

Cerner®



Experience Studio Fall 2021



Meet the Team



Jared Buls



Enya Song



Natasha Chambers



Sarah Palagy



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Varun Aravapalli



Olivia Eavey



Special Thanks



Paul Parsons



Nancy Rasche



Chorong Park



Gabriella Goss



Nick Gould



Carley Hummel



Katarina Mazanka



David Jacob

About Cerner



Cerner is

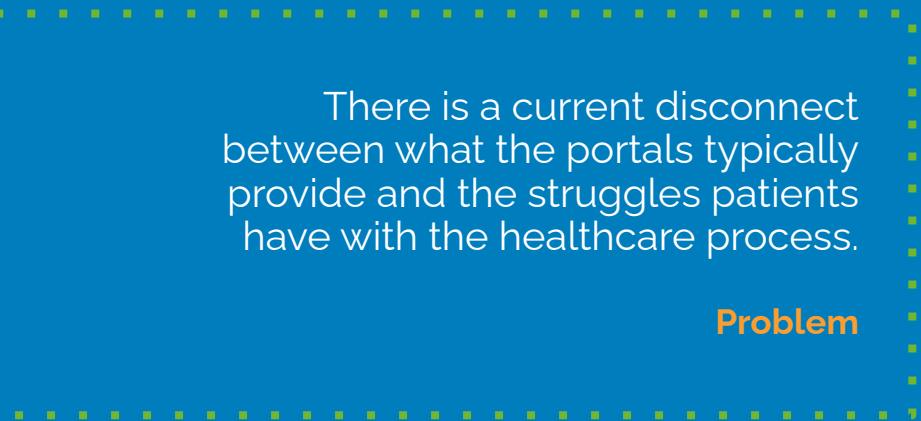
U.S. supplier of healthcare information technology solutions that support clinical, financial, and operational aspects within the industry.

Cerner's mission is to

Seek breakthrough innovations that will empower their clients and shape the healthcare of tomorrow.

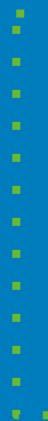


Opportunity Space



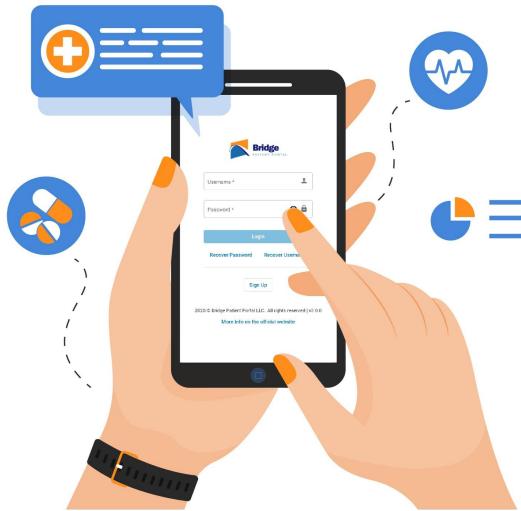
There is a current disconnect between what the portals typically provide and the struggles patients have with the healthcare process.

Problem

- 
- 
- Our goal was to research the healthcare space and explore a more proactive approach to empower patients to better manage their health through the assistance of the patient portals
 - Solution**
- 



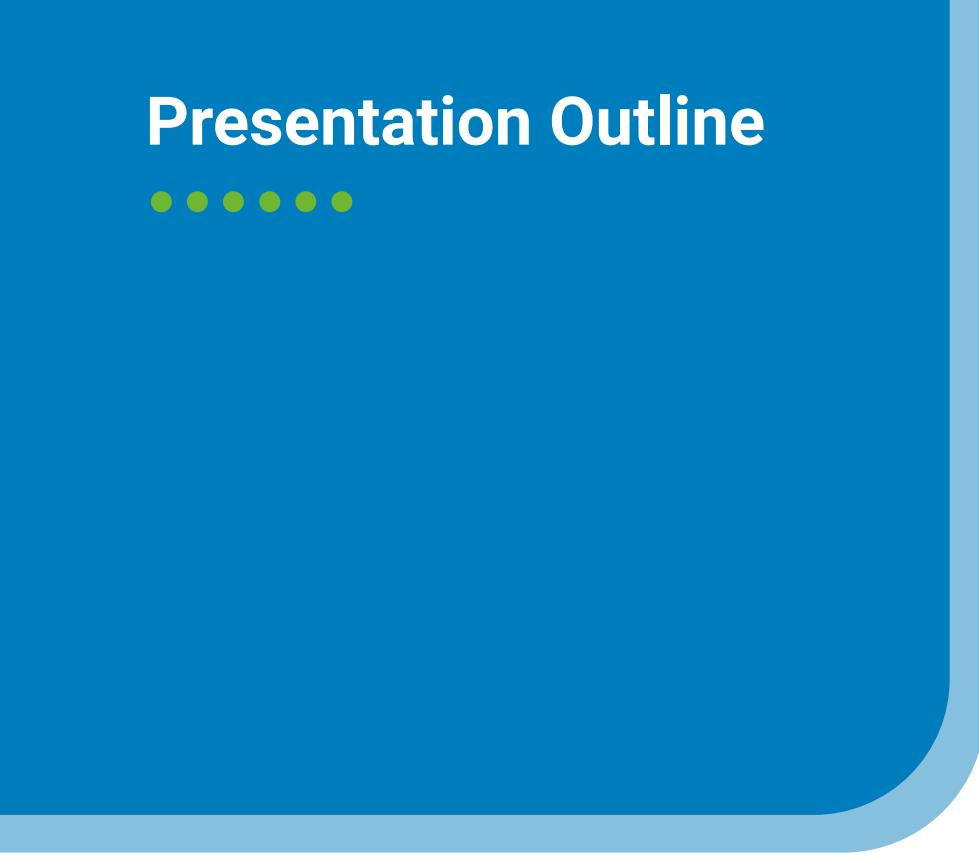
Recap: What is a portal?



A digital touchpoint that facilitates the seamless transfer of information between patients and any health care professional involved in the process. They typically involve logging into a platform to access medical information, scheduling tools, and contact their care providers.



Presentation Outline



User Introduction

Introduce our primary user and their current pain points



Feature Walk Through

Walk through features alongside our persona and research



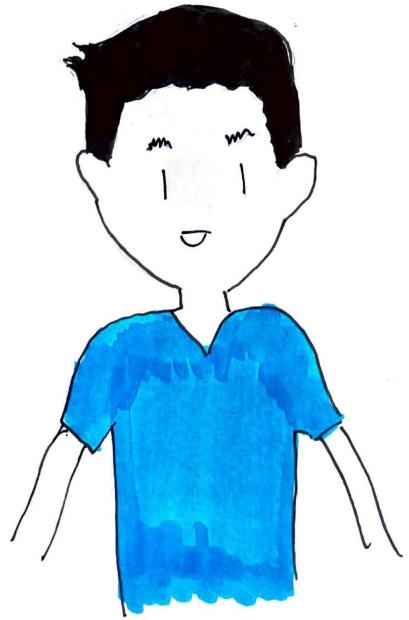
Next Steps

Reflect on project process and what we plan to accomplish further



Introducing our user...





Sam

(primary user)



New parent of a young child



Internalized Stress



Tight Schedule



Charlie

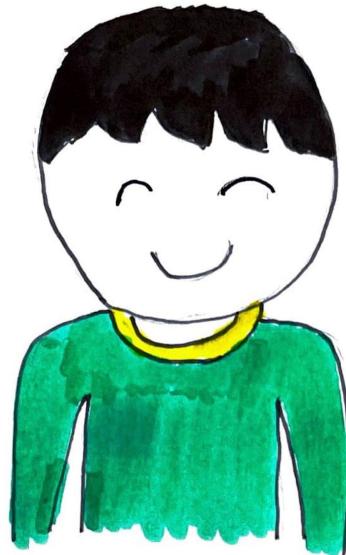
(Sam's child)



Young child requiring vaccines



Frequent “pop-up” health issues that require Sam’s help



What is the appointment journey currently like?





One morning, Charlie wakes up with an earache. It's so painful that Charlie doesn't want to get out of bed.





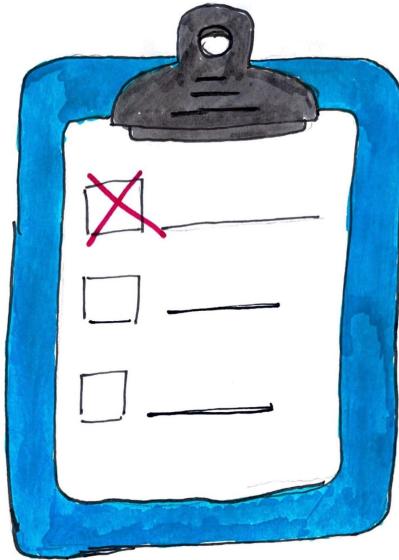
Sam calls of work and Charlie's school. He then calls the doctor to schedule an appointment for later that day.





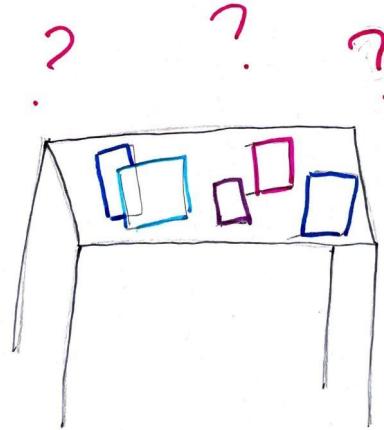
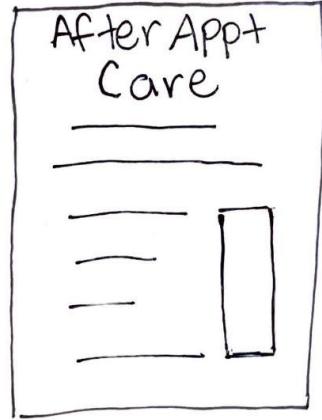
During the appointment, Sam feels stressed about Charlie's health and is also **overwhelmed trying to remember all the information** the doctor is giving.





Additionally, at the appointment the doctor tells Sam that Charlie still **hasn't received a state-required vaccine.**





After the appointment, Sam is given a paper copy of the appointment summary. Although he tries his best to keep track of it, the **busyness of everyday life** leads to it being **misplaced** and for Sam to be **confused** about how to take care of Charlie.





Sam's busy schedule also creates **more anxiety and distractions** about reminding Charlie to take his medication daily.





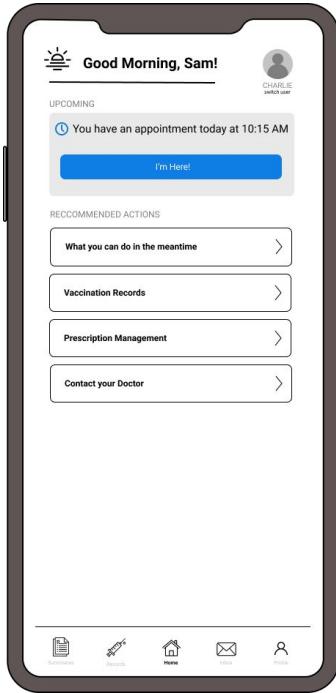
Because of the current system, Sam is left stressed, overwhelmed, and distracted.



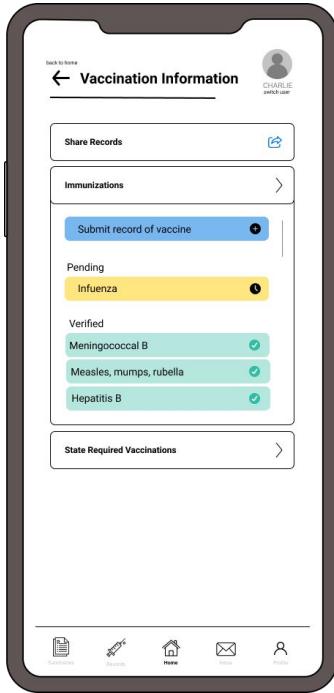
How might a patient portal app benefit Sam and his appointment journey?



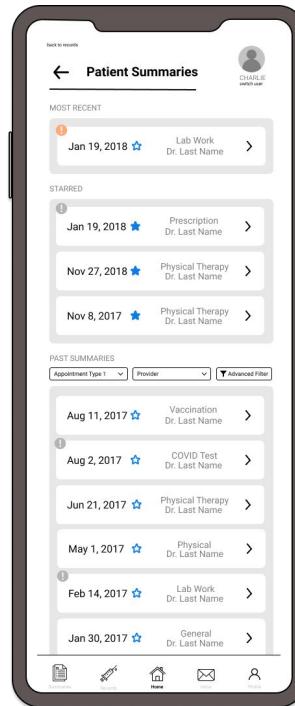
Solution Overview



HOME



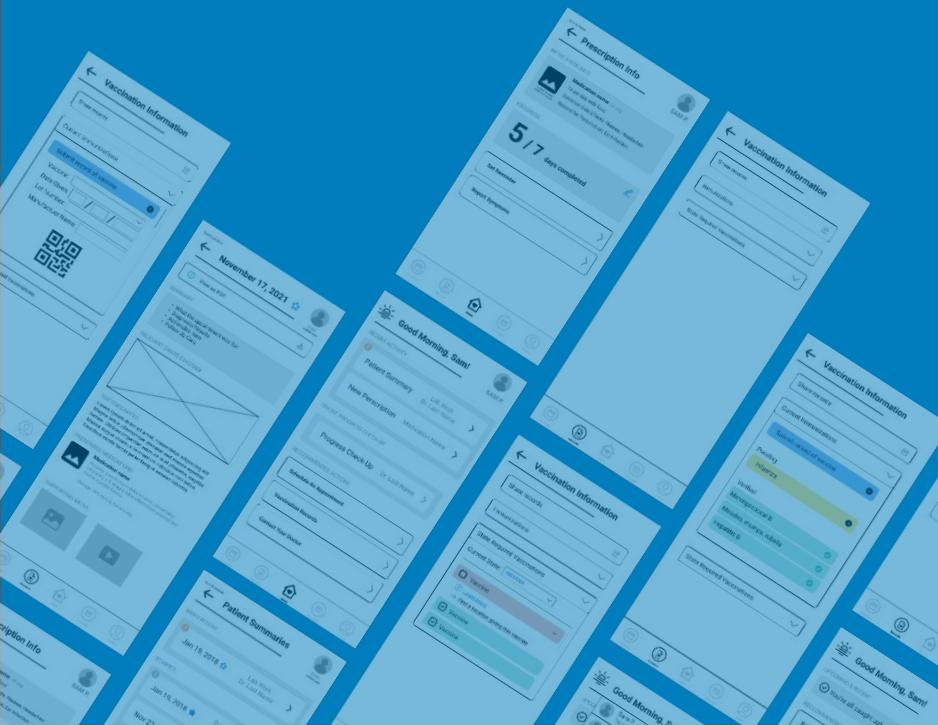
VACCINE INFORMATION



PATIENT SUMMARIES



Home Page



Home page & timely information

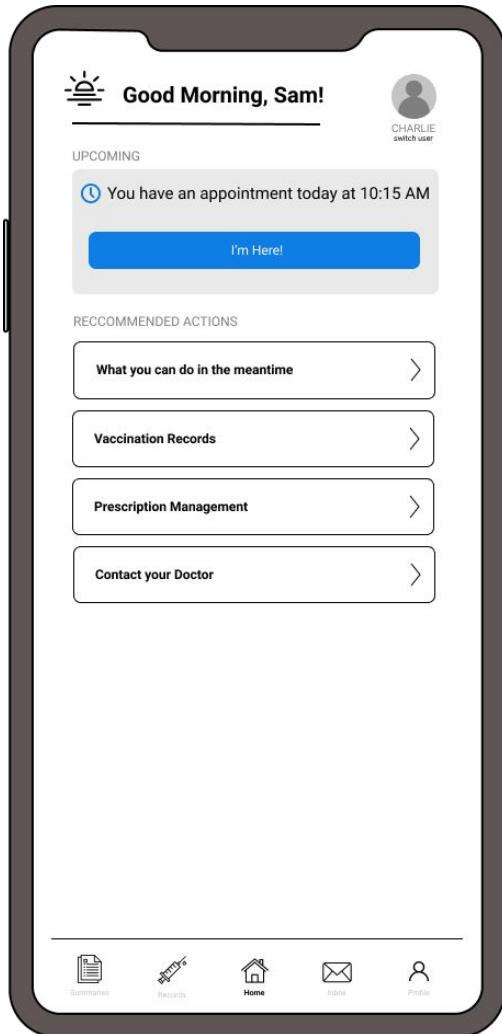


Vaccination information



Patient Summaries





Why Home Page With Time-Based Information

Clunky and hard to navigate

Parents value **time** when it comes to their children's health

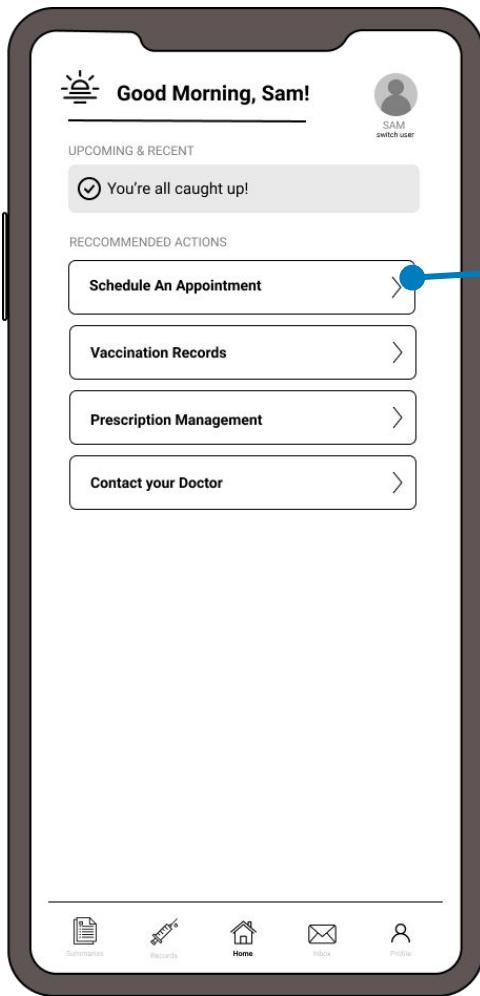
Parents struggle most with the **unknown** when their children are sick

Increase engagement by giving portals more **purpose**



Home Page

No Current Scheduled Appointment

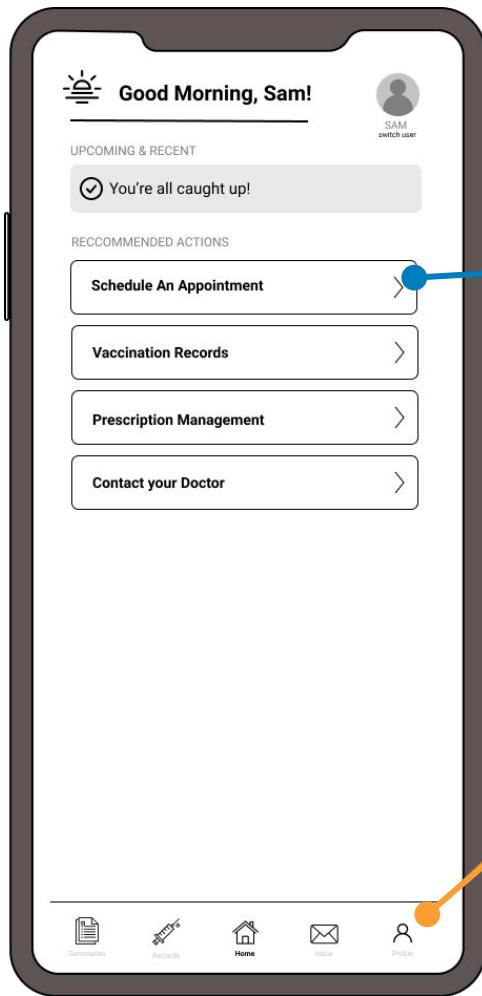


The Recommended Actions section gives users quick actions to take in simple terminology.



Home Page

No Current Scheduled Appointment

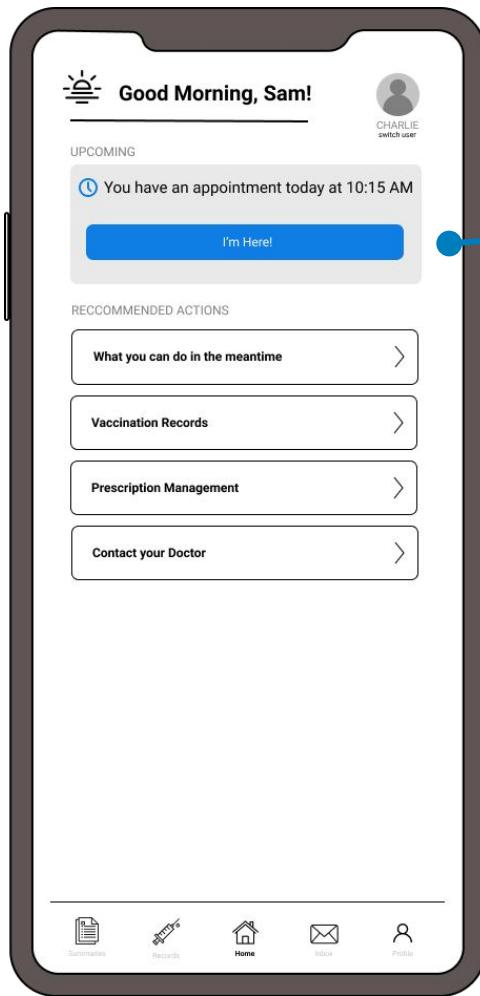


The Recommended Actions section gives users quick actions to take in simple terminology.

Clean, simple bottom navigation. Gives users a clear mental model of the app and its functions.



Home Page

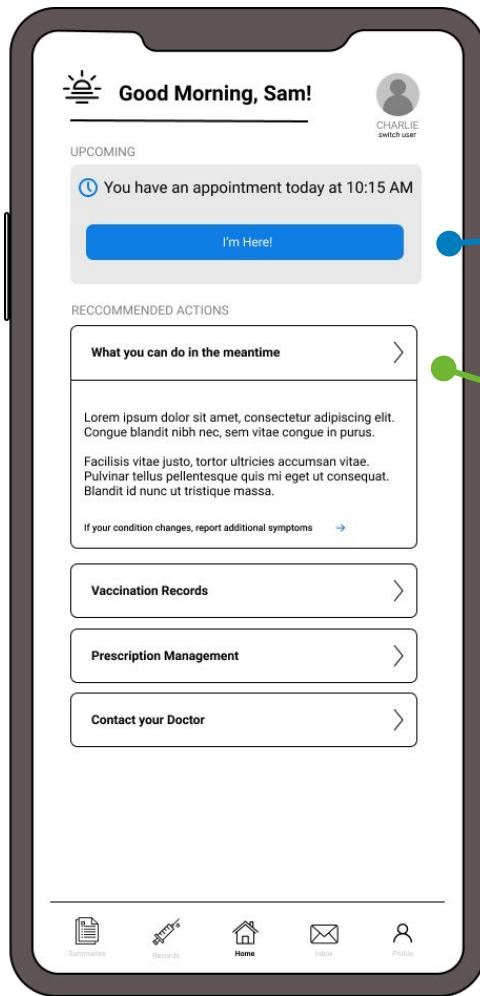


Upcoming Scheduled Appointment

The upcoming appointment notification allows parents to check in through the app, minimizing time.



Home Page



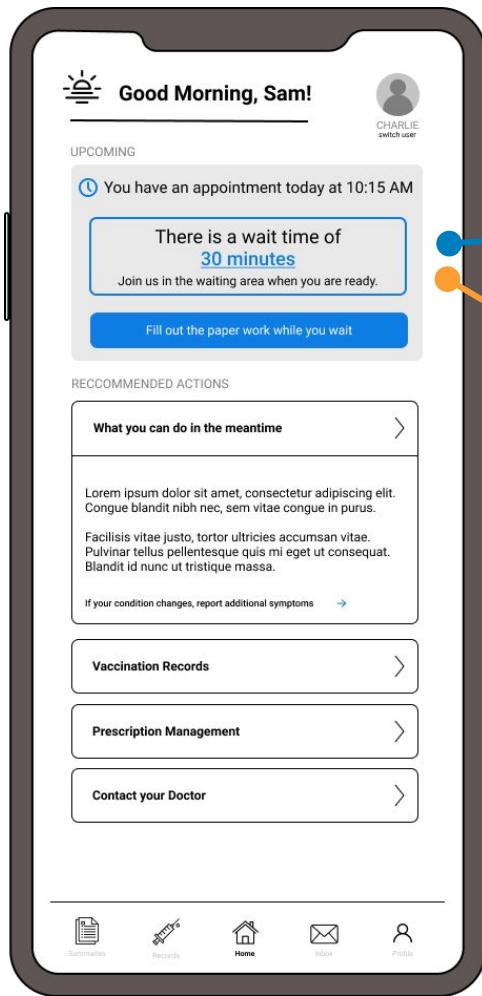
Upcoming Scheduled Appointment

The upcoming appointment notification allows parents to check in through the app, minimizing time.

"What to do in the meantime" gives parents actions to take to help their child based on inputted symptoms.



Home Page



Upcoming Scheduled Appointment

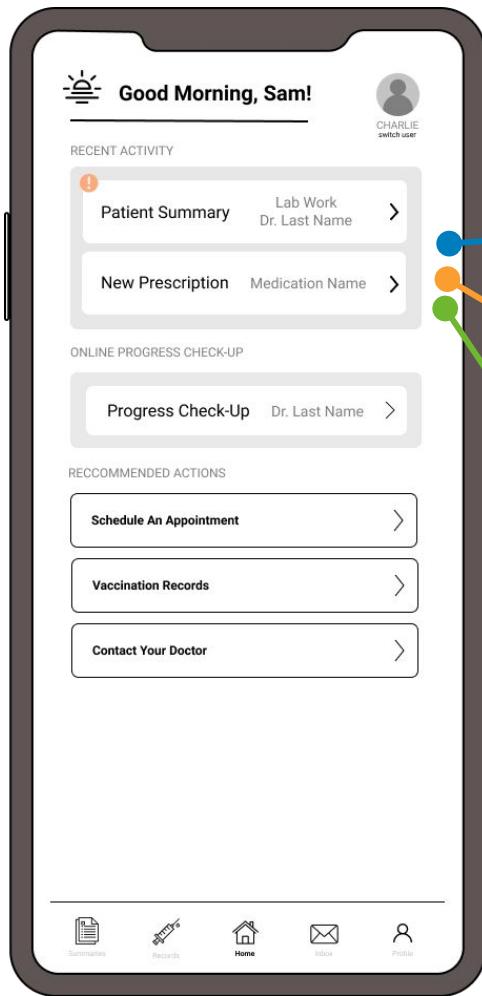
The upcoming appointment notification allows parents to check in through the app, minimizing time.

Once they are ready to check in the day of their appointment, the app will show them the current wait time, so users can prioritize time.



Home Page

After Scheduled Appointment



The upcoming appointment notification allows parents to check in through the app, minimizing time.

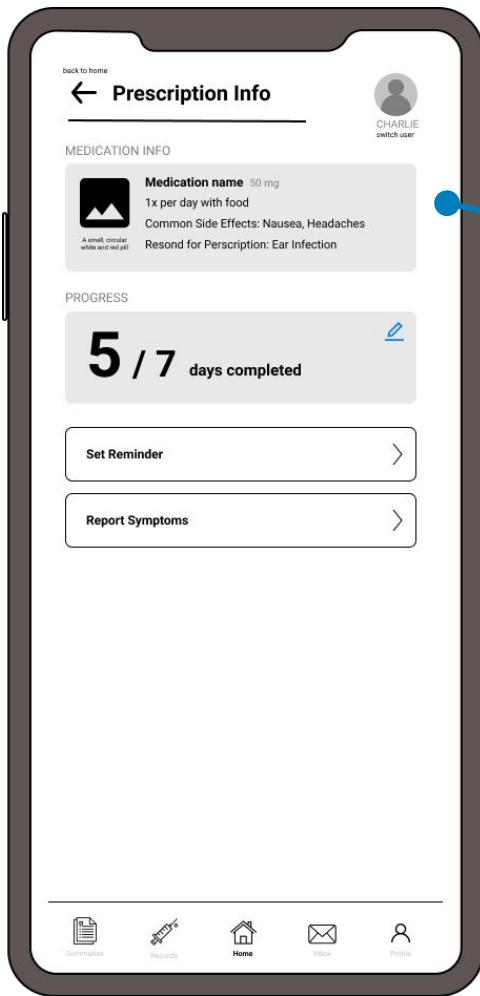
Once they are ready to check in the day of their appointment, the app will show them the current wait time, so users can prioritize time.

Once the appointment is completed, the portal will provide quick and simple actions to view their patient summary and any medication information



Home Page

After Scheduled Appointment



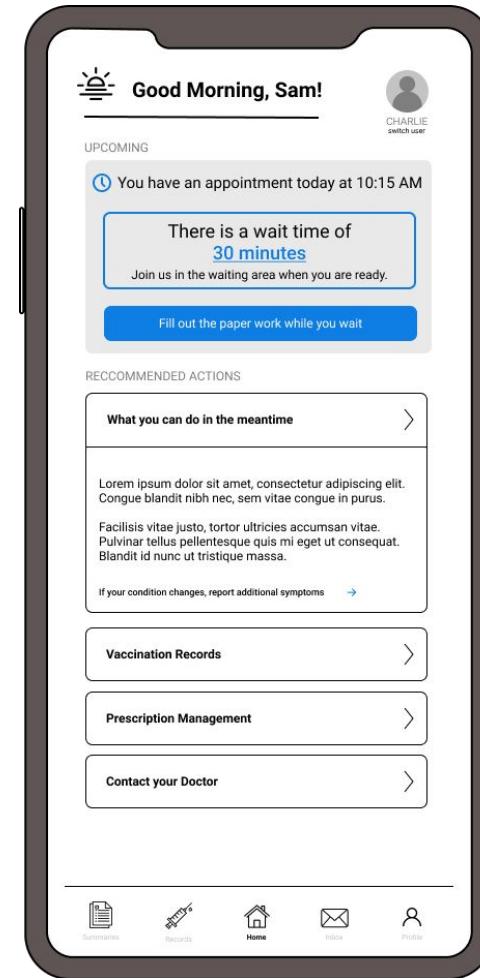
Prescription info helps parents keep track of their children's medication and health overtime.



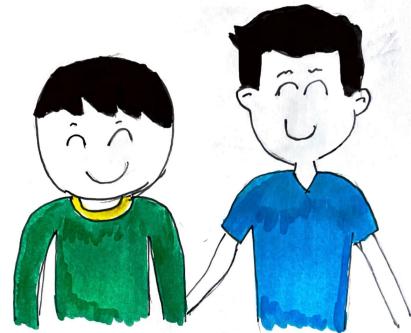
Let's Check Back with Sam & Charlie



These features allow Sam to **receive credible information and save time** from searching on the internet about how to care for Charlie before the appointment.



Let's Check Back with Sam & Charlie



By having a set location to **personally track medications**, Sam can stay on top of his tasks and Charlie's health.

Good Morning, Sam!

RECENT ACTIVITY

- Patient Summary Lab Work Dr. Last Name
- New Prescription Medication Name

ONLINE PROGRESS CHECK-UP

- Progress Check-Up Dr. Last Name

RECOMMENDED ACTIONS

- Schedule An Appointment
- Vaccination Records
- Contact Your Doctor

Prescription Info

Medication name: 50 mg
1x per day with food
Common Side Effects: Nausea, Headaches
Resond for Prescription: Ear Infection

PROGRESS

4 / 7 days completed

report a missed day 1

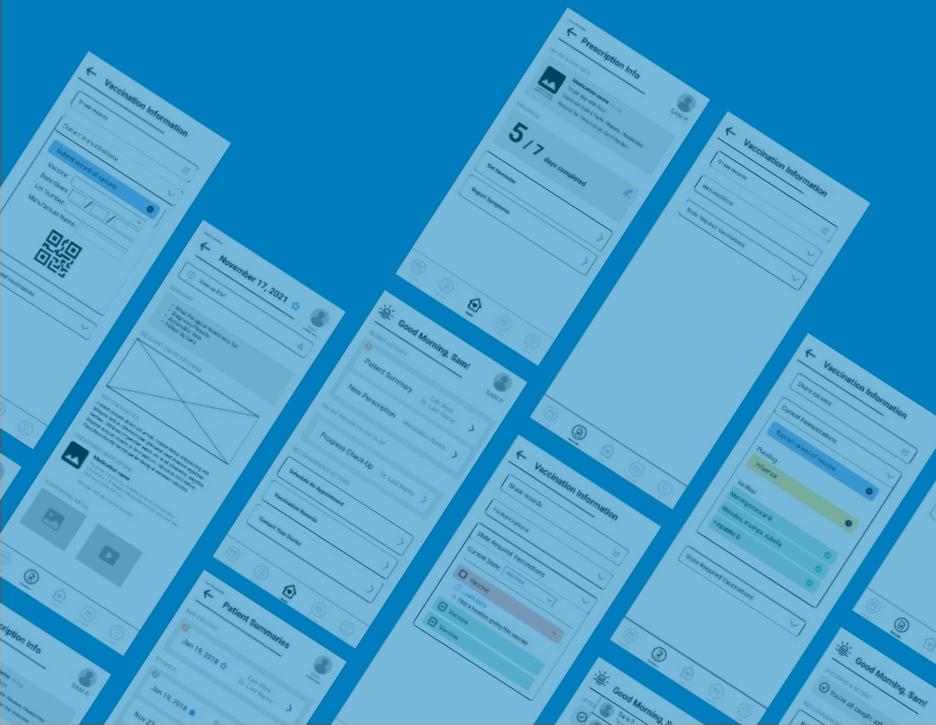
Miss a day? Don't worry! Just take today's dose tomorrow morning.

Set Reminder

Report Symptoms



Vaccination Organization



Home page & timely information



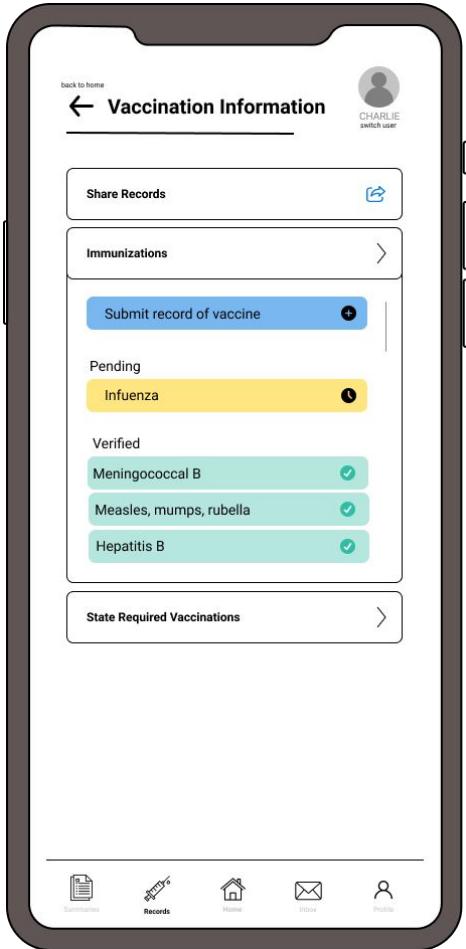
Vaccination information



Patient Summaries



Why Vaccination Records?



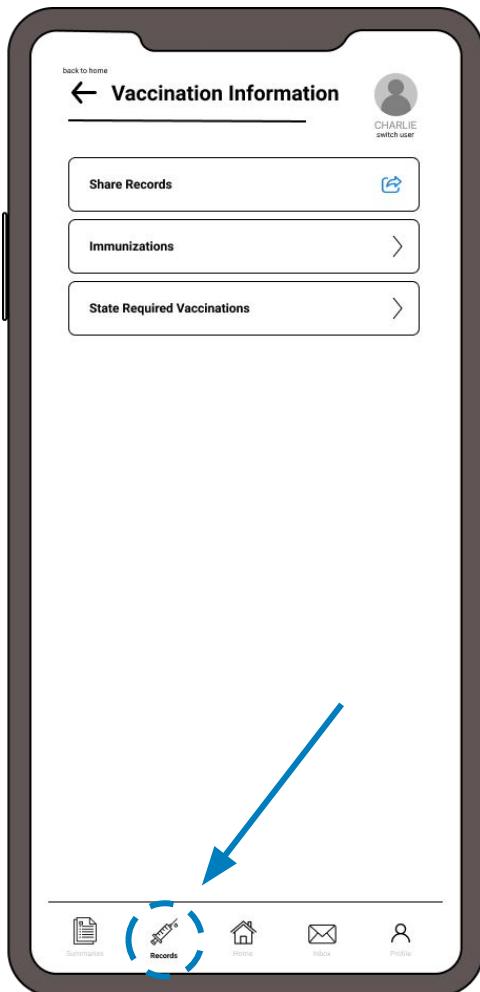
Started with **medical history**

Parents value **time** and **safety** over anything else

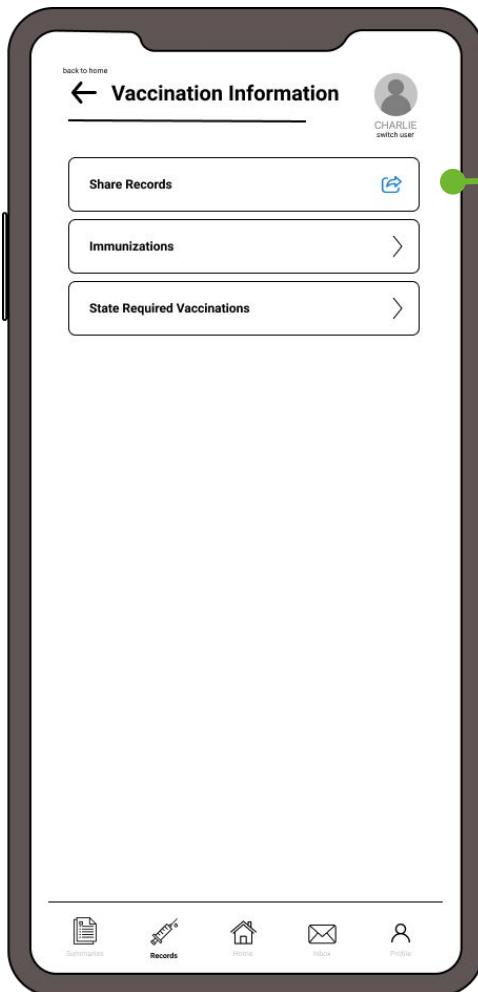
Primary users showed an innate interest toward **vaccination management**



Vaccination Walkthrough



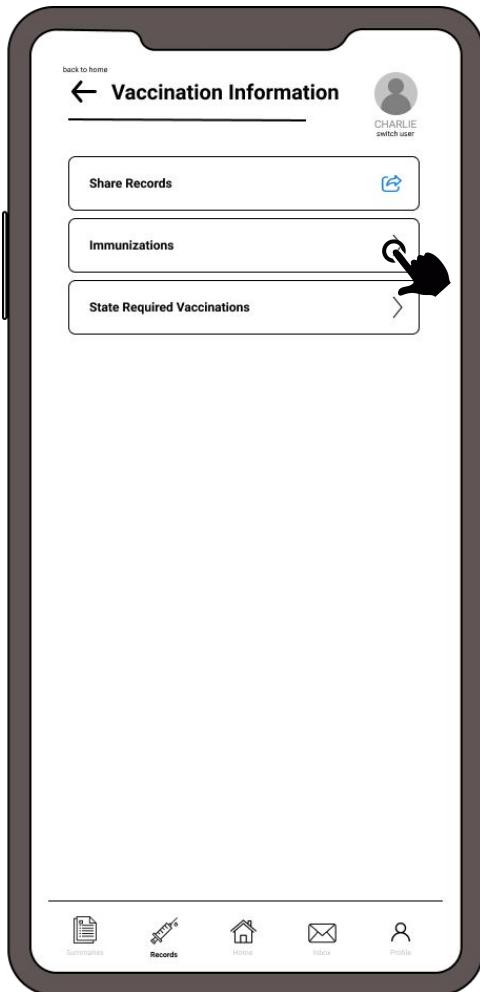
Vaccination Walkthrough



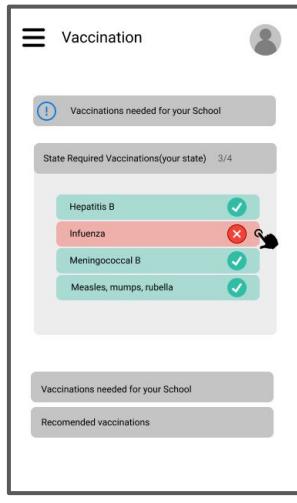
Easily share vaccination records to schools or other hospitals



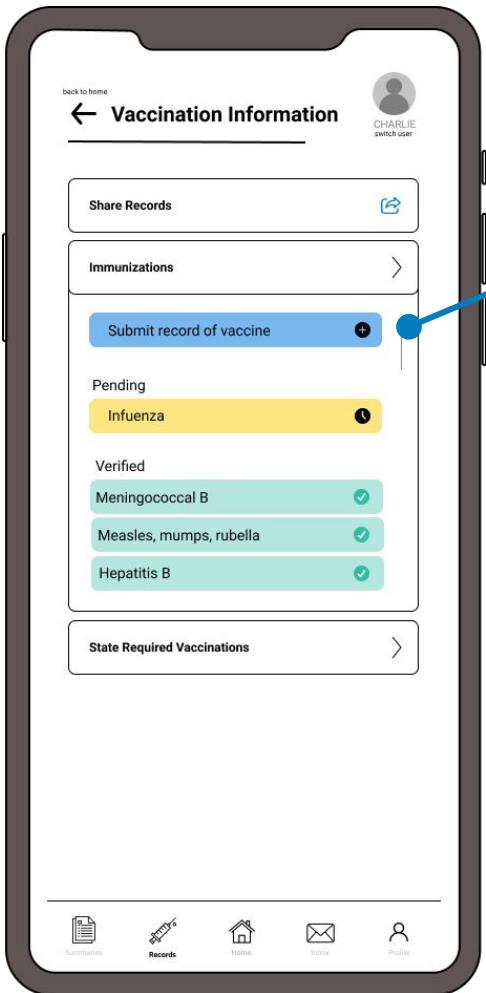
Vaccination Walkthrough



Vaccination Walkthrough



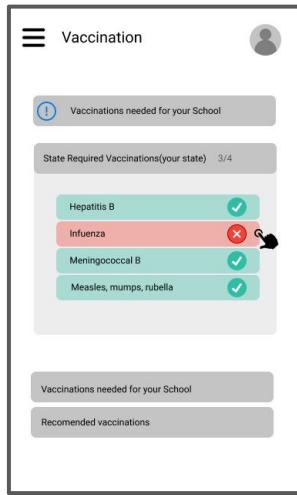
lo-fi



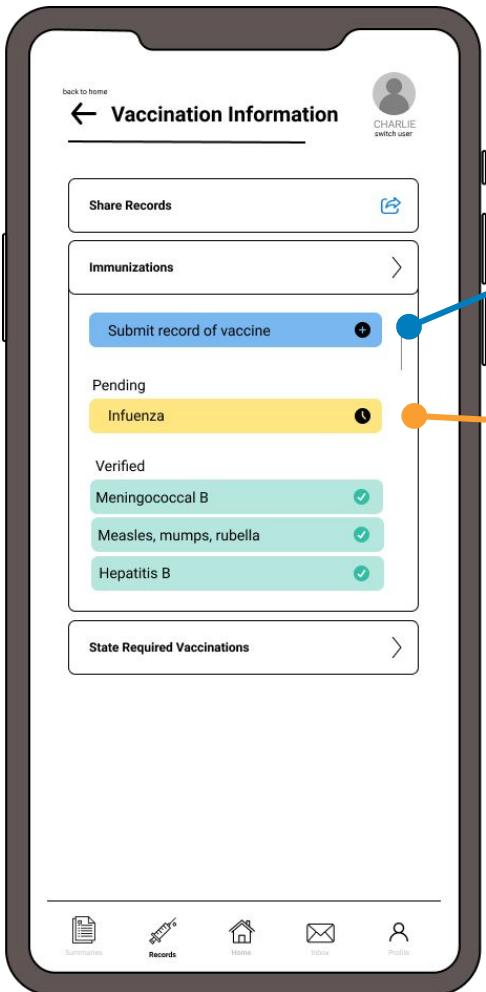
Users can click here to self-report a vaccination and quickly show proof of vaccination



Vaccination Walkthrough



lo-fi

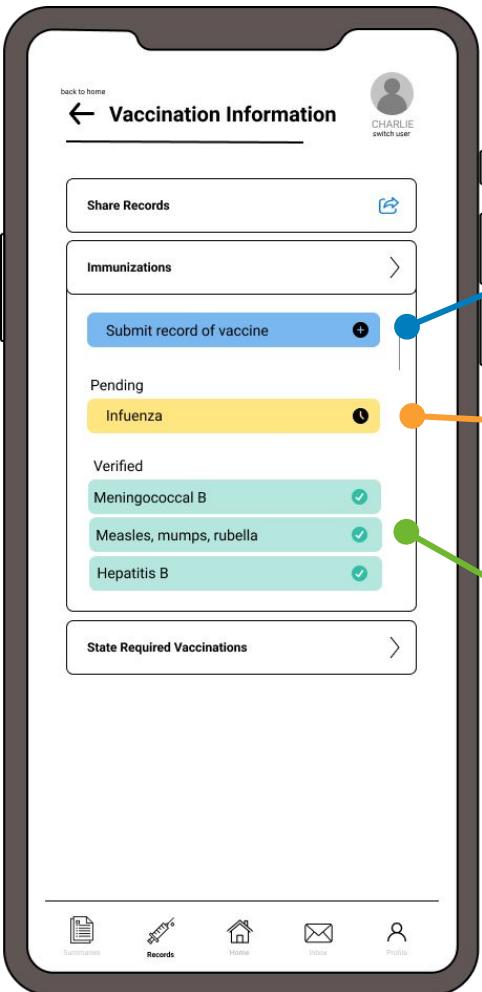
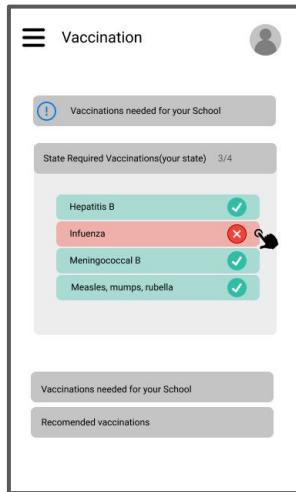


Users can click here to self-report a vaccination and quickly show proof of vaccination

Pending is the step in between submitting the vaccine and it getting verified



Vaccination Walkthrough



lo-fi

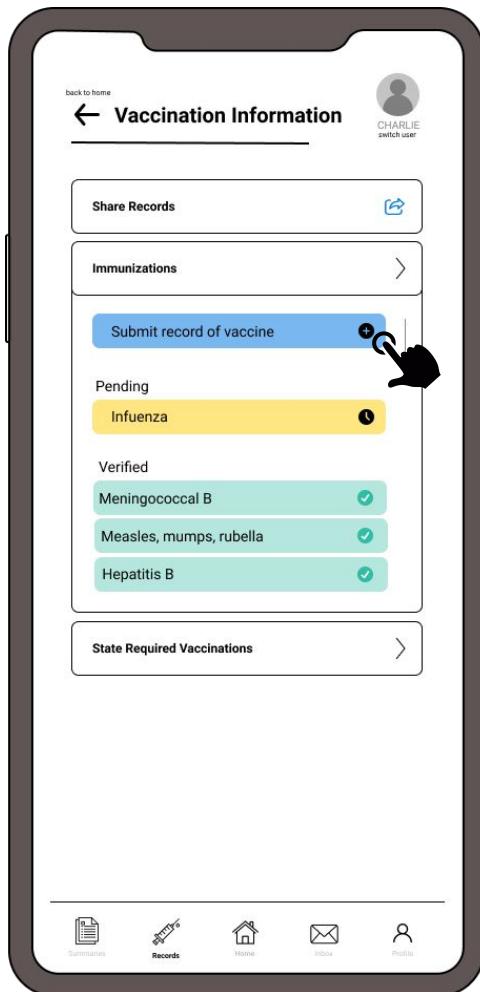
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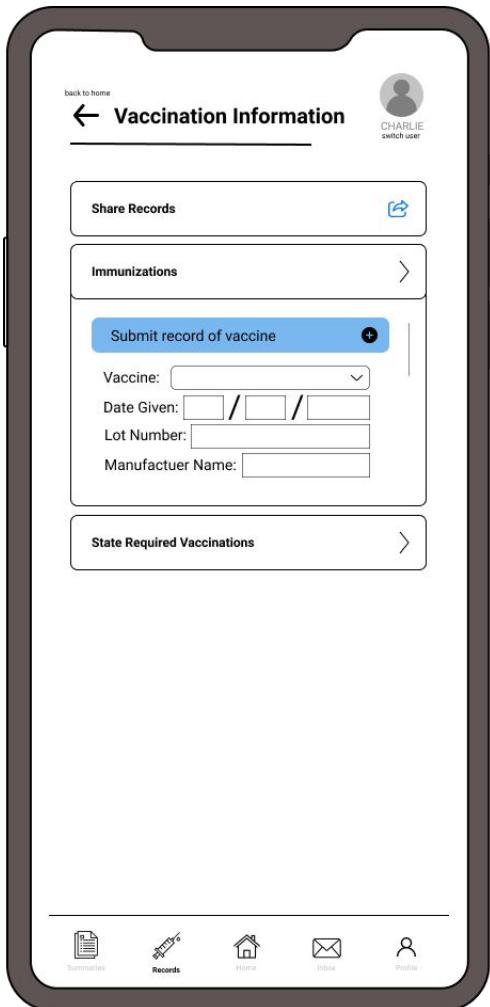
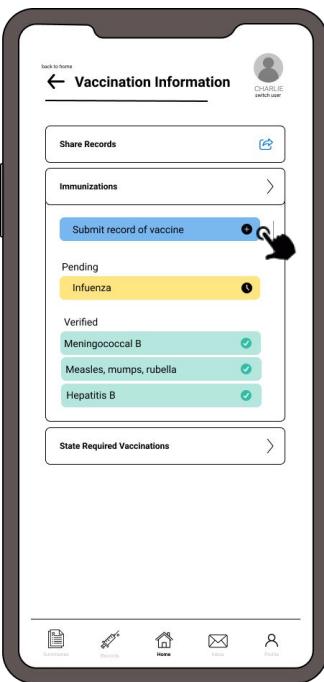
The verified section includes vaccinations you have previously gotten and has been verified



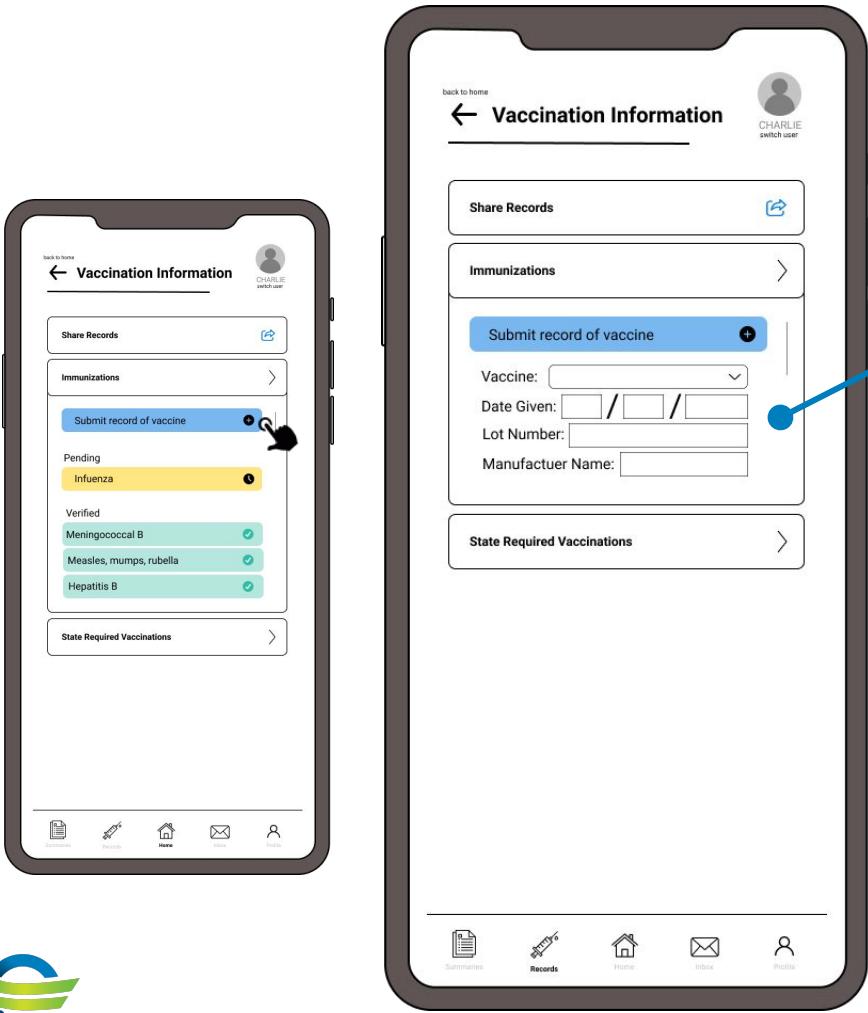
Vaccination Walkthrough



Vaccination Walkthrough



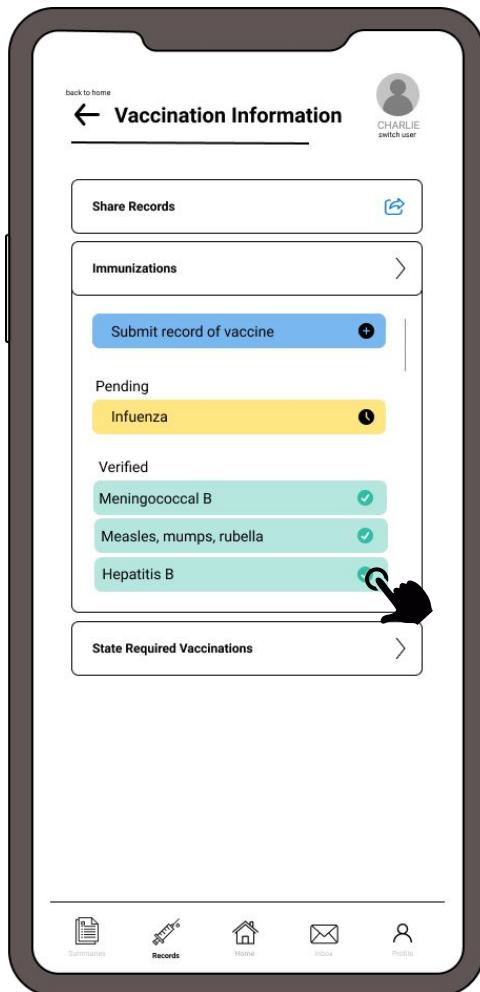
Vaccination Walkthrough



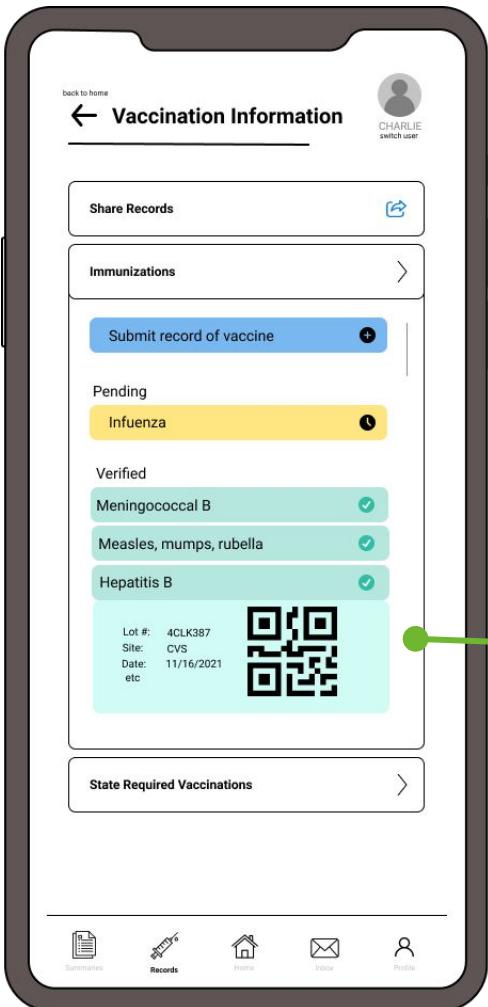
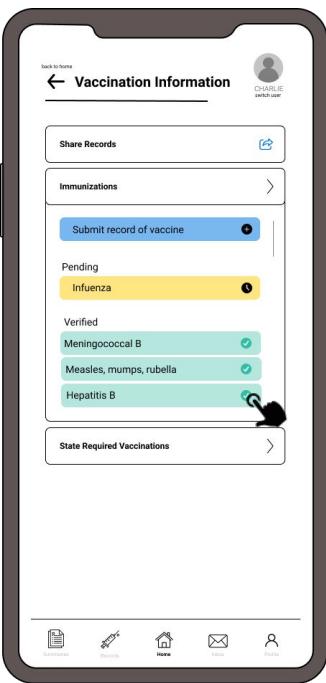
List of relevant information that must be entered



Vaccination Walkthrough



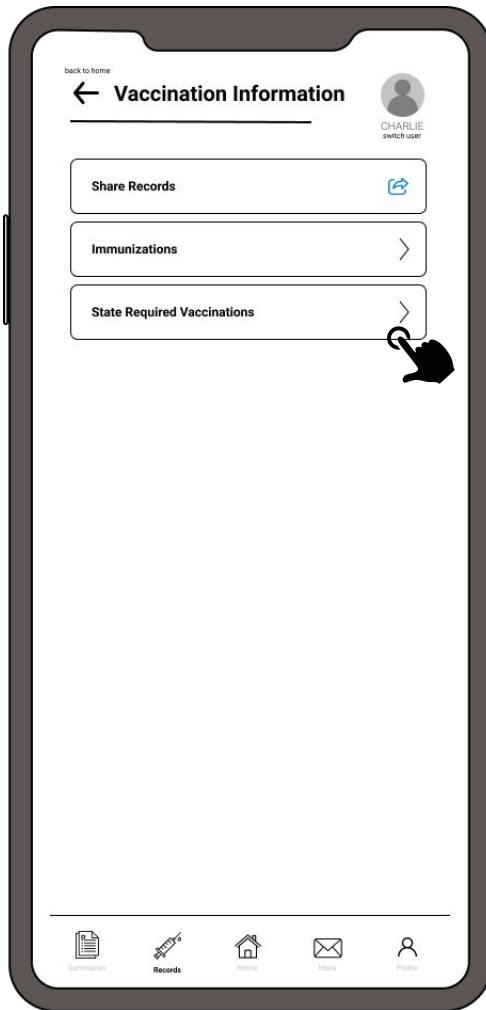
Vaccination Walkthrough



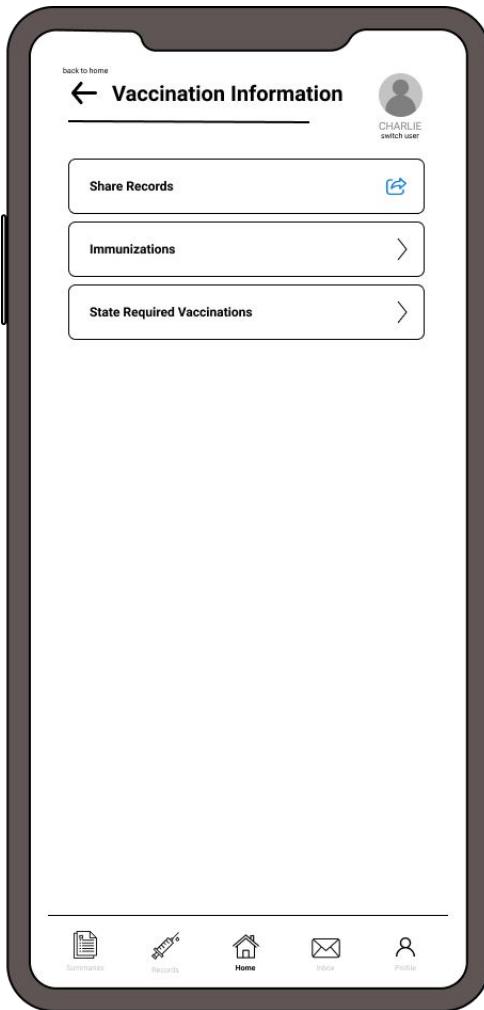
Quick access to on-the-go vaccination proof



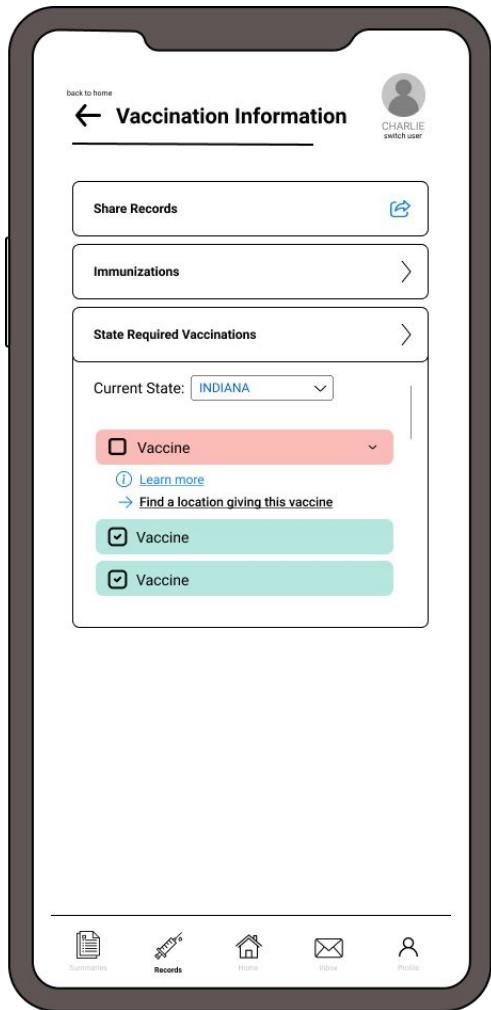
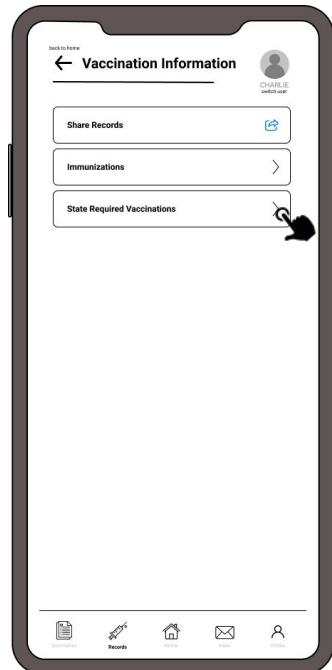
Vaccination Info



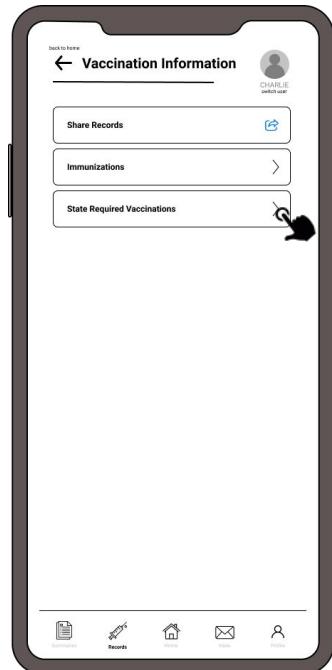
Vaccination Info



Vaccination Info



Vaccination Info

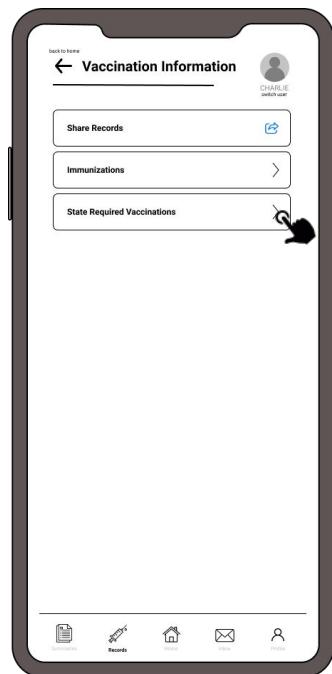


A large mobile device screen showing the "State Required Vaccinations" section. The top bar has a back arrow and the text "Vaccination Information". It shows a user profile for "CHARLIE" and a "switch user" option. Below are three buttons: "Share Records", "Immunizations", and "State Required Vaccinations". The "State Required Vaccinations" button is highlighted with an orange circle. The main content area shows "Current State: INDIANA" with a dropdown arrow. Below it is a section for "Vaccine" with a red background, containing a checkbox and two buttons: "Learn more" and "Find a location giving this vaccine". There are also three other "Vaccine" sections with checked checkboxes and green backgrounds. At the bottom are five navigation icons: "summaries", "Records", "Home", "Email", and "Profile".

State Selection



Vaccination Info



The large mobile device displays the 'Vaccination Information' screen. At the top, there are buttons for 'Share Records' and 'Immunizations'. Below these is a section titled 'State Required Vaccinations' with a dropdown menu set to 'INDIANA'. Two orange circles highlight the dropdown arrow and the 'INDIANA' text. The screen then shows a list of vaccines:

- Vaccine (status: pink bar)
- Vaccine (status: light blue bar)
- Vaccine (status: teal bar)

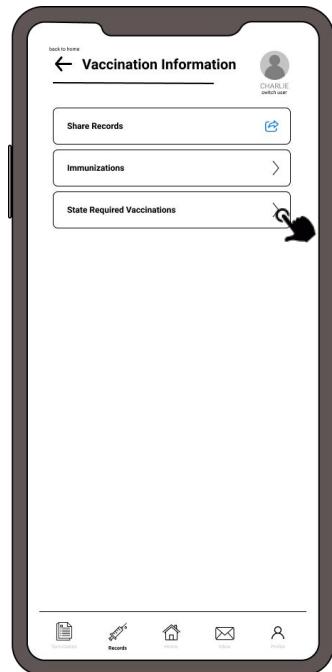
Below the list are links: 'Learn more' and 'Find a location giving this vaccine'.

State Selection

Vaccines on the list that are still needed



Vaccination Info



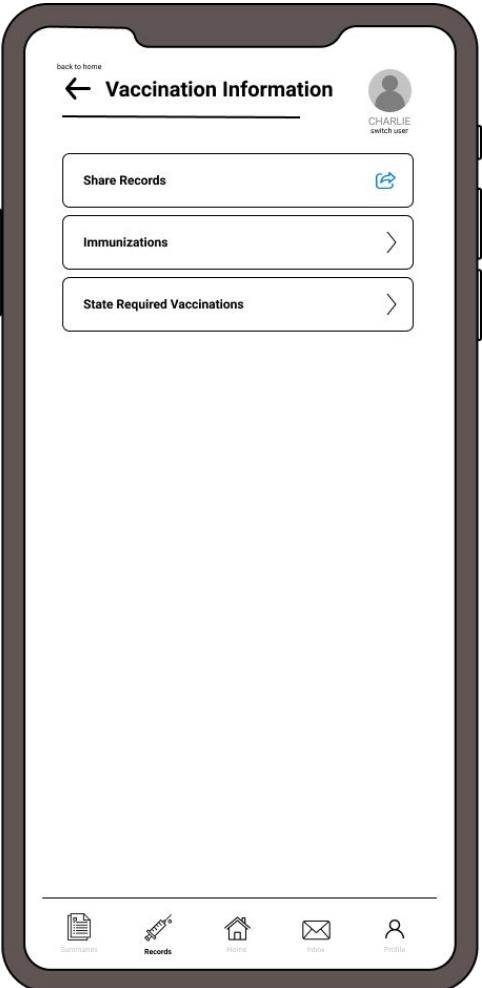
A large mobile phone screen on the right side of the image. It shows a "Vaccination Information" page. At the top, there's a "back to home" link, a user profile for "CHARLIE", and a "switch user" option. Below this is a "Share Records" button with a share icon. The main content area has three sections: "Share Records", "Immunizations", and "State Required Vaccinations". Under "State Required Vaccinations", it says "Current State: INDIANA". Below this is a list of vaccinations categorized into three groups: "Vaccine" (red background), "Vaccine" (green background with a checkmark), and "Vaccine" (green background with a checkmark). Each group has a callout bubble pointing to it. The first group is labeled "State Selection", the second is "Vaccines on the list that are still needed", and the third is "Vaccines on the list that you have".

State Selection

Vaccines on the list that are **still needed**

Vaccines on the list that **you have**





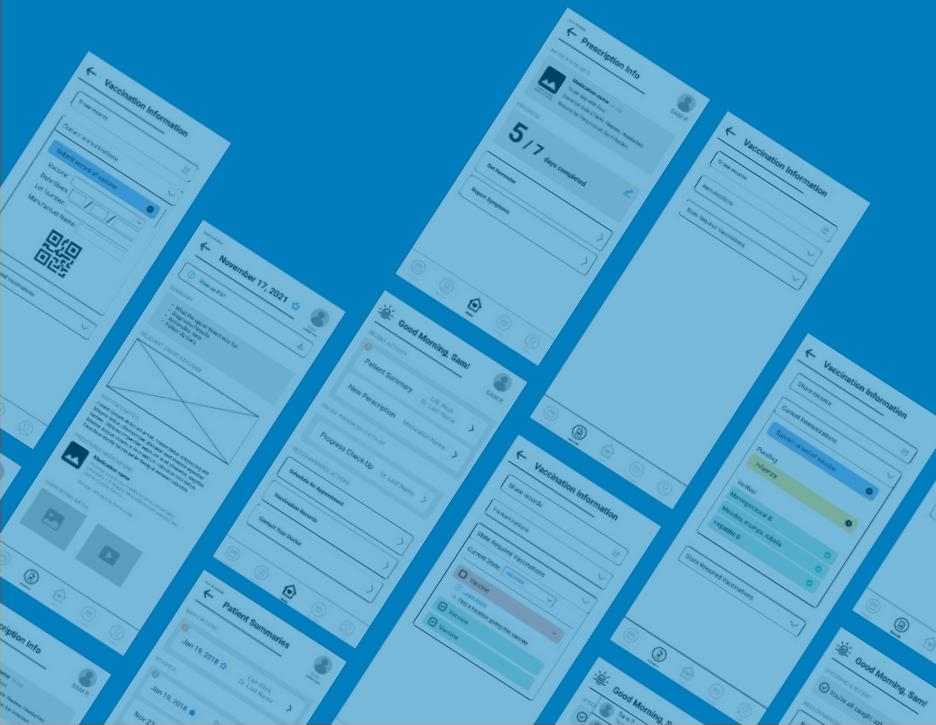
Let's Check Back with Charlie and Sam



Sam is able to save **time** and **stress** because all of the **vaccinations** that Charlie needs are in one place that is **easily accessible**. He is also able to keep track of any on-going vaccines and **easily share** vaccination proof to schools.



Patient Summaries



Home & Time-based Features



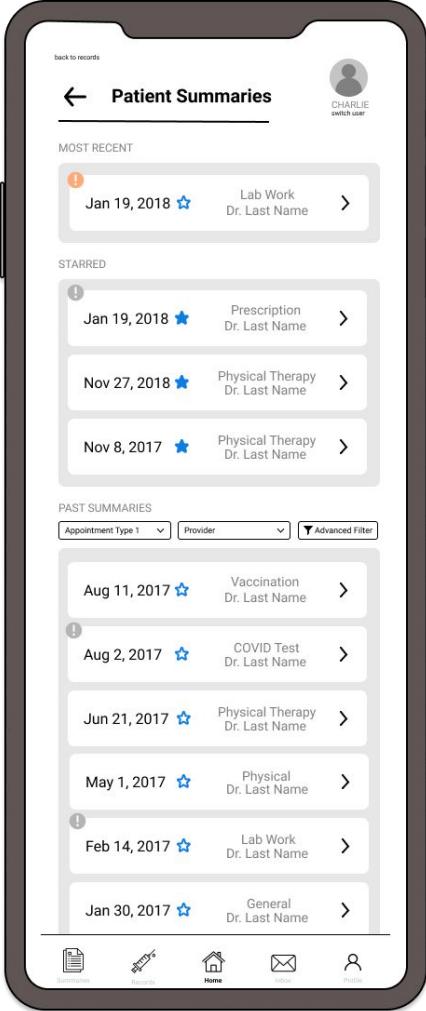
Vaccination information



Patient Summaries



Why Patient Summaries?



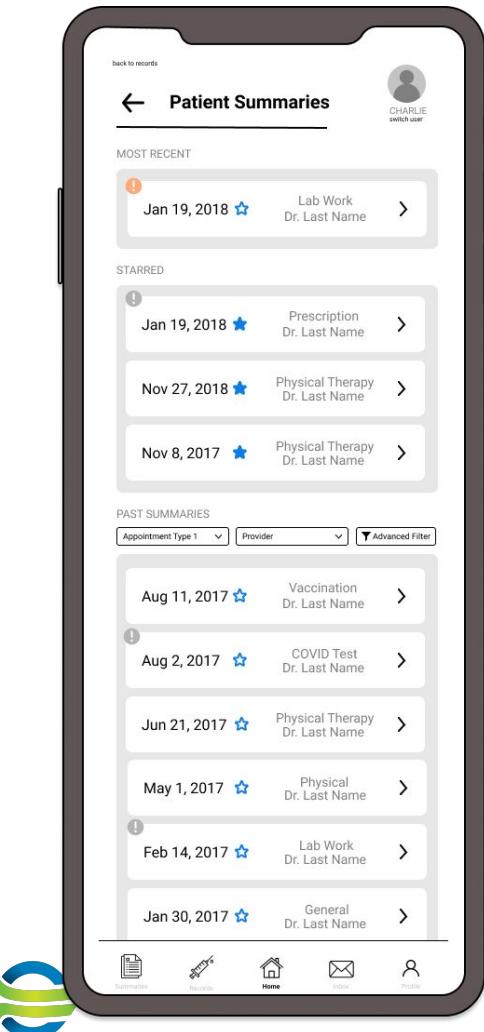
55% of participants check their portal for important information about their appointment

Interviewing participants revealed that **recalling specific information** was a common pain point

The patient appointment journey is **exhausting**



Patient Summaries



Most Recent

Starred

Past Summaries



Important
Results/Action Items



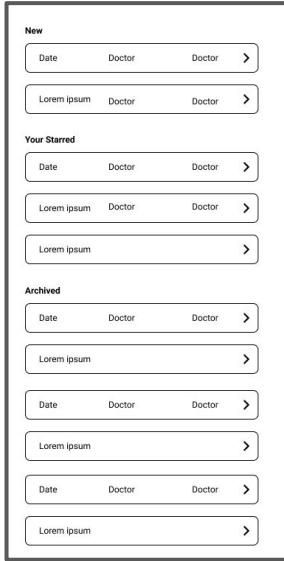
Important Results
(read)



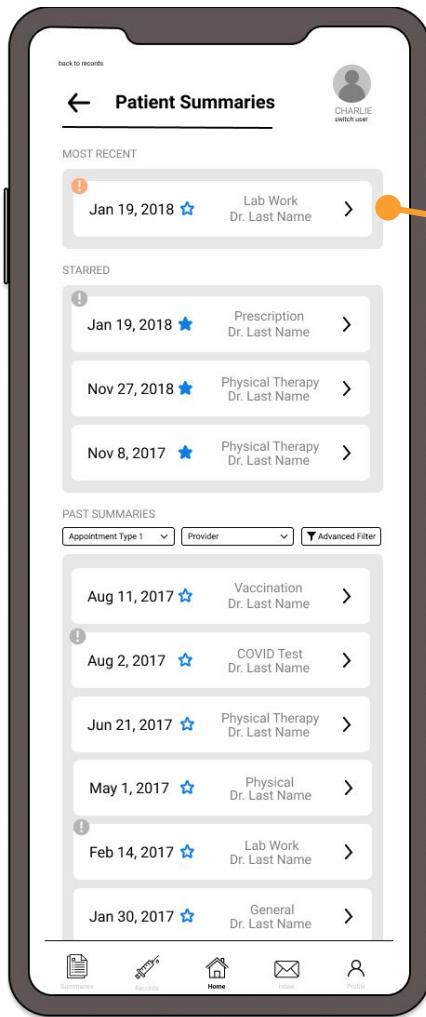
Starred
by user



Patient Summaries



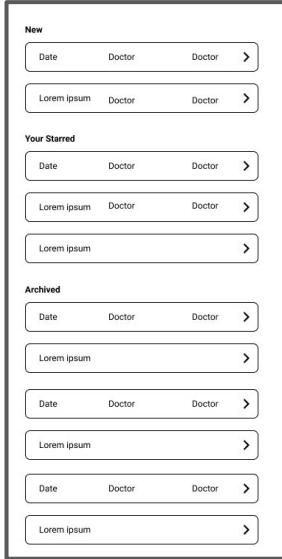
LO-FI



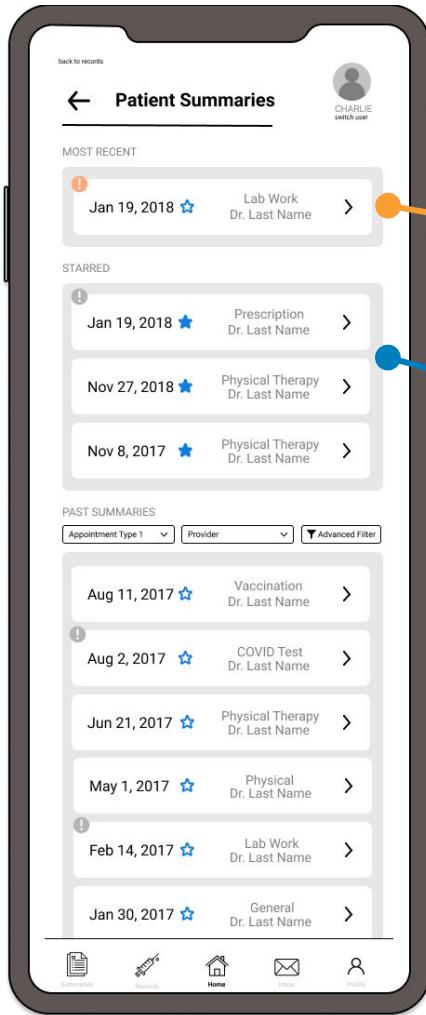
Most recent: indicates the patient's most recent patient summary for their convenience



Patient Summaries



LO-FI

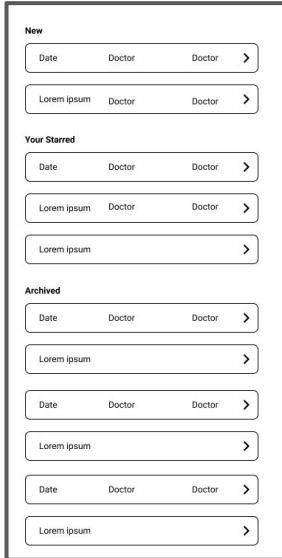


Most recent: indicates the patient's most recent patient summary for their convenience

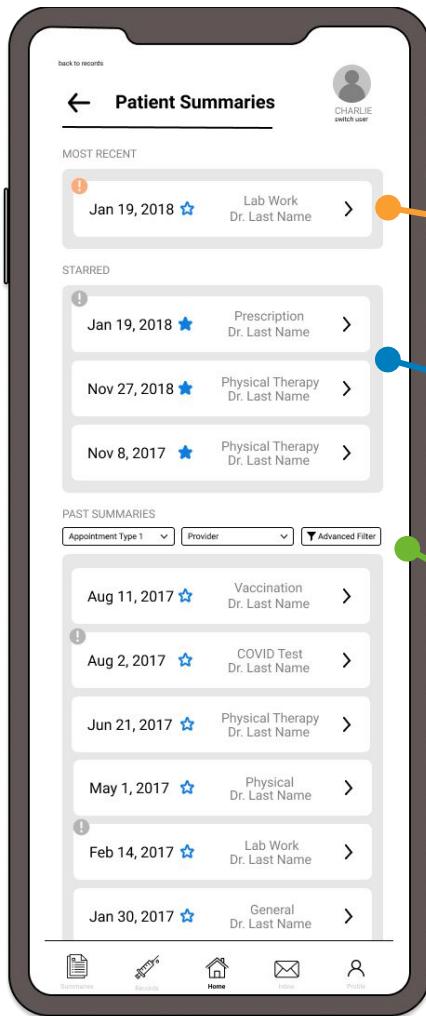
Starred: Make accessing it easier to access summaries the user finds important



Patient Summaries



LO-FI



Most recent: indicates the patient's most recent patient summary for their convenience

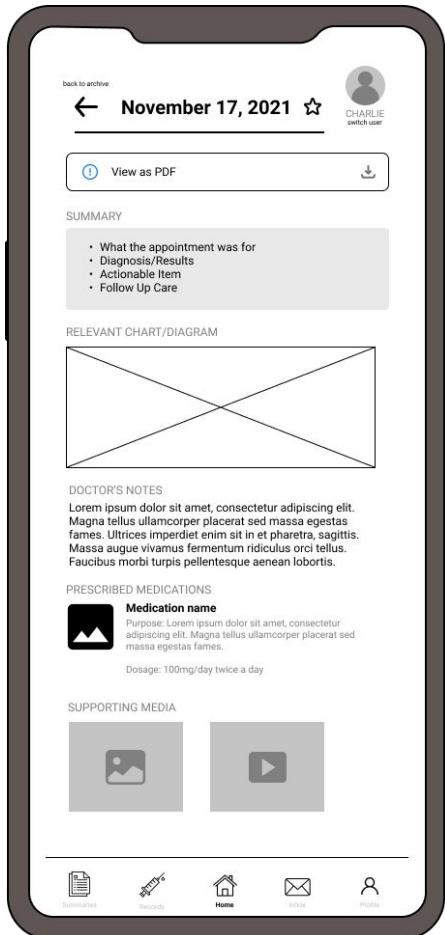
Starred: Make accessing it easier to access summaries the user finds important

Past Summaries: consolidate previous records, in an unobtrusive way while still allowing patients to refer back to them

PAST SUMMARIES

Appointment Type 1 Provider Advanced Filter





Argument For a Better Format

Current patient summaries aren't geared towards a layman's understanding and are not consistently provided

Confusing Terminology

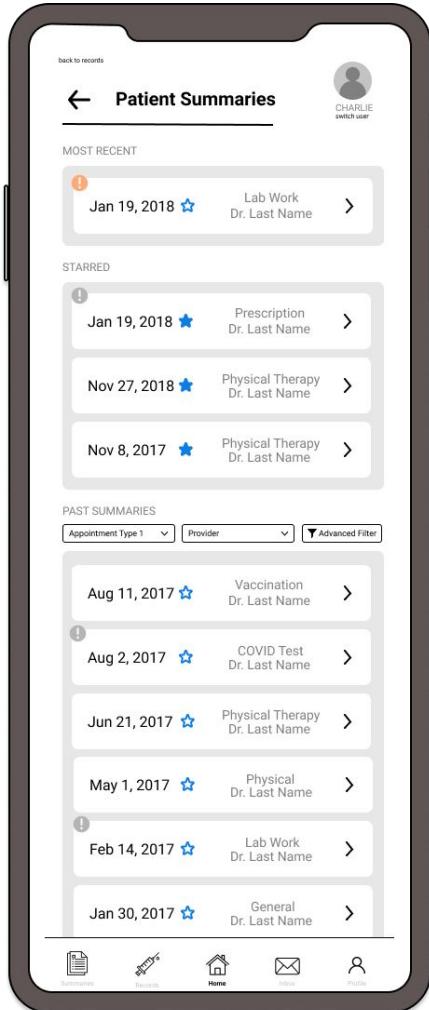
Dense Text

Unengaging Content

"I feel like I am completely on my own to manage something that they do everyday."

Interview Participant



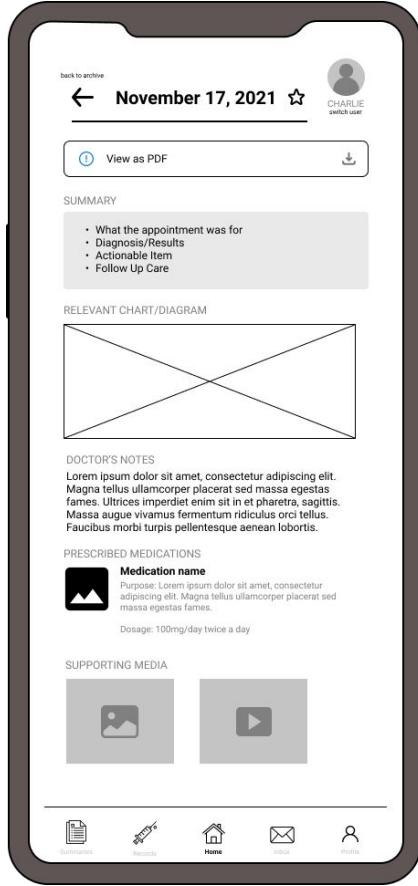
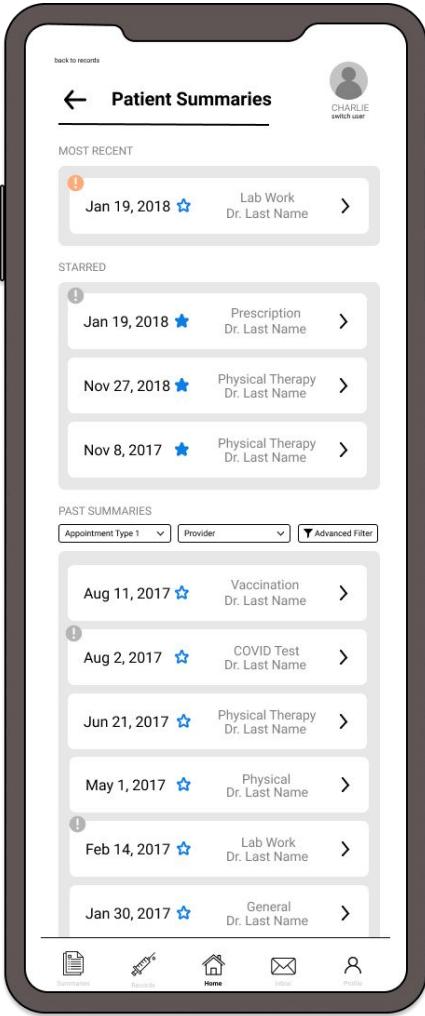


Let's Check Back with Sam & Charlie



With Charlie's patient summaries organized, Sam can easily review the details from his last appointment and **doesn't have to worry about remembering everything.**





Let's Check Back with Sam & Charlie



Overall, there are still barriers for Sam to overcome, with better organization, he can now clearly locate Charlie's most recent summary and **access** information about the **medication that prescribed** for his earache.





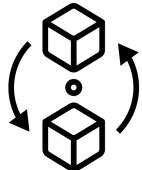
Next Steps & Reflection



Next Steps



01 Finalize Project Documentation



02 Compile Transition Document



Reflection - What We Learned



Questions?

CERNER x PURDUE
FA2021



**Need icons and text input

Reflection - What We Learned

Quality over Quantity

Mercury is the closest planet to the Sun

Quality over Quantity

Mercury is the closest planet to the Sun

Teamwork

Mercury is the closest planet to the Sun

Feedback often and Frequently

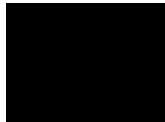
Mercury is the closest planet to the Sun



USE THESE ICONS



USE THESE COLORS



I put these here to show progression



Stuff we need to get done

Headers: **Roboto | Bold**

Everything Else: Raleway | medium

Slide 31: Needs to be more
consistent/better visually

Home Screen Walk through: Needs
to be more consistent/better visually

Home Screen Walk through: Needs
to be more consistent/better visually



Need to do:

- Double check fonts
-
-



- Why Section (~1 minute)
 - What led us to choose this feature
 - Tie in our user group

Vaccinations needed for your School

State Required Vaccinations(your state) 3/4

Hepatitis B	✓
Influenza	✗
Meningococcal B	✓
Measles, mumps, rubella	✓

Vaccinations needed for your School

Recomended vaccinations

