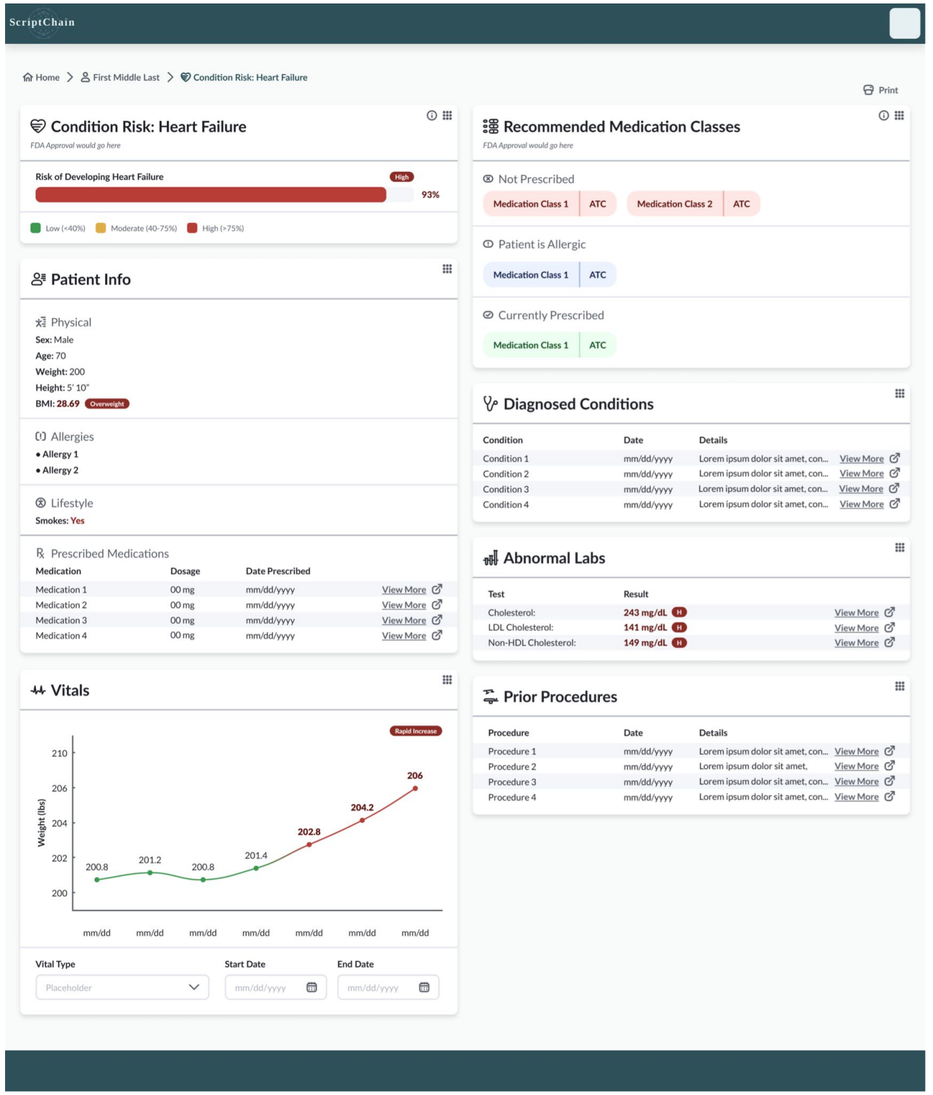
They can view patient’s information here and it predicts risk and what needs attention according to the patient’s information



FINAL DESIGNS

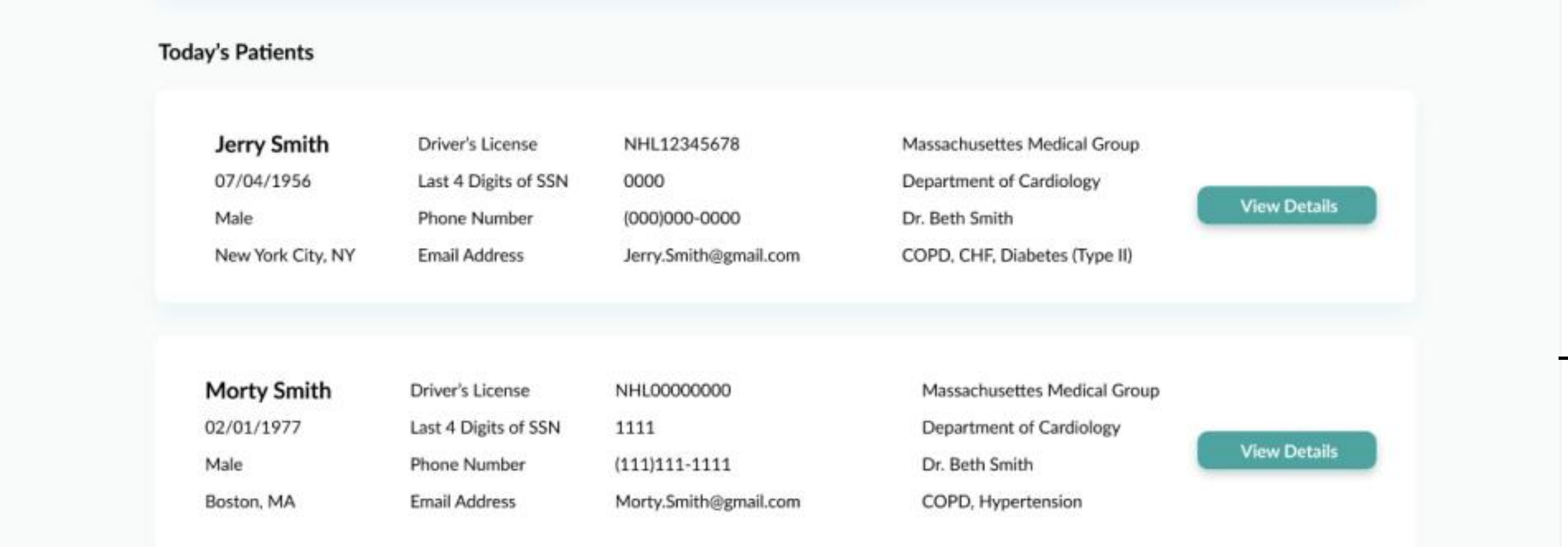
Hi-fi designs

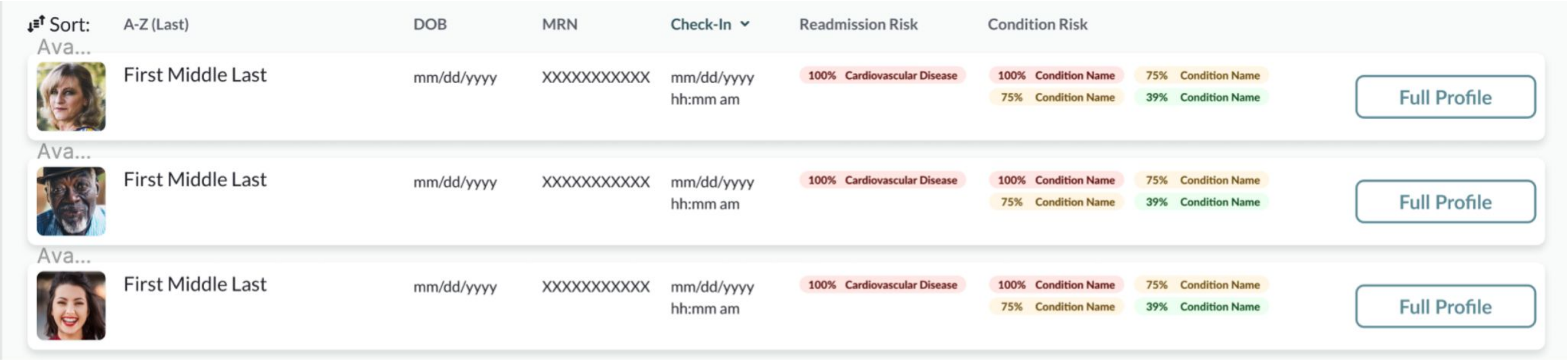
After they click on Heart failure, the get all the relevant information related to that predicted disease



FINAL DESIGNS

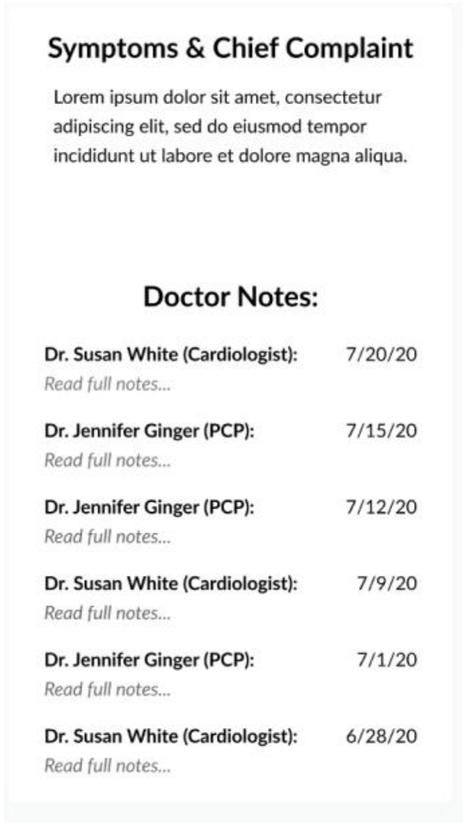
Design decisions

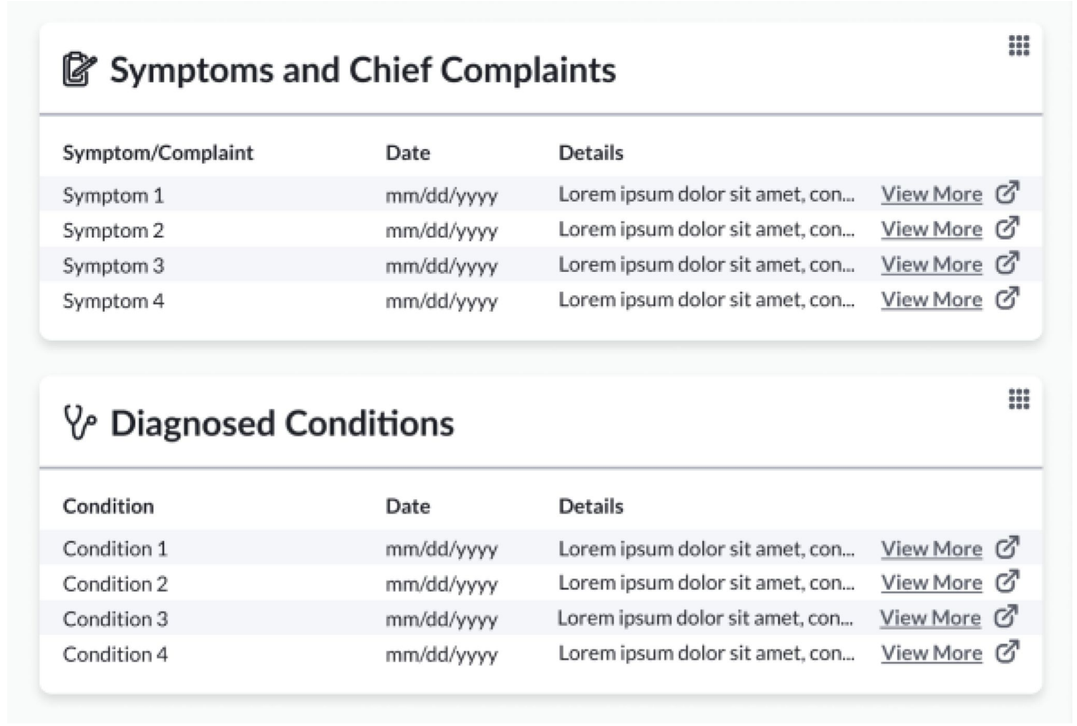




FINAL DESIGNS

Design decisions





REFLECTION

My biggest learning

How to effectively lead cross-functional meetings

As an intern, it was hard for me to drive meetings, especially with cross-functional partners. I had to learn how to set and follow meeting agendas, stir conversations back to the agenda when needed, and decide action items needed from different cross-functions in order for me to progress on design.

How to communicate and collaborate

I had the opportunity to collaborate with cross functional team. I communicated with business analyst team and engineering department. My background in CS helped me a lot in understanding the engineer’s language, to communicate with them in the front-end development language and also help them during tight deadlines.

REFLECTION

Things I’d done differently

Conduct workshops

During the feedback session with the CEO, I told him how I wanted to conduct workshops and fun activities for the entire team to have more design ideas and feedback while also growing interaction between different departments. He told me it was a great idea and I could have done it before.

Conduct more research

COVID impacted a lot of research and a lot of time went into trying to get into contact with the physicians. I wanted to observe physicians in-person to have a better note of how they interact with the EHR. I also would have explored more about AI and the algorithm the engineering team used to better inform my design decisions.

Thank you!