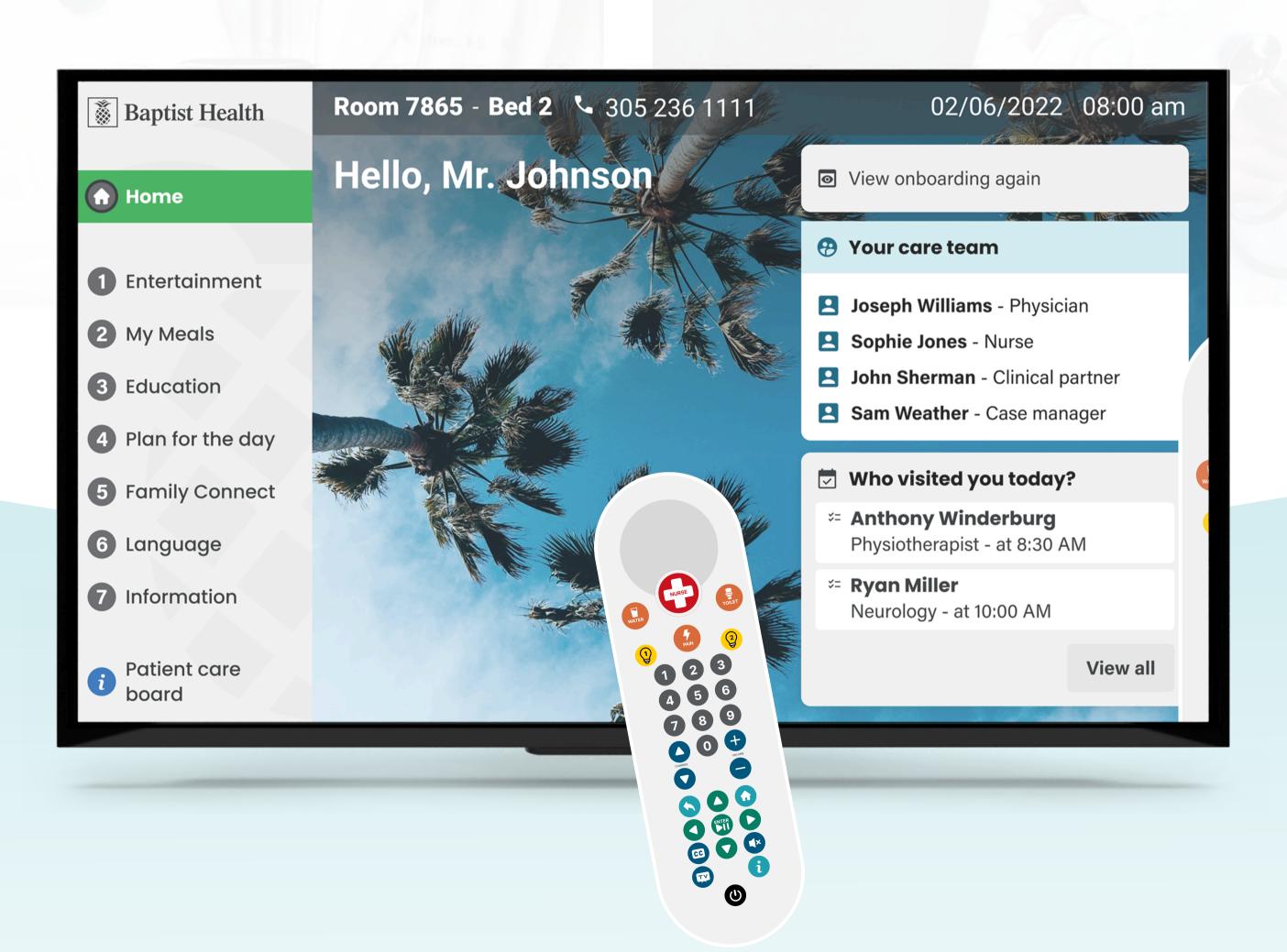


Infotainment for medical assistance and support



About the project

Redesigned the digital smart room experience to optimize patient information and decrease nurse workload.

Health Industry

My role: Product Designer



The "smart room" project in the hospital did not meet expectations. Despite the investment, employees did not find the technology useful, resulting in low adoption.

Problem detected

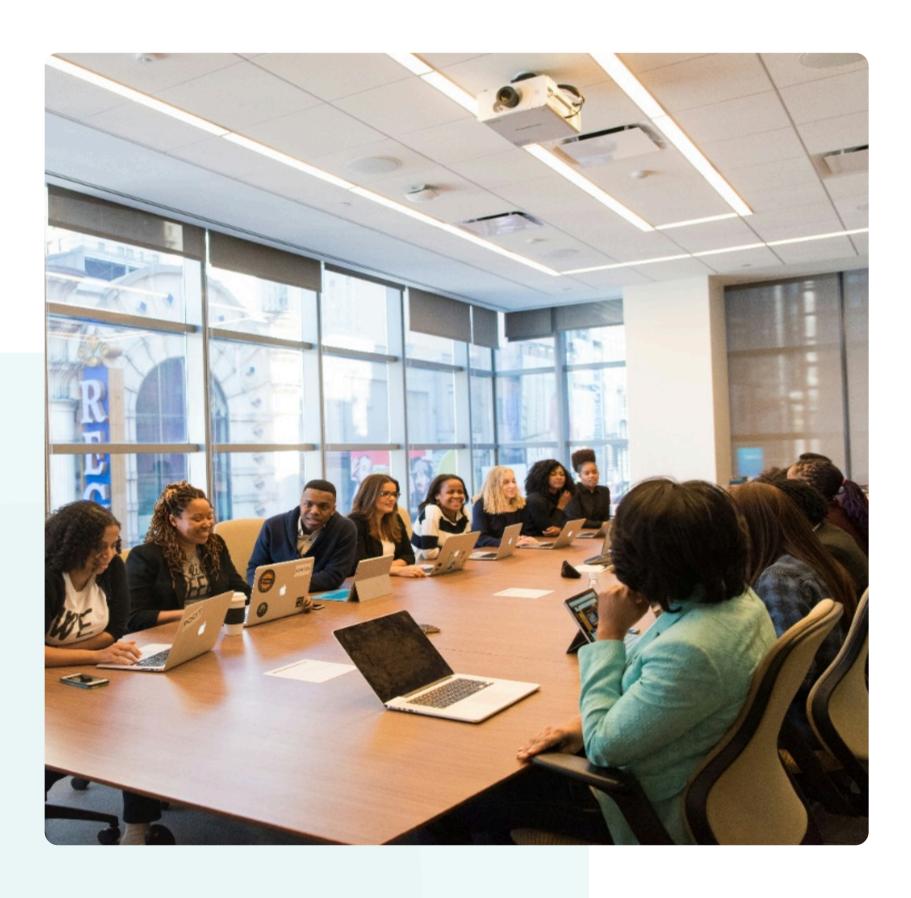
Despite its intentions, the initial Smart Room system:

- Was difficult to use for patients, especially elderly or non-techsavvy users.
- · Relied on an unintuitive remote control interface.
- Required frequent assistance from nurses for basic tasks.
- Overwhelmed users with medical or technical jargon.
- Failed to integrate entertainment, nutrition, and communication tools in a cohesive way.
- This led to frustration, low adoption, and continued strain on hospital staff.



Objective

The redesign aimed to make the Smart Room easier to use and more helpful for patients and their families, while reducing the workload for hospital staff.



Objectives

- Reduce nurse interruptions by 30%.
- Increase patient feature use by 50%.
- Improve ease of use by 2 points (7-point scale).
- Speed up task completion by 40%.
- Boost patient satisfaction by 25%.

8 Features & Target Definition

- Patients: Varied ages, with different tech skills, needing easy access to services.
- Nurses: Focused on patient care, seeking to reduce routine task interruptions.
- · Doctors: Require quick patient info access.
- Administrators: Oversee hospital efficiency and resource management.

Project timeline

This re-design took about six months to complete based on Design thinking

Method. This period was dedicated to defining key functionalities and ensuring the final product met complex user needs.



Emphaty

We observed and interviewed patients, families, and staff to understand their frustrations, needs, and daily challenges with the existing Smart Room system.



Define

We identified the core problem: the system was too technical, hard to use, and increased staff workload instead of reducing it.



Ideate

We brainstormed and sketched patient-friendly solutions: a touch interface, simplified navigation, and better integration of services like meals, media, and communication.



Prototyping, Testign And Iterating

Built prototypes tested with users; feedback led to improvements in usability, accesibility and clarity before finalizing the design.

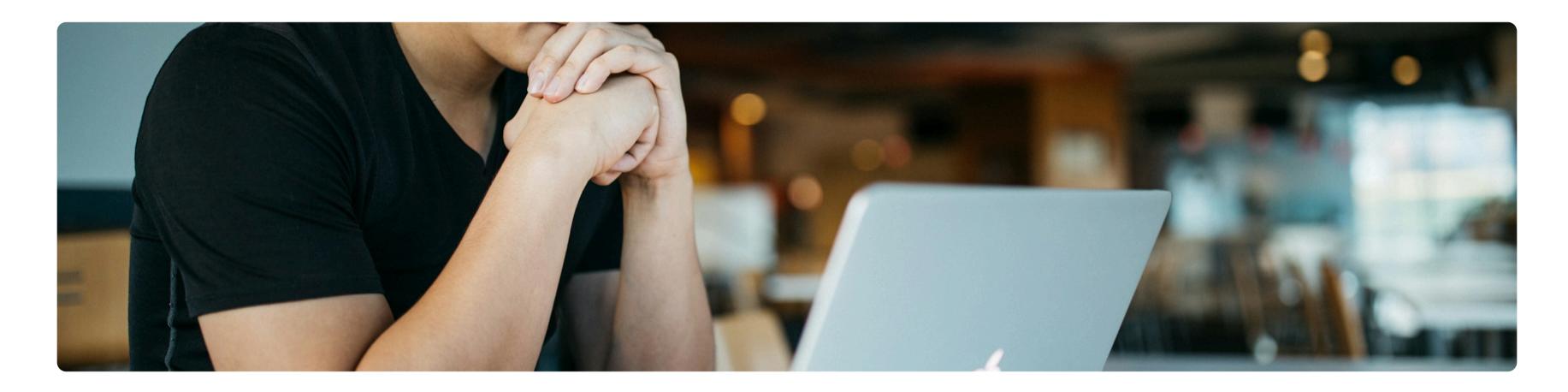


Handoff

Delivered design specs and assets; collaborated with developers to ensure accurate implementation and resolve issues.

Team & collaboration

Successful delivery of the Smart Room redesign relied on strong collaboration and clear communication across teams. I coordinated efforts among stakeholders, designers, developers, and testers, using Microsoft Azure DevOps to manage the project efficiently.





Stakeholder Sessions

Regular meetings with stakeholders ensured business goals and user needs were clearly understood and prioritized.



UX Design Coordination

Collaborated closely with UX designers to iterate on concepts, wireframes, and prototypes, maintaining user-centered focus.

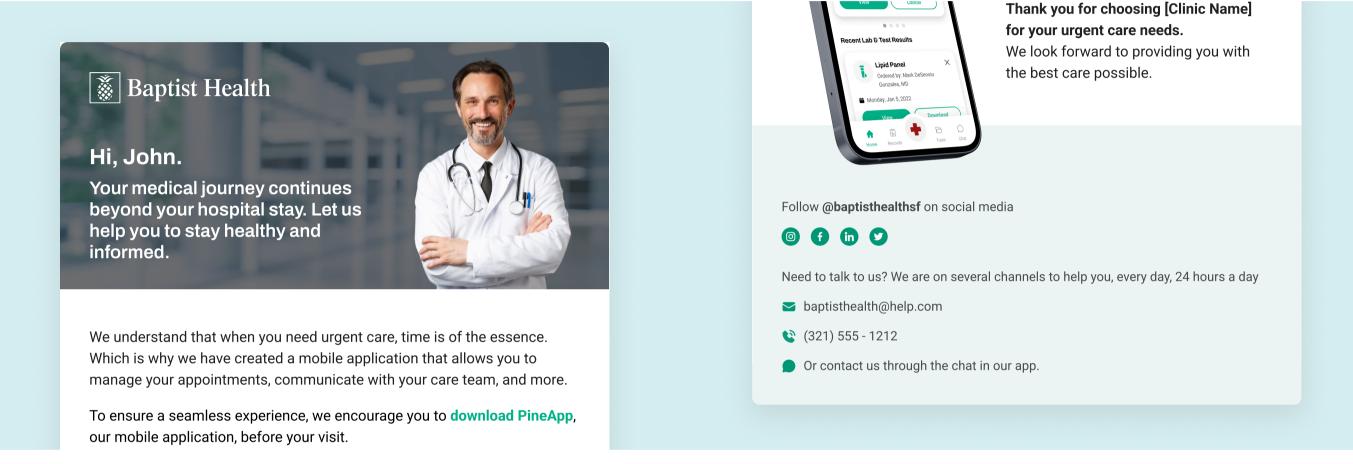


Developer Alignment

Worked with developers to clarify requirements, address technical constraints, and support smooth implementation.

Research

To understand the problems with the existing Smart Room system, we used a mixed-methods research approach. Combining qualitative and quantitative data allowed us to capture both user behavior and underlying motivations. Insights from this research directly shaped our design decisions.





Interviews

Conducted with patients, nurses, and doctors to uncover pain points, needs, and emotional drivers behind system usage.



Platform Analytics Review

Reviewed data from the existing platform to identify underused features, frequent touchpoints, and task drop-offs.



User Feedback Surveys

Distributed to a broader user base to validate patterns seen in interviews and analytics, and to gather satisfaction data.



Synthesis And Insights

All findings were mapped and analyzed using affinity clustering and pattern recognition to identify key design opportunities.

Initial context data

These initial hurdles underscored the need for strategic improvements to enhance system acceptance and streamline healthcare operations

Increased Workload: Medical Staff Handling 15% Surge

Medical staff are managing a 15% increase in workload, impacting efficiency and direct patient care time.

Patient Dissatisfaction

Patients report dissatisfaction, finding the system too complicated and difficult to navigate.

Low Adoption Rate

Patient adoption rate stands at a mere 17%, falling significantly short of the anticipated 65-70% goal.

System Acceptance Challenges

Patient experience falls short due to perceived complexity and overall dissatisfaction with the system.

Quotes from interview process

Using the system is like solving a maze every time. It's frustrating and confusing.



Emily Rodriguez
Patient

System glitches make updating patient charts a time-consuming task. It slows us down.



Emma Martínez Nurse The system's slow response time affects our ability to make timely medical decisions.



Joshua Torres Physician

upcoming uggle. I often encounter errors and delays in accessing my medical records. It's unreliable.



Marco Hernández

Patient

The lack of system integration with other hospital tools causes delays in patient care.



Charles Rivers

Nurse

Patients often com results due to syste



Isabella Do

Navigating complex system interfaces requires ongoing training, diverting time from patient care.



Mathew López
Internal Medicine

We often face data entry errors that impact the accuracy of patient records.



Sophia Jhonson

Nurse

The system layout is confusing and cluttered, making it hard to manage my health info.



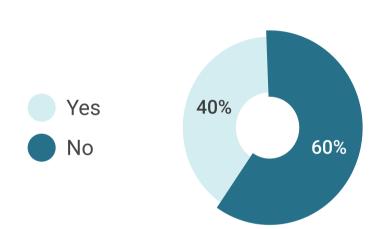
Donald Perry

Patient

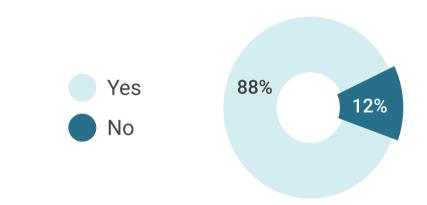
Survey findings (patient information)

This re-design took about **six months to complete**. This period was dedicated to defining key functionalities and ensuring the final product met complex user needs.

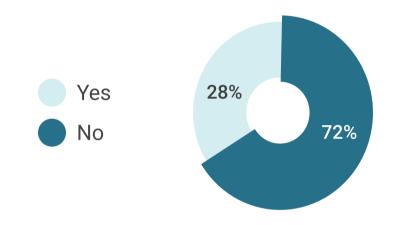
Do you find the platform useful for managing your medical information?



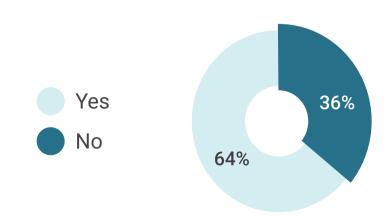
Have you experienced frequent delays in accessing your medical records through the system?



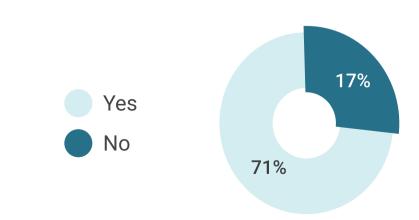
Does the current system help you communicate effectively with healthcare providers?



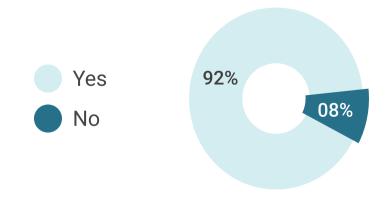
Do you find it challenging to navigate the platform to find information about your current diet?



Do you believe the system should be significantly improved to better meet your healthcare needs?



Are you satisfied with the technical support provided to address issues with the system?



Next steps

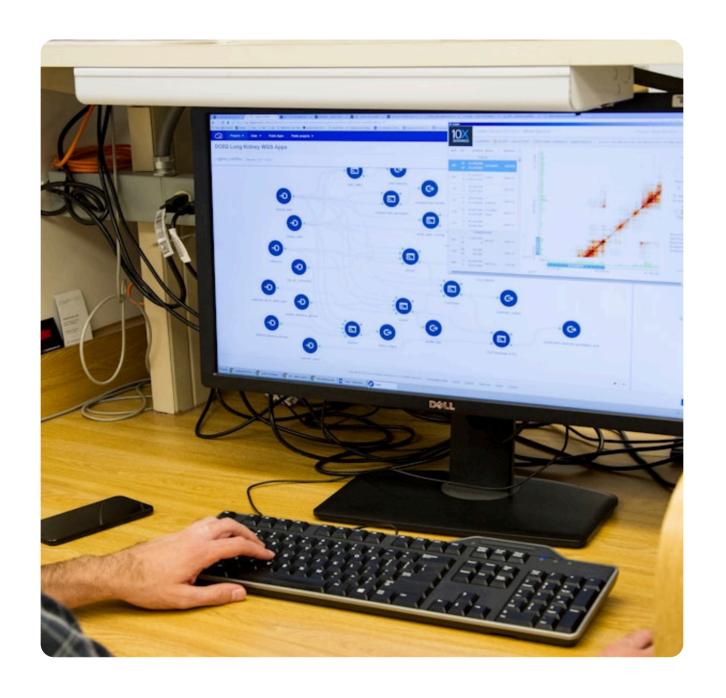
Data analysis

Research-Driven design decisions

After collecting qualitative and quantitative data, we applied structured analysis methods to extract meaningful insights:

- **Thematic coding**: We grouped interview and open-ended survey responses by recurring themes (e.g., "difficulty with remote," "need for autonomy," "confusion with interface").
- **Usage pattern mapping**: From platform analytics, we identified which features were used the most/least and where users dropped off.
- Cross-method triangulation: We compared findings from interviews, surveys, and analytics to validate patterns and reduce bias.
- Affinity diagramming: We synthesized all data into clusters to surface opportunities and common friction points.

Result: A clear, evidence-backed understanding of user pain points, unmet needs, and behavioral trends.



Next steps

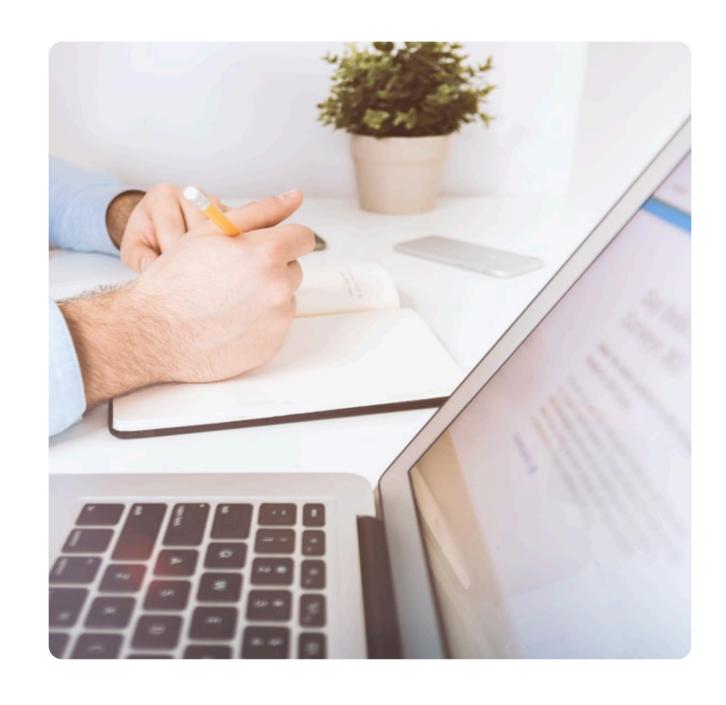
Data analysis

Research-Driven design decisions

Research findings had a direct impact on our design strategy:

- **Simplified Interface**: Interview and survey feedback revealed cognitive overload; we reduced complexity and used clearer iconography.
- **Touch-based Navigation**: Low usage of remote-based features led us to prioritize a bedside touchscreen as the primary interface.
- **Prioritized Features**: Analytics showed high interest in entertainment and food ordering; these were made more prominent and easier to access.
- Accessibility Considerations: Patterns among elderly users prompted larger text, contrast adjustments, and simplified flows.

Research didn't just inform design, it defined it.



Key insights

Patients seek autonomy

Many prefer handling basic tasks themselves instead of calling nurses.

Remote controls cause frustration

Most users—especially older adults—struggled with the existing remote interface.

Nurses face frequent interruptions

Many requests related to features available on the TV—like food menus or entertainment—added pressure on staff.

TVs are familiar, but need better UI

Patients are comfortable using TVs, but interfaces must be simple and intuitive for limited-input navigation.

Frequent nurse interruptions

Many requests related to features available on the TV-like food menus or entertainment—added pressure on staff.

Emotional connection matters

Patients wanted easier access to call or message family directly from the TV.

Popular features weren't visible

Entertainment and food services were the most used, but often hidden or hard to access via the remote.

Needs vary greatly

The system must adapt to different levels of mobility, tech familiarity, and cognitive ability, within the limits of a TV-based experience.

Personas (Patients)

Diana Robles, 34

Mother of a sick child



Pain points

- The current entertainment platform is confusing and difficult to navigate, making it challenging to find relevant educational content for her child.
- There are no clear options to personalize the experience according to her child's needs.
- She wishes the platform facilitated communication with medical staff.

Goals

 To facilitate entertainment and education for her child during hospital stays.

Solve

 Integrate communication features allowing quick consultations with medical staff, enhancing Maria's peace of mind.

Jonathan Presley, 23

Young adult patient



Pain points

- The current platform lacks entertainment options that appeal to someone his age.
- He finds it difficult to access relevant educational content in an interesting format.
- There are inadequate dining options that cater to his preferences and dietary needs.

Goals

• To enjoy entertainment during his hospital stay that is relevant and engaging for his age group.

Solve

 Include interactive and visually engaging educational content to keep Jonathan interested and engaged during his hospitalization.

Javier Nelson, 54

Caregiver for his father



Pain points

- The current platform lacks clear information on how to properly care for his father in the hospital.
- There is insufficient information about available dining services for his father and his dietary needs.

Goals

• To obtain clear information about his father's health status and treatment.

Solve

 The new platform could provide practical caregiving guides and tips to help Javier better care for his father in the hospital.

Personas (Medical Staff)

Michael Johnson, 45

Doctor



Pain points

- Difficulty accessing the complete patient record quickly and clearly.
- Need for an intuitive and efficient user interface to review medical histories and progress notes.
- Issues with integrating data from different hospital systems, hindering a comprehensive view of patient history.

Goals

 Quick access to relevant medical information for informed decision-making.

Solve

• Customized interfaces to clearly and concisely display critical patient data.

Anya Mikels, 32

Nurse



Pain points

- Difficulty accessing crucial patient data quickly, such as diet and updated medication.
- Frustration with the lack of integration between patient management systems and diet/ medication systems.

Goals

- Easy access to updated information on patients' diet and medication.
- Improve accuracy and efficiency in clinical data recording.

Solve

A new platform could integrate patient
management systems with dietary and
medication records, allowing smoother access
to relevant information.

Jorge Miroslava, 47

Administrator



Pain points

- Difficulties in managing and coordinating services being sought by patients.
- Need to improve efficiency in appointment management and medical services billing.
- Issues with lack of integration between hospital management systems and billing systems.

Goals

• Facilitate administrative management and billing of medical services.

Solve

 A new platform could offer integrated tools for appointment management, service tracking, and billing.

User journey map

We created journey maps to visualize the patient and staff experience with the Smart Room system.

- Built from research: Based on interviews, surveys, and usage data.
- Multiple user types: Separate maps for patients, nurses, and families.
- Emotional tracking: Highlighted moments of frustration, confusion, and satisfaction.
- Design alignment: Used to identify key pain points and guide design priorities.

SCENARIO: Find educational content.

I'm not sure where to start, but I want to learn more about my condition while I wait.



There are several options entertainment, meals, settings. I'm not sure where the educational part is.

I locate "Patient Education" under a sub-menu. It should've been more visible or labeled more clearly.



I try two different menus but keep ending up in videos or hospital info. I feel lost.



Nice level

Medium level

Bad level

Now I know how to care for myself. I didn't need to ask anyone or wait for a nurse.



The video is simple and wellpaced. I can understand what I need to do once I'm home.





Problem

The original Smart Room TV interface was difficult to use, especially for elderly or low-tech patients. Navigation through a remote control felt confusing, and core features—such as entertainment, meal requests, communication, and educational content—were buried or labeled unclearly. This led to low adoption, constant staff assistance for basic tasks, and frustration for patients and families.



Hypothesis

If we redesign the Smart Room TV interface to be simpler, more intuitive, and structured around patient needs—with clearer labels, visual hierarchy, and easier navigation—then patients will use the platform more independently, and staff workload related to non-clinical tasks will decrease.



Key metrics

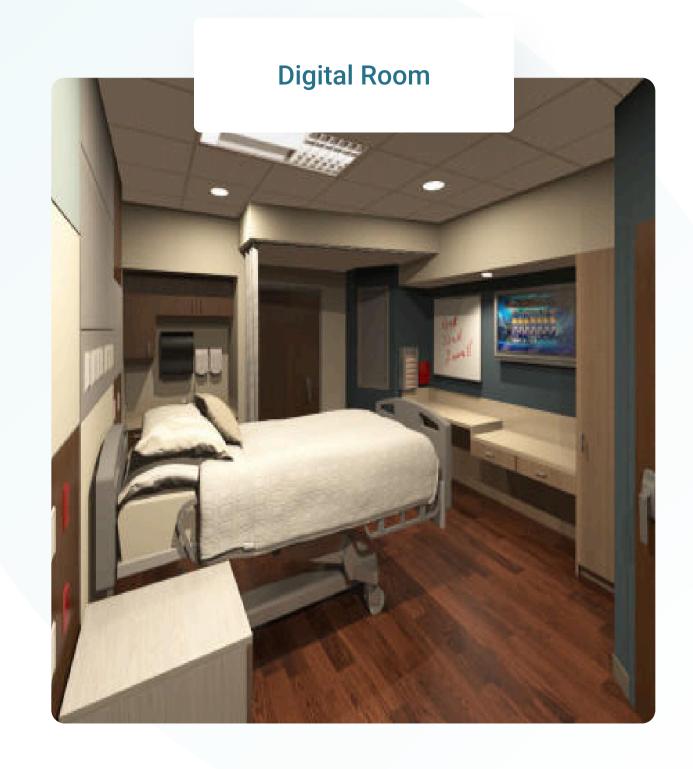
- Staff Interruption Reduction
- Feature Adoption Rate
- Task Completion Time
- Ease-of-Use Rating
- Patient Satisfaction
- Support Request Frequency
- Onboarding Success

Continued medical education

ical notes tracking

Baptist Health's mobile app

Lab results tracking



Dining meals

Education

Entertainment

Surgical Procedures

Oportunity zone

These areas were identified through surveys, interviews, and competitor analysis, pinpointing key user needs and expectations.

Renovating the current plattform (main sections)





Home



Enterteinment



My Meals



Education



Plan For The Day



Familty Connects



Language



Patient Care Board

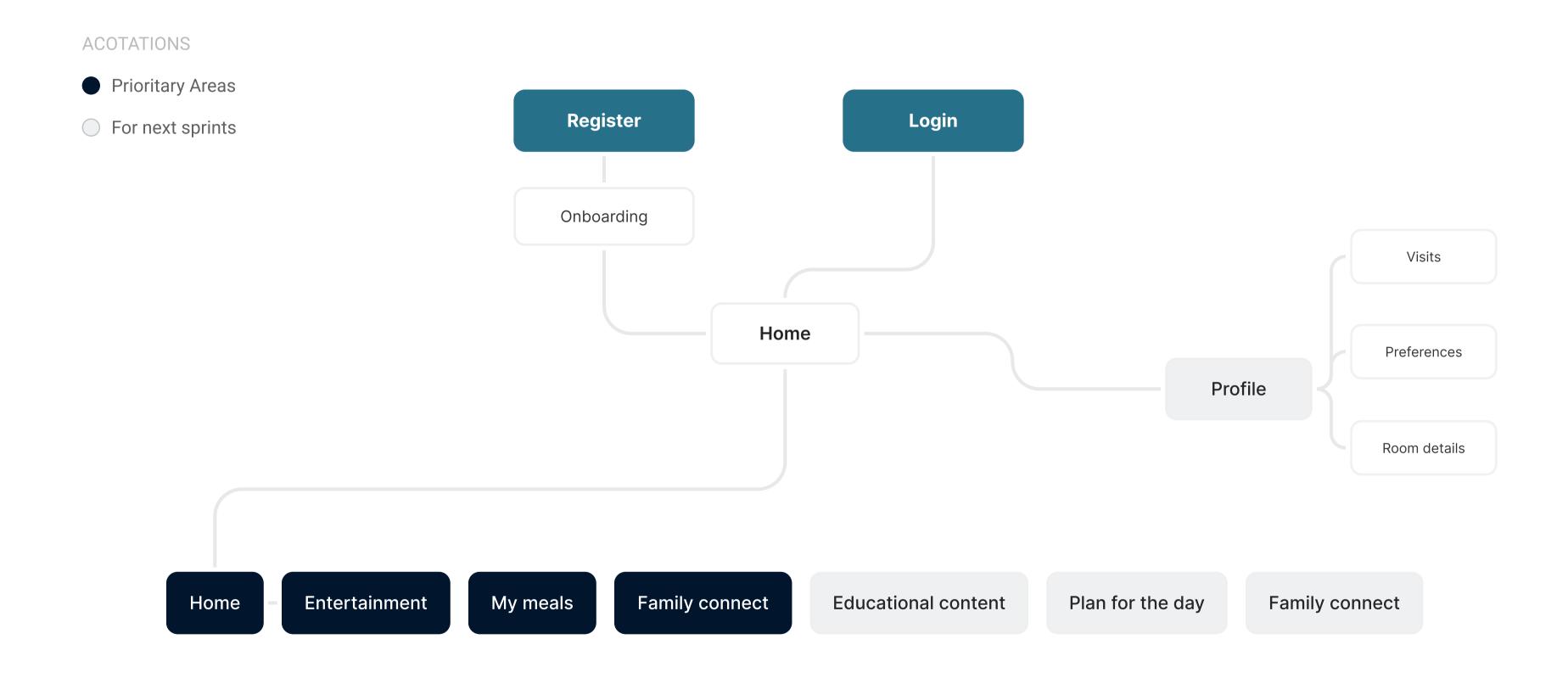


Your Care Team



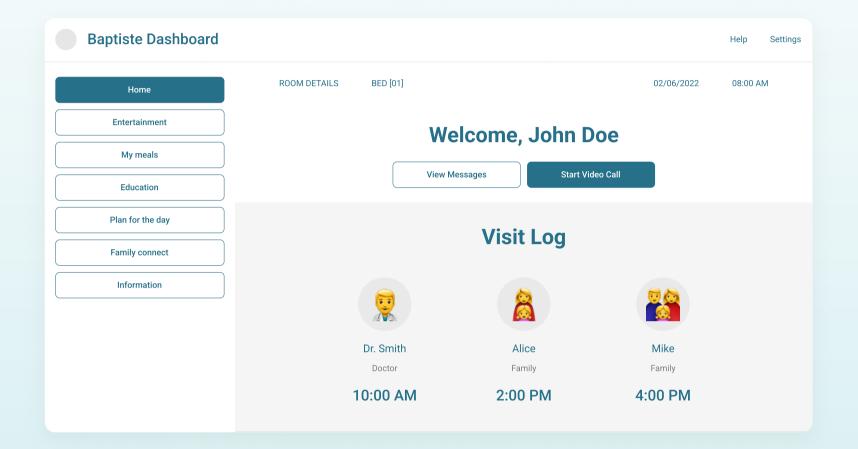
Visits

Information Architecture

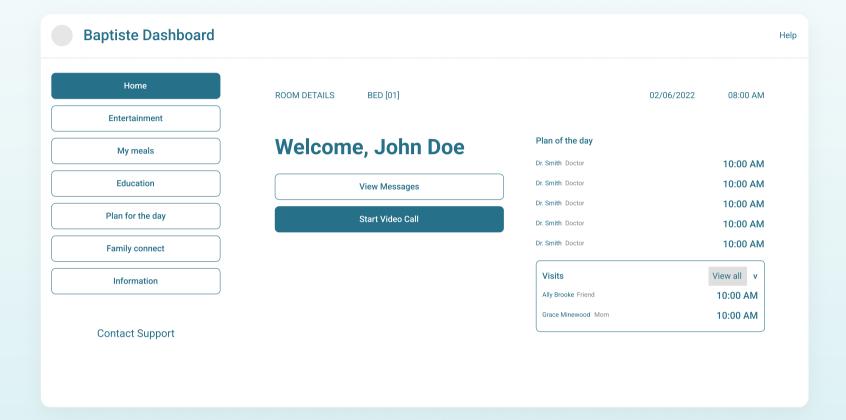


^{**} Only a preview is shown due to NDA or confidentiality agreements.

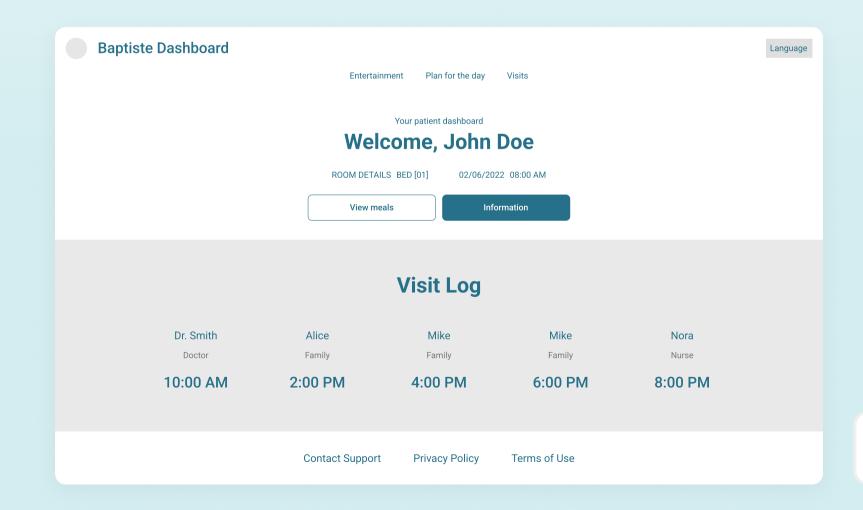
Wireframes Mid-fidelity



Concept 02 * (valideated)



Concept 01



Concept 03

System thinking & interaction logic

Mapping interactions

System dependencies

Resilient & Transparent UX

To improve usability, we first had to understand how patient actions triggered real-world processes. Many features—like meal orders or service requests—were tied to multiple backend systems or staff roles.

- End-to-End Flow Mapping: We mapped how each user action (e.g., requesting food) flowed from the TV interface to hospital systems and staff operations.
- Real-World Alignment: Interviewing nurses and admins revealed mismatches between interface logic and real workflows (e.g., unnecessary nurse approvals, duplicate requests).
- Task Simplification: We restructured flows so users could complete tasks in fewer steps, while backend logic handled routing and responsibility.
- Interaction Scenarios: We created usage scenarios (e.g., post-surgery patient ordering food) to test how different actions depended on timing, staff, or patient condition.



System thinking & interaction logic

Mapping interactions

System dependencies

Resilient & Transparent UX

The Smart Room depended on existing hospital infrastructure—ranging from dietary systems to EMR access and IoT devices. We worked cross-functionally to ensure design feasibility and operational coherence.

- Tech + Ops Discovery: We collaborated with IT and development teams to document the capabilities and limits of connected systems (e.g., nurse call APIs, kitchen service status).
- Safe Default Behaviors: Where systems could fail or respond slowly, we designed fallback states (e.g., "Your request is pending, please wait" or manual alert options).
- Adaptable Logic: Hospitals differ in setup. We created logic flows that could adjust based on room type, wing, or hospital-level restrictions.
- Latency & Dependency Awareness: Some requests (like room temperature or light settings) had real-time response needs, while others (like surveys) could tolerate delays. We built in priority logic accordingly.

```
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System thinking & interaction logic

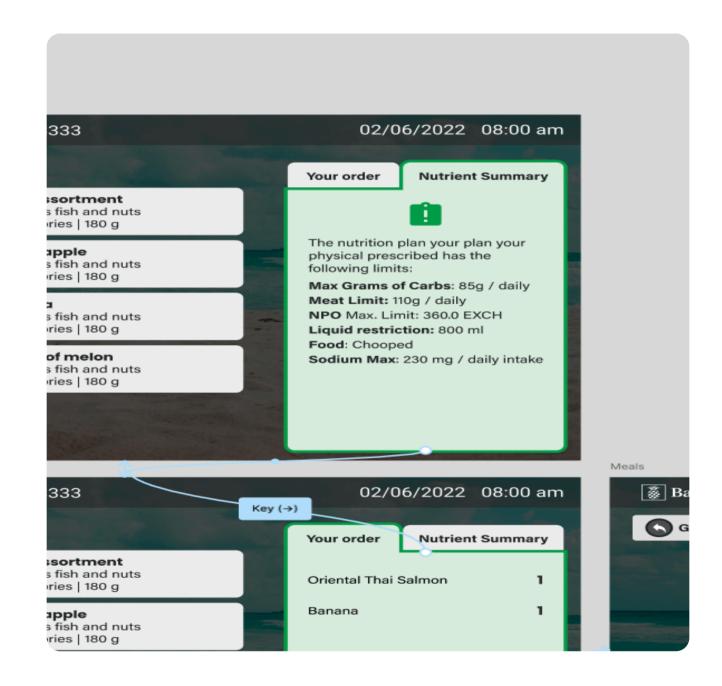
Mapping interactions

System dependencies

Resilient & Transparent UX

Users shouldn't feel the burden of technical complexity. We focused on making the interface feel simple and trustworthy—even when system interactions were layered or uncertain.

- Clear Status Feedback: Every user action provided immediate, human-readable feedback—success, error, or system delay—with guidance on next steps.
- Retry & Recovery States: When something failed (e.g., system offline), the UI offered retry options or safe alternatives (e.g., "notify staff manually").
- Reduced Cognitive Load: We avoided exposing technical terms or backend logic. Instead, users saw clear, task-focused messaging ("Your meal is on the way").
- **Designing for Confidence**: Especially in a hospital setting, clarity and reassurance are critical. Visual indicators (checkmarks, confirmations, progress bars) made interactions feel secure and complete.



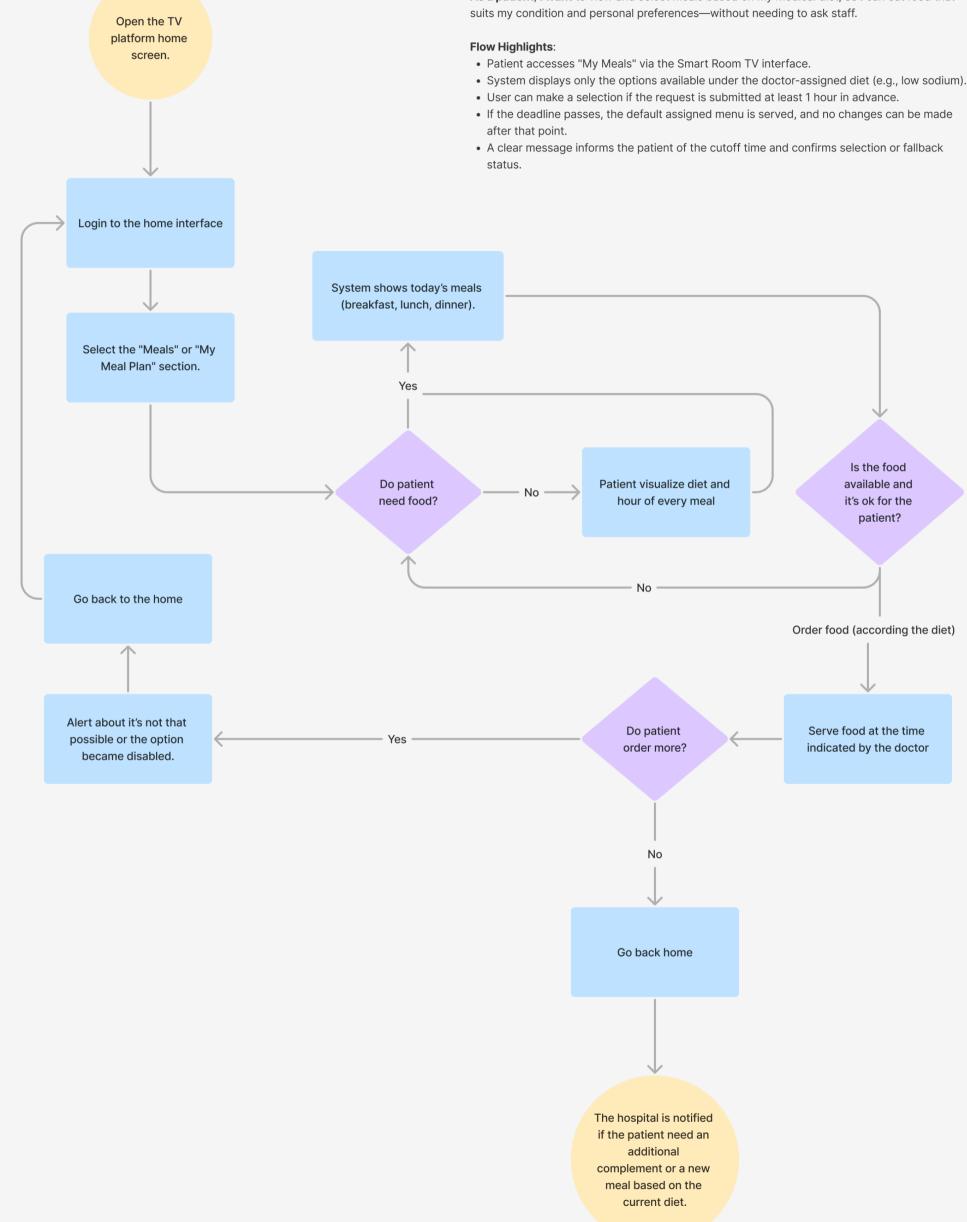
Task flows

How we structured it

- User-Story based flows: Each flow was built from a user story (e.g., "As a patient, I want to view and choose my meals so I can eat according to my diet").
- · Conditional logic integration: Diagrams included variations depending on user state (e.g., dietary restrictions, time remaining, or system availability).
- Acceptance criteria defined: Each path had clear outcomes that satisfied both technical feasibility and hospital operations (e.g., meal cutoff times, medical diet compliance).
- · Stakeholder-reviewed: Doctors and admin staff reviewed flows to validate that they aligned with safety protocols and workflows.

Scenario:

As a patient, I want to view and select meals based on my medical diet, so I can eat food that





This Baptiste Plattform was developed based on the style guide and components of the current PineApp platform with adecuations. The type font changed and states colors too.

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#59BEC9

#2EA84A

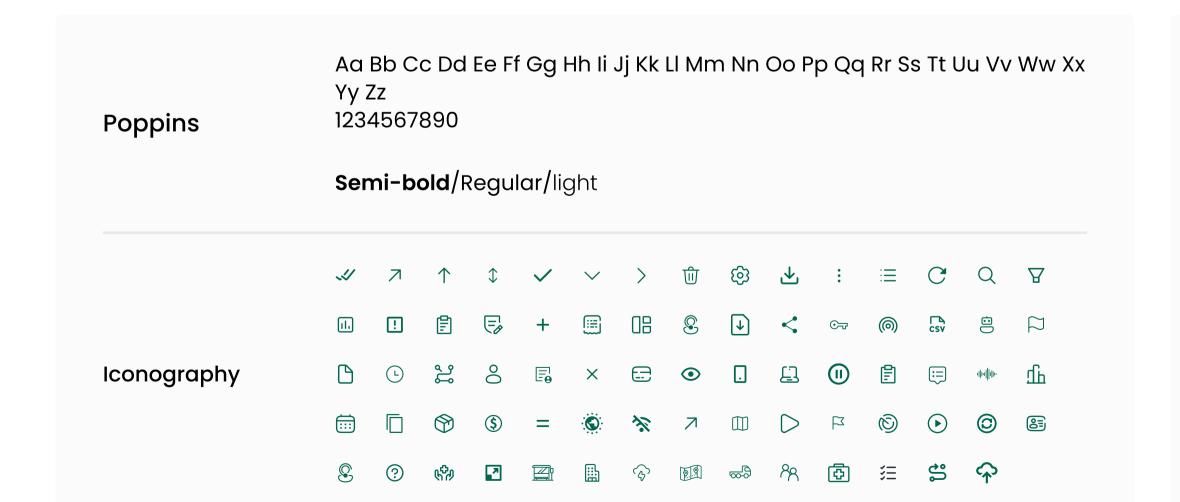
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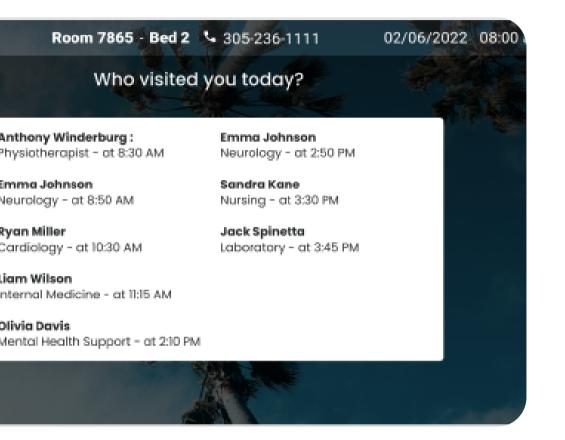
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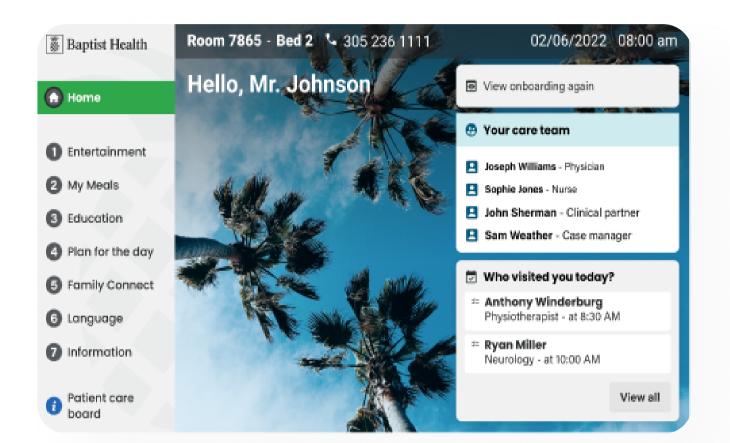
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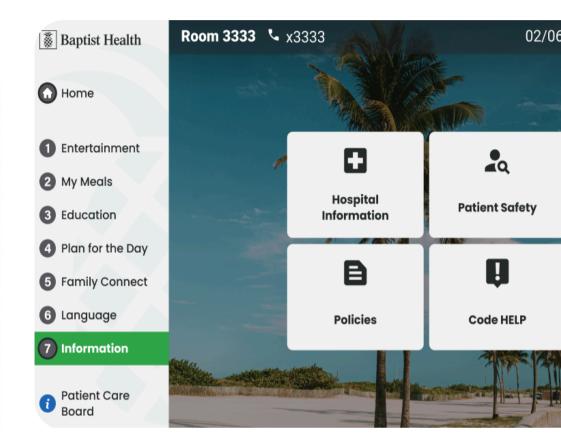


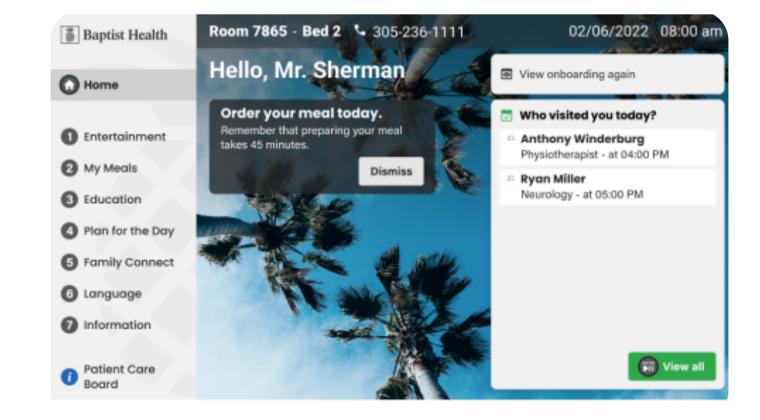


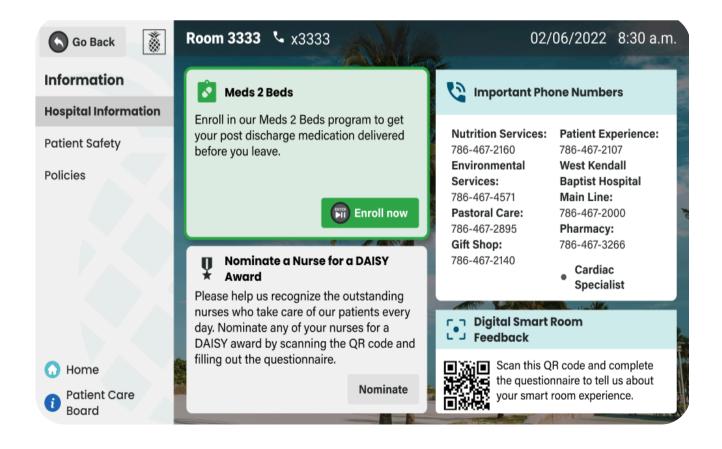
Wireframes High-fidelity











Prototyping, testign and iterating

During the strategy phase, features and target audiences were defined, along with user journeys, and concepts were tested collaboratively with the team.



Hi-Fi Screen Testing

High-fidelity prototypes were created and tested to ensure the visual and functional design met user needs.



Analysis Of Current Remote Control

Several button indicators on the existing remote control were unclear, misrepresenting their intended function.



Usability Testing With Volunteers

Unmoderated usability tests were conducted with hospital visitors, who received discount incentives for their participation.



Feasibility Verification With Engineers

The feasibility of the design was verified through consultations with engineers to ensure technical viability.



Testing

We developed interactive prototypes in Figma to simulate the redesigned Smart Room TV interface. These were used for internal reviews, usability tests, and validation with real users. Some flows were also integrated with Maze to track user behavior more precisely.

Tools & process

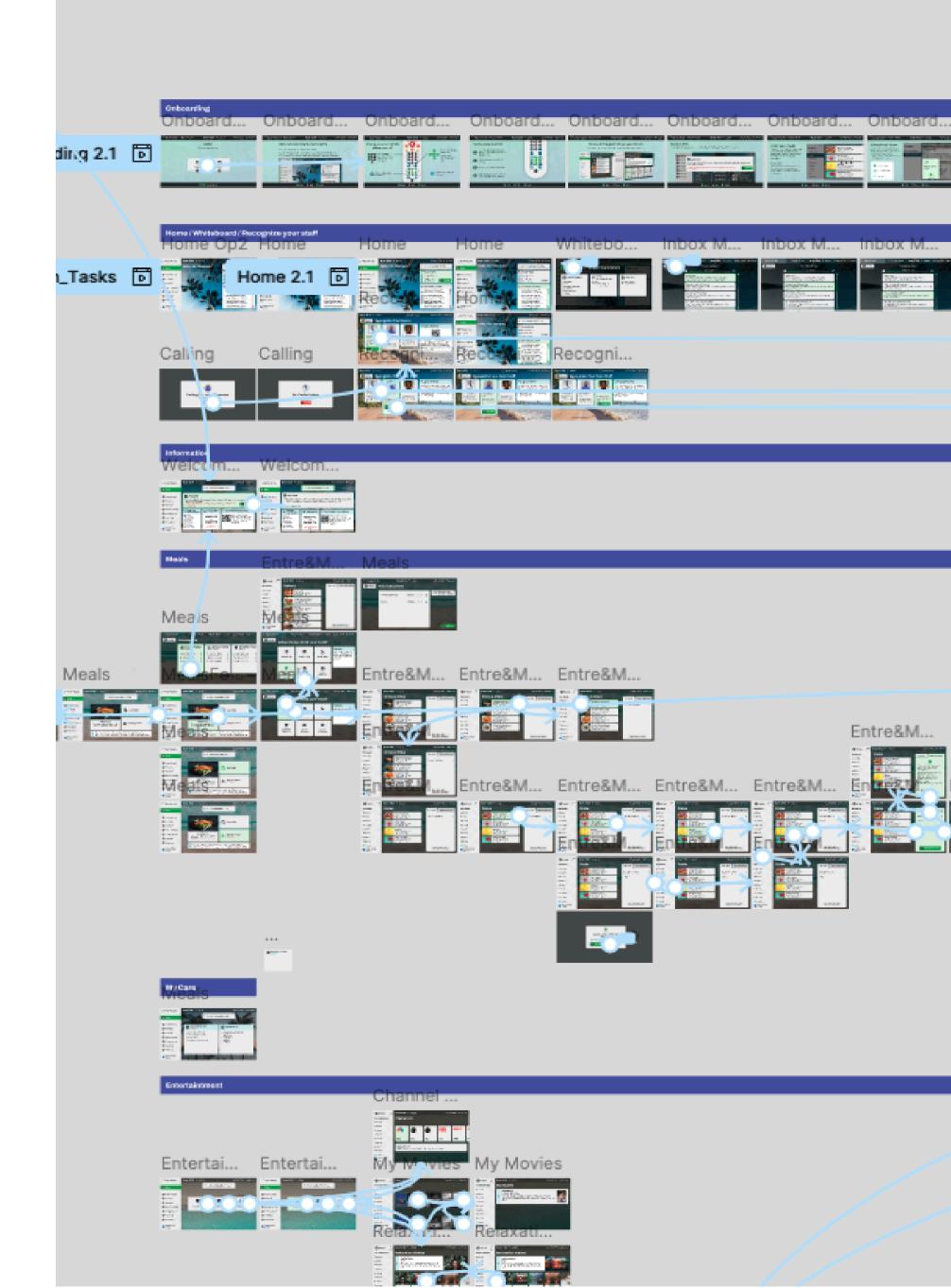
Figma interactive prototypes

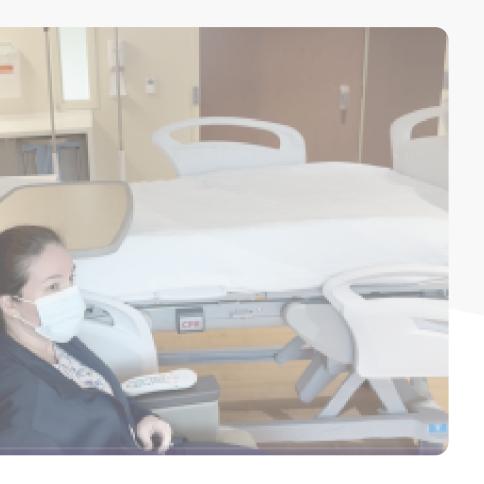
Built high-fidelity prototypes replicating the full TV experience, including navigation via directional controls (up/down/left/right).

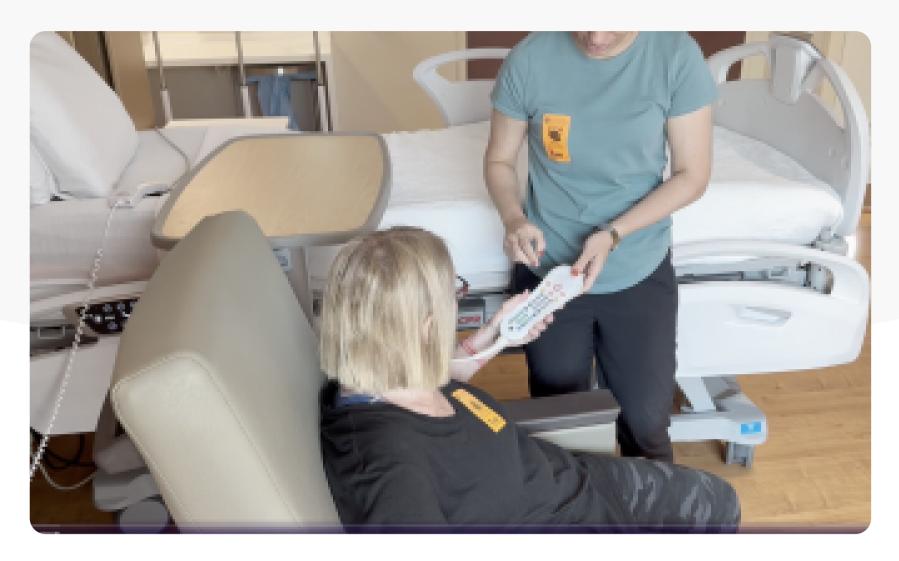
Maze integration

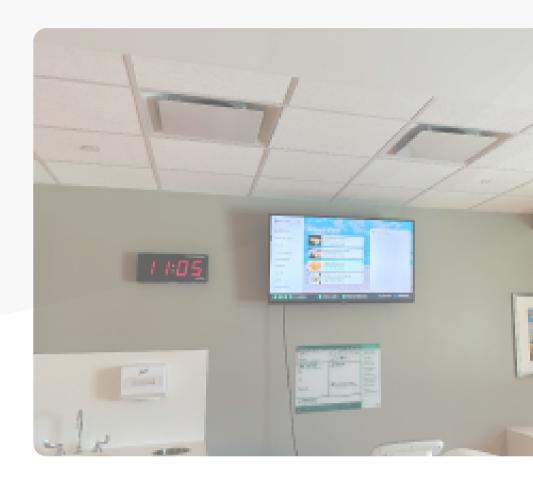
Used Maze to run remote usability tests on specific flows

—like meal selection and content navigation—tracking click
heatmaps, time on task, and completion rates.









Context

The testing was conducted in a controlled environment simulating typical hospital settings to ensure realistic user interactions.

Sample

A diverse group of hospital visitors (100), including patients and staff, was selected alleatory in diverse hospitals from Baptiste to provide a range of perspectives.

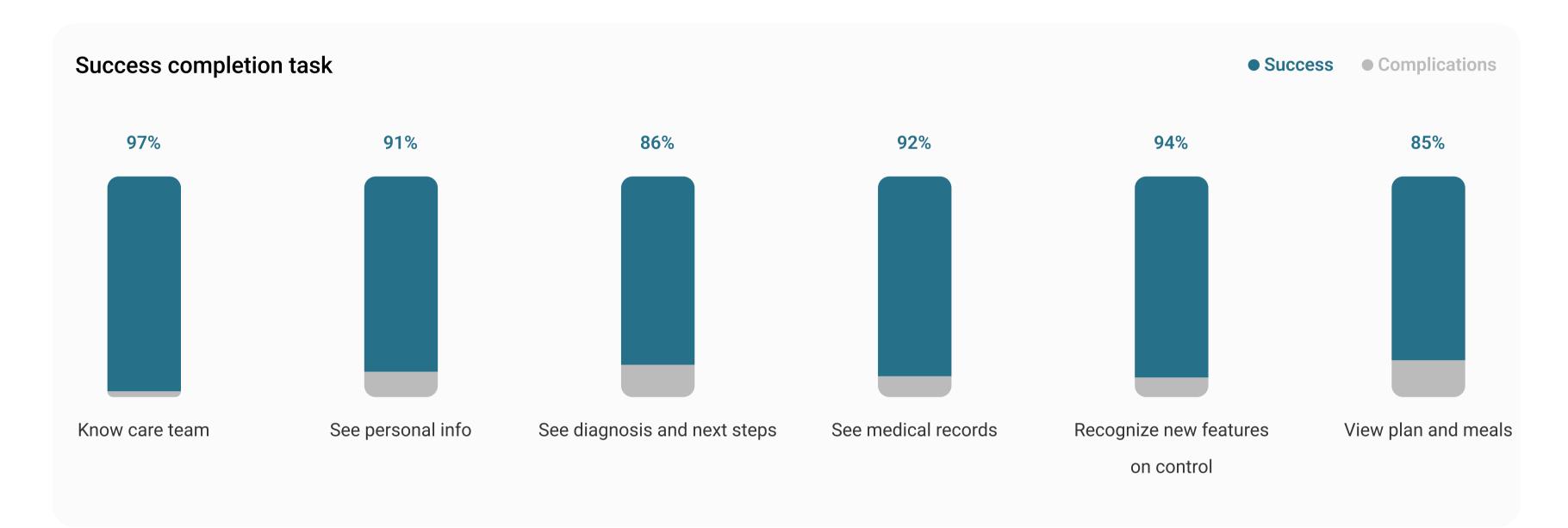
Information Recording

Feedback and interactions were recorded using screen capture software and observation notes for detailed analysis.

Metrics Evaluated

Key metrics such as task completion time, error rates, and user satisfaction were evaluated to measure the effectiveness of the design.

Findings





Efficiency Improvement

The average time for users to request assistance dropped from 3 minutes to 1.5 minutes, and meal ordering time reduced from 4 minutes to 2 minutes.



Daily Activity Overview

85% of users found the daily activity overview feature helpful, significantly improving their ability to manage and keep track of scheduled activities.



Error Rates

User error rates decreased by 35% due to clearer button indicators and intuitive design.

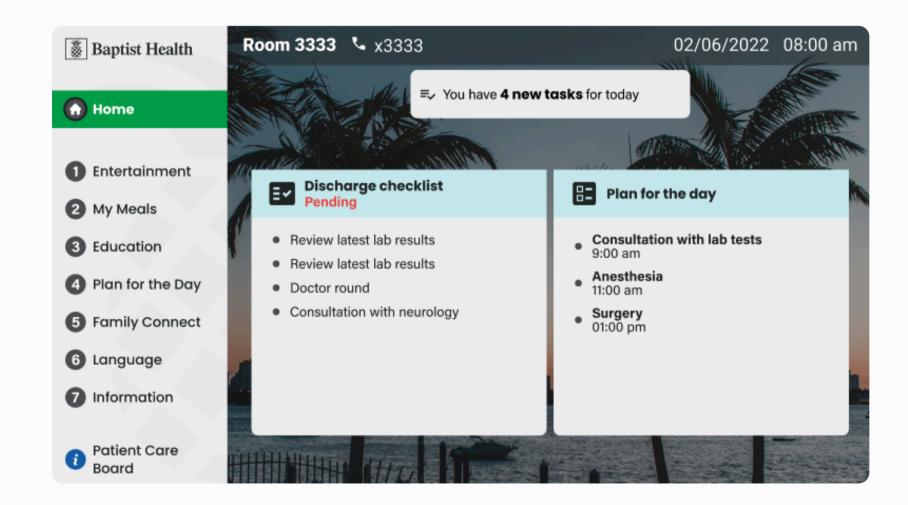


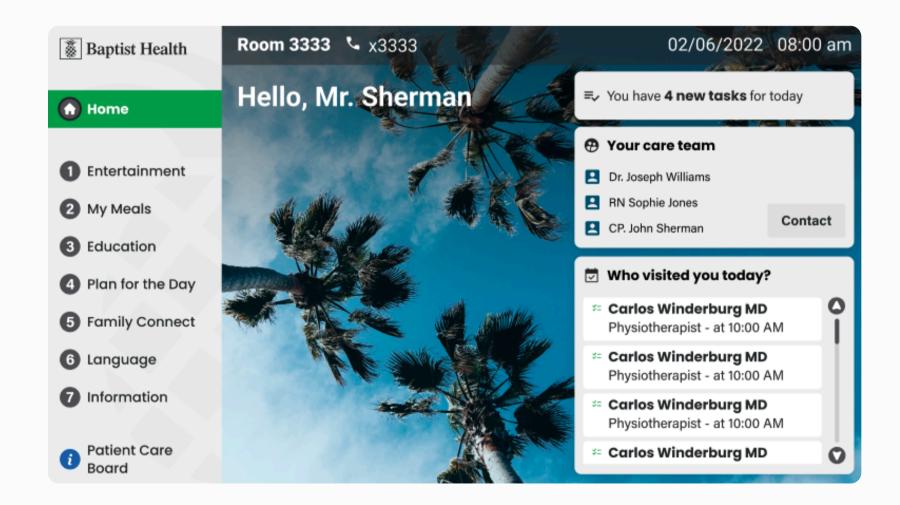
Learning Curve

90% of users became proficient with the new platform and remote control within 15 minutes, indicating a rapid learning curve.

Before & after testing

User testing revealed that the original two-column layout—with dense content on both sides—caused cognitive overload, especially among older or recovering patients. We simplified the layout to reduce visual noise and improve focus.



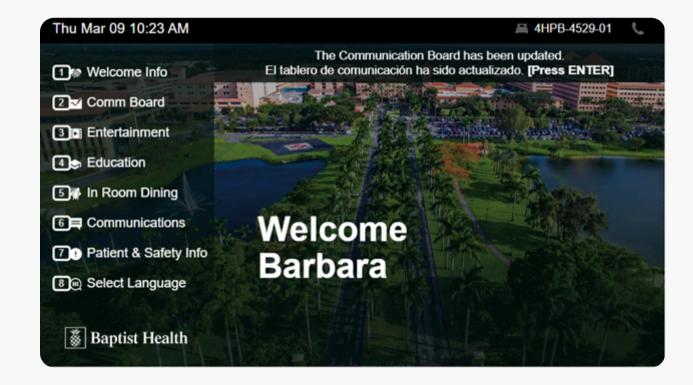


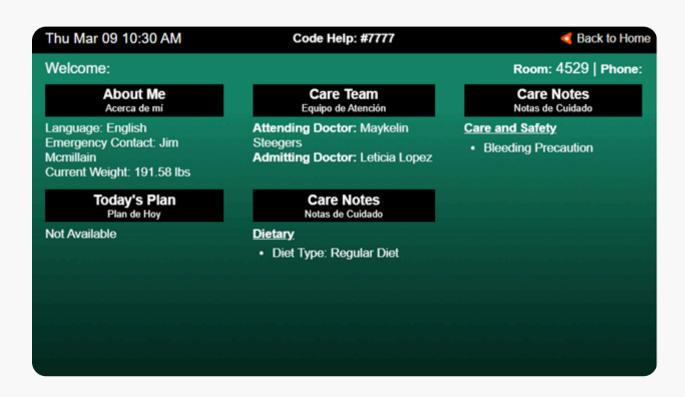
- Two full columns of information:
 - Left = welcome message + system tips
 - Right = itinerary, alerts, shortcuts
- Patients struggled to distinguish between sections.
- Many felt overwhelmed or ignored key items altogether.

- · Clear layout hierarchy:
 - Left = short welcome message with patient name
 - Right = only today's itinerary (condensed)
- Secondary content (tips, shortcuts) moved to sub-SECTIONS.
- Users reported the screen felt calmer, clearer, and easier to scan.

Before the re-design

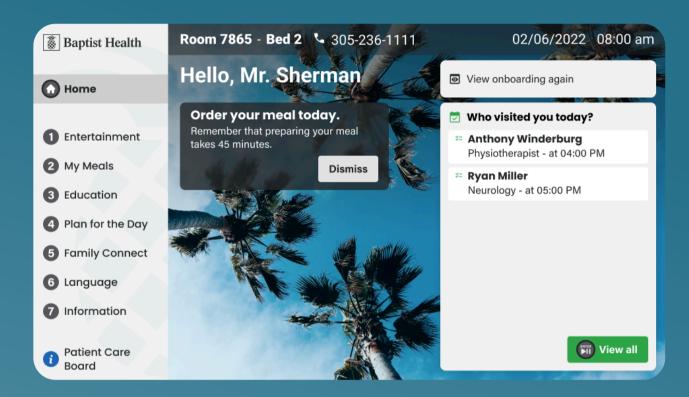
Confusing, technical language, hidden information

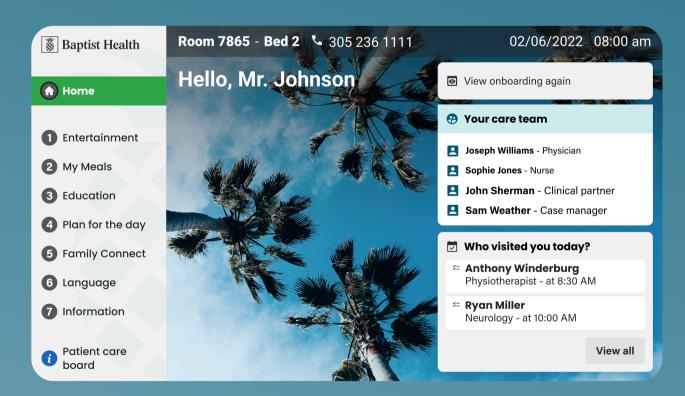




After

Clear, enjoyable, informative, user friendly







Accesibility considerations

Accessibility was a core priority from the beginning of the Smart Room redesign.

We aimed to make the interface usable for patients with visual, cognitive, or auditory limitations, ensuring that everyone could interact with the system independently.

Deuteranomaly





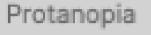
Protanopia



Deuteranomaly

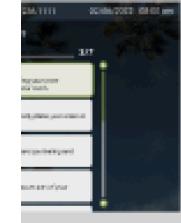






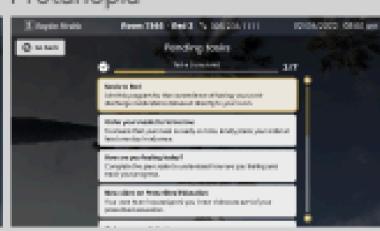


Deuteranomaly

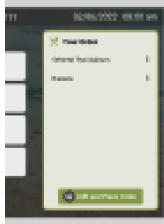




Protanopia



Deuteranomaly







What we considered early

We designed accessibility into the foundation—not as an afterthought.





Iconography With Labels

All icons were paired with text to reduce ambiguity, especially for users with low literacy or cognitive impairments.

High Readability Typography



High Readability Typography

We used sans-serif fonts, large sizes, and sufficient spacing to support readability from a distance.



Captions & Subtitles

All video and audio content included optional subtitles to support deaf or hard-of-hearing users.



Color Independence

Information was never conveyed by color alone; icons and text indicators provided alternate cues.

Stark Contrast Testing

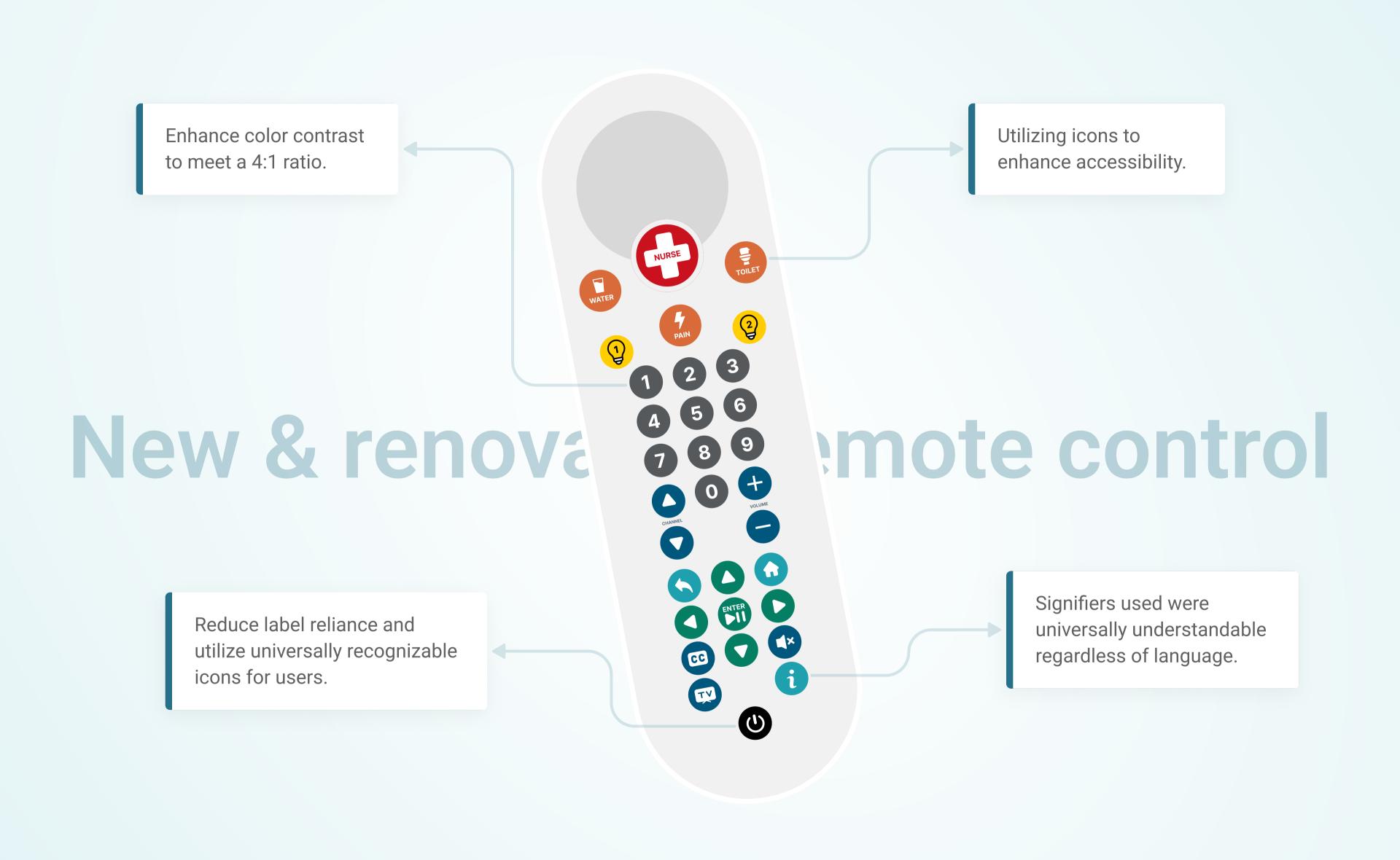
Used the Stark plugin in Figma to verify compliance with WCAG AA standards for text and UI contrast.

Simulations for Visual Impairments

Ran interface tests under conditions like monochromacy, protanopia, and low contrast vision to ensure visibility held up across states.

Inclusive Usability Testing

Included participants with known visual limitations during moderated sessions to gather direct feedback and surface overlooked barriers.



Handoff 15 days

The handoff was conducted with detailed training sessions, specific project documentation, and early setup of specialized technical support.



Documentation And Training

Comprehensive documentation and training sessions were provided to stakeholders and the operational team to ensure a smooth transition.



Feedback Integration

Feedback from prototype testing and usability sessions was integrated into the final product, ensuring alignment with user expectations before handoff.



Technical Support Setup

A technical support team was established to address initial user queries and provide ongoing assistance post-handoff, ensuring operational continuity.

Hand-off challenges

During the handoff and development phase, we closely collaborated with engineering to ensure feasibility and alignment with hospital systems. While many flows were implemented as designed, some required adjustments due to technical constraints.

- Shared detailed flows, component specs, and interaction rules via Figma + documentation.
- Regular syncs with devs to clarify logic, validate feasibility, and adjust designs as needed.
- · Maintained an open channel for issue tracking and change negotiation.

Early and continuous collaboration with development reduced rework and enabled more informed design decisions from the start.



Remote control navigation

Expected behaviors like skipping disabled elements weren't supported by the TV OS.

Solution: Redesigned focus order using the native device navigation logic.



External system integration limits

APIs for meal services and others were restricted.

Solution: Showed cached menus and displayed pending status messages when real-time updates weren't available.



Integrated Analysis

Multimedia performance issues

Some TVs struggled with streaming videos that had active subtitles.

Solution: Reduced default video resolution and offered static fallback content as an alternative.

Launch

The rollout was gradual and sequentially implemented across the hospital chain, ensuring effective adoption and continuous adjustments based on initial feedback.



User adoption

Achieve **80%** adoption among medical and administrative staff within the first two weeks post-launch.



Efficiency in care

Reduce nurse response time by **30%** since platform implementation, at least in pre-launch phase.

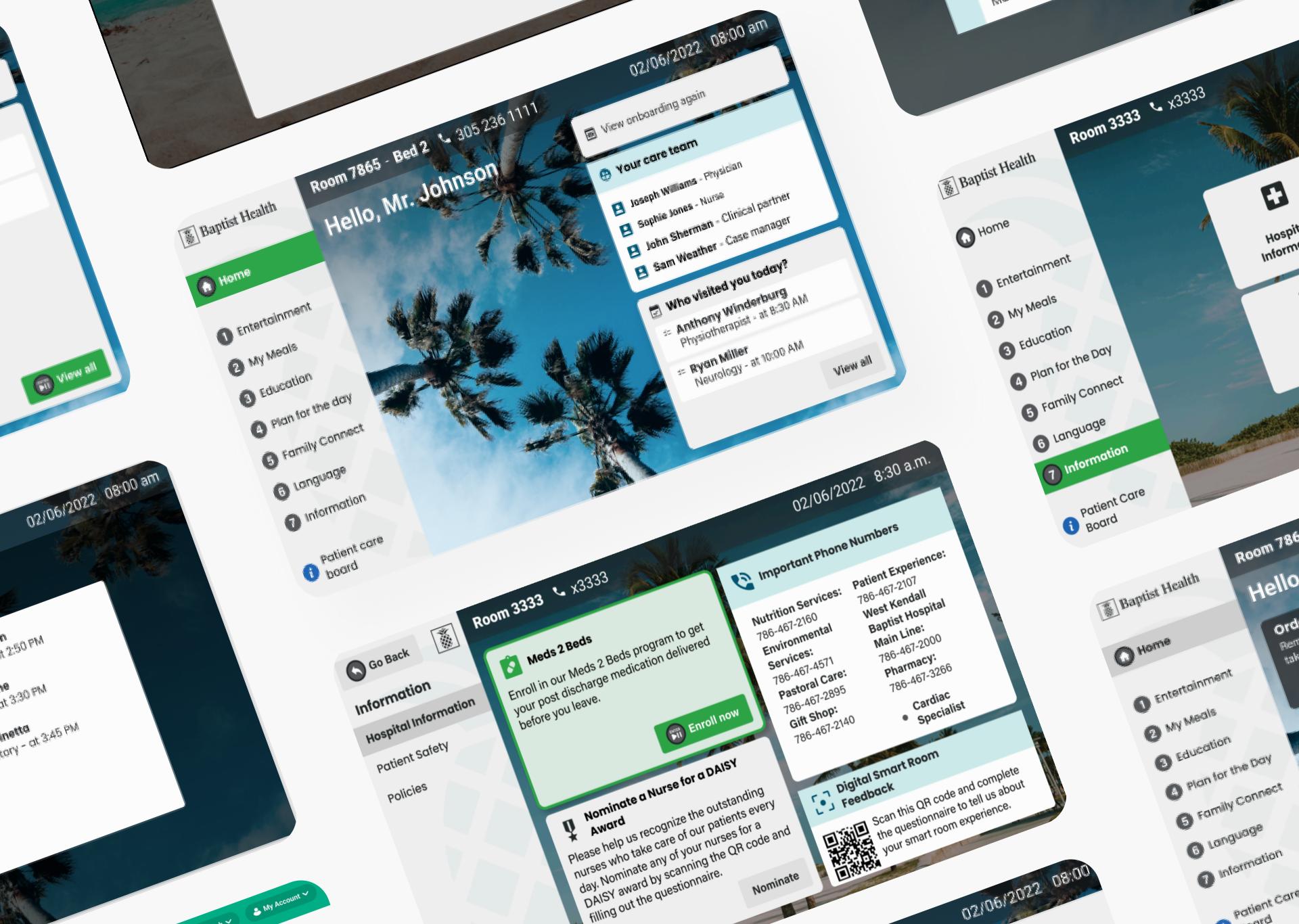


Patient and Family Satisfaction

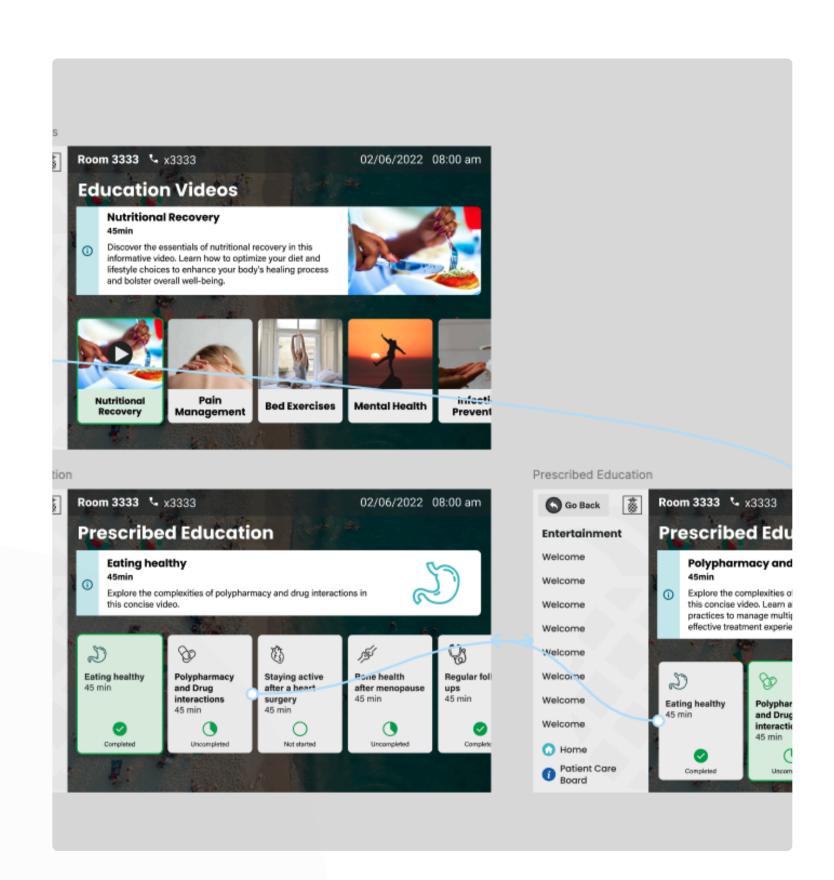
Achieve an average rating of **4.2 out of 5** in patient and family satisfaction surveys, indicating a significant improvement in user experience.



Sessions were coordinated with the marketing team to showcase the platform's benefits and advancements.



Learning Experience





Main Challenges Faced

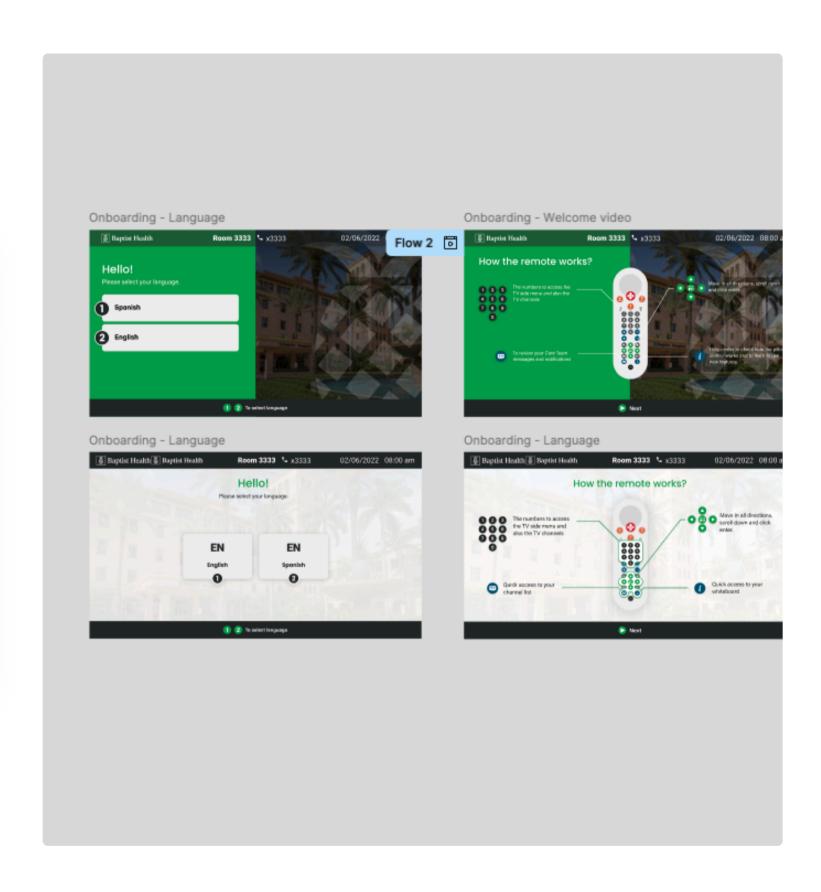
- Balancing system complexity with ease of use, especially for diverse patient abilities.
- Integrating multiple hospital systems with limited APIs and realtime constraints.
- Designing for TV remote navigation, which limited interaction patterns and prototyping options.

Learning Experience



Difficult Decisions & Trade-Offs

- Simplifying some advanced features to ensure stability and usability on legacy hardware.
- Prioritizing core tasks (meals, entertainment, communication) over less critical functions due to time and technical limits.
- Accepting that not all user customization could be real-time due to backend restrictions.

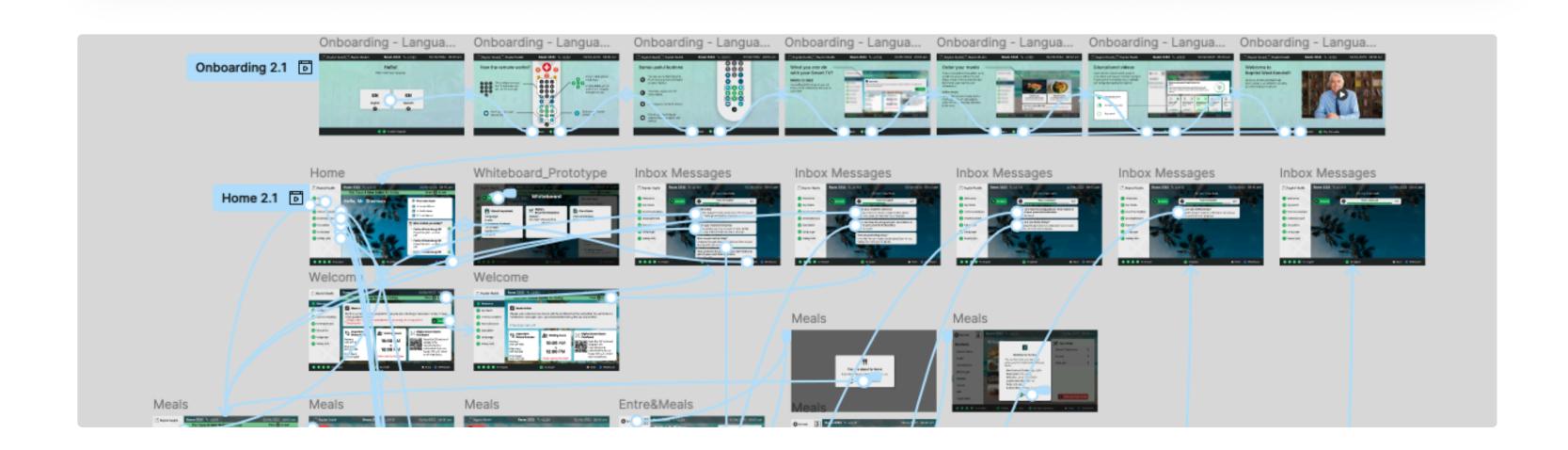


Learning Experience



Key Learnings & Future Applications

- Early and continuous collaboration with cross-functional teams is crucial to avoid costly redesigns.
- Designing for constrained devices demands creative simplification without sacrificing user needs.
- Accessibility and inclusivity must be embedded from day one, improving outcomes for all users.
- User testing in realistic environments uncovers issues that prototypes alone cannot reveal.



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Welcome to the Baptiste Digital Room! Here you can manage your medical information, check your clinical conditions, enjoy educational and entertainment content, connect with your loved ones, easily view your daily schedule & more!

