

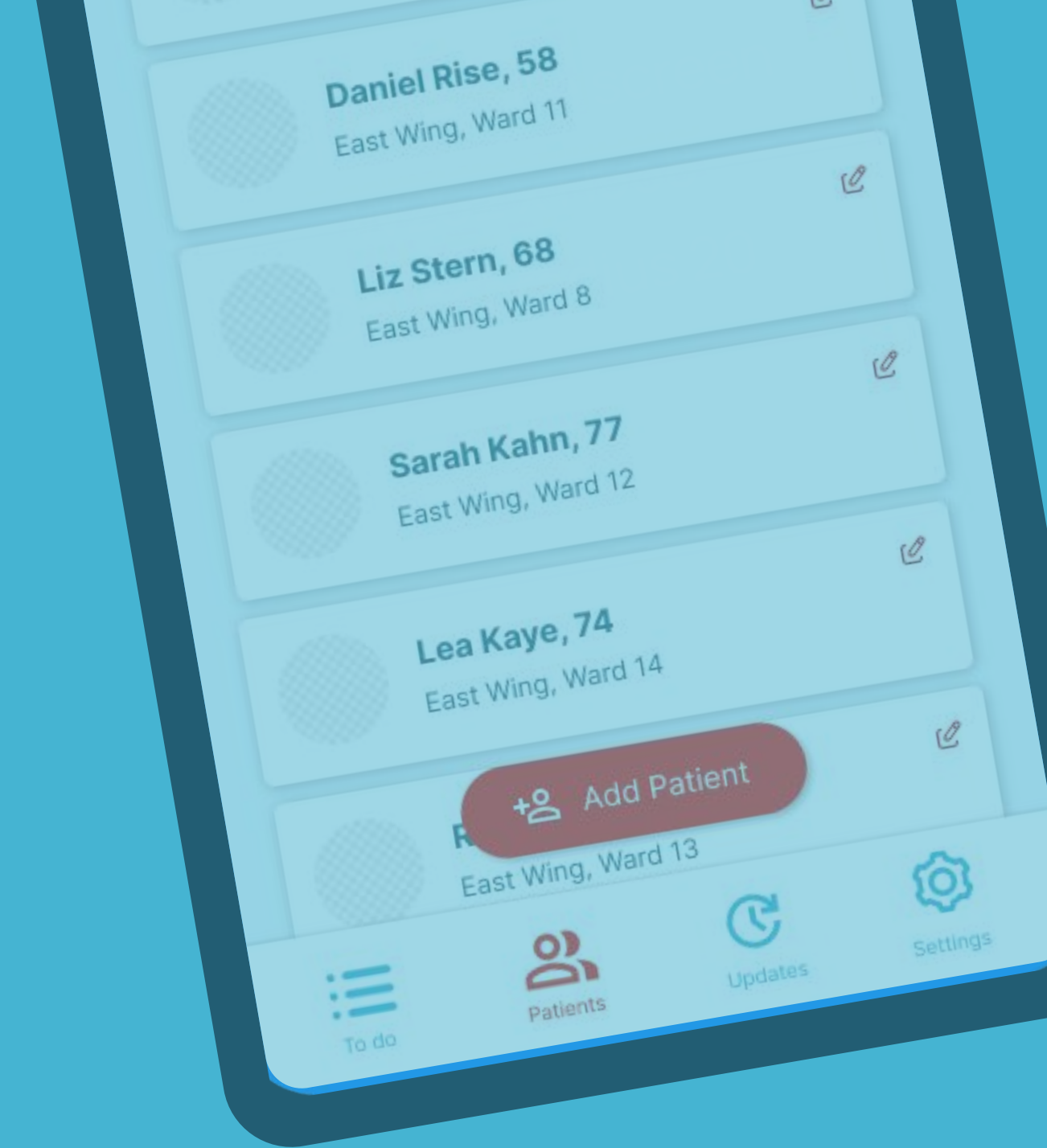
Assignment 1:

Mobile App Case Study:

“Help nurses stay on top of their patients and patient requirements.”

Michal Bendahan

November 2024



Problem Statement

Nurses face heavy workloads, which can lead to essential tasks being overlooked. They need an efficient way to track patient medications and specific care requirements to ensure timely and accurate care delivery.

Project Objective:

We need to create an app where Nurses can **track all their time sensitive tasks**; so they can **log the medications** they've administered to patients, ensuring proper dosages and times, as well as any other patient needs get dealt with at the **correct time**.

Discovery & Research

To better understand existing solutions and identify opportunities for improvement, I conducted a competitive analysis of similar nurse/task management apps. This allowed me to evaluate their strengths and pain points to better align potential solutions with nurses' needs.



Competitive Analysis:

Application 1:

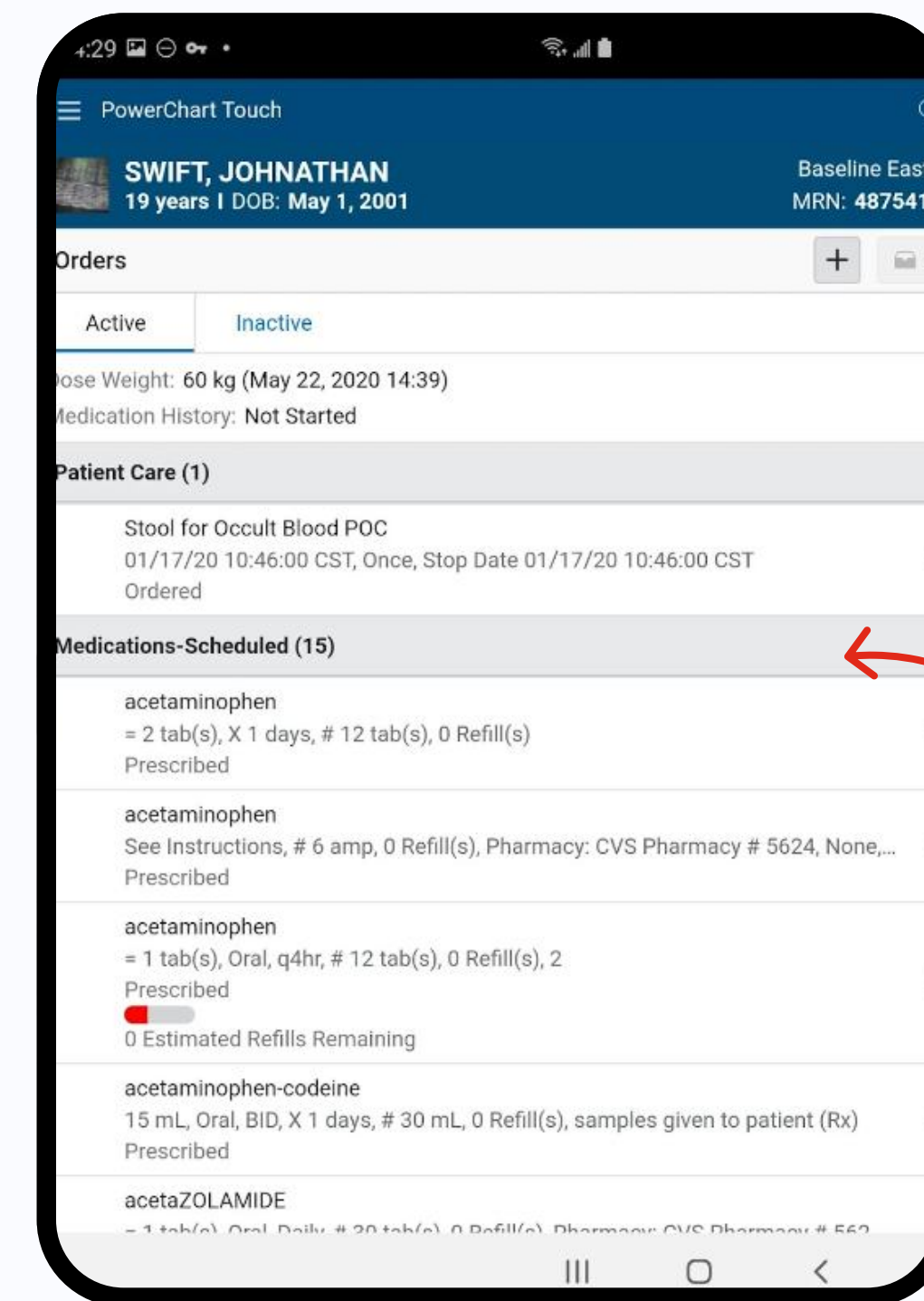
Cerner PowerChart App

Cerner PowerChart is a widely used Electronic Health Record (EHR) system that nurses and other healthcare professionals use to track patient data, manage medication, and ensure proper documentation.

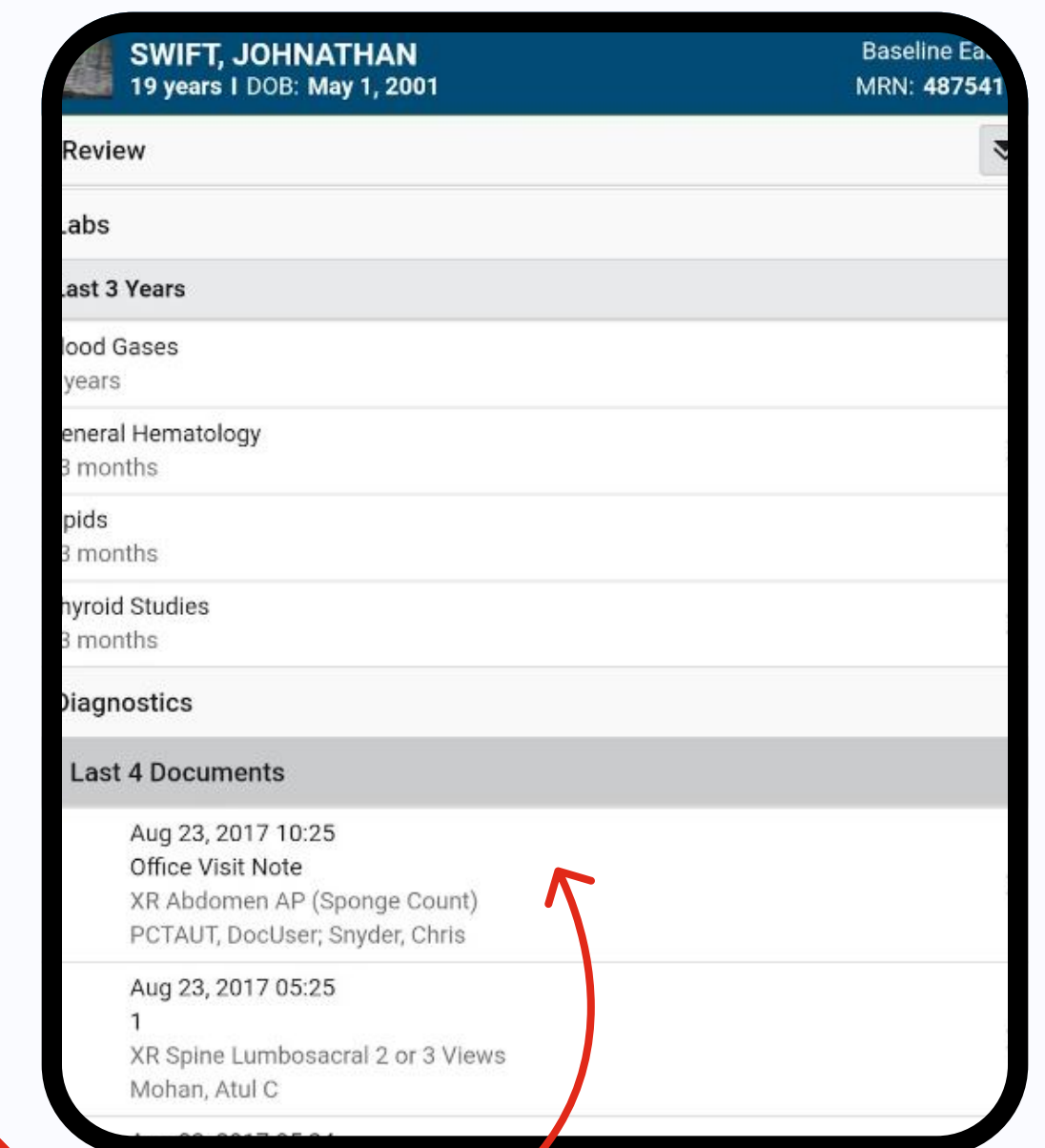
UX Insights:

- Simplifies tasks like medication, monitoring, and charting.
- Real-time updates on a central dashboard.
- Customizable views for personalized use.
- Clear
- visuals to track patient progress.
- visuals are a little bland, lacking color and brand identity

Clear labels for efficiency



Color coding for urgent notifications or tasks so they don't get overlooked.



Displays heavy data clearly, separating the different sections.

Application 2:

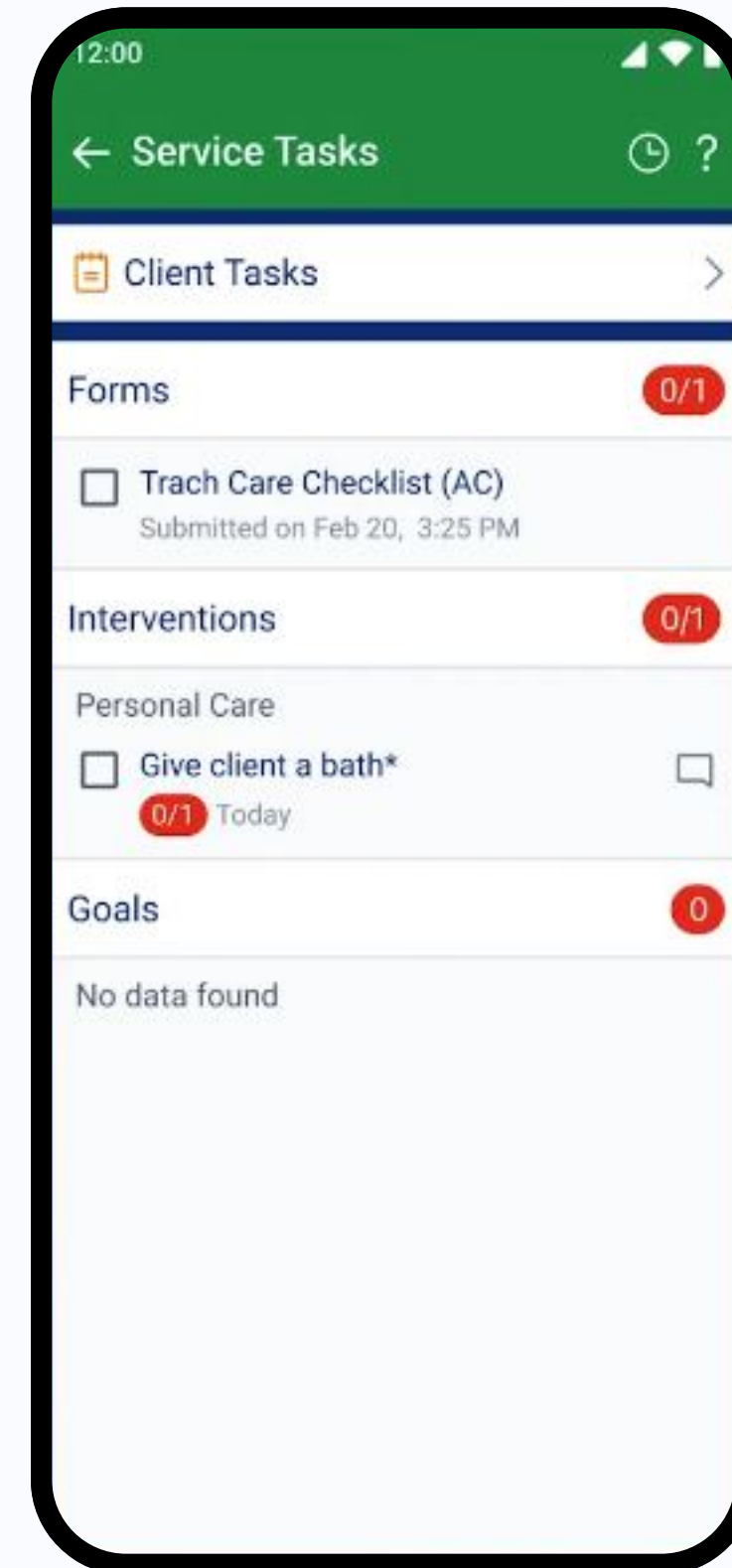
AlayaCare App

AlayaCare is a home care software platform that provides tools for scheduling, patient tracking, and communication between caregivers. Although it's focused on home healthcare, the app's features are helpful for understanding how to manage care tasks, track patient progress, and stay in touch with patients.

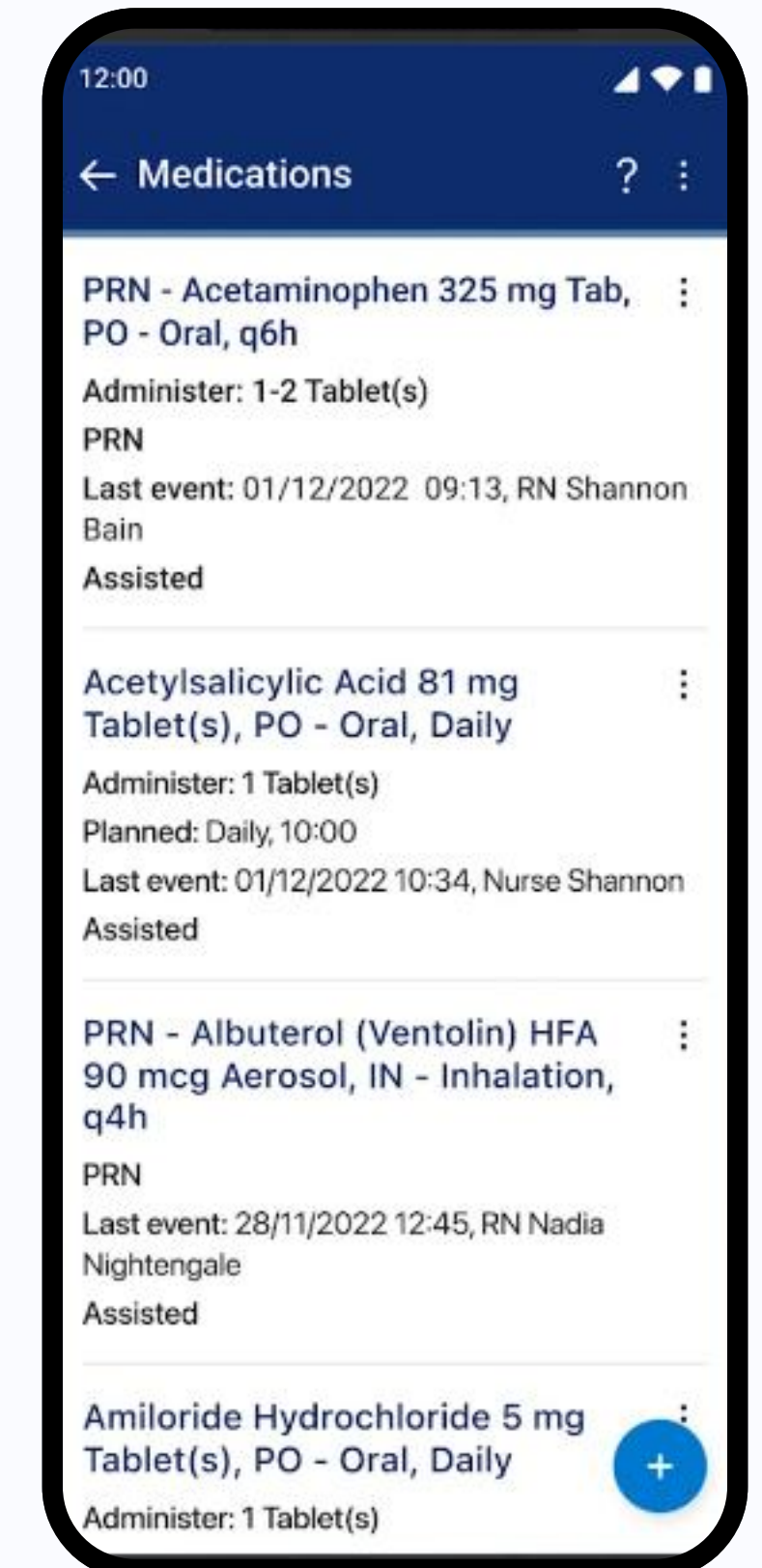
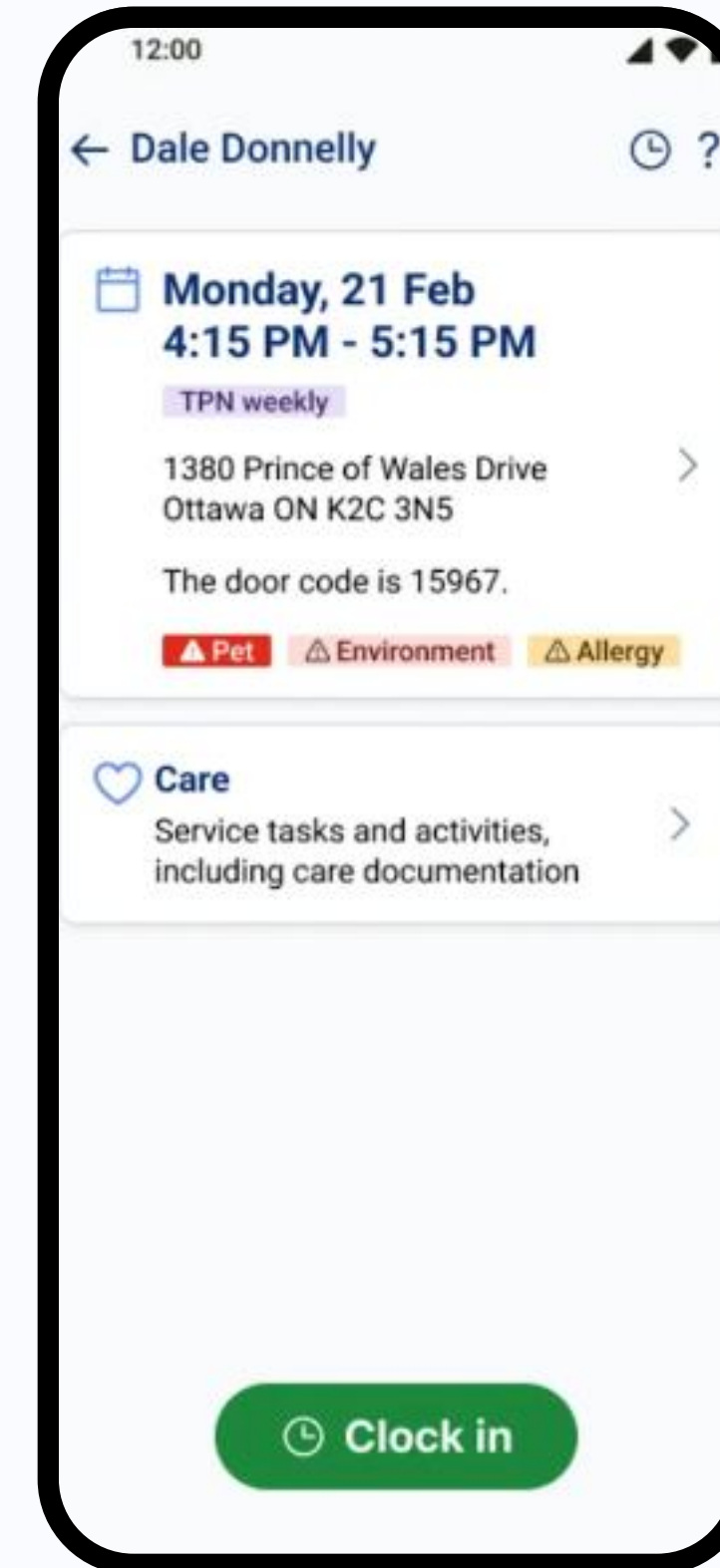
UX Insights:

- Easy Access: Caregivers can view patient data, schedule visits, and track tasks in an organized way.
- Nurses can document care notes instantly, streamlining their workflow.
- Combines scheduling, task lists, and real-time updates to improve care management and reduce errors.
- Visuals lack brand identity

Clear check mark to mark tasks as they are completed, clear indication if any job is still incomplete.



Alarm feature



Easy to add a new medication / note - in convenient place.

Application 3:

PointClickCare App

PointClickCare is an EHR system commonly used in long-term and post-acute care settings. It helps nurses track patient conditions, manage medication, and provide updates in real time.

UX Insights:

- Simplified Layout: Focuses on key tasks like tracking vitals, administering medication, and writing progress notes.
- Easy-to-Read Interface: Integrates patient data in a clear, simple design.
- Icons for Quick Access: Key functions are easily accessible through intuitive icons.

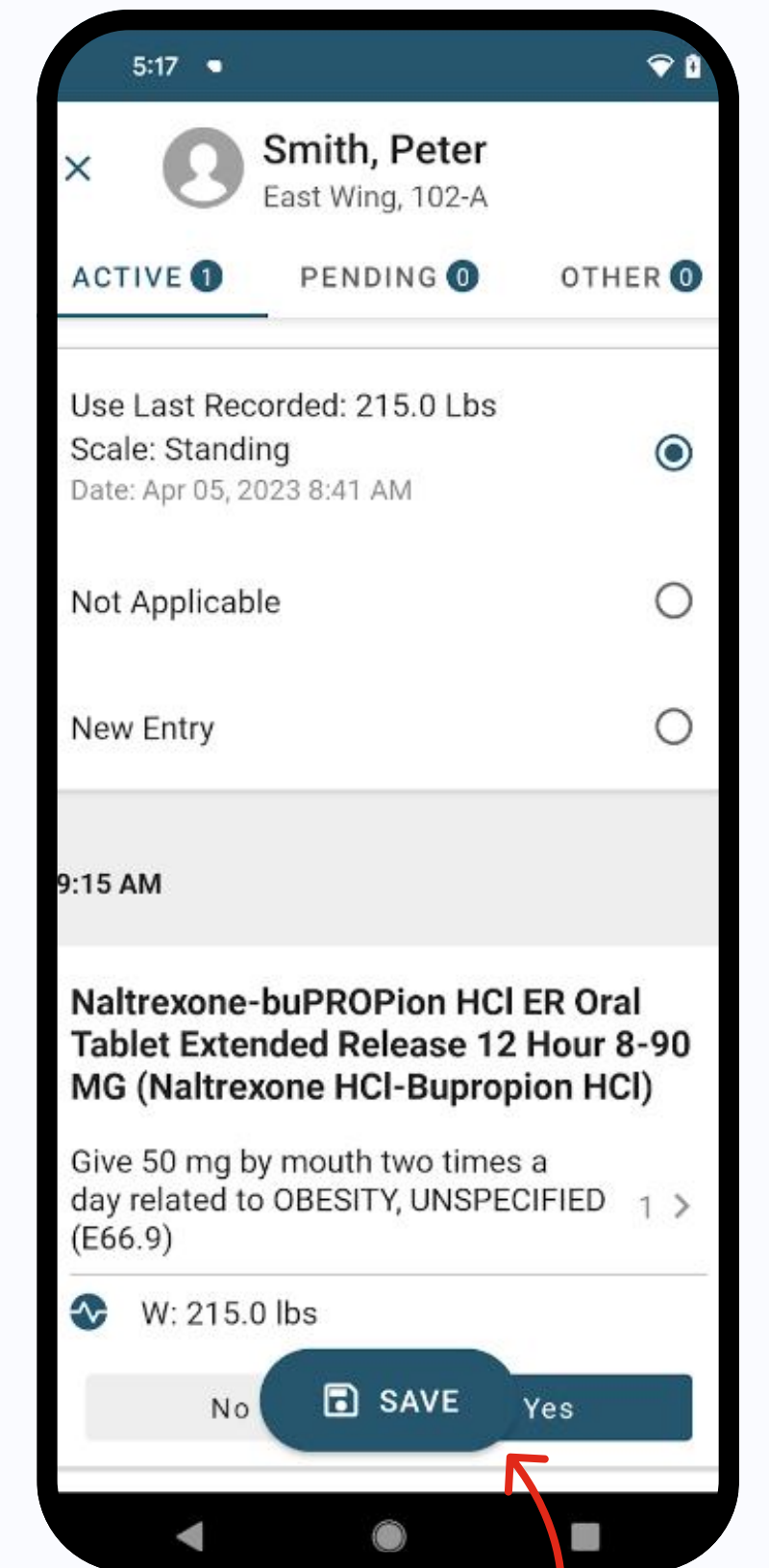
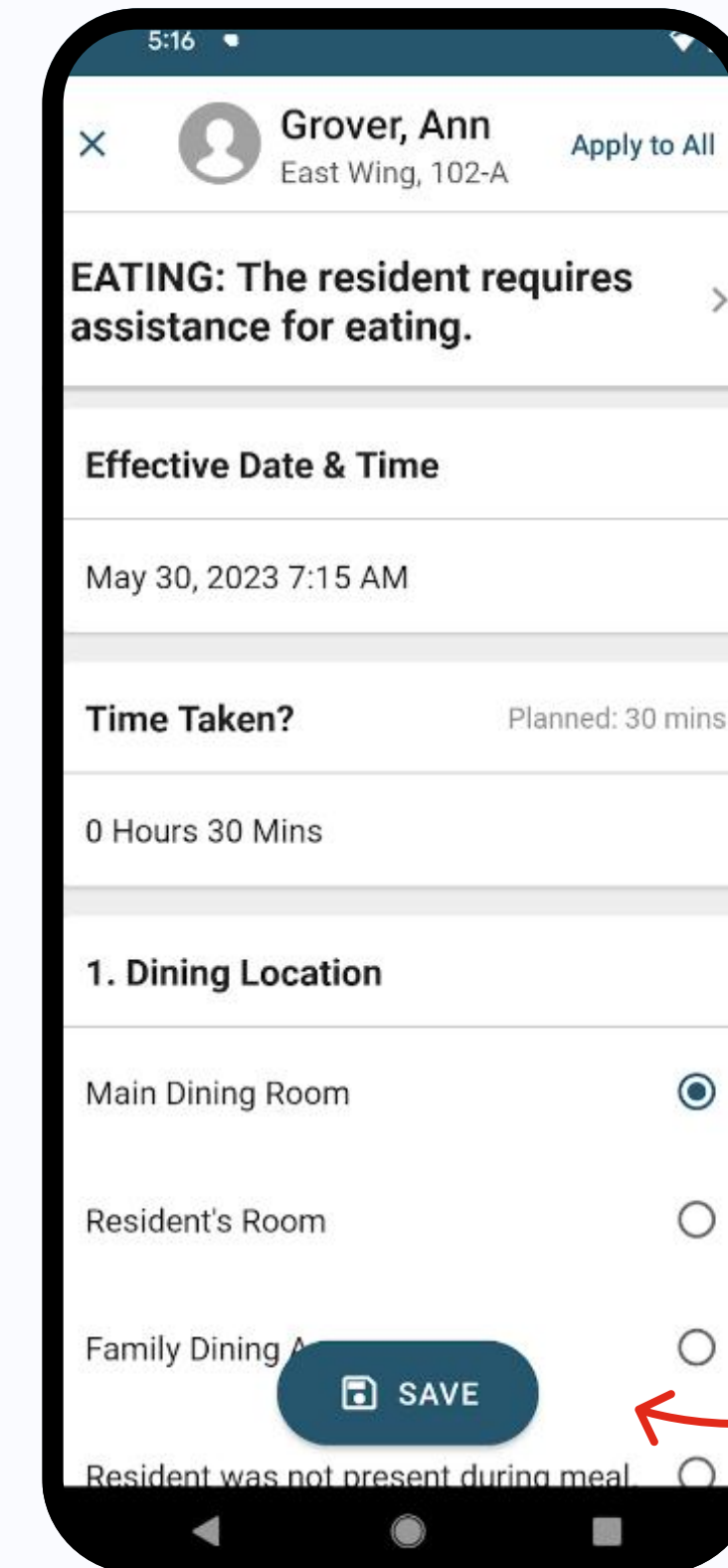
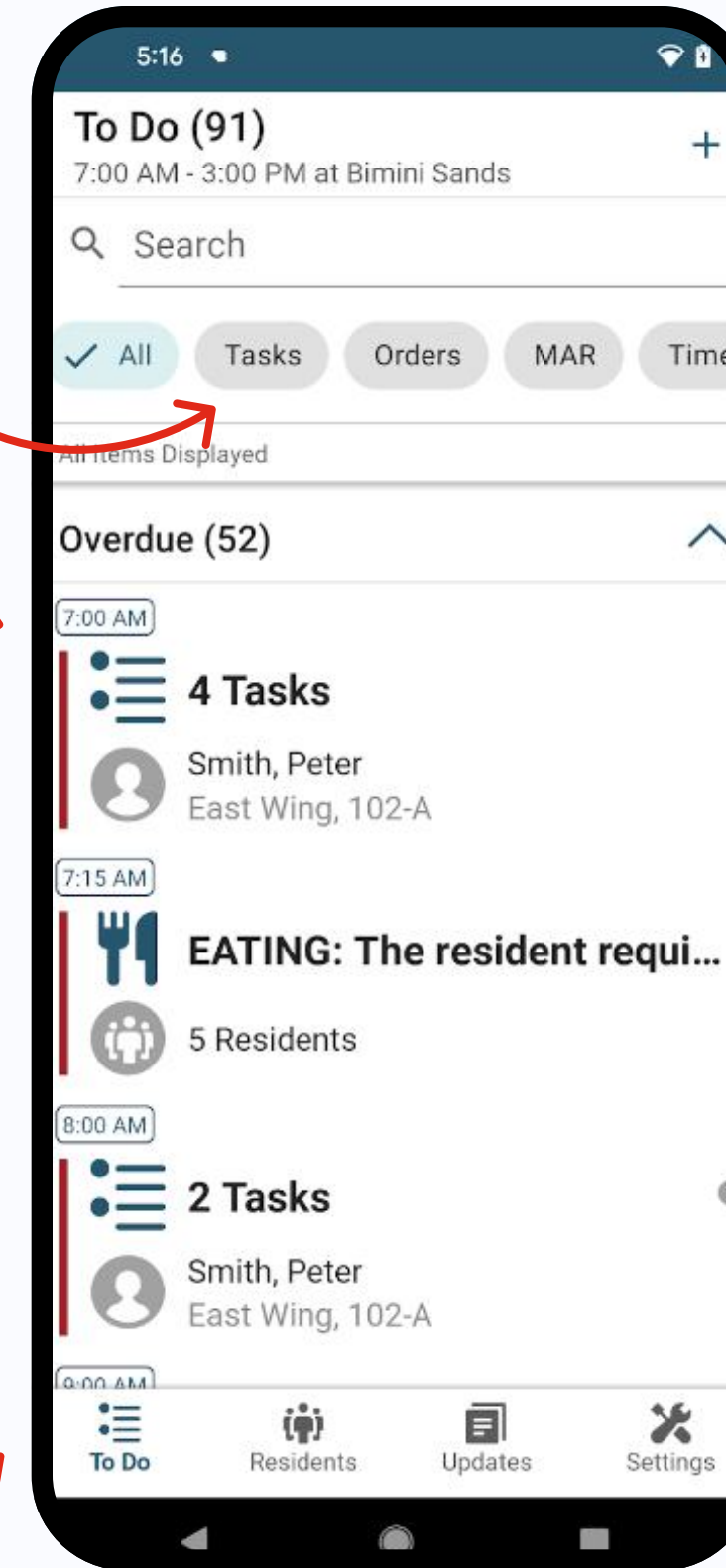
Tasks can be easily accessed /viewed.

Tasks are clearly assigned to specific times

Use of icons as Easy Access to Key Functions

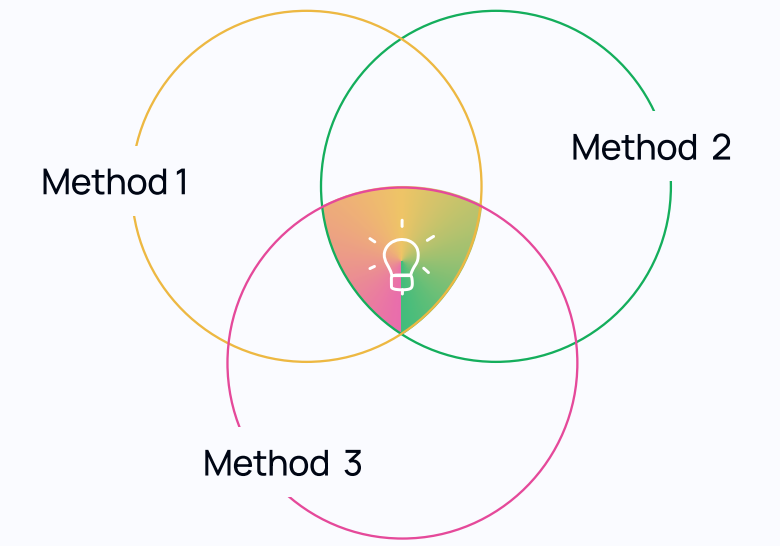
simplifies complex patient data into actionable insights.

A clearly labeled, easily findable button designed for quick, intuitive updates.



Wrapping up Competitive Analysis

Key Takeaways



Method 1

Cerner's interface focuses on streamlining complex workflows, though **color coding** and **clear separations** for a easier user experience.

I would like to incorporate this into my design as this will cause different tasks not to be easily recognizable and not be confused, so all tasks are dealt with efficiently.



I would like to include in my design:

Color Coding

Clear Section Separations

Method 2

AlayaCare is focused on home healthcare, but the app's features are helpful for understanding how to manage care tasks, track patient progress though clear **check mark to mark tasks** as they are completed as well as **important buttons placed in User friendly manner** so ensure tasks are easily tracked when assigned and when completed.

I would like to incorporate this into my design as this will ensure tasks dont get overlooked as it is convenient for the user to track without much effort.



I would like to include in my design:

Check Marks

Important buttons placed conveniently

Method 3

PointClickCare app's layout **simplifies patient management** by **focusing on the most important tasks** for nurses, such as vitals tracking, medication administration, and progress notes. It integrates patient data with a **simple, easy-to-read interface**.

I would like to incorporate this into my design as this will ensure nurses can focus on most important tasks for each time frame so it is completed within the correct time frame and doesn't get overlooked.



I would like to include in my design:

Simplify Complex Data

Simple, Easy-to-read interface

Icons as Easy Access to Key Functions

Additional research to design Patient management pages specifically

I then went on to further explore other apps where I was specifically assessing the elements and what would be most useful in creating the patient information pages.

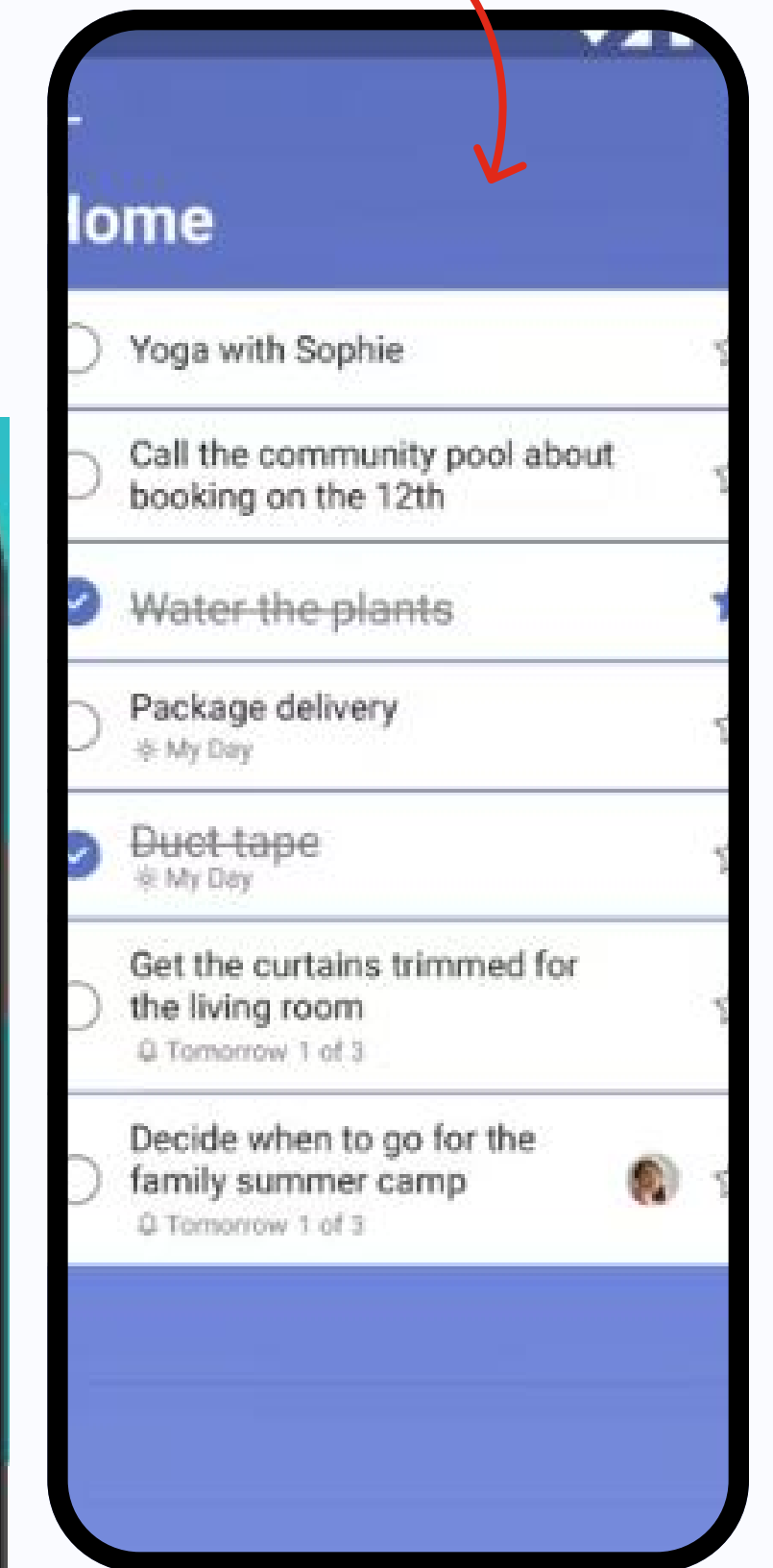
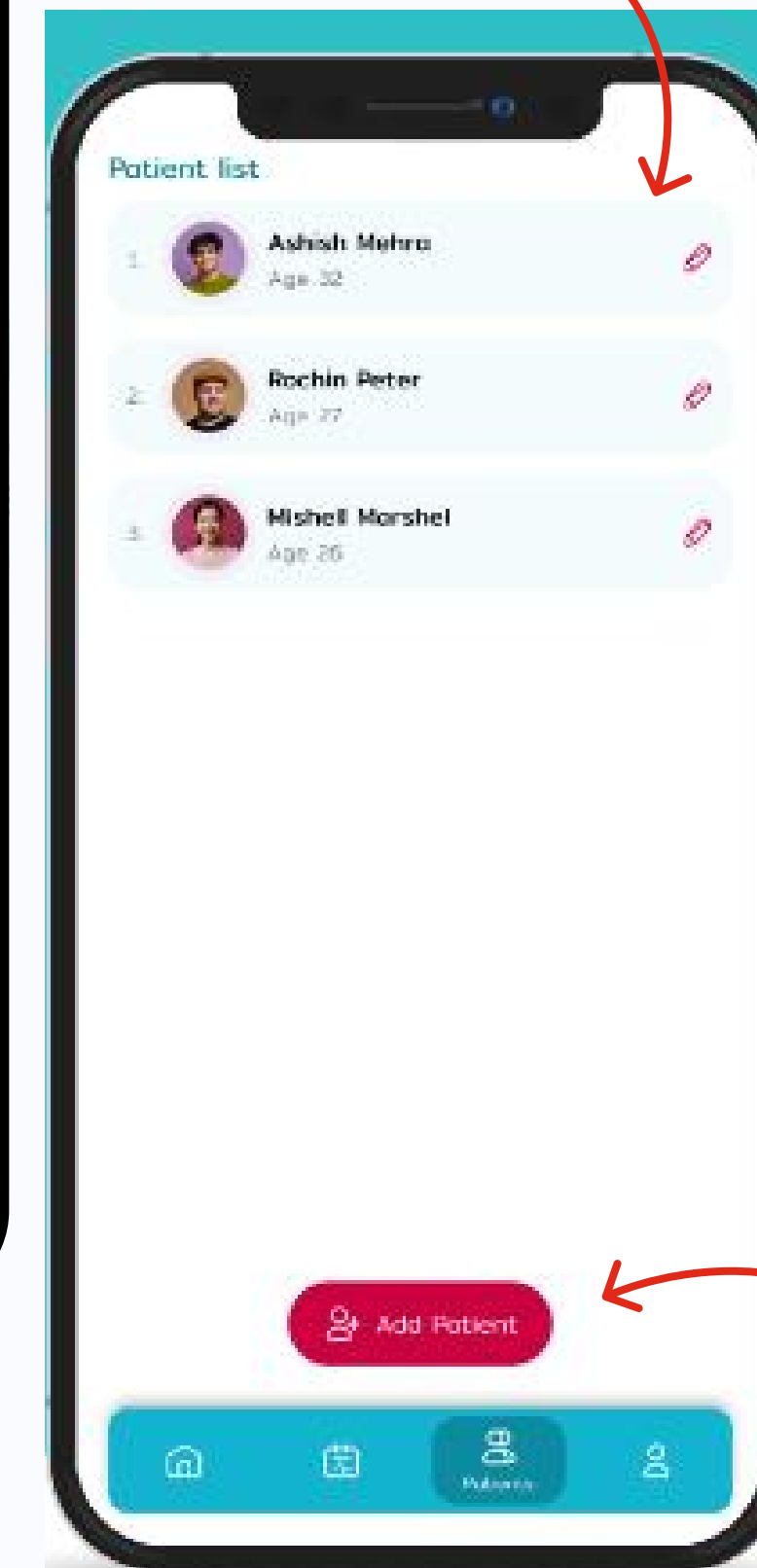
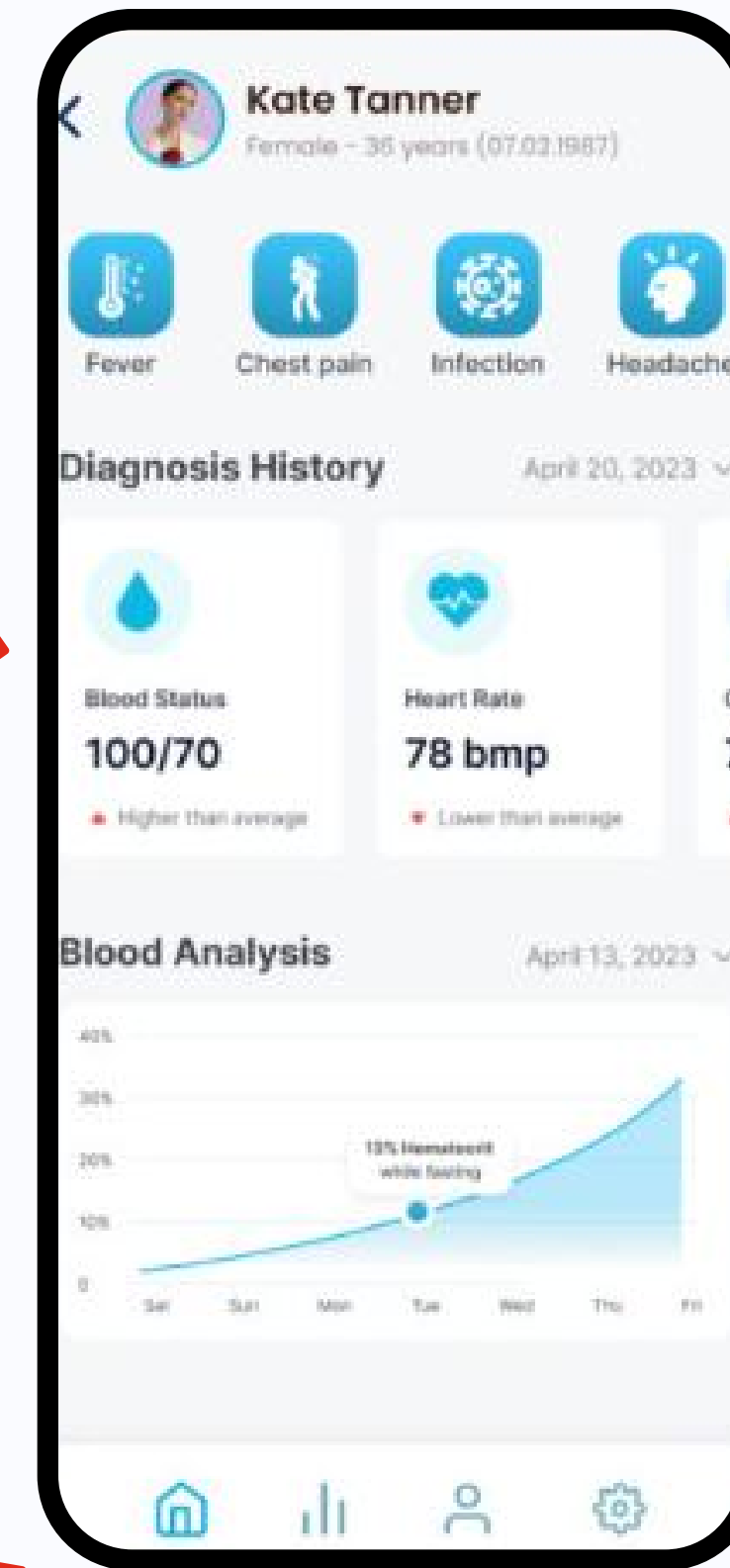
Use of icons as Easy Access to Key Functions

Clear and unambiguous vital information

Clear primary information, to avoid any confusion

Image of each patient to avoid confusion and easily editable

Clearly listing events/tasks



Easy and clear how to add a new patient

UX Solutions

After concluding the research i was ready to craft my solution. I started with sketching out my ideas in order to create the optimal user experience for nurses.

Solution:

I designed an app to address nurses' heavy workloads and the risk of overlooked tasks by including:

- **Clear Task List:** Prioritized and time-sensitive tasks are highlighted for easy access and quick action.
- **Patient Management:** Comprehensive tools to organize individual patient care information, ensuring accurate and timely delivery of care.

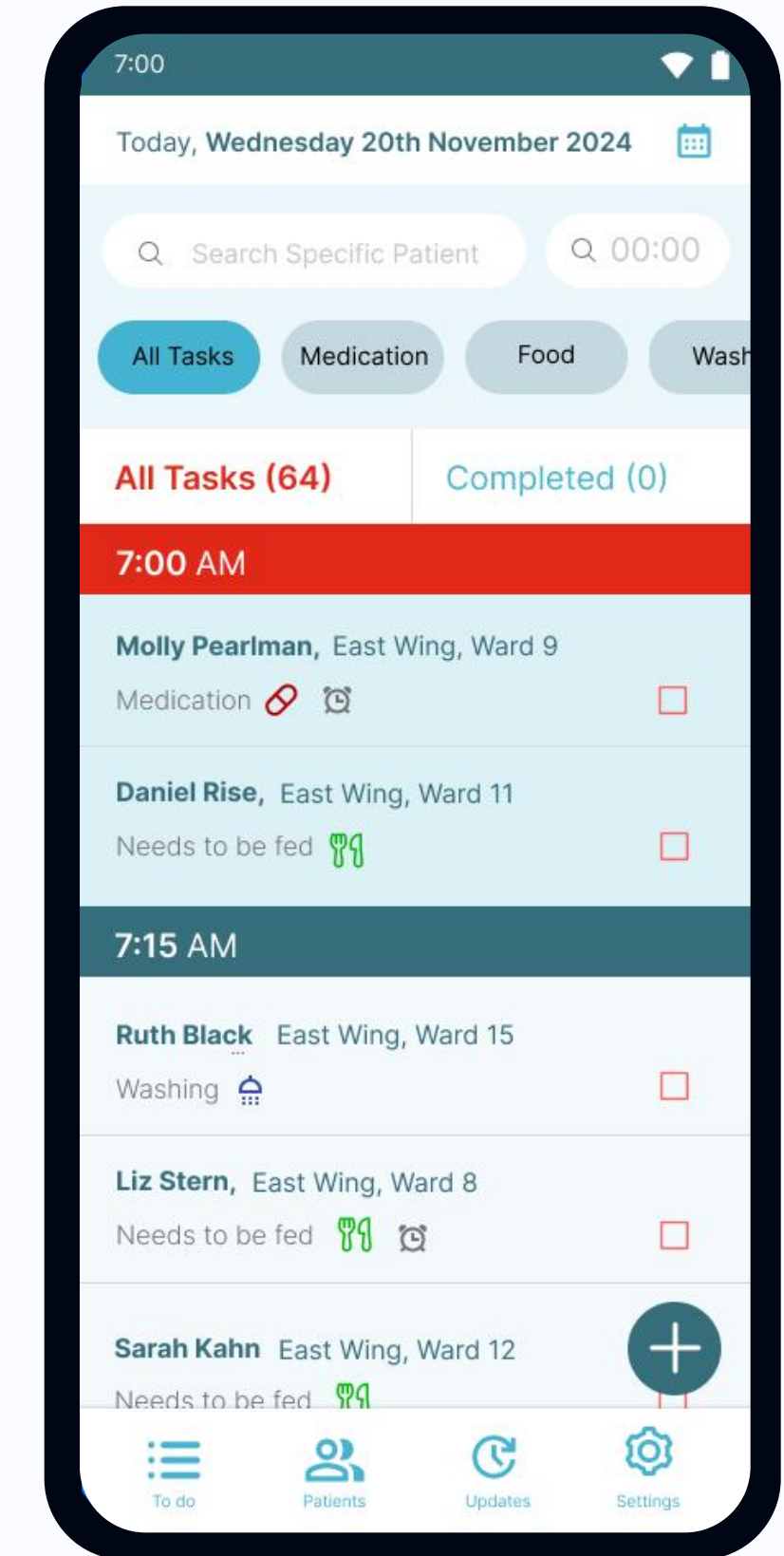
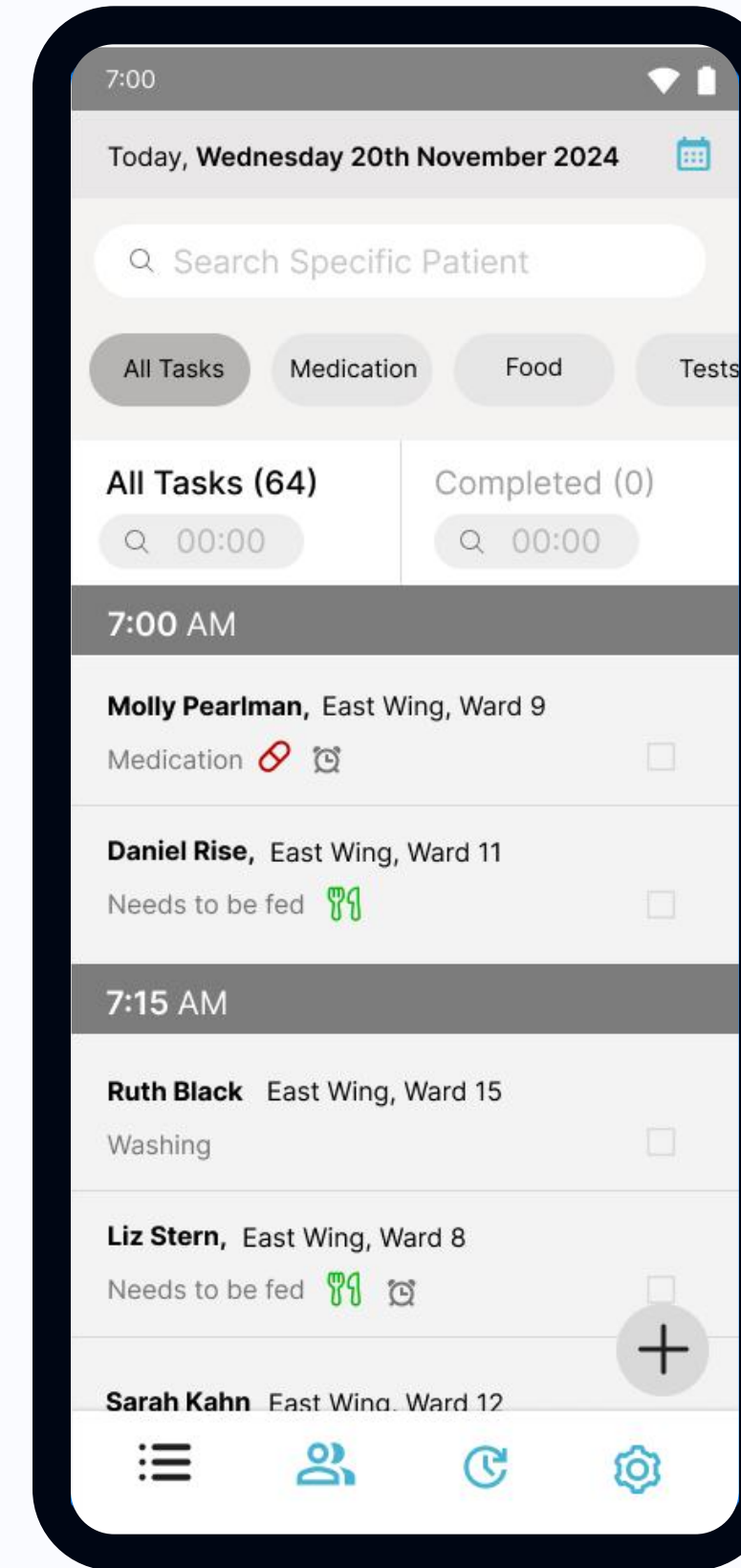
UI brand strategy



Blue is one of the most **common colors for nurses**. This shade is said to **promote tranquility** and feelings of **peace**, which can be a visual boon in the hectic hallways of hospitals. Because of this specific color's ubiquity, blue can also convey a **sense of trust**.

I chose **red** as the accent color as it connects with nurses and healthcare environments. It has association with **urgency** and **criticality**, connection to **blood** and **medical procedures** and is the symbolism of **alertness** and **caution**.

Wireframe  UI using Brand Tones



Feature highlight #1

Clear Task List

The goal of this screen is to display all patient tasks, with critical and timely ones highlighted to ensure they aren't missed.

Simplified patient management

Simplifies patient management by focusing on the most important tasks for nurses, such as vitals tracking, medication administration.

Color Coding

Color coding for urgent notifications or tasks so they don't get overlooked.

Icons

Use of icons as Easy Access to Key Functions

Clear Date labels for efficiency

Tasks can be viewed according to patient name, time or task type.

Simple, Easy-to-read interface

Nurses can focus on most important tasks for each time frame so it is completed within the correct time frame and doesn't get overlooked.

Tasks for a different date can be viewed for nurses to plan ahead to ensure extra efficiency.

Clear Section Separations

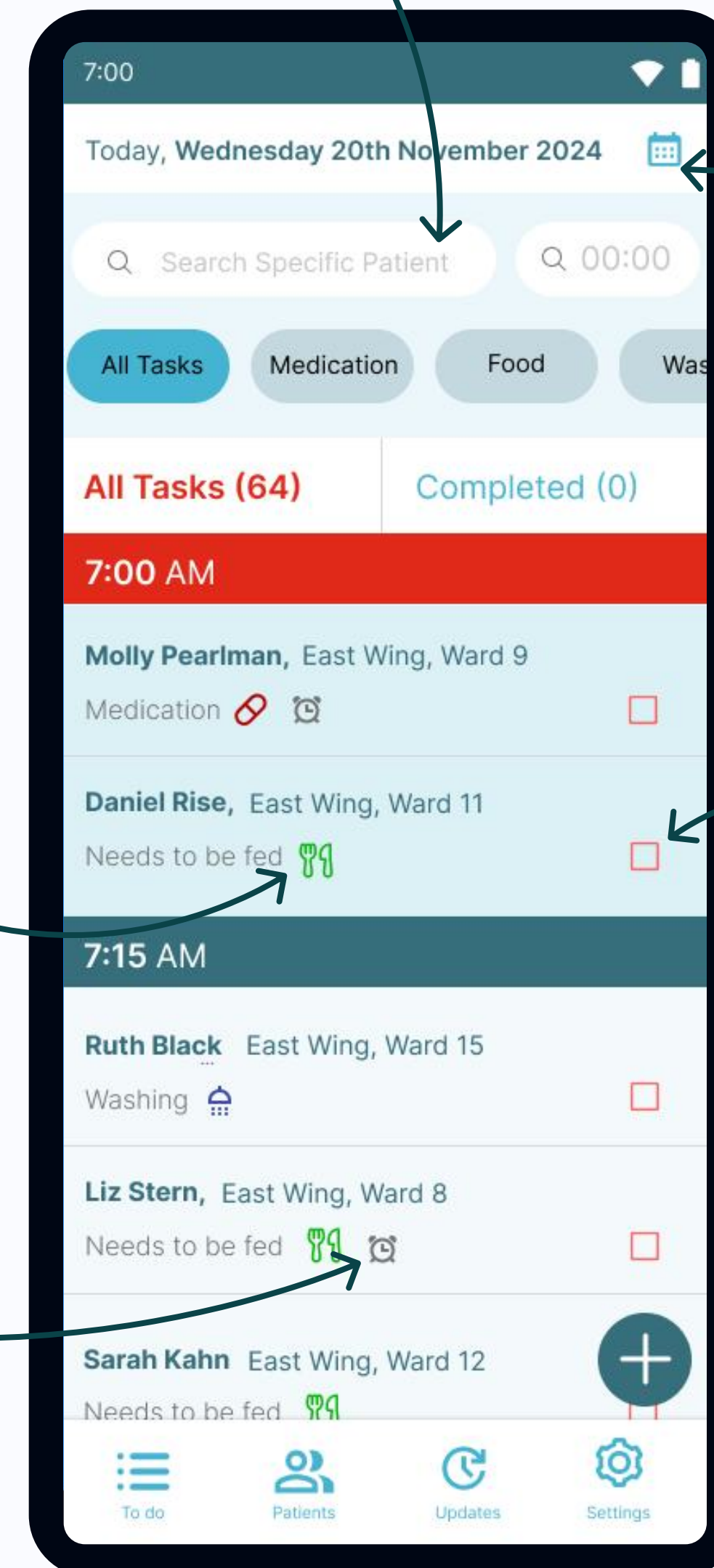
Displays heavy data clearly, separating the different sections so the app is easy to use. This section is **emboldened** because it is the section within the time frame that the tasks need to be completed. This is helpful for the nurses to keep track of the daily schedule.

Check Marks

Clear check mark to mark tasks as they are completed, clear indication if any job is still incomplete.

Important buttons placed conveniently

Easy to add a new medication / note - in convenient place.

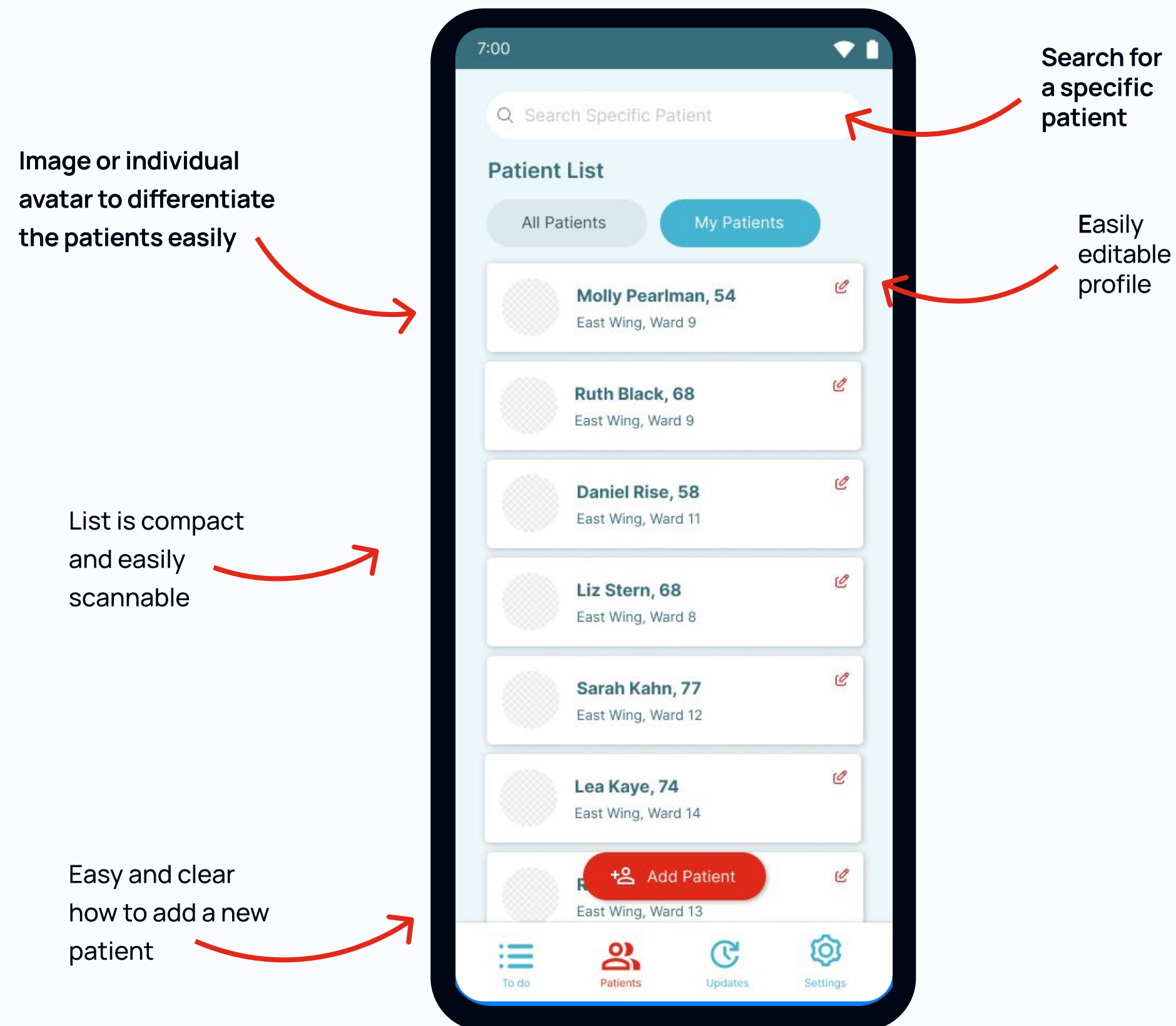


Feature highlight #1

Patient Management

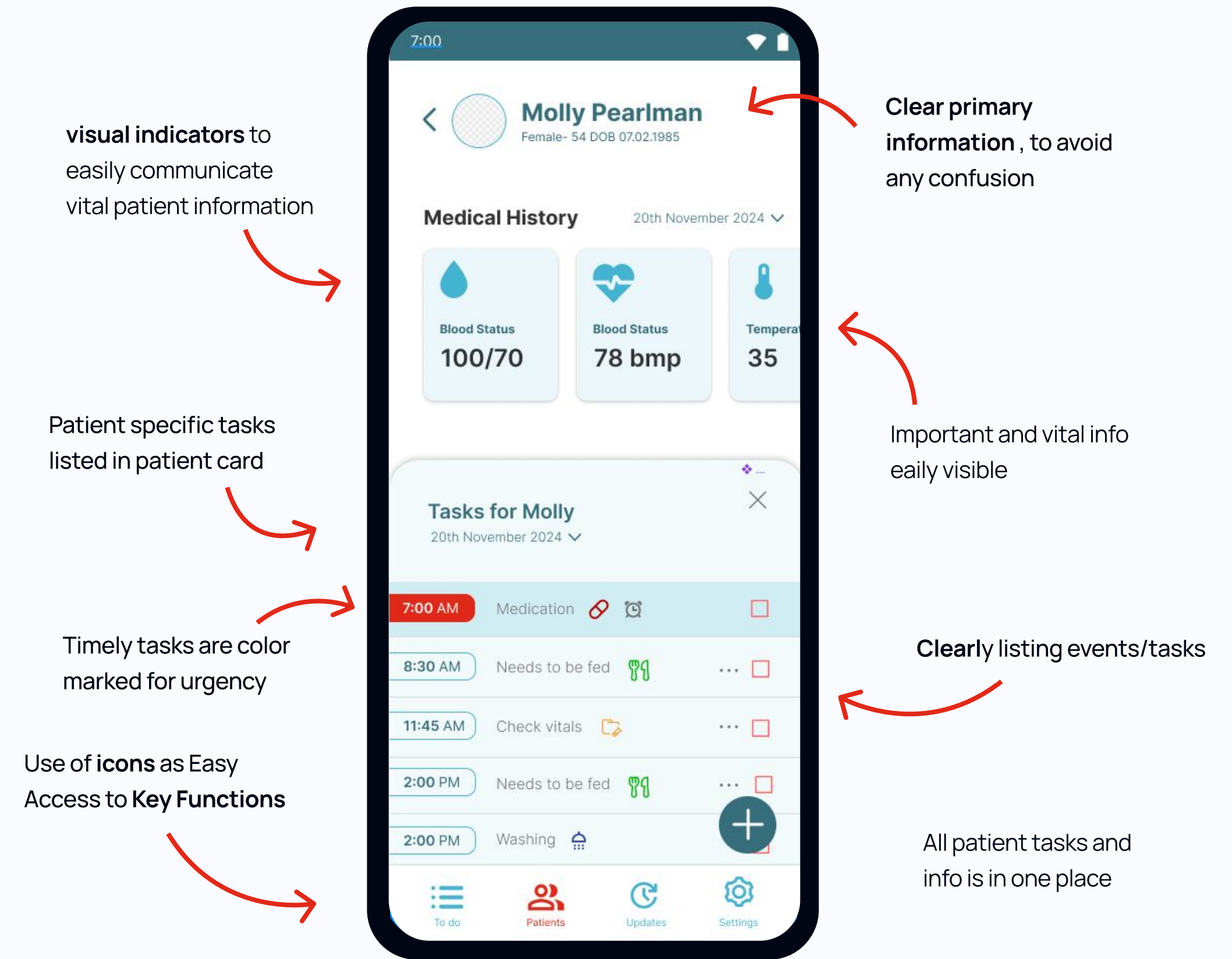
Full list of patients

The goal of this screen is to provide an easily scannable list for quick patient identification.



Screen for individual patients

The goal of this screen is to centralize all patient information, including tasks, follow-ups, and key data.



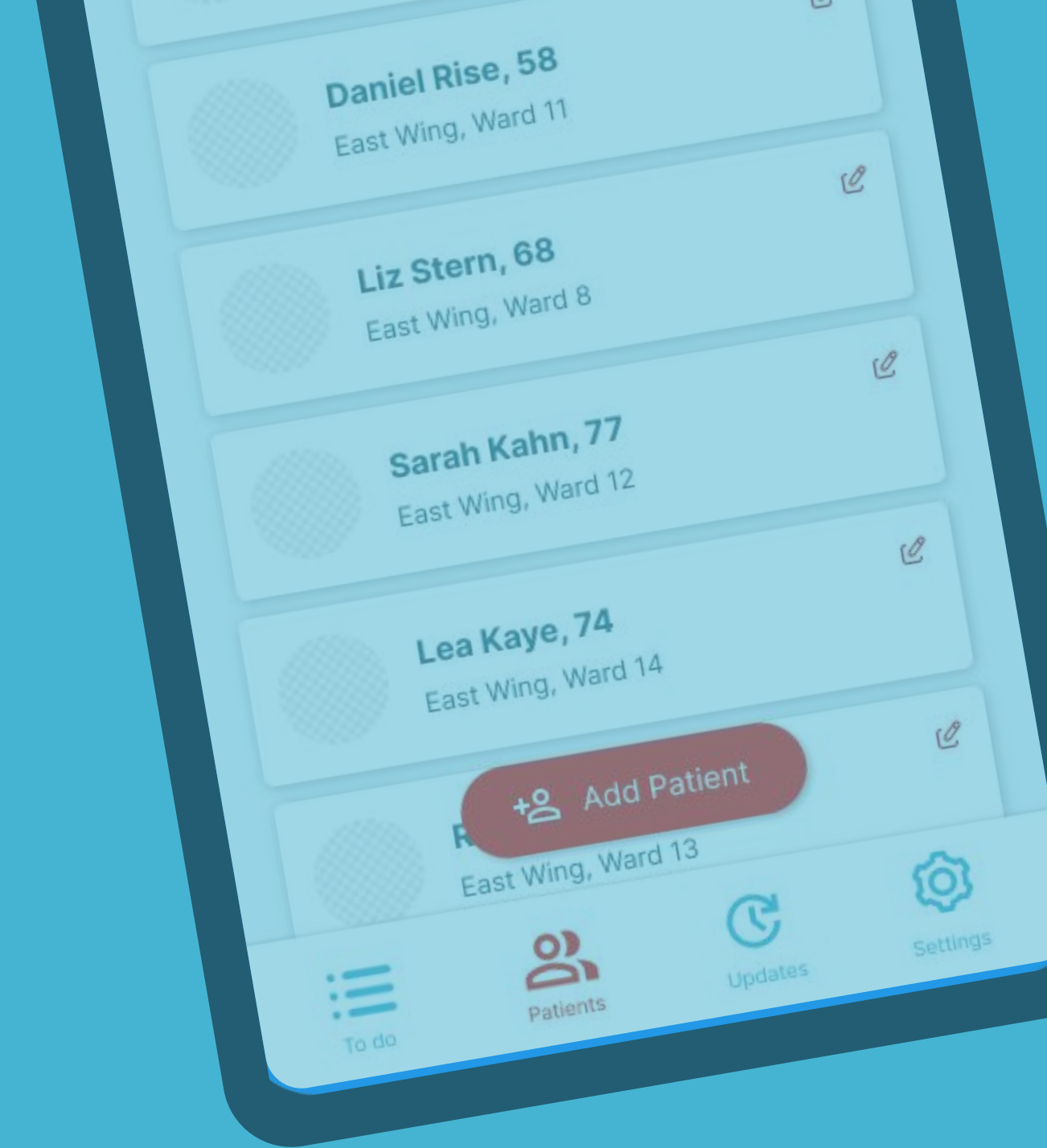
Assignment 2:

Desktop App Case Study:

“For the Director of Nursing
to track all patients and
nurses”

Michal Bendahan

November 2024



Problem Statement

The Director of Nursing needs a system to track all patients and nurses, manage nurse schedules and availability, monitor performance, and easily view nurse assignments to each patient, while quickly identifying any issues.

Project Objective:

We need to design a desktop app that enables the Director of Nursing to **easily see nurse schedules and availability, track their performance and easily view which nurse is assigned to each patient.**

Discovery & Research

To better understand existing solutions and identify opportunities for improvement, I conducted a competitive analysis of similar nurse/task management apps.

This allowed me to evaluate their strengths and pain points to better align potential solutions with nurses' needs.

Competitive Analysis:

Application 1:

Deputy

Deputy is a workforce management app designed to simplify scheduling, time tracking, and employee communication. It helps businesses manage staff schedules, track attendance, and streamline payroll. The app also allows managers to assign tasks, monitor employee availability, and ensure compliance with labor laws, making it easier to coordinate shifts and optimize workforce productivity.

	Mon	Tue	Wed	Thu
Nadire Ferne	9:00 - 5:00 Management	9:00 - 5:00 Management		9:00 - 5:00 Management
Hannah Gibbs		9:00 - 5:00 Floor staff	9:00 - 5:00 Floor staff	9:00 - 5:00 Floor staff
Cecilio Parvan	9:00 - 5:00 Accounts		9:00 - 5:00 Accounts	Annual leave
Lillie Coleen	9:00 - 5:00 Management		9:00 - 5:00 Management	
Emily Stewart		9:00 - 5:00 Floor staff		9:00 - 5:00 Floor staff
David Lee	9:00 - 5:00 Deliveries	9:00 - 5:00 Deliveries	9:00 - 5:00 Deliveries	9:00 - 5:00 Deliveries
+ Add new employee				

Easy to search for specific employee

Clear list of employees

Clear tabs with easy navigation for switching between them.

easily see nurse schedules and availability

Color coded for easy viewing

Application 2:

S-Care

S-care is a healthcare management app that helps monitor patient care, track health metrics, and ensure safety. It aids healthcare providers in improving workflows, enhancing communication, and identifying potential issues early to ensure high-quality patient care.

Clear tabs with easy navigation for switching between them.

Convenient search option

Clean and neat interface

The screenshot displays the S-Care application interface. On the left is a sidebar with navigation tabs: Dashboard, Appointments, Doctor, Patients, Messages, and Setting. At the top, there is a search bar and a user profile icon. The main content area is titled 'Patients List' and contains a table with the following data:

Name	Gender	Age	Diagnosis	Phone Number	Address	Blood	Triage
Andrea Hiyahiya	Female	25 yo	Cancer	(280) 548-8124	Nampa, Tennessee	O+	Non Urgent
Bianca Laloma	Female	42 yo	Heart attack	(124) 864-1794	Nampa, Tennessee	A+	Emergency
John Smith	Male	27 yo	Cancer	(789) 164-4876	San Francisco, Oregon	A+	Resuscitation
Amalia Makbleng	Female	25 yo	Diabetes	(222) 544-8790	Anchorage, Georgia	B+	Urgent
Rizky Roge	Male	20 yo	Stroke	(135) 872-1460	Gresham, California	O+	Pass Away
Andrea Hiyahiya	Female	25 yo	Heart attack	(552) 548-2554	Oakland, Massachusetts	A+	Non Urgent
Eduardo Miles	Male	25 yo	Fever	(716) 545-4286	Round Rock, Alabama	O+	Urgent
Soham Henry	Male	23 yo	Kidney	(478) 745-9458	Rialto, New Jersey	A+	Emergency

easily view patients and their assigned nurses

Color coded for easy viewing

Important information is bolded, and less important details are shown in a lighter version

Application 3:

OPrime

OPrime is an AI-powered customer service platform that helps businesses automate support tasks, manage inquiries, and improve response times across multiple channels. It streamlines customer service by using chatbots and automated responses to reduce the workload on human agents.

Although not related to nursing, I studied this app to understand how it effectively displays large amounts of data in a clear and organized way.

Clear tabs with easy navigation for switching between them.

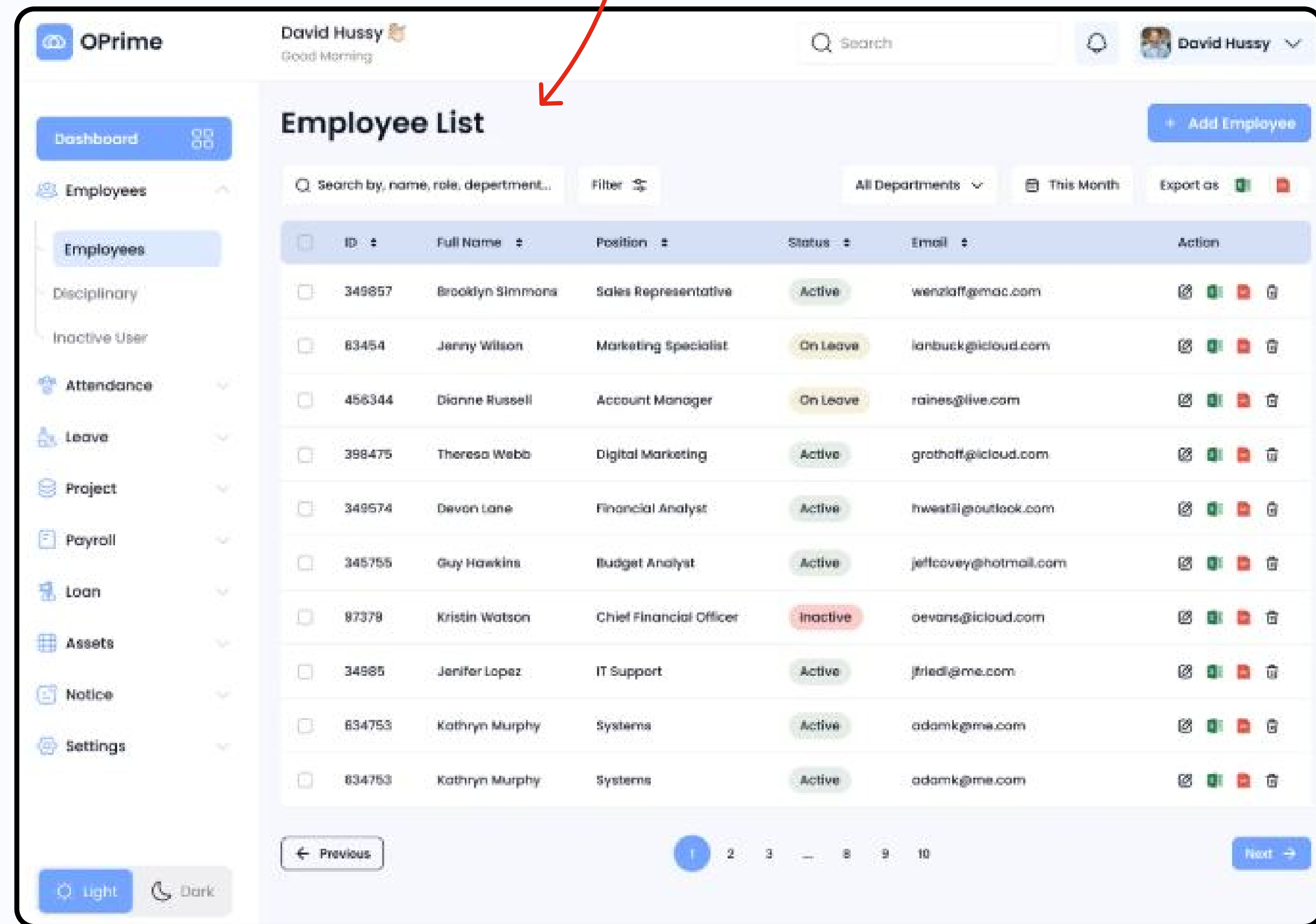
An advanced sorting feature for improved efficiency.

Convenient search bar for more efficiency

easy to add another employee

easily see availability of employee

Color coded for easy viewing and alerts



A clean, visually appealing interface that's easy on the eyes.

Wrapping up Competitive Analysis

Key Takeaways

Based on my analysis of these apps, here are the key features I aimed to incorporate into my own design:

Clear listing

Color coded for easy viewing and alerts

Sorting feature for efficiency

Easy navigation of tabs /sections

View schedules effortlessly

Convenient search option

Emboldened important information

Important buttons easily accessible

Color coding for easy viewing

Clean and easy- to- read interface

UX Solutions

After concluding the research, I was ready to craft my solution.

I started with sketching out my ideas in order to create the optimal user experience for director of nursing.

Solution:

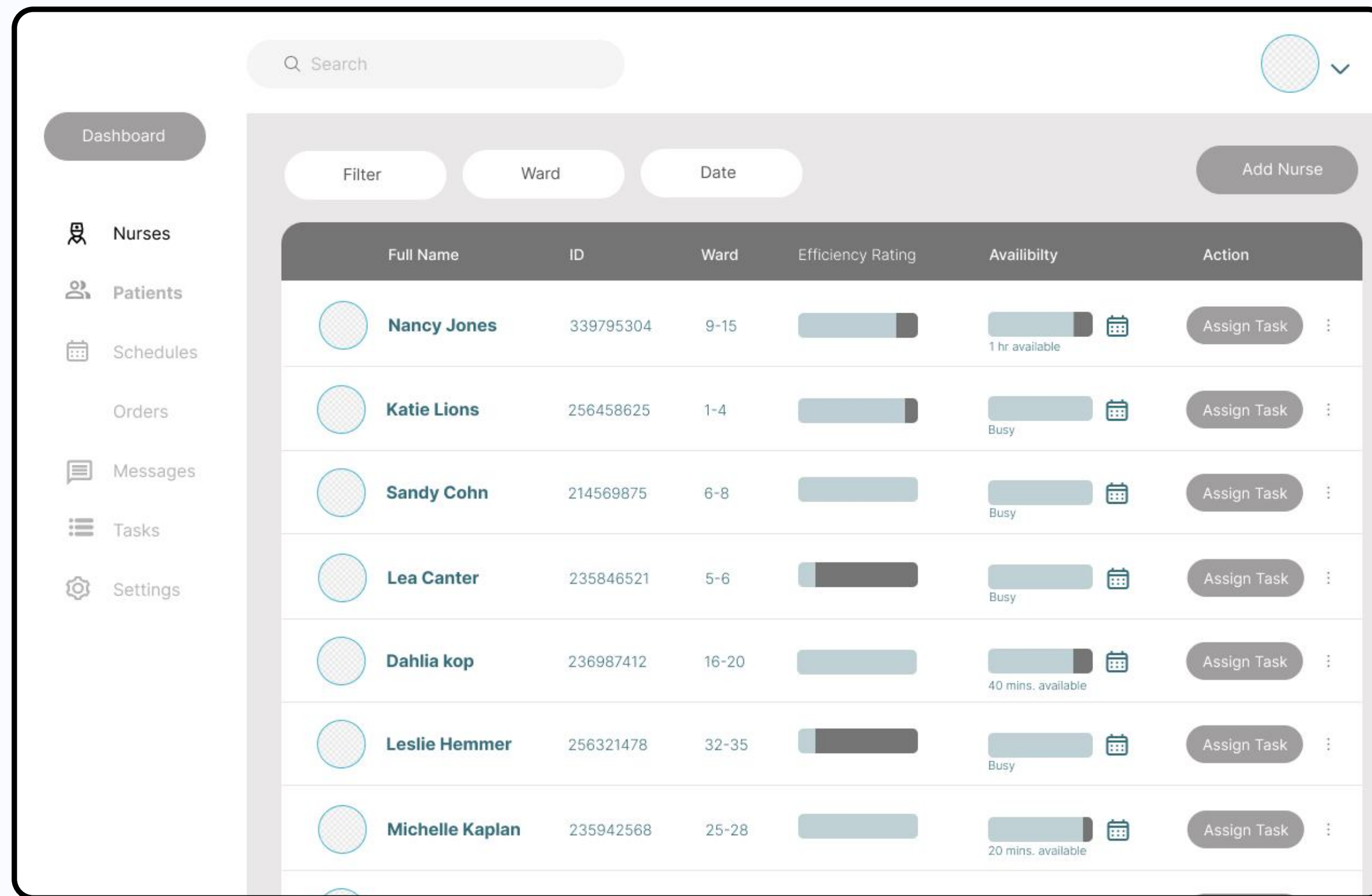
I designed a desktop app that enables the Director of Nursing to **easily see nurse schedules and availability, track their performance and easily view which nurse is assigned to each patient.**

This will help ensure smoother operations and better coordination of care.

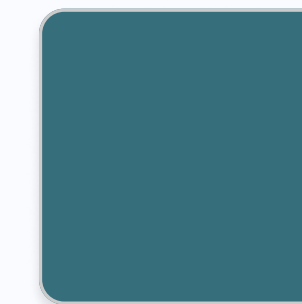
I achieved this by including:

- **Clear Nurse List:** A simple view of nurse availability, schedules, and efficiency, making it easy to identify nurses with extra availability for additional tasks and spot those who are overtasked.
- **Patient Management:** An organized list of all patients and their assigned nurses, ensuring smooth coordination and operations, while helping to quickly detect any issues.

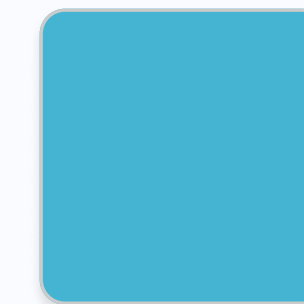
Wireframe



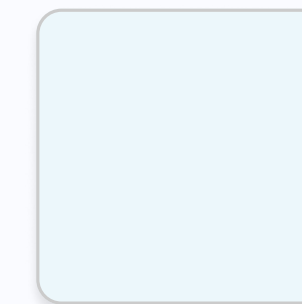
+ UI Branding



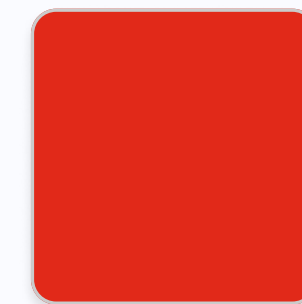
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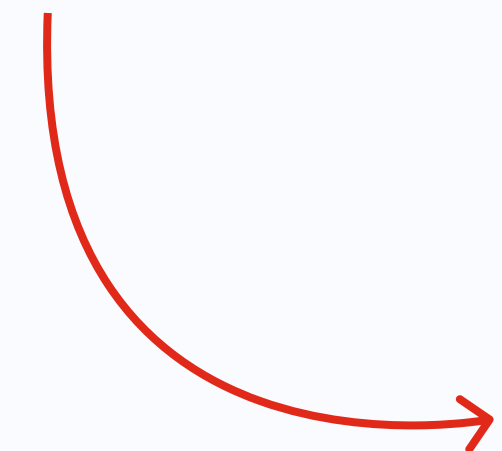
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Dashboard to track nurse performance

The goal of this screen is to be a **clear nurse list**:

A clear view of nurse availability, schedules, and individual efficiency. This allows for easy identification of nurses with extra availability, making it easy to assign additional task and to detect where help is needed.

Convenient search option

Easy navigation of tabs /sections

The screenshot shows a dashboard for 'MyHeath' with a search bar and a 'List of Nurses' table. The table has columns for Full Name, ID, Ward, Efficiency Rating, Availability, and Action. Callouts highlight features like 'Sorting feature for efficiency' (pointing to filter buttons), 'Important buttons easily accessible' (pointing to 'Assign Task' buttons), 'View schedules effortlessly' (pointing to calendar icons), 'Clean and easy-to-read interface' (pointing to the overall layout), 'Color coded for easy viewing and alerts' (pointing to red bars in the efficiency and availability columns), and 'Emboldened important information' (pointing to the 'Full Name' column).

Full Name	ID	Ward	Efficiency Rating	Availability	Action
Nancy Jones	339795304	9-15	<div style="width: 75%; background-color: #ccc; border: 1px solid #ccc;"></div>	<div style="width: 20%; background-color: #007bff; border: 1px solid #007bff;"></div> 1 hr available	Assign Task
Katie Lions	256458625	1-4	<div style="width: 75%; background-color: #ccc; border: 1px solid #ccc;"></div>	<div style="width: 0%; background-color: #007bff; border: 1px solid #007bff;"></div> Busy	Assign Task
Sandy Cohn	214569875	6-8	<div style="width: 100%; background-color: #ccc; border: 1px solid #ccc;"></div>	<div style="width: 0%; background-color: #007bff; border: 1px solid #007bff;"></div> Busy	Assign Task
Lea Canter	235846521	5-6	<div style="width: 100%; background-color: #dc3545; border: 1px solid #dc3545;"></div>	<div style="width: 0%; background-color: #007bff; border: 1px solid #007bff;"></div> Busy	Assign Task
Dahlia kop	236987412	16-20	<div style="width: 100%; background-color: #ccc; border: 1px solid #ccc;"></div>	<div style="width: 40%; background-color: #007bff; border: 1px solid #007bff;"></div> 40 mins. available	Assign Task
Leslie Hemmer	256321478	32-35	<div style="width: 100%; background-color: #dc3545; border: 1px solid #dc3545;"></div>	<div style="width: 0%; background-color: #007bff; border: 1px solid #007bff;"></div> Busy	Assign Task
Michelle Kaplan	235942568	25-28	<div style="width: 100%; background-color: #ccc; border: 1px solid #ccc;"></div>	<div style="width: 20%; background-color: #007bff; border: 1px solid #007bff;"></div> 20 mins. available	Assign Task

Sorting feature for efficiency

Important buttons easily accessible

View schedules effortlessly

Clean and easy-to-read interface

Clear listing

Emboldened important information

Color coded for easy viewing and alerts

Patients and their assigned nurses

The goal of this page is to simplify **Patient Management** by offering an organized list of all patients and their assigned nurses. This provides the Director of Nursing with clear, easily updatable information, allowing for quick identification of any potential issues to ensure smooth and efficient operations.

The screenshot shows a web application interface for patient management. It features a sidebar with navigation tabs: Nurses, Patients, Schedules, Orders, Messages, Tasks, and Settings. The main content area is titled 'List of Patients' and includes a search bar, filter buttons for 'Filter', 'Ward', and 'Date', and an 'Add Patient' button. A table lists patients with columns for Full Name, Gender, Age, Contact Number, Assigned Nurse, Efficiency Rating, and Action. The 'Efficiency Rating' column uses a color-coded progress bar to indicate task completion. Annotations highlight various UI features: 'Convenient search option' points to the search bar; 'Easy navigation of tabs /sections' points to the sidebar; 'Sorting feature for efficiency' points to the filter buttons; 'Important buttons easily accessible' points to the 'Update' buttons; 'Color coded for easy viewing and alerts' points to the efficiency rating bars, with a note stating 'Clear to see when patient is being neglected. Clear to see that nurse has not been tracking tasks on time.'; 'Clear listing' points to the table structure; 'Clean and easy- to- read interface' points to the overall layout; and 'Emboldened important information' points to the patient names in the table.

Full Name	Gender	Age	Contact Number	Assigned Nurse	Efficiency Rating	Action
Molly Pearlman	Female	87	052-715-0232	Nancy Jones	<div style="width: 20%;"></div>	Update
Ruth Black	Female	45	052-792-0222	Katie Lions	<div style="width: 20%;"></div>	Update
Daniel Rise	Female	67	052-715-0232	Sandy Cohn	<div style="width: 10%;"></div>	Update
Leon Stern	Male	65	052-792-3456	Lea Canter	<div style="width: 10%;"></div>	Update
Sarah Kahn	Female	58	077-715-1233	Dahlia kop	<div style="width: 10%;"></div>	Update
John Kaye	Male	69	052-792-0445	Leslie Hemmer	<div style="width: 10%;"></div>	Update
Michael Green	Male	71	072-792-0221	Michelle Kaplan	<div style="width: 10%;"></div>	Update

Conclusion & Success

This was a great project to work on. I loved the bright colors and fresh, clean design in the final version. I learnt how to keep only important information visible while keeping the app as versatile as possible.

I am happy with the outcome as I have begun the process of creating an app where Nurses can **track all their time sensitive tasks**; so they can **log the medications** they've administered to correct patients, ensuring proper dosages and times, as well as any other patient needs get dealt with at the **correct time without errors**.

I also enjoyed creating the desktop app where the Director of Nursing to **easily see nurse schedules and availability**, **track their performance** and **easily view which nurse is assigned to each patient**.

If I had more time, I would love to develop the alarm features to see how I would create reminders to further ensure nurses are fully secure in their schedules.

I would also love to research even more similar apps, to improve the app even further.

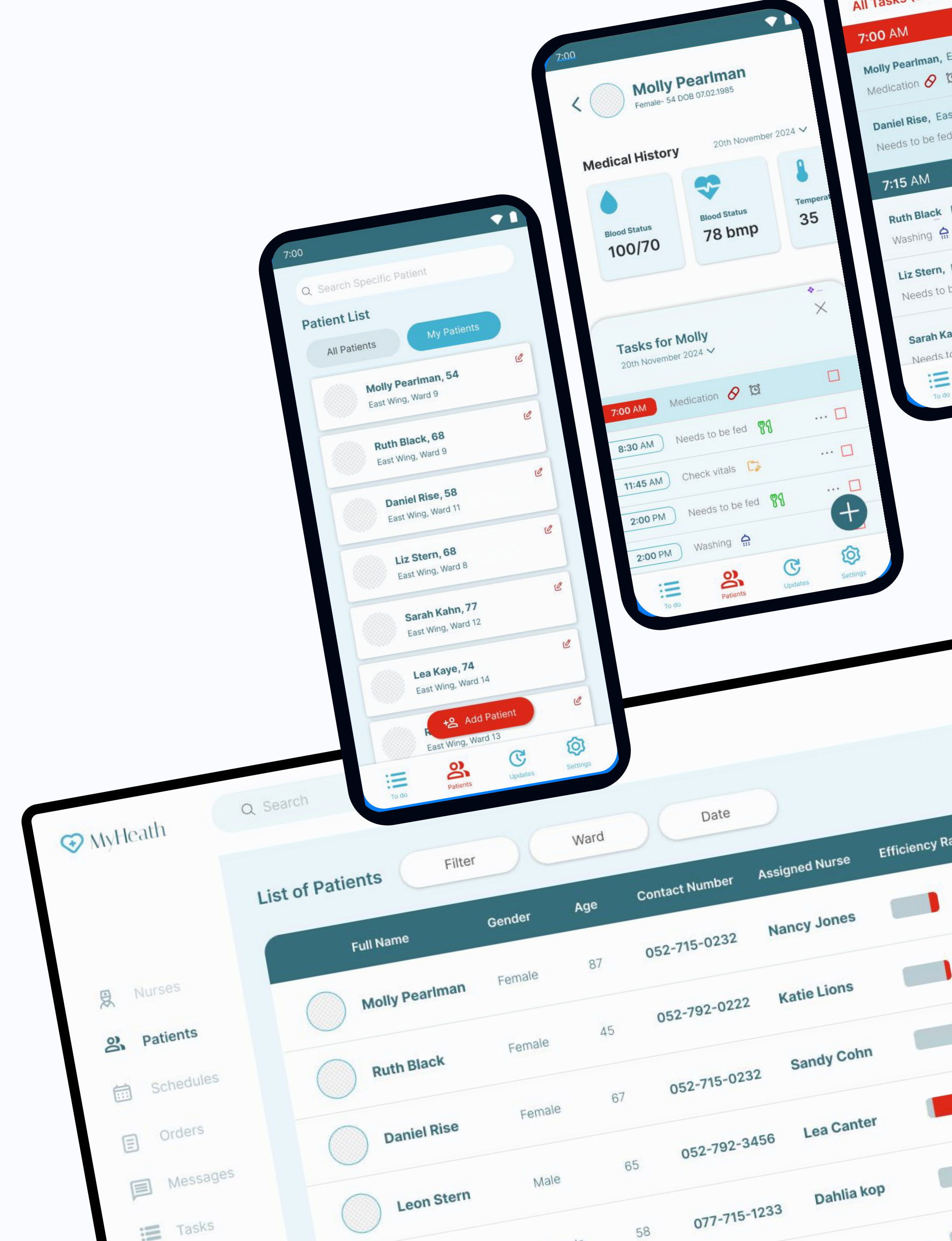
In order to measure success...

One of the most critical areas to track is how well the app prevents medication errors (e.g., missed doses, wrong dosages, wrong patient). Since the app includes features like reminders, medication tracking clear patient labeling, success would be reflected in fewer errors.

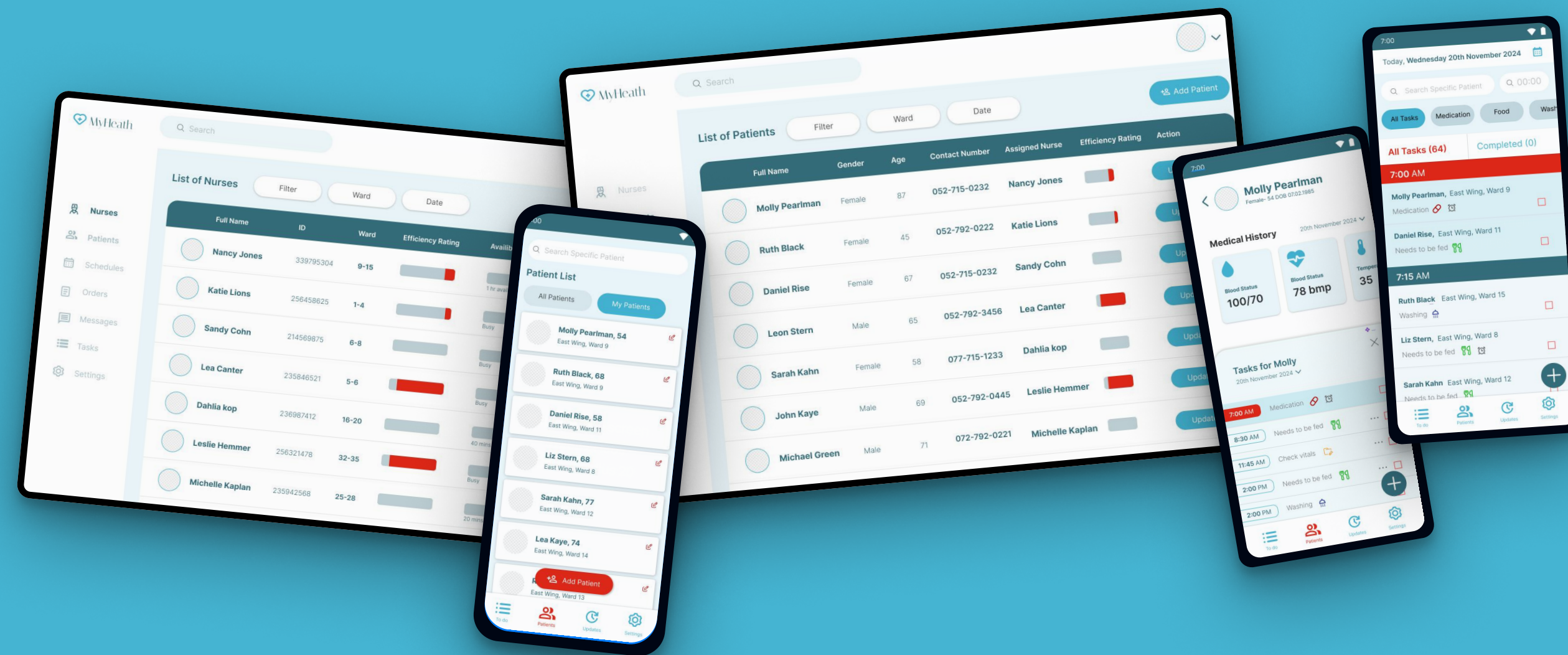
In addition, since the app uses digital patient data and reduces manual entry, it could lead to more accurate and timely records. Measuring the reduction in documentation errors (e.g., missing data, confused patients, overlooked records) can indicate success.

In summary:

- **Success from the nurses perspective** - less medication error and patient confusion.
- **Success for Patients** - Happier patients (check in with monthly satisfaction questionnaire),
- **Success for the Director of Nursing** is determined by how user-friendly and intuitive the app is for coordinating nurses and patients, leading to smoother operations and less stress in managing the healthcare centre.



Thank you



Michal Bendahan

054.846.8886 | November 2024