

Design a service summary app for a hospital

Kelsie Gosser

Project overview



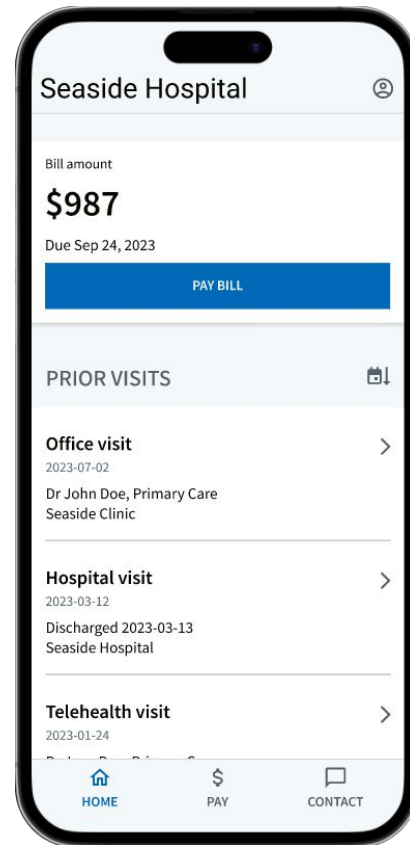
The product:

Seaside Hospital would like an easy way for patients to view their services summary for past visits, with the ability to pay for bills using an app. This app targets patients of the Seaside Hospital System.



Project duration:

Mar - Sep 2023



Project overview



The problem:

Many people don't understand the services that are being performed and why when they visit the hospital. They also would like to pay for their bills using an app rather than by mail or phone.



The goal:

Bring clarity to services rendered at the hospital or by a doctor around what was performed, why it was performed, and how much they owe for the services.

Project overview



My role:

UX Designer



Responsibilities:

- User research by conducting interviews
- Paper and digital wireframing
- Low and high fidelity prototyping
- Conducting usability studies
- Accounting for accessibility
- Iterating on design
- Communicating with stakeholders and developers

Understanding the user

- User research
- Personas
- Problem statements
- User journey maps

User research: summary



My research consisted of building empathy with users provided in the course. I put myself in their shoes based on the demographics and other information provided and tried to answer questions from their perspective.

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Research found that patients are quite busy and don't want to spend time on the phone talking with billing to understand their medical bills. They would prefer a way to view details via an app before they pay for their bill.

User research: pain points

1

Detail

Wishes there was an easier way to view services rendered than by getting it in the mail many week later

2

Payment

Would like to pay for bill quickly and easily without depending on anyone to assist them

3

Understanding

Users don't fully understand healthcare system and why services are being rendered

Persona: Jerry Cook

Problem statement:

Jerry is a busy small business owner with very little time who needs easy access to his hospital services because he doesn't have time to call hospital billing each time a service is rendered.



Jerry Cook

Age: 41

Education: Bachelor's degree

Hometown: San Jose, CA

Family: Married with one child

Occupation: Small business owner

"I am very busy with my work, so I only go to the doctor when absolutely necessary."

Goals

- To be a great employer
- To grow his business
- Stay healthy enough to support his family long term
- Be able to view medical services summary and insurance coverage in a tech savvy way
- Understand medical services better when he has them performed

Frustrations

- Too busy to find time to go to the doctor regularly
- Lack of visibility into how his medical insurance coverage works
- Doesn't know if he should spend the money to go to the doc

Jerry works hard to ensure his business is running as smoothly as possible. He wants to provide for his family and works long hours to accomplish this. He knows his health is important, but he has a hard time prioritizing it, and the few times he does go to the doctor, he feels frustrated and confused by the lack of transparency with the services being rendered and what the coverage by his insurance is.

User journey map

Mapping Jerry's process revealed how nice it would be to be able to have technology available for viewing the summary, as well as getting assistance for questions and payment.

Persona: Jerry

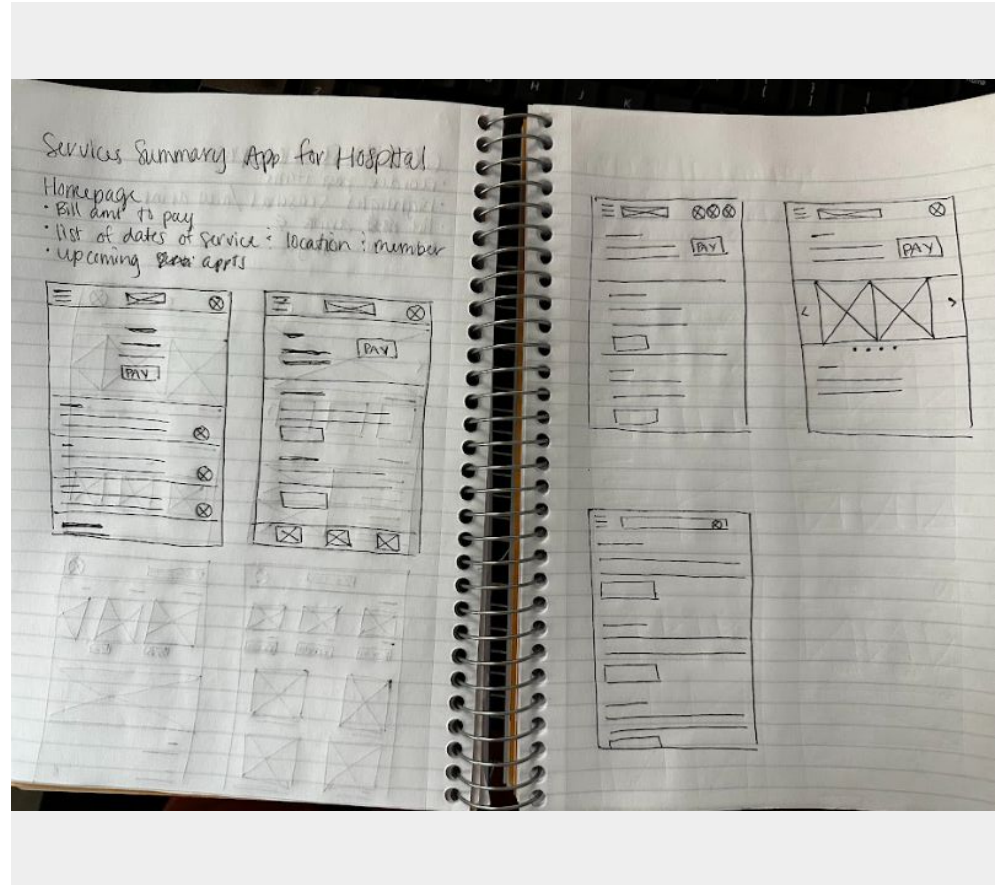
Goal: View and understand what is covered by insurance for recently rendered hospital services

ACTION	Open mail	Review hospital services and coverage	Contact hospital	Get assistance from hospital billing	Pay for hospital bills
TASK LIST	Tasks A. Obtain mail B. Open letter from hospital	Tasks A. See hospital services summary B. See insurance coverage for each line item	Tasks A. Look in document from mail for an email or phone number to call B. Call the hospital C. Navigate through automated messaging to get to billing department D. Wait for a representative to answer	Tasks A. Wait for rep to pull up information B. Ask hospital billing to explain services summary C. Ask for more information around insurance coverage D. Try to dispute claims that don't make sense	Tasks A. Ask representative best way to pay B. Look at link listed in document for paying bill C. Go to phone and login to billing page of hospital D. Enter credit card information E. Pay for medical bills.
FEELING ADJECTIVE	Interested in seeing services summary	Confusion around certain services Concern about amount owed	Confusion around how to contact hospital Annoyance by how hard it is to talk to a rep	Frustration by lack of clarity Concern over amount owed Relieved someone can assist in understanding	Irritated that can't pay over phone Relief that process is completed
IMPROVEMENT OPPORTUNITIES	Make this available technically instead of waiting for the mail	Provide more information in the services summary	Make it clear how to get help Allow for call backs when trying to reach a rep	Ensure the rep has information for patient right away	Allow patient to pay for bills while on phone with rep

[User journey map](#)

Paper wireframes

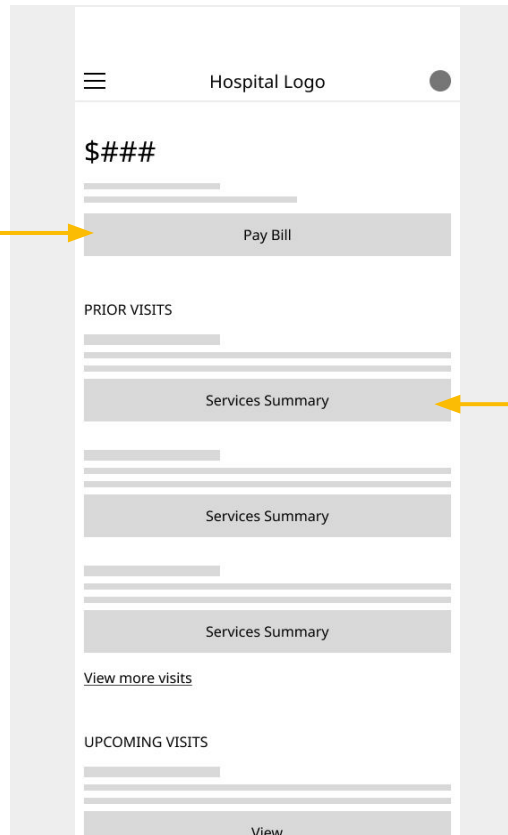
I wanted to take time to come up with what I thought the main screens would be for this services summary app so that I could address the users main pain points. I wanted to make sure that the payment button was clear and easy to find on each relevant screen.



Digital wireframes

I wanted to ensure that I was keeping the user's feedback related to pain points front and center when designing the app.

I put the pay bill button at the very top of the screen for when a user logs in so that they can easily pay their bill.



I wanted users to be able to know right away how to view more information about their past visits.

Digital wireframes

The ability to dig deeper into understanding why a service was rendered and how the bill associates with it was key to this design. Users didn't want to have to sit on the phone with the billing department, so in addition to showing services summaries for each past visit, I wanted a way for the patient to easily reach out to billing through the app.

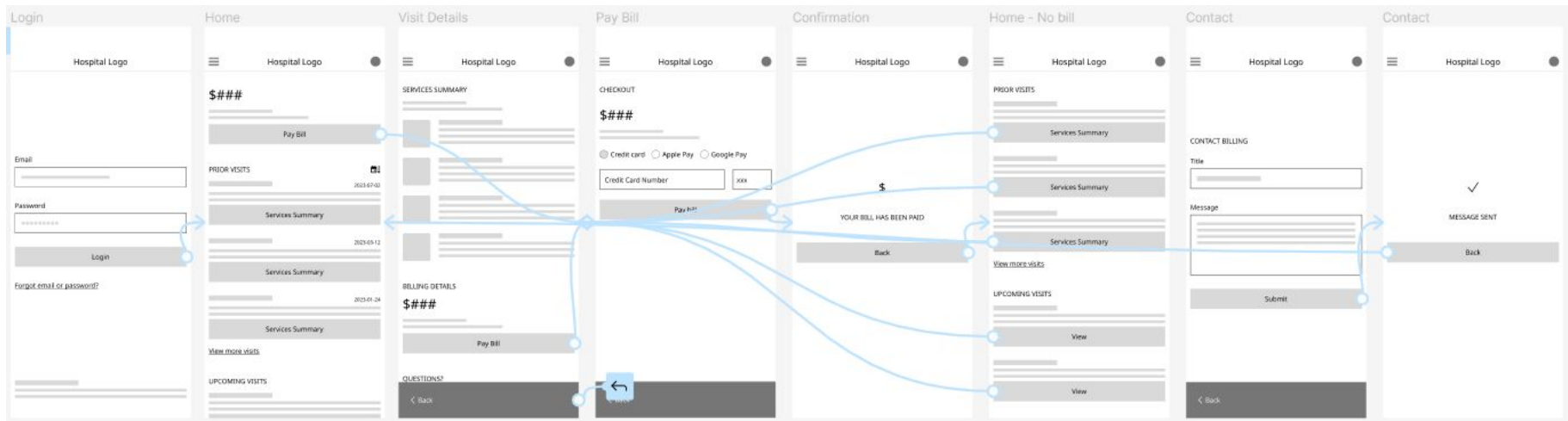
Wireframe of a mobile app screen for contacting hospital billing. The screen displays a header with a menu icon, "Hospital Logo", and a dark circle. Below the header is a section titled "CONTACT BILLING". This section contains a "Title" label above a single-line text input field, followed by a "Message" label above a multi-line text area. Below the text area is a grey "Submit" button. At the bottom of the screen is a dark grey bar with a white "< Back" button.

The user can send a secure message to billing at the hospital in case they have further questions.

Low-fidelity prototype

The low-fidelity prototype showed how a user would move through viewing service summaries and paying a bill so that we could perform a usability study with users.

View the [low-fidelity prototype](#) for a Services Summary App for a Hospital.



Usability study: findings

I conducted two rounds of usability studies with users. The first round helped influence design for taking wireframes to mockups. The second round used a high-fidelity prototype and highlighted additional areas that needed attention.

Round 1 findings

- 1 Users want better cues in the app for knowing when hospital visits occurred
- 2 Users need more detailed information when paying their bill
- 3 Users need improved navigation

Round 2 findings

- 1 Additional context needed for the prior visit cards to be useful
- 2 The use of bottom nav was an improvement, but needed refinement
- 3 The payment confirmation summary improved the overall payment process

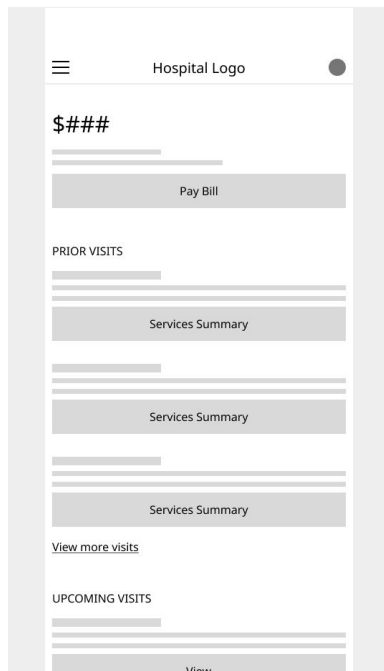
Refining the design

- Mockups
- High-fidelity prototype
- Accessibility

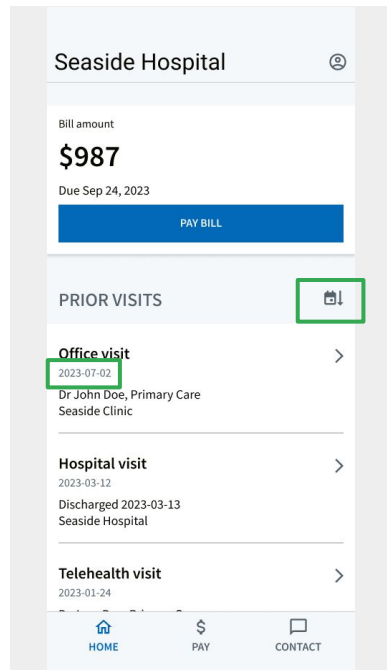
Mockups

The goal is to allow users to scan through prior visits and allow them to choose a specific visit and view additional details about their service. Before the usability study, it wasn't clear to the user how to select the most recent visit, so I added a sort to the visits along with date information included in the prior visits cards.

Before usability study



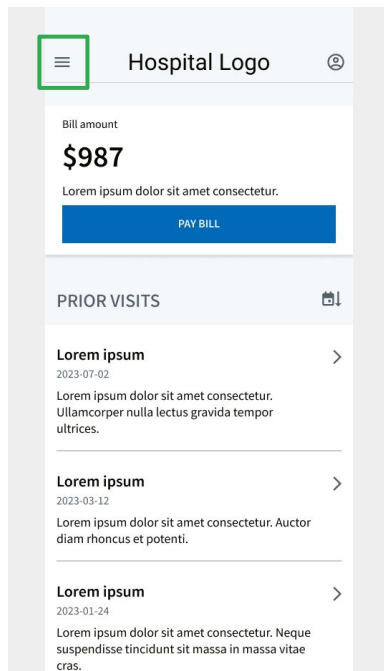
After usability study



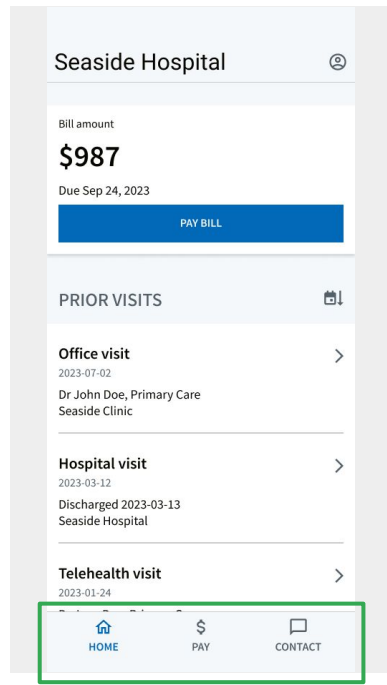
Mockups

Navigation was unclear for the users, so to simplify things, I removed the hamburger menu and decided to go with a straightforward view using a bottom nav bar, and then a large Back screen at the top to replace the logo where applicable.

Before usability study



After usability study



Mockups

Seaside Hospital

Email

email@domain.com

Password

LOGIN

[Forgot email or password?](#)

Seaside Hospital

Bill amount

\$987

Due Sep 24, 2023

PAY BILL

PRIOR VISITS

Office visit

2023-07-02

Dr John Doe, Primary Care

Seaside Clinic

Hospital visit

2023-03-12

Discharged 2023-03-13

Seaside Hospital

Telehealth visit

2023-01-24

BACK

SERVICES SUMMARY

Hospital visit at Seaside Hospital

2023-03-12 - 2023-03-13

Ambulance

Lorem ipsum dolor sit amet consectetur.

Admitted to hospital

Lectus in suspendisse mattis malesuada

scelerisque senectus accumsan.

Blood tests

Lorem ipsum dolor sit amet consectetur.

Ullamcorper nulla lectus gravida tempor u...

Lab results

Lorem ipsum dolor sit amet consectetur. Ac

massa amet facilisi non.

Discharge

2023-03-13

Notes Lorem ipsum dolor sit amet consect...

BILLING DETAILS

Seaside Hospital

PAYMENT

Current balance

\$987

[Pay other amount](#)

☒ Credit card ☐ Apple Pay ☐ Google Pay

Name on card

First Last

Credit card number

XXXX XXXX XXXX XXXX

Expiration date

MM / YY

CW

XXXX

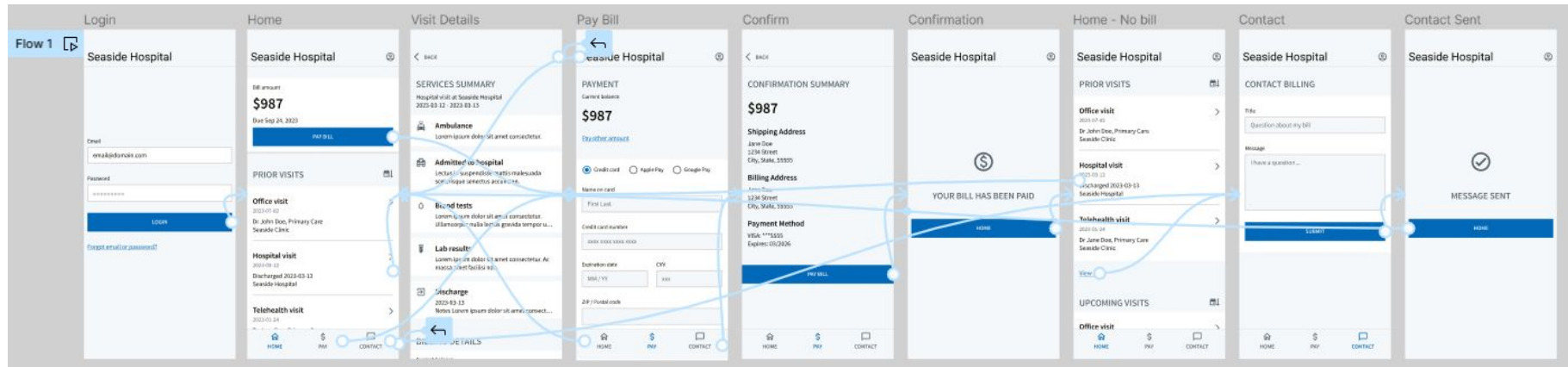
ZIP / Postal code

HOME PAY CONTACT

High-fidelity prototype

The final prototype provided clearer navigation and a cleaner payment process. It also provided the right amount of detail in the summary portion for the user to understand the services rendered.

View the Services Summary App for a Hospital [high-fidelity prototype](#)



Accessibility considerations

1

Color contrast is something I checked throughout the design process to ensure it meets AAA standards.

2

The usage of icons as a visual aid in identifying different parts of the design including navigation.

3

Used a font that is clean and easy to read.

Going forward

- Takeaways
- Next steps

Takeaways



Impact:

The Services Summary App for a Hospital made it easier for patients to understand the services rendered and improved the payment workflow.



What I learned:

While designing this app, I learned how big of a role performing multiple iterations has on a project. There were many insights that were discovered throughout the usability studies that I would not have uncovered if it weren't for including the users in the design process.

Next steps

1

There were a few different pain points that were uncovered early on in the usability studies that can now be prioritized.

2

Continue to conduct user research to identify new pain points that should be addressed.

3

Work with developers to ensure that accessibility best practices are being included in development of the app.

Let's connect!



Thank you for taking the time to review this case study for a Services Summary App for a Hospital.
Please contact me if you are interested in learning more.

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