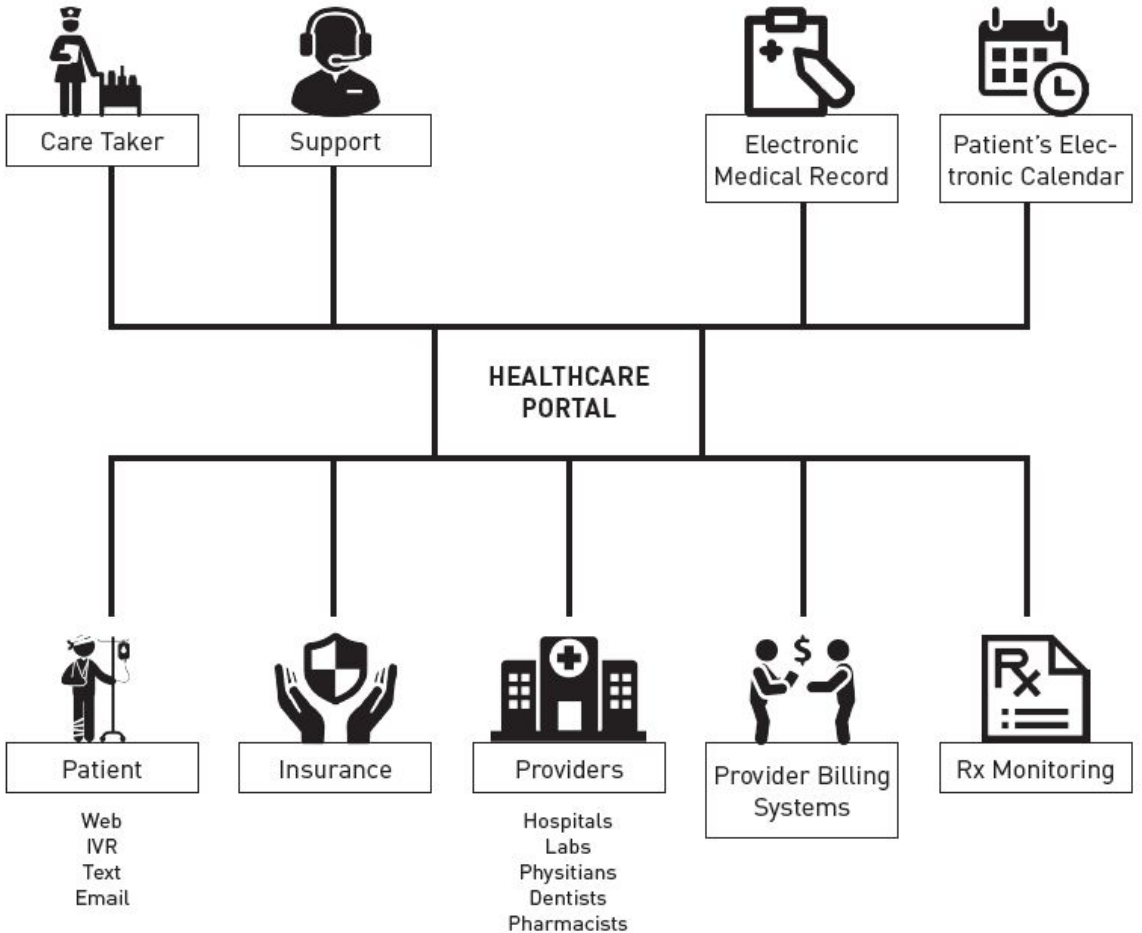


[Health-Connect]

KLUTZKE | NALLAM | ODIOKO



[Connections]



[Healthcare Portals - Pros]

Internet healthcare portals can improve provider-patient communication.

- Available 24 hours a day
- Streamline common processes:
 - Updating prescriptions
 - Requesting lab results
 - Scheduling appointments
 - Billing
- Overcomes issues with voicemail:
 - Unclear or missing information
 - No record of contact

[Healthcare Portals - Cons]

- Registration for new users can be a big hurdle.
- Provide features rather than user experience
- Patients aren't tech-savvy
- Can feel impersonal
- Liability and regulatory issues
- Access to family members is restricted
- Supporting multiple providers increases complexity

[Requirements]

Primary Mode of Use - For Patients

- Smartphone with internet connection
- Used in a typical US household environment
- User can read and write English at 7th grade level

Alternative Modes

- Desktop website
- Interactive voice response (IVR)

Regulatory & Liability Compliance

- Health Insurance Portability and Accountability Act (HIPAA)
- Section 508 not required but recommended
- Not for emergencies!

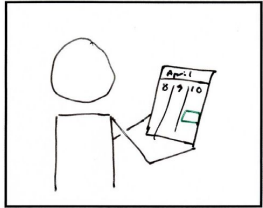
[Design Exploration]

- Smartphone App
 - More patients have phones than have PCs
- Patient Interface
 - Assumed provider interactions behind the scenes
- Scenarios Explored
 - Managing appointments
 - Managing prescriptions

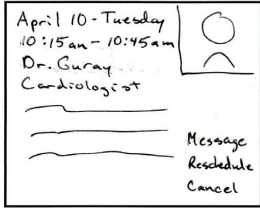
[Storyboards - Appointments]

Storyboard Template

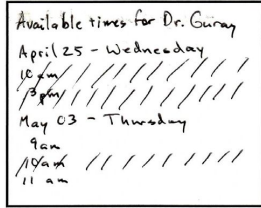
Rescheduling an Appointment
Name: _____
 Project: _____



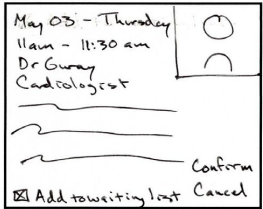
Chris finds the appointment on her Google Calendar. She taps a hyperlink.



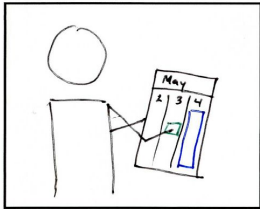
Her phone launches the portal app and displays its appointment. Chris requests to reschedule.



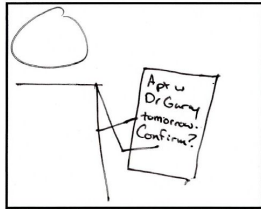
System shows available times. Times that conflict with calendar are grayed out.



Chris selects a time and requests to be added to the waiting list.



System updates the appointment on May & Chris's calendars.

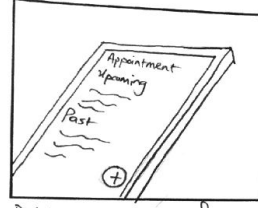


System sends a reminder the day before the appointment.

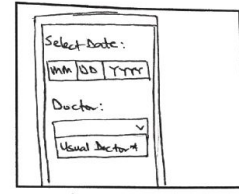
Storyboard Template

'Back-Up' Doctor

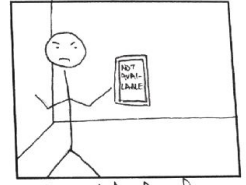
Name: _____
 Project: _____



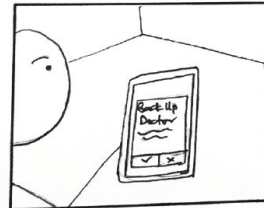
Patient opens app to make appointment.



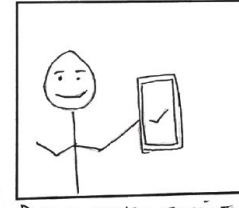
He chooses a date and selects his doctor.



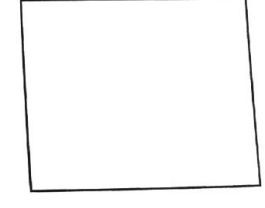
System tells him his doctor isn't available.



System suggests a similar doctor that is available for the chosen date.



Patient makes appointment.

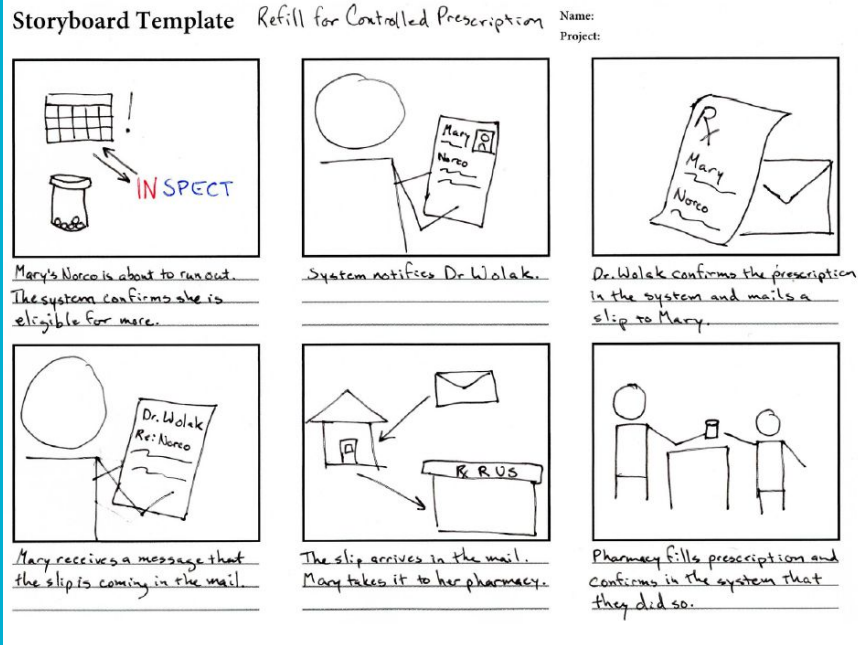


Rescheduling An Appointment

Back-Up Doctor

[Storyboards - Prescriptions]

Storyboard Template Refill for Controlled Prescription Name: Project:



This storyboard consists of six panels illustrating the process of a controlled prescription refill. Panel 1 shows a calendar icon and a pill bottle with an 'INSPECT' label. Panel 2 shows a person holding a prescription slip for 'Mary Norco'. Panel 3 shows a prescription slip for 'Mary Norco' being mailed. Panel 4 shows a person holding a message from 'Dr. Wolak Re: Norco'. Panel 5 shows a house and a mailbox labeled 'RUS' with an envelope being delivered. Panel 6 shows two people at a counter, one holding a pill bottle.

Mary's Norco is about to run out. The system confirms she is eligible for more.

System notifies Dr. Wolak.

Dr. Wolak confirms the prescription in the system and mails a slip to Mary.

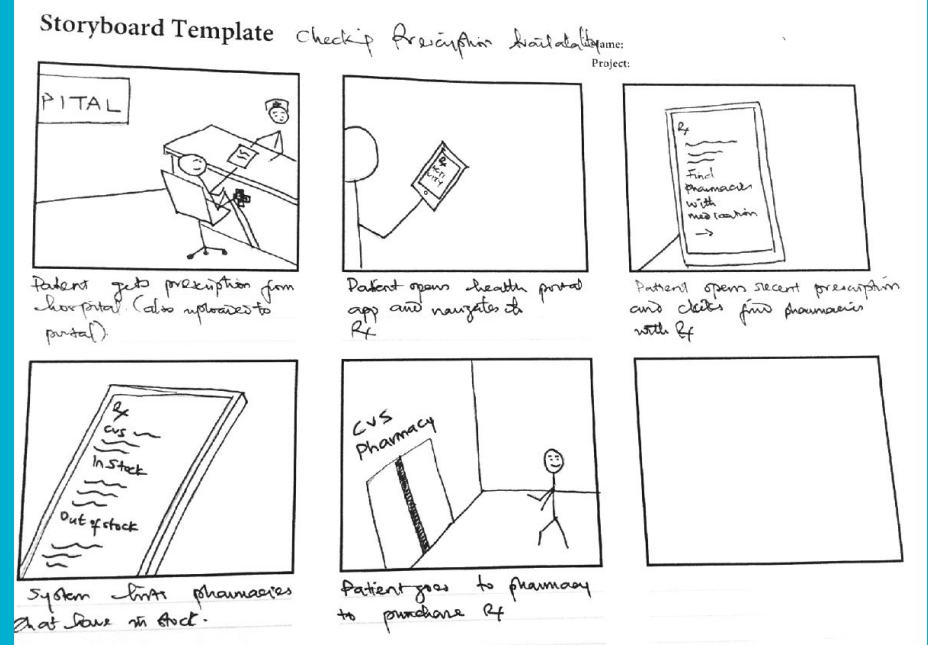
Mary receives a message that the slips coming in the mail.

The slip arrives in the mail. Mary takes it to her pharmacy.

Pharmacy fills prescription and confirms in the system that they did so.

Refill for Controlled Prescription

Storyboard Template Checkup Prescription Availability Name: Project:



This storyboard consists of six panels illustrating the process of checking prescription availability. Panel 1 shows a person at a desk in a 'HOSPITAL' setting. Panel 2 shows a person holding a prescription slip. Panel 3 shows a person opening a health portal app and navigating to the Rx section. Panel 4 shows a person opening a recent prescription and clicking for a pharmacist. Panel 5 shows a person at a 'CVS Pharmacy' counter. Panel 6 is an empty box.

Patient gets prescription from her portal (also updates to portal).

Patient opens health portal app and navigates to Rx

Patient opens recent prescription and clicks for pharmacist with Rx

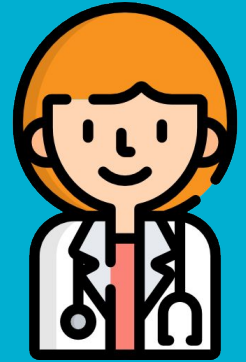
System prints pharmacist that does in stock.

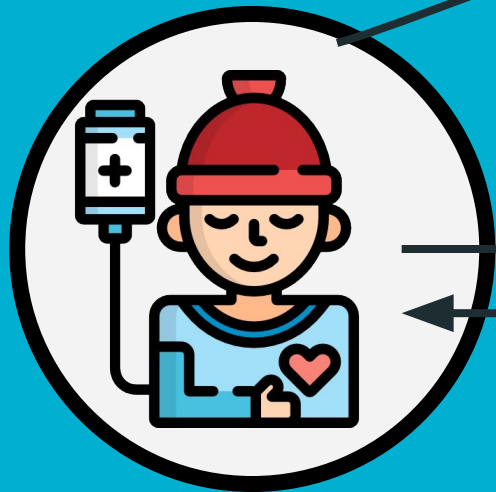
Patient goes to pharmacy to purchase Rx

Checking Prescription Availability

[Managing Prescriptions]

- This is the system we selected for our design
- Exploring interactions between patient, physician, and pharmacist
- Not resolved by the portals we studied





Patient



Pharmacy



HealthCare
Provider



**Makes
Communication
With
Pharmacies
Easier**



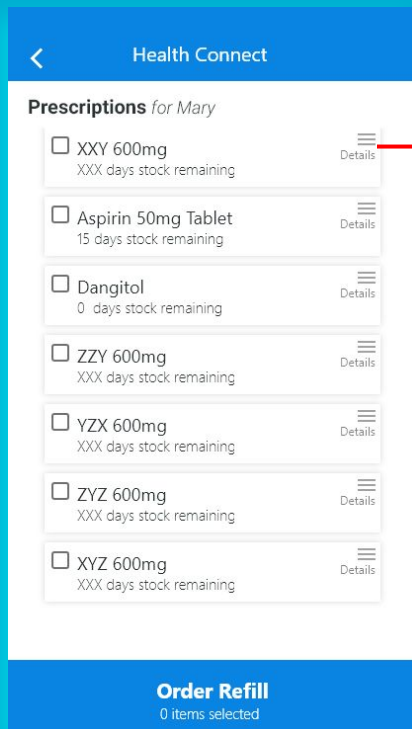
Manage Your Prescriptions



Choose Pickup Location



[Prototype 1 - Key Findings]



'Details' button didn't seem clickable.

Security concern on easy access to other user's profile.



[Interactive Prototype / Demo]



Launch

[Evaluation Results]

- Refined wording on some buttons and messages
- Concerns
 - “Cart” analogy feels wrong for prescriptions
 - Not realistic to estimate when doctor will provide prescription
 - Need some security measure for switching between patients
- Suggestions
 - Display estimated costs based on insurance and other providers
 - Test a task having delay due to insurance authorization
- Expert review is in progress

[Next Steps]

- Carry out more research on regulatory and liability compliance.
- Explore incorporating an Insurance feature.
- More user testing with industry professionals.

[Thank You]

What are your questions?