

USE CASE

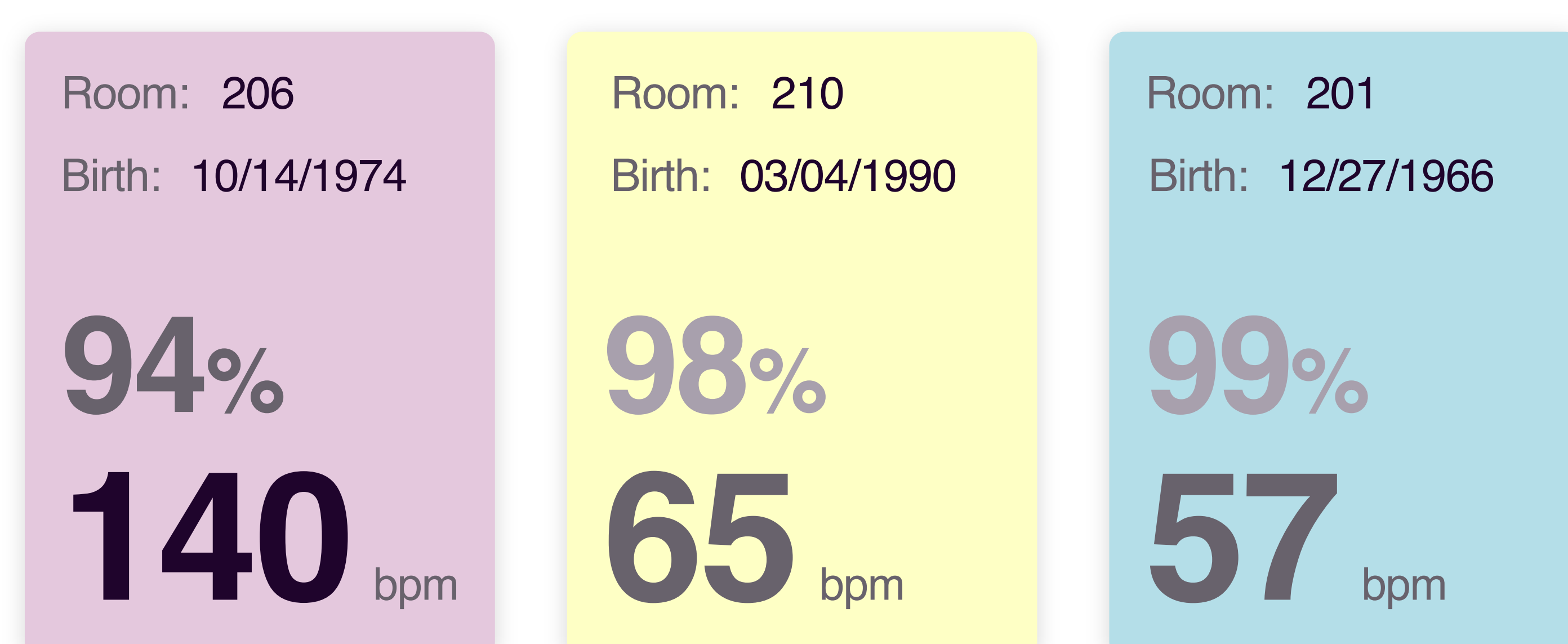
This purpose of this system is to monitor in-patient vitals in a single ward, such as an ICU, etc. This system is comprised of 3 interconnected interfaces for both health care professionals and patients alike.

HC providers must login with an individual username and password to avoid HIPAA violations. The interfaces automatically log the user out when there has been no activity for 10 minutes to protect patient data from prying eyes.

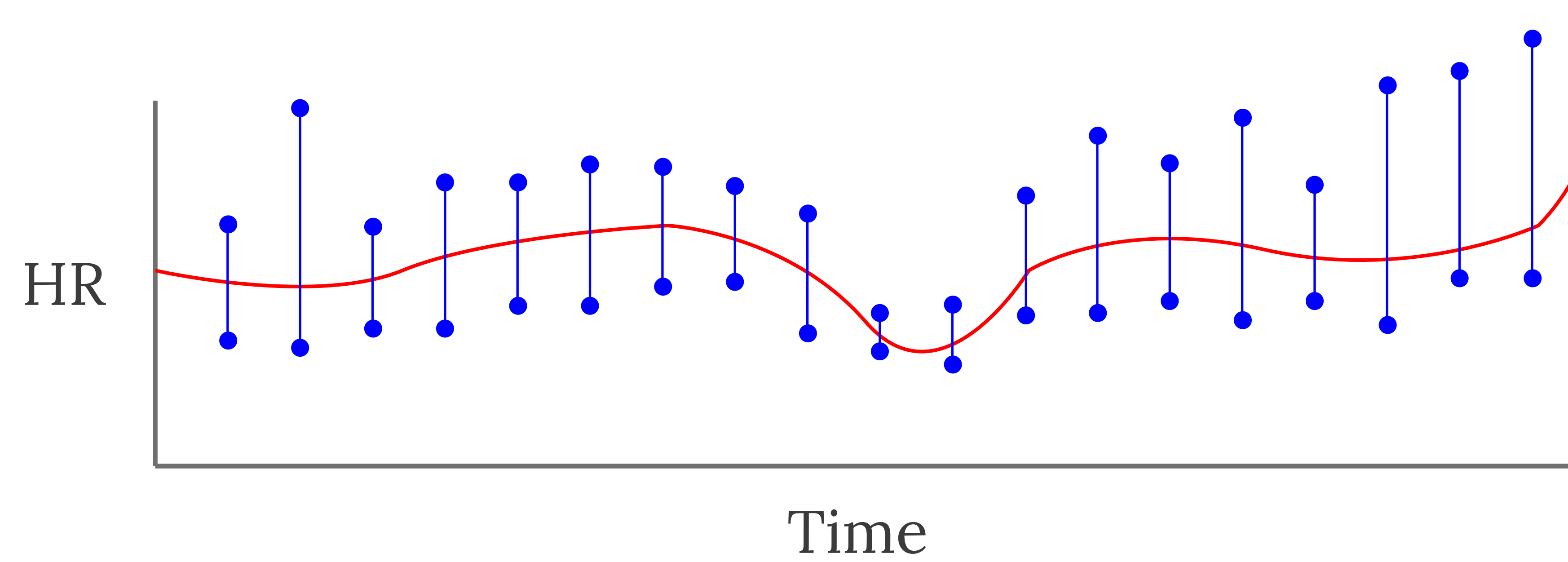
Each HC provider interface shows the data for ten or more patients via patient cards. Clicking on a patient card will take the user to an expanded version complete with more data, patient history, medications, and notes tied to that specific patient. The desktop version is suitable for a private work station, while the tablet version is suitable for mobile nurses and visiting patients.

The patient interface is a wearable that displays the current and resting heart rate of the patient. This HR information is the same that is displayed in the HC provider interface.

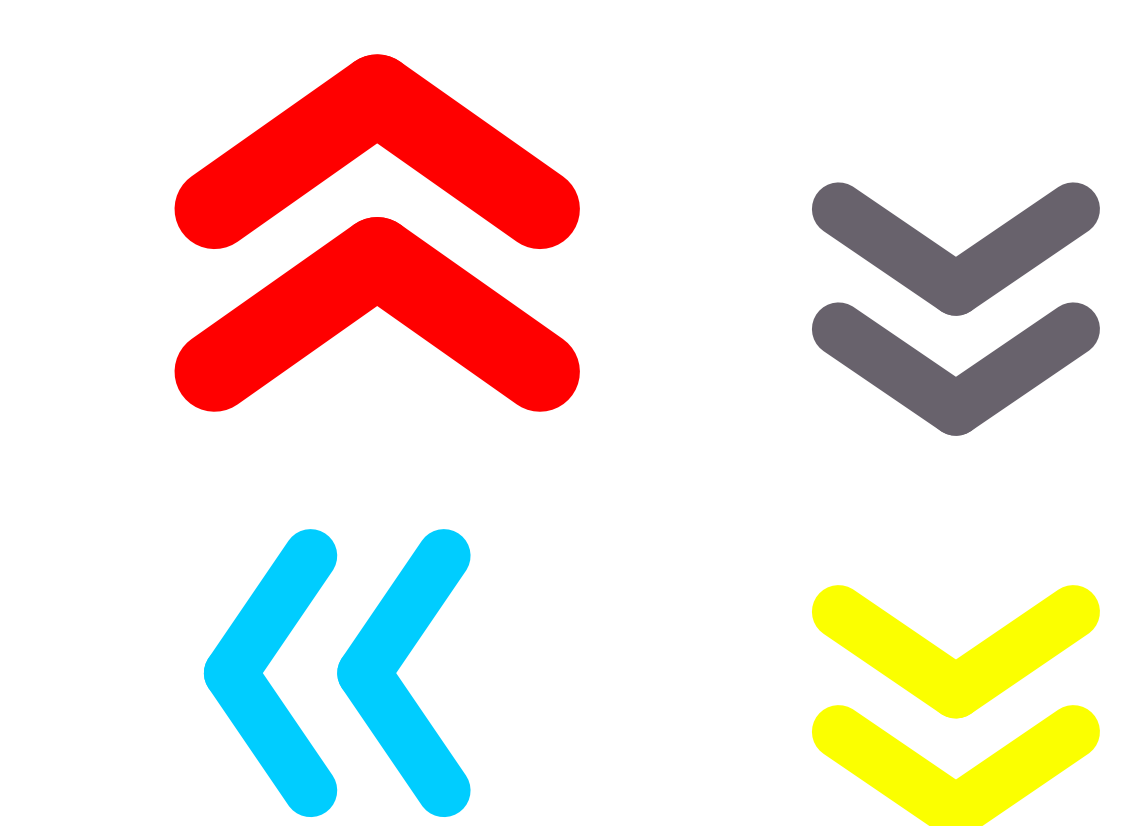
VISUAL ELEMENTS



Patient Cards



Graphs



Arrow Icons

FONTS

Lora Regular
Helvetica Regular
Helvetica Bold

COLOR PALLETTE

69626D

Dim gray

93B7BE

Light blue

23022E

Russian violet

FEFFBE

Cream

E8C7DE

Thistle

DESKTOP APPLICATION

To be used by Healthcare Providers

- 1920 x 1080 px.
- Private workstation/desktop computer

Users can click and drag patient cards between high priority and low priority depending on preference/needs

The dashboard features a top navigation bar with the user's name 'Dr. Whitewolf' and a 'log out' button. Below the navigation bar, there are two sections: 'High Priority Patients' and 'Low Priority Patients'. Each section contains a grid of patient cards. Each card displays the patient's room number (201), birthdate (12/27/1966), blood oxygen percentage (99%), and current heart rate (57 bpm). The cards are color-coded: red for out of range, yellow for barely within range, and green for well within range. To the right of the patient cards is a 'Notes' section with a text area containing placeholder text.

Shows the user who is currently signed in.

manual log out option

Users can enter their own notes here. Notes written on this page are general and are not tied to any individual patient or information.

Users can view notes past the fold when they scroll within the notes box.

Patient cards show the patient's room number, birthdate, blood oxygen percentage and current heart rate. They are also color coded to indicate status:

- Red = Vitals are out of range
- Yellow = Vitals are barely within range
- Green = Vitals are well within range

Users can view more patient cards by scrolling over them.

Dumbbell chart showing the patient's average heart rate (red line) over time. The blue dumbbells signify the full range of heart rates the patient experienced over a period of 24 hours, showing 20 days total.

When users click on a patient card, they are brought to this page, which is an expansion of the patient card. It provides more detailed information including an average Heart Rate graph, some vitals, a list of medications, the patient's history, and a space to write notes that correspond to the patient being viewed.

The detailed patient view for 'Rebecka' (Room 206) includes a header with a back arrow, the patient's name, room number, and the user's name 'Dr. Whitewolf' with a 'log out' button. The main content area features a 'HR' dumbbell chart showing heart rate over 'Time'. Below the chart, there are three large numbers: '140' (Current HR) with a red upward arrow, '65' (Resting HR), and '94%' (Blood Oxygen) with a green double arrow. To the right is a 'Medications' list: 'Metoprolol - heart rhythm' and 'Amlodipine - blood flow'. Below that is a 'History' section with patient details: Name: Rebecka Park, Age: 60, DOB: 07/28/1964, Gender: Female, Medical History: Diagnosed with coronary artery disease (CAD) 5 years ago. History of hypertension (diagnosed at age 50). To the right of the main content is a 'Notes' section with a text area containing placeholder text.

Current blood oxygen trend signified by the red arrow icon.

Current heart rate trend signified by the red arrow icon.

Patient history, editable.

Patient medications, changes automatically when prescribed.

Notes pertaining to the currently selected patient. Editable.

TABLET APPLICATION - Portrait

To be used by Healthcare Providers

- 1536 x 2048 px. (Portrait)
- Mobile tablet for visiting patients

Shows the user who is currently signed in.

manual log out option

High Priority Patients

Room: 206 Birth: 10/14/1974 94% 140 bpm	Room: 210 Birth: 03/04/1990 98% 65 bpm	Room: 201 Birth: 12/27/1966 99% 57 bpm	Room: 211 Birth: 07/18/2000 97% 72 bpm
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Low Priority Patients

Room: 206 Birth: 10/14/1974 99% 122 bpm	Room: 210 Birth: 03/04/1990 98% 65 bpm	Room: 201 Birth: 12/27/1966 99% 54 bpm	Room: 211 Birth: 07/18/2000 97% 99 bpm
Room: 206 Birth: 10/14/1974 98% 108 bpm	Room: 210 Birth: 03/04/1990 98% 68 bpm	Room: 201 Birth: 12/27/1966 99% 48 bpm	Room: 211 Birth: 07/18/2000 97% 72 bpm

Users can click and drag patient cards between high priority and low priority depending on preference/needs

When users click on a patient card, they are brought to this page, which is an expansion of the patient card. It provides more detailed information including an average Heart Rate graph, some vitals, a list of medications, the patient's history, and a space to write notes that correspond to the patient being viewed.

Rebecka
Room 206

Dr. Whitewolf
log out

HR

Time

140 Current HR **65** Resting HR **94%** Blood Oxygen

History

Name: Rebecka Park
 Age: 60 DOB: 07/28/1964
 Gender: Female
 Medical History:
 Diagnosed with coronary artery disease (CAD) 5 years ago.

Medications Notes

Metoprolol - heart rhythm
 Amlodipine - blood flow

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This page shows the same information as the desktop version.

TABLET APPLICATION - Landscape

To be used by Healthcare Providers

- 2048 x 1536 px. (Landscape)
- Mobile tablet for visiting patients

Dr. Whitewolf
log out

High Priority Patients

Room: 206 Birth: 10/14/1974 94% 140 bpm	Room: 210 Birth: 03/04/1990 98% 65 bpm	Room: 201 Birth: 12/27/1966 99% 57 bpm	Room: 211 Birth: 07/18/2000 97% 72 bpm
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Low Priority Patients

Room: 206 Birth: 10/14/1974 99% 122 bpm	Room: 210 Birth: 03/04/1990 98% 65 bpm	Room: 201 Birth: 12/27/1966 99% 54 bpm	Room: 211 Birth: 07/18/2000 97% 99 bpm
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Notes

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When the user holds the tablet sideways, the same notes present on the desktop version appear. The user can edit them in this formation.

< Rebecka
Room 206

Dr. Whitewolf
log out

HR

Time

140
Current HR

65
Resting HR

94%
Blood Oxygen

History

Name: Rebecka Park
Age: 60
Gender: Female
Medical History:
Diagnosed with coronary artery disease (CAD) 5 years ago.

Medications

Metoprolol - heart rhythm
Amlodipine - blood flow

Notes

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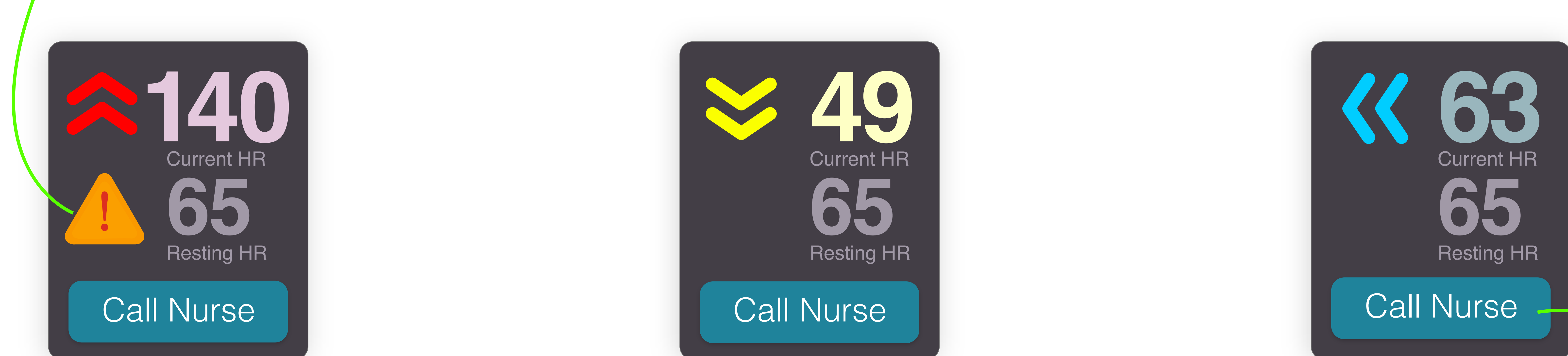
This page shows the same information as the desktop and portrait tablet versions.

WEARABLE INTERFACE

To be used by Patients in hospital for tracking their own health metrics.

- 396 x 484 (Apple watch resolution)

When an anomaly is detected, the watch displays a warning symbol. This warning symbol automatically alerts the health care provider.



The wearable always displays the current heart rate, the current heart rate trend, and the resting heart rate. The current heart rate and trend marker (arrow icon) are color coded based on whether the current heart rate is within the preset range or not:

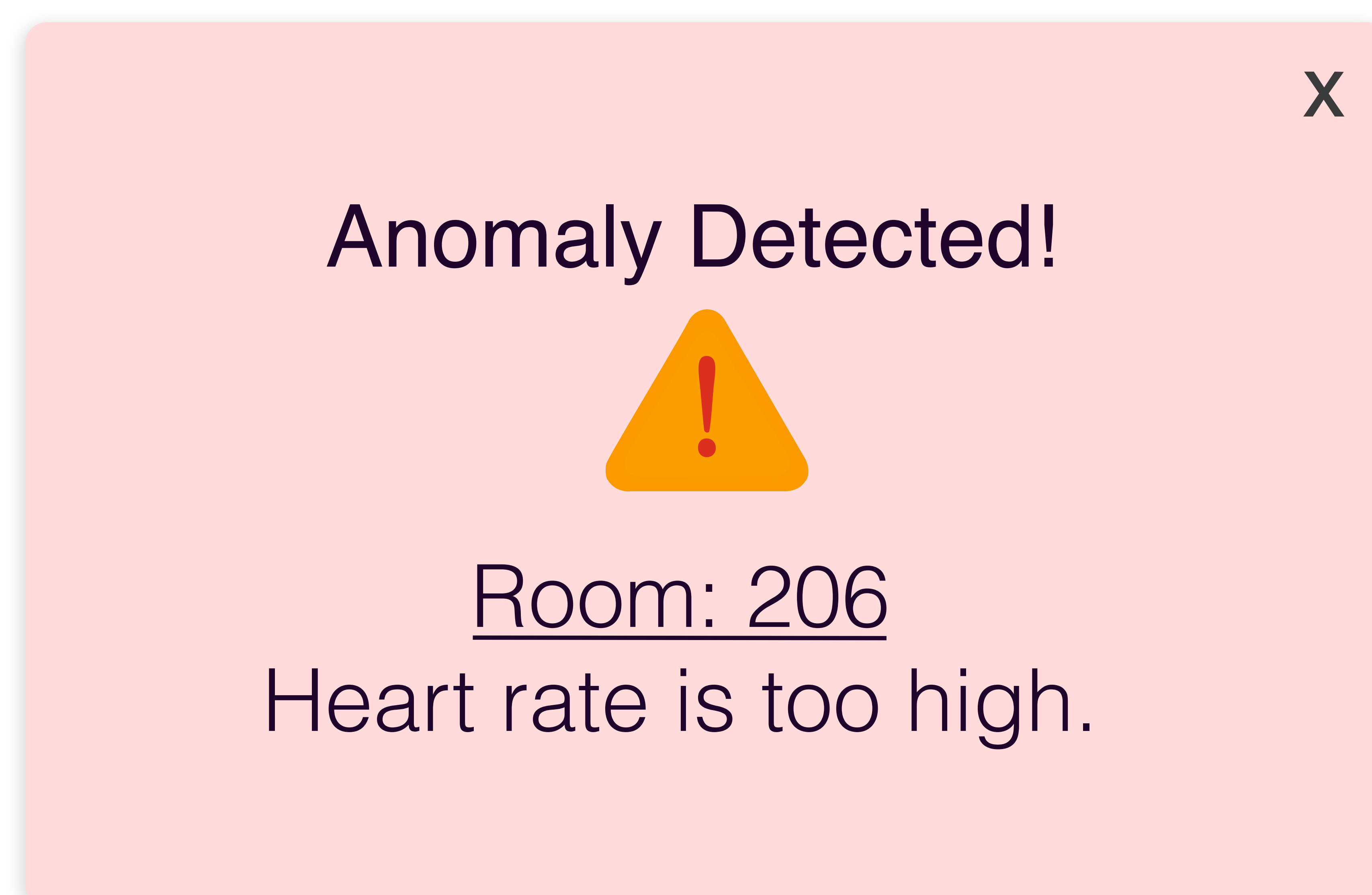
- Red = current heart rate is way outside of the range, and therefore requires immediate attention.
- Yellow = current heart rate is teetering on the edge of the range, and needs to be monitored.
- Blue = current heart rate is well within the range and requires no attention.

These colors correspond to the patient's "patient card" on the healthcare provider's interface.

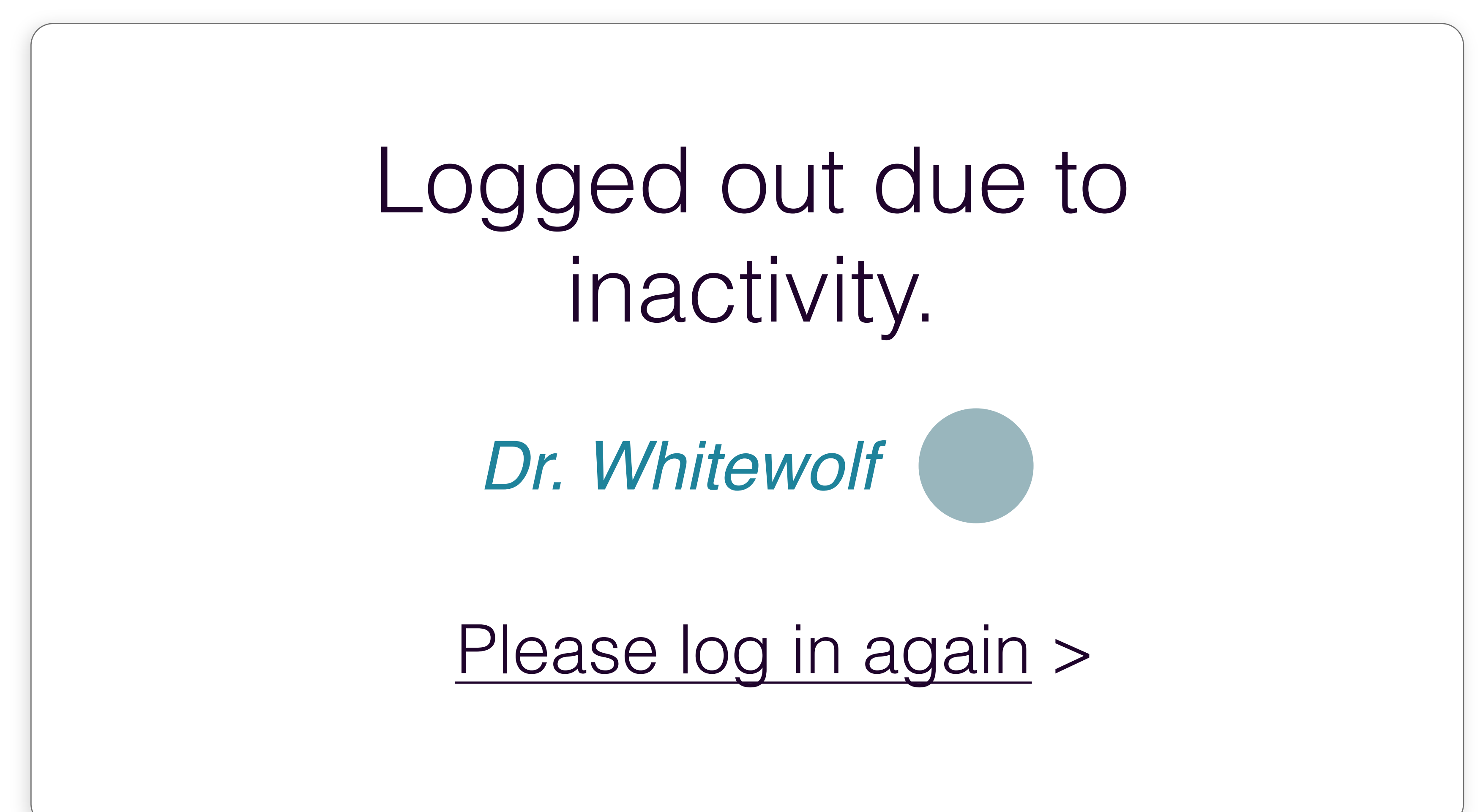
The wearable interface includes a "Call Nurse" button that the user can click this button at any time to summon a nurse or healthcare provider. This feature is directly linked to the healthcare provider interface via notifications, which have the same displays on both the desktop and the tablet versions.

NOTIFICATIONS

Shown only on the healthcare provider interface, but are the same on both the tablet and desktop versions.



This notification appears when an anomaly has been detected in a patient's vitals. HC providers can exit this notification by either clicking the "x" in the upper right hand corner or by clicking the room number of the patient to take them right to that patient's page.



This notification appears when there has been no activity on the HC provider's interface in 10 minutes. The HC provider must log in again in order to comply with HIPAA.