



neopenda

Style Guide  
March 2019

## Contact

If you find any issues or have any questions about the style guidelines, please contact Vera Huang at 217-722-6182 or email [verahuang517@gmail.com](mailto:verahuang517@gmail.com)

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# OVERVIEW

Neopenda is a 4-in-1 real-time vital monitoring device pairing up with a central monitoring application pre-installed on the android tablet.

This style guide provides all the detail information in relation to the visual design of the application, including the usages of the style elements and UI components.

## Design Principles

Our target users, Ugandan nurses, have experiencing overwhelming responsibilities when it comes to taking care of neonates with insufficient resources. In order to alleviate the burden of the target users, our design follows the following principles:



### Invert The Pyramid

Put the most important and pressing information in the most visible and prominent locations, expressing a clear hierarchy - and reducing decision fatigue.



### Birds Eye View

Our UI Dashboard should make important information easily visible at a glance.



### Don't Reinvent The Wheel

Use familiar patterns, language, and conventions that don't require learning curves, assumptions, or onboarding to understand.



# STYLE ELEMENTS

Colors

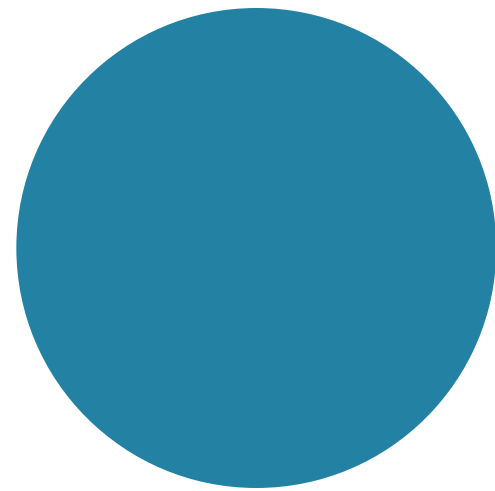
Typography

Iconography

# Colors

The color usage should be consistent. The color contrast should be considered when applying colors to the items or text in order to meet the WCAG 2 minimal criteria.

## Primary Color

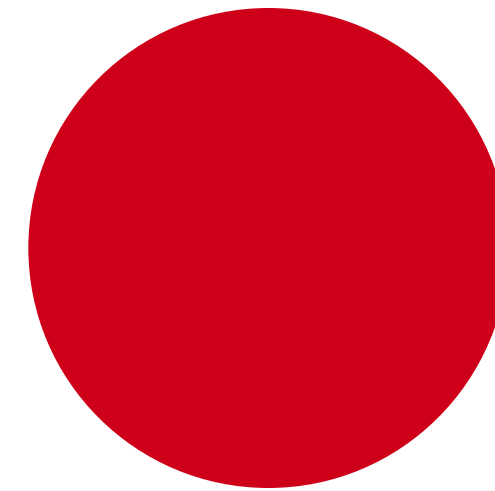


### Calming Blue

HEX: #2382A3  
RGB (35, 130, 163)  
CMYK (79, 20, 0, 36)  
Pantone: 314 C

- The calming blue is mainly used on the text, buttons, toggle switches and icons.
- The calming blue is used as selected state on the patient info cont. form. It is the color of active state of the text on top navigation and tab of the trend graphs.

## Accent Color



### Emergency Red

HEX: #CE0019  
RGB (206, 0, 25)  
CMYK (0, 100, 88, 19)  
Pantone: 1795 C

- The emergency red is only used on the buttons (in critical state) of the side panel on the dashboard, the background (flashing before interacted) of the critical vitals, and the notifications.
- The emergency red should be used carefully and should not be used in the situations other than critical events in order to reduce alarm fatigue.
- The flashing emergency red serves as the background of the critical vitals when the alarm sounds. Once users interact with the vital cards, the background of critical vital should stop flashing.

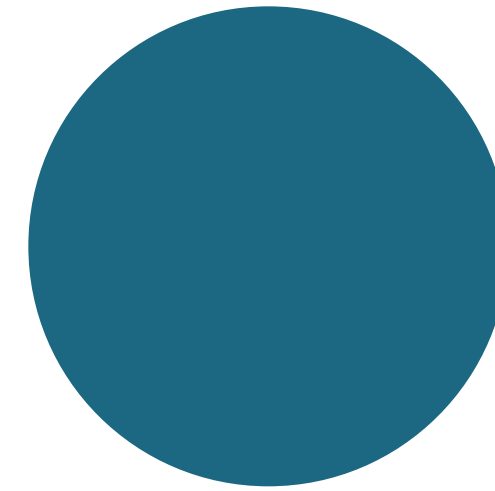
## Shades of Blue



### Feather Blue

HEX: #F3F8F9  
RGB (243, 248, 249)  
CMYK (2, 0, 0, 2)  
Pantone: 656 C

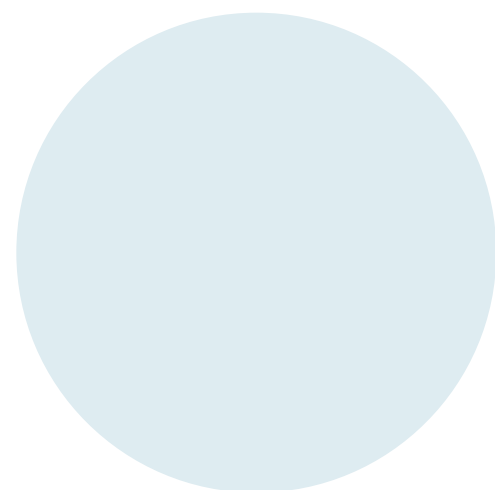
The feather blue is used as the background of the side panels, top navigation, title bar of the the vital cards, buttons of the vital cards, the background of form field boxes, and the background of the first row of the table.



### Steel Blue

HEX: #1C6882  
RGB (28, 104, 130)  
CMYK (78, 20, 0, 49)  
Pantone: 7707 C

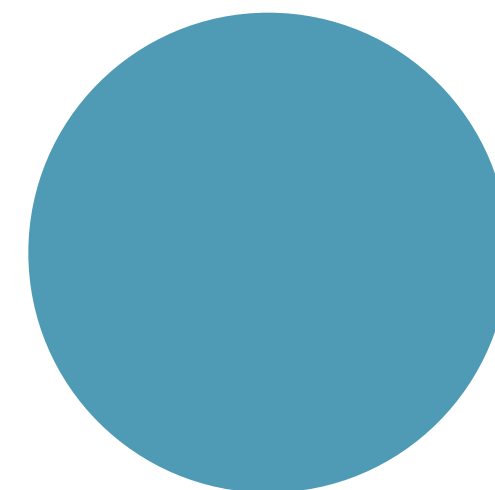
The steel blue is only used on the trend graphs, including the selected state of the “duration” on the side panel (filter) and the lines and dots on the trend graphs.



### Delight Blue

HEX: #DEECF1  
RGB (222, 236, 241)  
CMYK (8, 2, 0, 5)  
Pantone: 649 C

The Delight blue is used as the background of the inactive tab on the trend graphs.

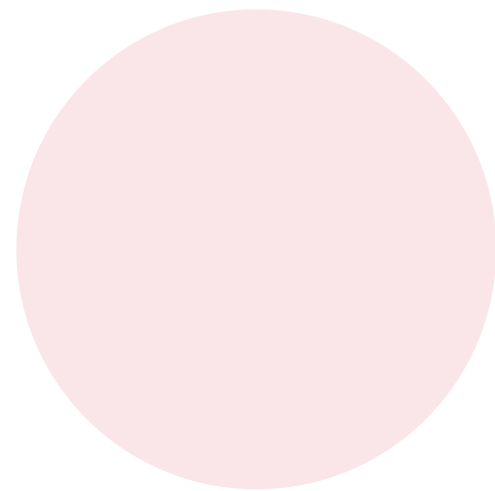


### Bondi Blue

HEX: #4F9BB5  
RGB (79, 155, 181)  
CMYK (56, 14, 0, 29)  
Pantone: 7459 C

The bondi blue is used on the text that acts as inactive or non-selected form. e.g. numbers on the side panel of the dashboard, mute/locate/trend buttons on the vital cards, and text on the unselected tabs on the trend graph.

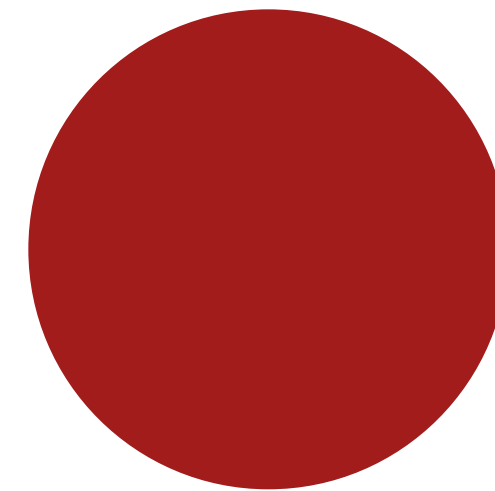
## Shades of Red



### Transparent Red

HEX: #CE0019  
RGB (206, 0, 25)  
CMYK (0, 100, 88, 19)  
Opacity: 10%

The transparent red is used on the trend graph as the shading for the areas of the critical events happen.

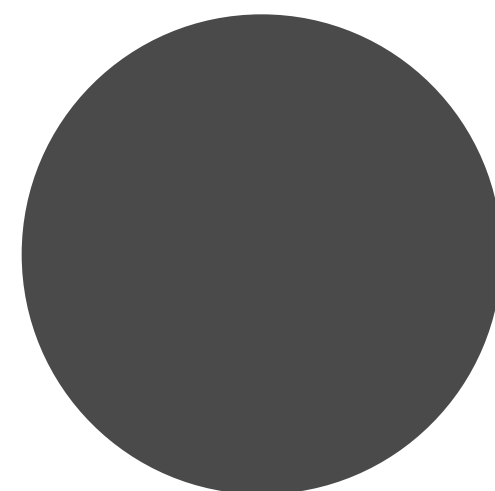


### Alert Red

HEX: #A21C1C  
RGB (162, 28, 28)  
CMYK (0, 83, 83, 36)  
Pantone: 7628 C

The alert red was used for the call-out box and the info buttons on the trend graphs.

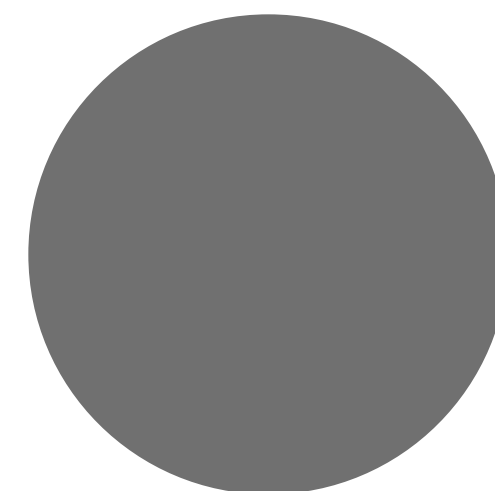
## Shades of Gray



### Prominent Dark

HEX: #4A4A4A  
RGB (74, 74, 74)  
CMYK (0, 0, 0, 71)  
Pantone: 446 C

The prominent dark is used for the vital numbers on the vital cards, body copy, and filter titles of the side panel of the trend graphs.



### Inactive Gray

HEX: #707070  
RGB (112, 112, 112)  
CMYK (0, 0, 0, 56)  
Pantone: 424 C

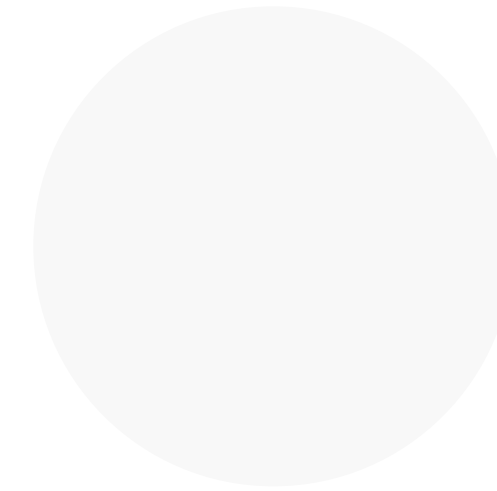
The inactive gray is used on the inactive buttons and inactive text, or to show less important information.



## Transparent Gray

HEX: #E6E6E6  
RGB (230, 230, 230)  
CMYK (0, 0, 0, 10)  
Opacity: 30%

The transparent gray is used on the trend graph as the shading of the non-critical areas.

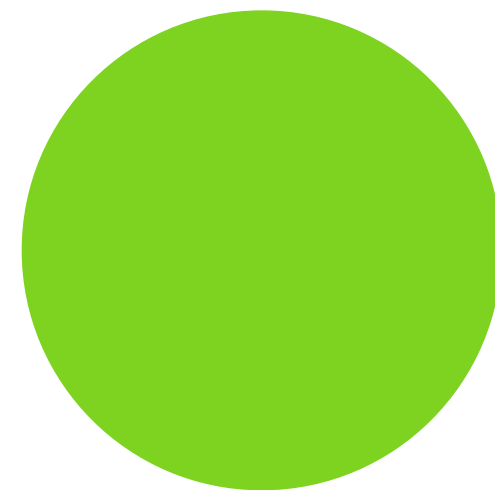


## Background Gray

HEX: #F8F8F8  
RGB (248, 248, 248)  
CMYK (0, 0, 0, 3)  
Pantone: N/A

The background gray is used with white (#FFFFFF) to separate different rows of tables and the trend charts.

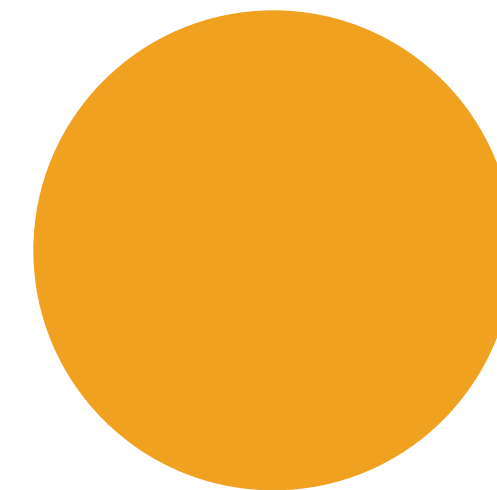
## Other Colors



## Safe Green

HEX: #7ED321  
RGB (126, 211, 33)  
CMYK (40, 0, 84, 17)  
Pantone: 7488 C

The safe green is used for full battery and the standard lines and numbers of the vitals on the trend graphs.



## Warning Orange

HEX: #EFA11F  
RGB (126, 211, 33)  
CMYK (40, 0, 84, 17)  
Pantone: 144 C

The warning orange is used for half battery symbol.

## Typography

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We use one typeface—Proxima Nova—throughout the entire application as far as the English letters. Some of the numbers use Proxima Nova Condensed.

By utilizing different colors, font sizes, and font weights, we were able to create a strong visual hierarchy that is aligned with one of the design principles, “Invert The Pyramid.”

### Disclaimer:

The designer does not own the font.

Please purchase the font for the commercial purposes:

<https://www.marksimonson.com/fonts/view/proxima-nova>

### Proxima Nova

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
TUVWXYZabcdefghijklmnopqrstuvwxyz  
1234567890

### Proxima Nova Condensed

ABCDEFGHIJKLMN OPQRSTUVWXYZ  
XYZabcdefghijklmnopqrstu vwxy  
z1234567890

# TYPOGRAPHY

## Text

### H1

Proxima Nova Semibold 24pt

### H2

Proxima Nova Semibold 20pt

### H3

Proxima Nova Semibold 16pt

### H4

Proxima Nova Semibold 14pt

### Body

Proxima Nova Medium 14pt

### Caption 1

Proxima Nova Regular 14pt

### Caption 2

Proxima Nova Medium 12pt

### Caption 3

Proxima Nova Regular 12pt

## Numbers

### Number Type 1

Proxima Nova Medium 32pt

Used for dashboard vital numbers

### Number Type 2

Proxima Nova Condensed Semibold 15pt

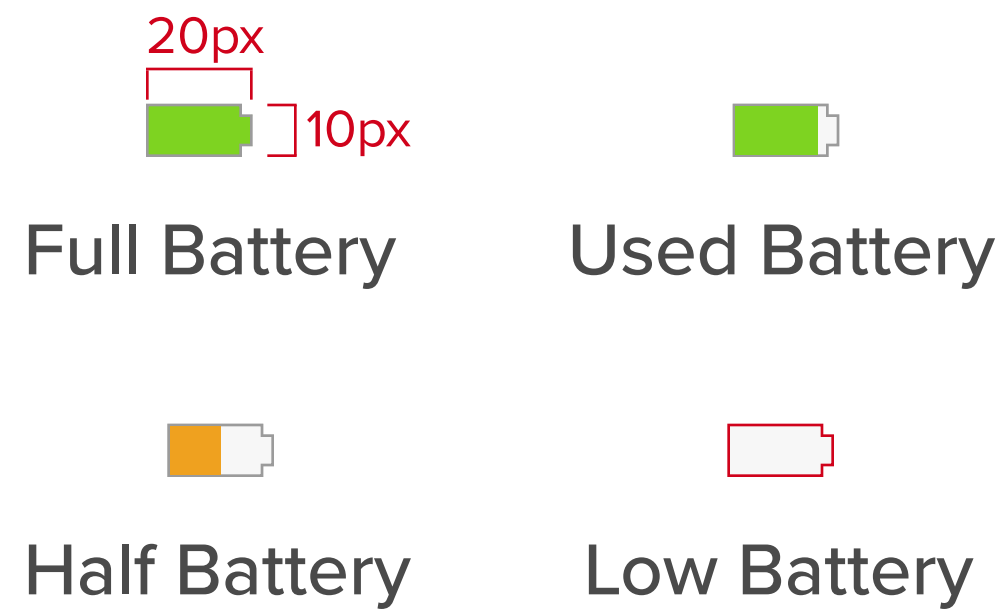
Used for the number in the circle on the dashboard, sidebar of the trend graphs, and notifications

# Iconography

In order to avoid misunderstanding of the icons used, icons with functions should ALWAYS have labels unless they are self-explanatory and well-recognized by our target users.

## Battery

The battery icons are located at the title bar of the vital cards.



## Top Navigation



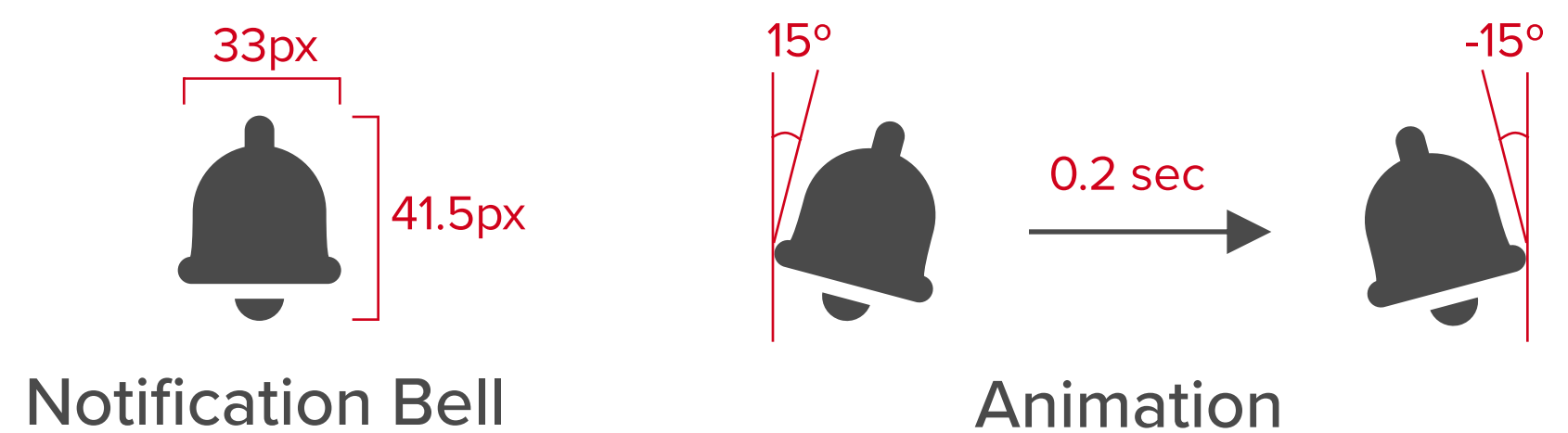
## Functional Icons

Functional icons should always be labeled when used. The label should explain what the icon means or does using a word or a phase. The shorter, the better.



## Notification

The notification bell is in white, on red background. To mimic the bell ringing, the notification bell is animated to transit from 15° to -15° of rotation within 0.2 seconds.



# UI COMPONENTS

Grid Layout

Buttons

Top Navigation

Side Panels

Cards

List

Trends

Forms

# Grid Layout

Column grid layout was used to organize components across the screens.

## Grid Layout Setting

### Total Width

1000px

### Offset

12px, centered

### Number of Columns

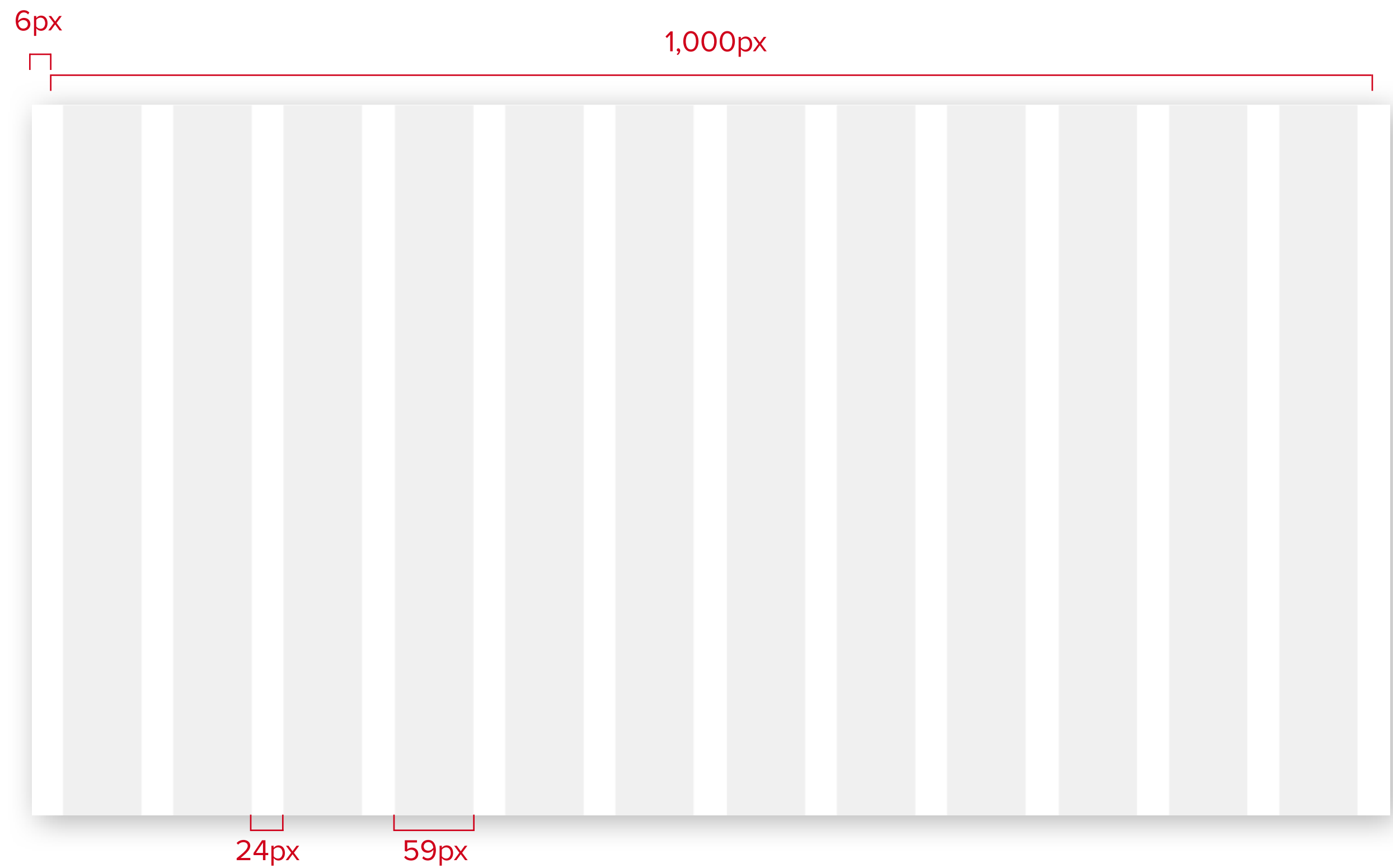
12

### Gutter Width

24px

### Column Width

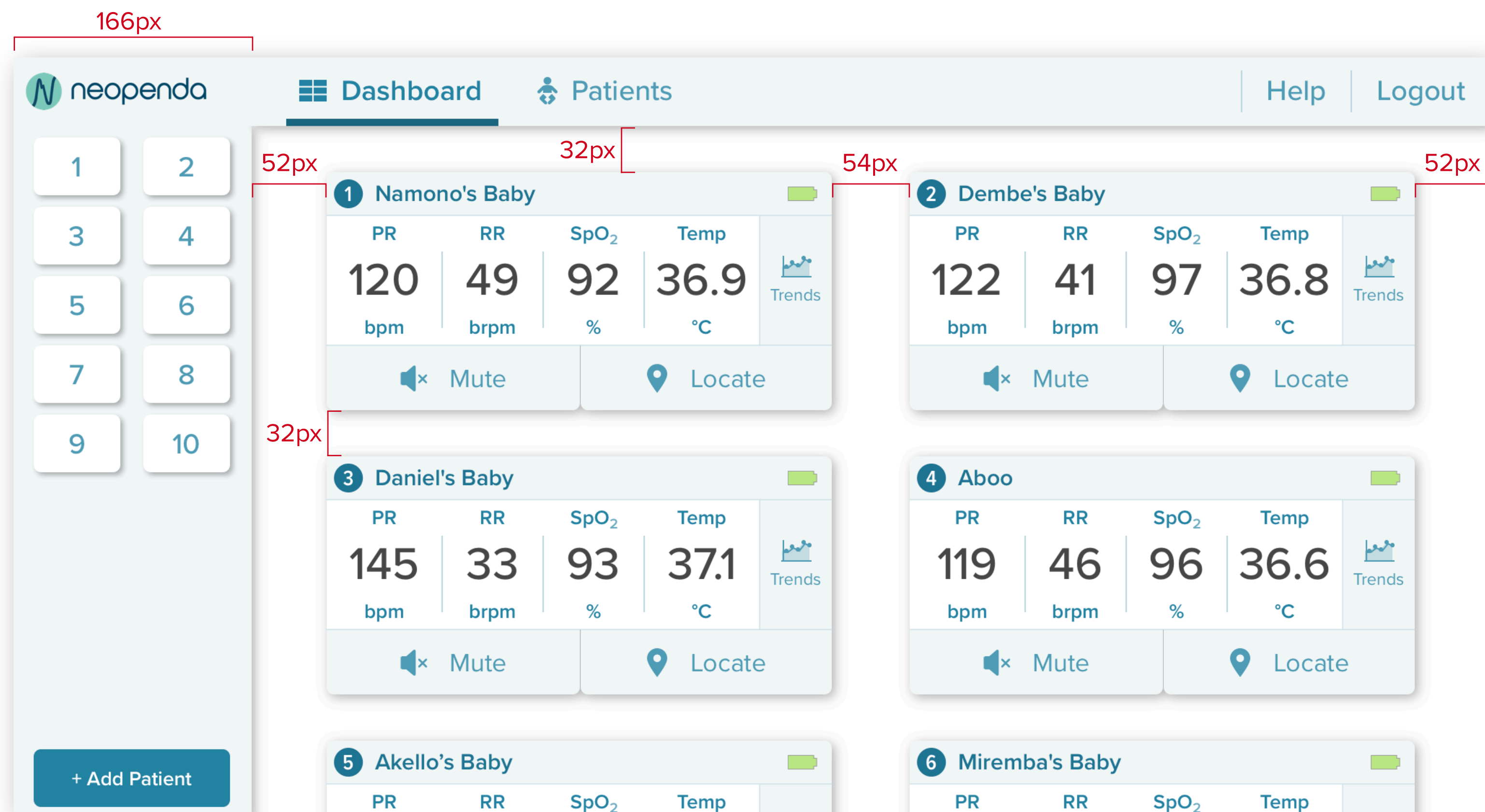
59px



# GRID LAYOUT

## Vital Card Layout

The vital card layout is based in the resolution of 1024 x 600. In case of different resolution of devices used for the application, make sure that at least four vital cards show be shown on the dashboard without scrolling.





## Buttons

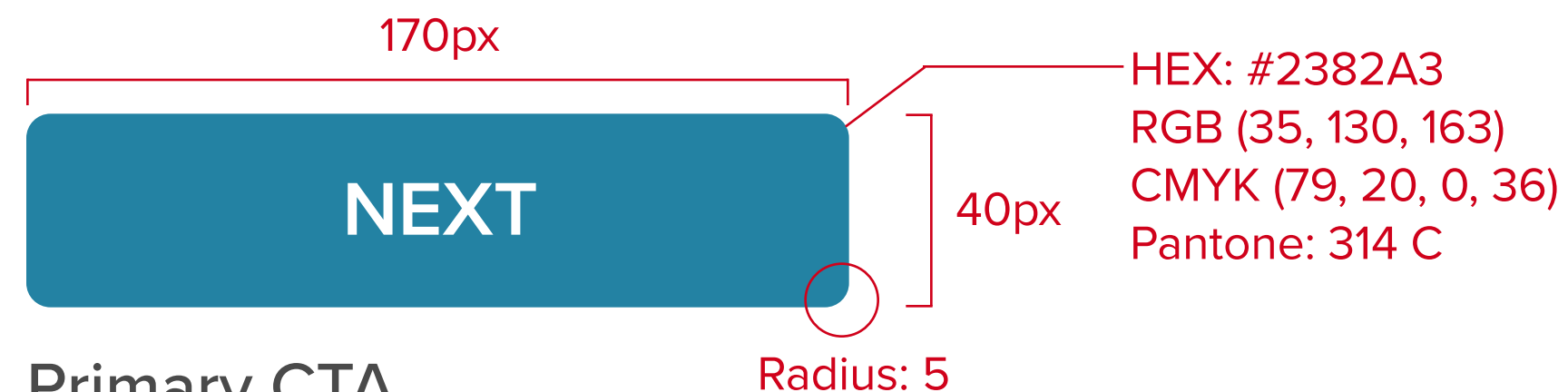
---

Buttons are used for various purposes. You will find the color, shape, and implementation of the buttons here.

# BUTTONS

## Call-To-Actions (CTAs)

Each page or screen should only have ONE primary CTA. If there are more than one links on the same screen, use secondary CTA for the second most important link, and underlined text for other links.



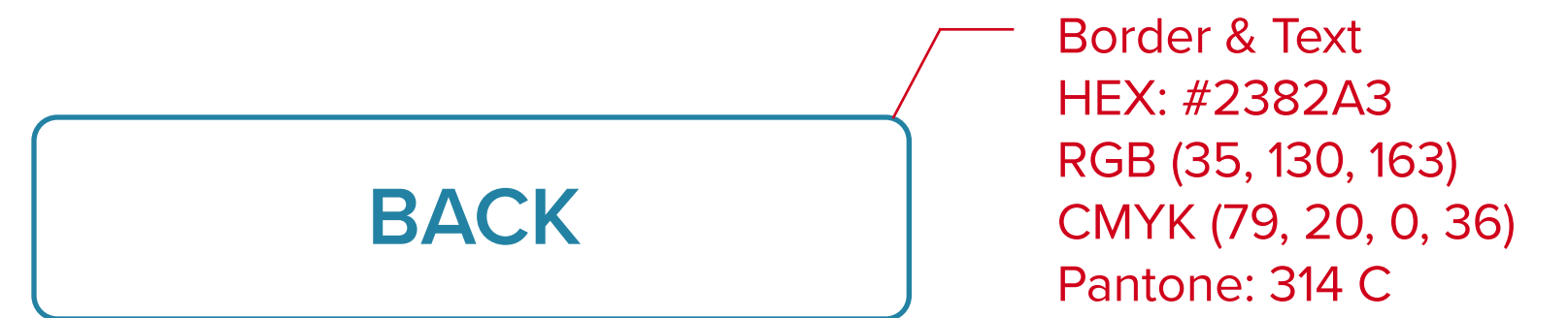
### Primary CTA

The buttons is active and clickable.



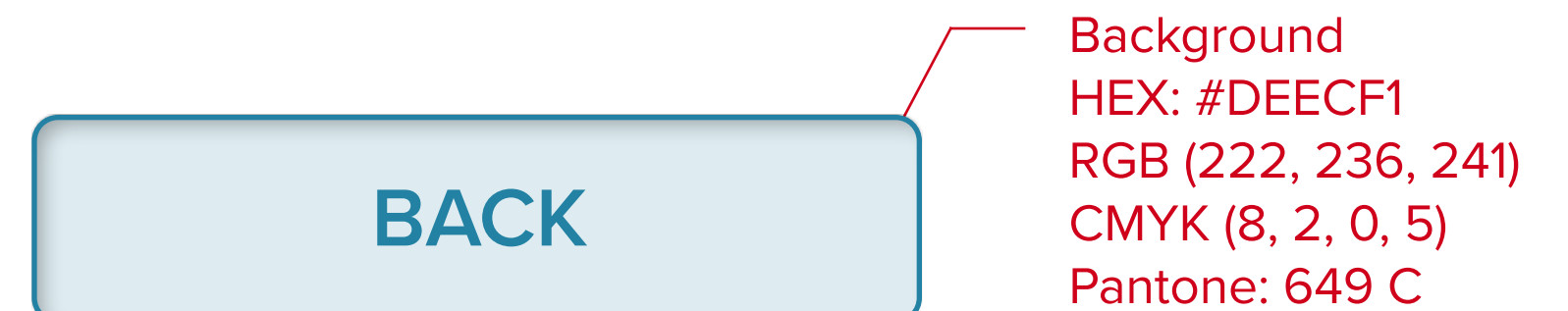
### Primary CTA on-click

This is the transition state of the button being tapped/clicked



### Secondary CTA

The buttons is active and clickable.



### Secondary CTA on-click

This is the transition state of the button being tapped/clicked

Inner Shadow  
(2, 2, 4, 0)  
#000000, 30%



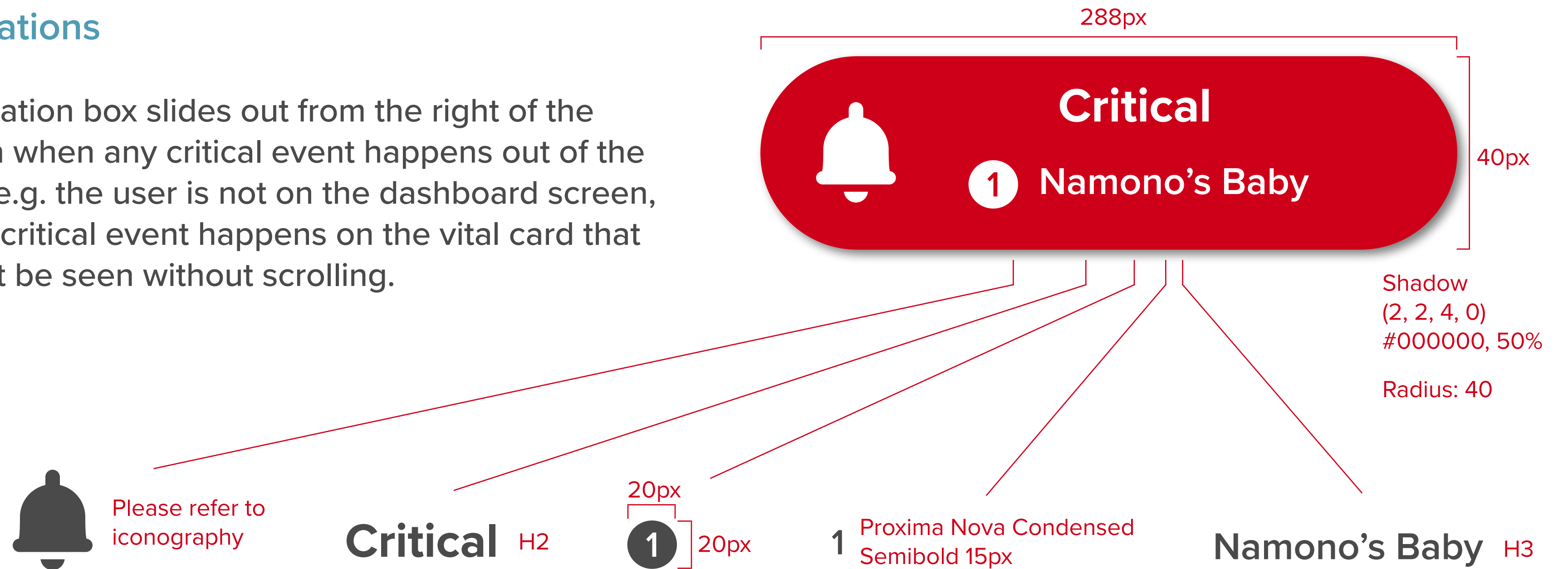
### Inactive CTA

The buttons is inactive and not clickable.

# BUTTONS

## Notifications

Notification box slides out from the right of the screen when any critical event happens out of the sight, e.g. the user is not on the dashboard screen, or the critical event happens on the vital card that cannot be seen without scrolling.



The bell of the notification is animated to mimic the bell ringing. For more information, please refer to page 9, iconography.

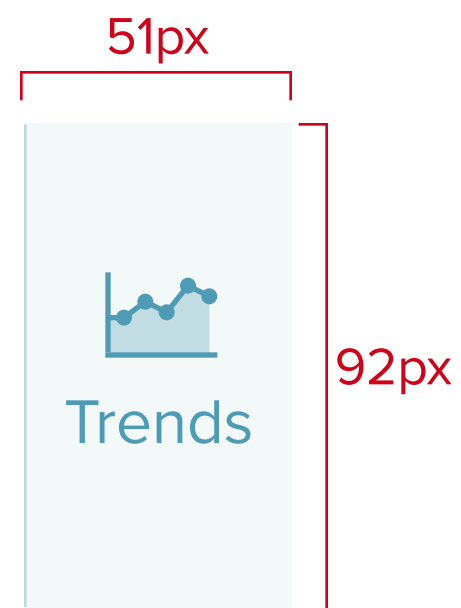
When there are more than one critical events happening, the notification will only show the baby numbers instead of the number and the name.

# BUTTONS

## Vital Card Buttons

Vital card buttons include the trends button, mute button, and locate button.

### Trends Button



Text & Icon  
HEX: #4F9BB5  
RGB (79, 155, 181)  
CMYK (56, 14, 0, 29)  
Pantone: 7459 C

Background  
HEX: #F3F8F9  
RGB (243, 248, 249)  
CMYK (2, 0, 0, 2)  
Pantone: 656 C

### Resting Form

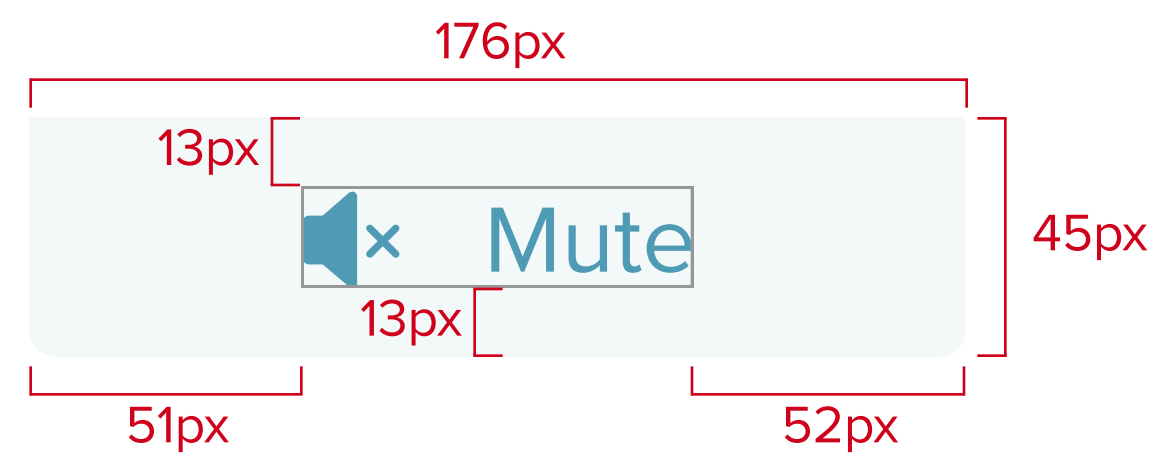


Inner Shadow  
(2, 2, 4, 0)  
#000000, 30%

Background  
HEX: #DEECF1  
RGB (222, 236, 241)  
CMYK (8, 2, 0, 5)  
Pantone: 649 C

### On-click Form

### Mute/Locate Button



### Resting Form

Background  
HEX: #F3F8F9  
RGB (243, 248, 249)  
CMYK (2, 0, 0, 2)  
Pantone: 656 C

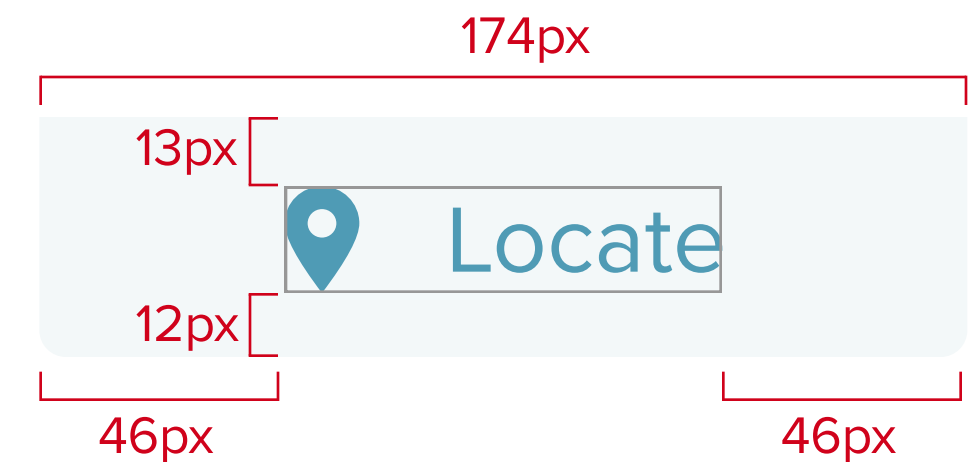
Text & Icon  
HEX: #4F9BB5  
RGB (79, 155, 181)  
CMYK (56, 14, 0, 29)  
Pantone: 7459 C



### On-click Form

Background  
HEX: #DEECF1  
RGB (222, 236, 241)  
CMYK (8, 2, 0, 5)  
Pantone: 649 C

Text & Icon  
HEX: #4F9BB5  
RGB (79, 155, 181)  
CMYK (56, 14, 0, 29)  
Pantone: 7459 C



For icon sizing,  
please refer to  
iconography  
page



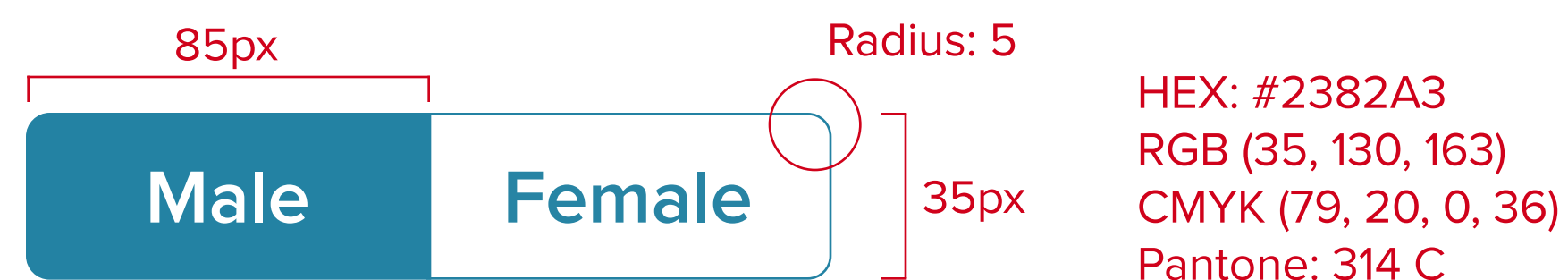
Inner Shadow  
(2, 2, 4, 0)  
#000000, 30%

# BUTTONS

## Tap Buttons

Tap buttons are used on the new patient form where users can choose among various options. The text inside the button should be centered. The buttons should be at least 85px wide so that they are big enough for users to tap. If the options are more than two rows, make sure that the spacing between rows should be at least 24px to minimize mistakes.

### Do's

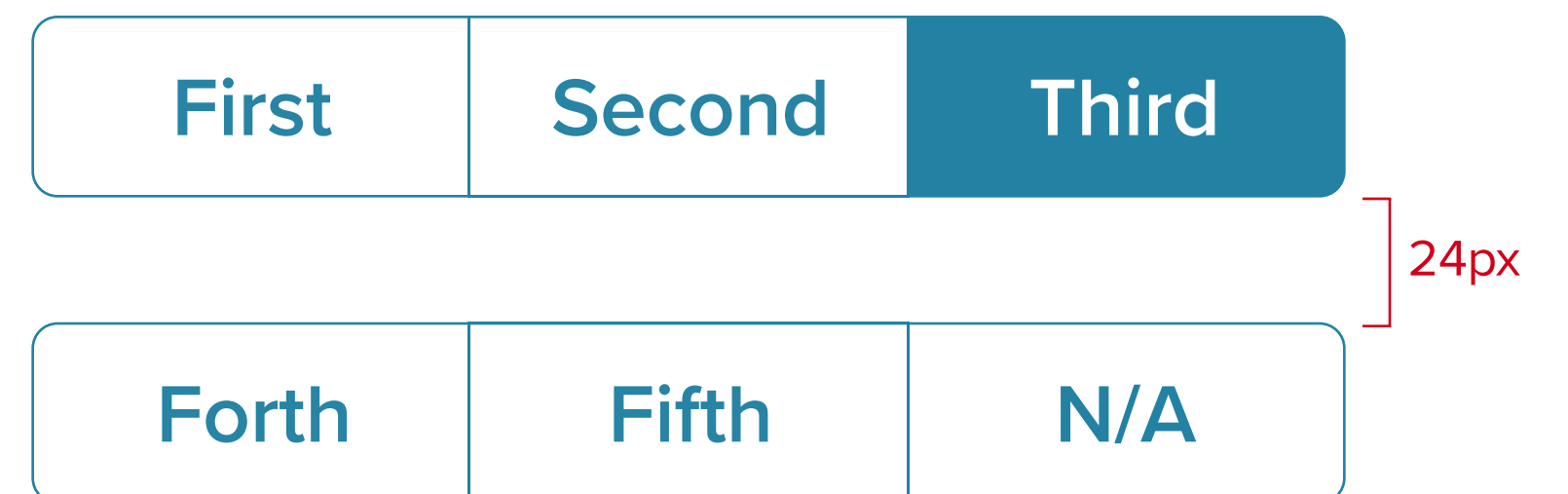


Each option is at least 85px wide ✓

### Don'ts



The width of each button is smaller than 85px ✗



The spacing between two rows is at least 24 px ✓



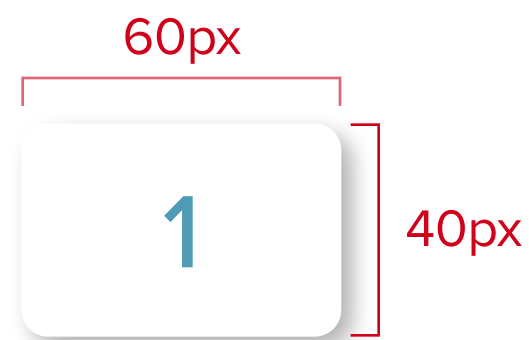
Not enough spacing between two rows ✗

# BUTTONS

## Numbers

There are two types of number buttons, including the buttons on the side panel of the dashboard and the numbers on the new patient form. Each has different styles and behaviors.

### Side Panel Numbers



Resting Form

HEX: #FFFFFF  
RGB (250, 250, 250)  
CMYK (0, 0, 0, 0)  
Pantone: N/A

Shadow  
(2, 2, 4, 0)  
#000000, 30%



Resting Form On-click

HEX: #F8F8F8  
RGB (248, 248, 248)  
CMYK (0, 0, 0, 3)  
Pantone: N/A

Inner Shadow  
(2, 2, 4, 0)  
#000000, 30%



Alarm Form

HEX: #CE0019  
RGB (206, 0, 25)  
CMYK (0, 100, 88, 19)  
Pantone: 1795 C

Shadow  
(2, 2, 4, 0)  
#000000, 30%



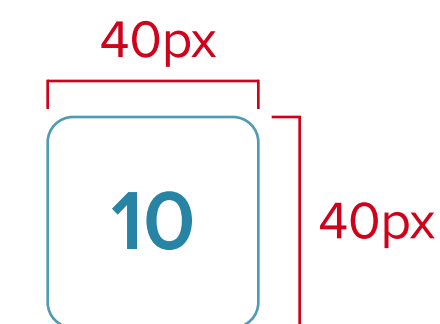
Alarm Form On-click

HEX: #A21C1C  
RGB (162, 28, 28)  
CMYK (0, 83, 83, 36)  
Pantone: 7628 C

Inner Shadow  
(2, 2, 4, 0)  
#000000, 30%

### New Patient Form Numbers

When the buttons are put together, ensure that the spacing between each other should be more than 4px.



Unselected Form

HEX: #2382A3  
RGB (35, 130, 163)  
CMYK (79, 20, 0, 36)  
Pantone: 314 C

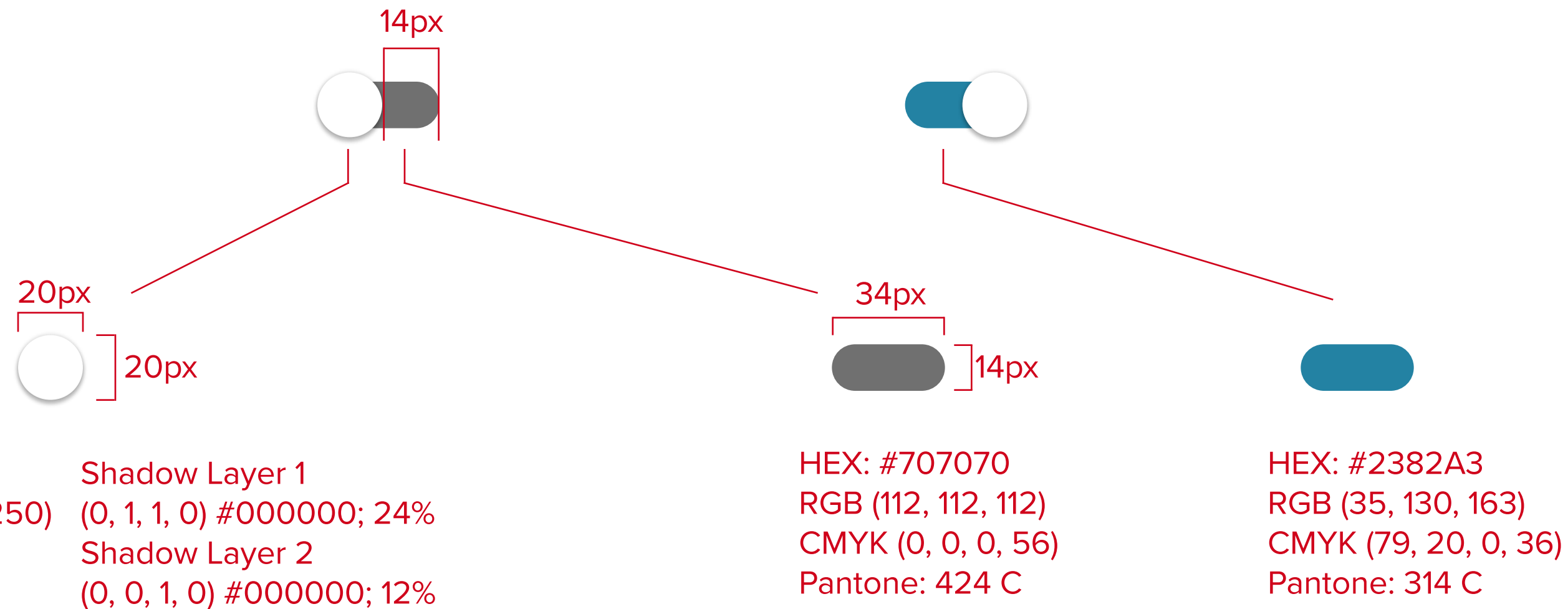


Selected Form

# BUTTONS

## Toggles

Toggles are used for turning functions on and off or switching between two options.



### On-Off



On and Off toggles are used for enabling/disabling the 1-hour reminder for the temperature monitoring. When the toggle is on, the bar should turn blue (#2382A3); while off, gray (#707070.)

### Options

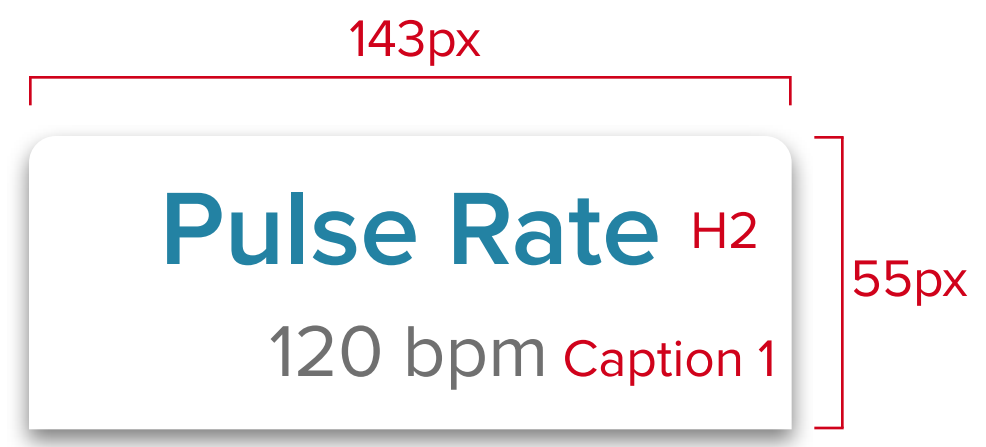


When used as the switch between two options/functions, the bar should stay blue no matter which function is on. In order to identify the enabled/disabled options, the text should turn blue (#2382A3) if enabled, and gray (#707070) if disabled.

# BUTTONS

## Tabs

Tabs are used on the trend graph pages, where users can switch among four vitals.

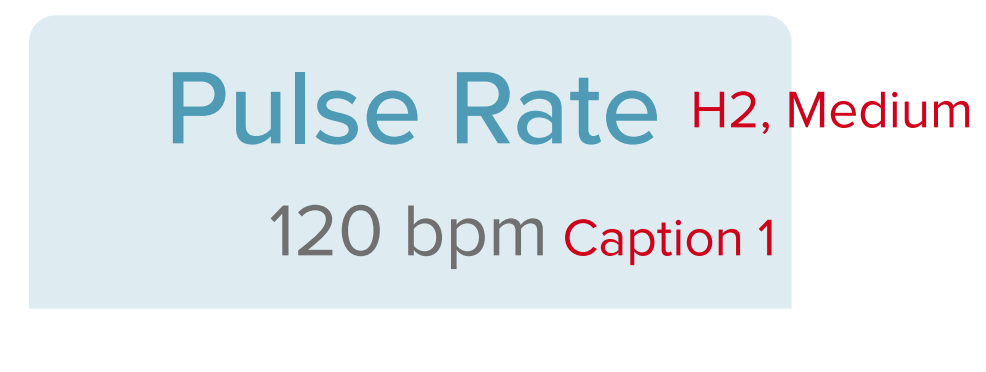


143px

55px

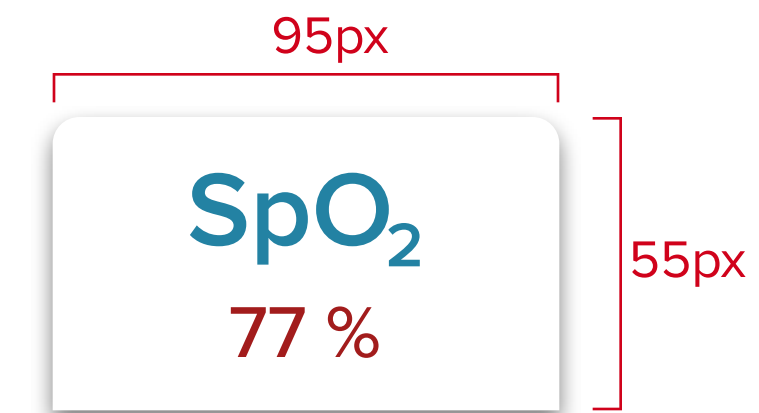
**Pulse Rate** H2  
120 bpm Caption 1

Radius (5; 5; 0; 0)    Fill  
Shadow    HEX: #FFFFFF  
(0, 2, 4, 0)    RGB (250, 250, 250)  
#000000, 50%    CMYK (0, 0, 0, 0)  
Pantone: N/A



**Pulse Rate** H2, Medium  
120 bpm Caption 1

Fill  
HEX: #DEECF1  
RGB (222, 236, 241)  
CMYK (8, 2, 0, 5)  
Pantone: 649 C



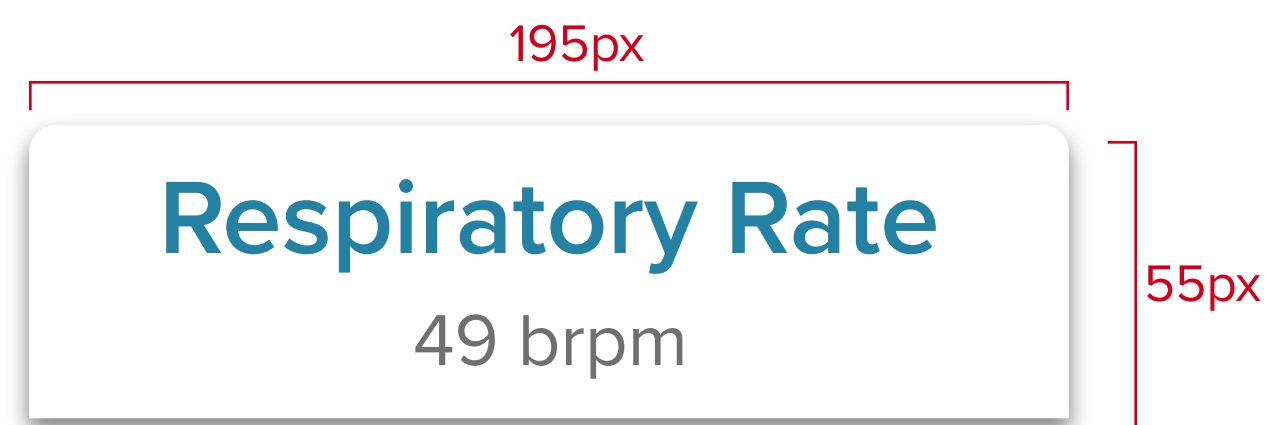
95px

55px

**SpO<sub>2</sub>**  
77 %



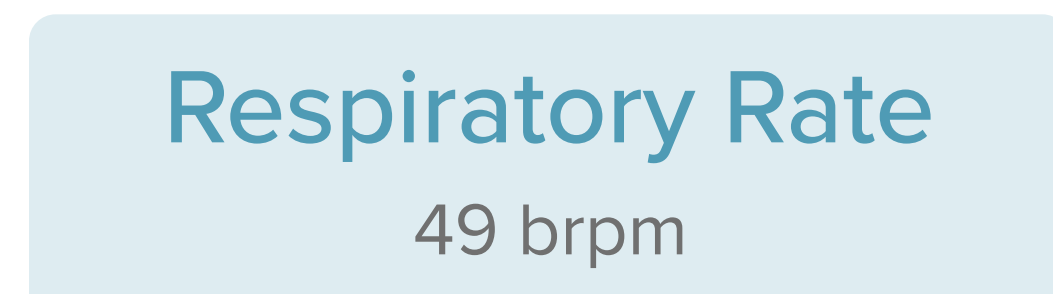
**SpO<sub>2</sub>**  
77 %



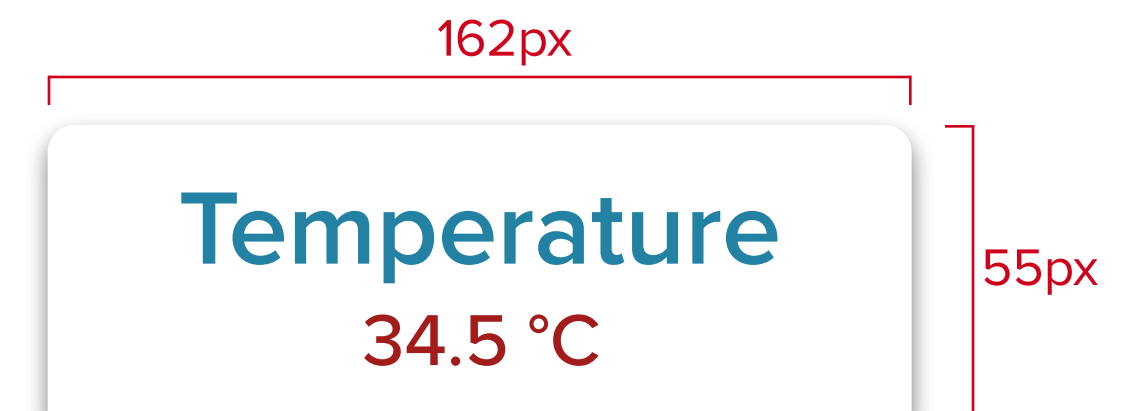
195px

55px

**Respiratory Rate**  
49 brpm



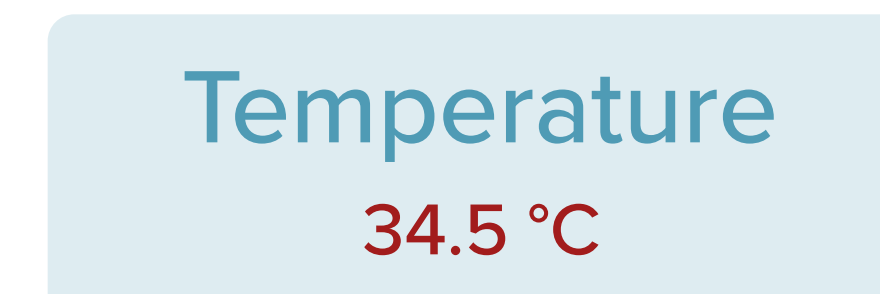
**Respiratory Rate**  
49 brpm



162px

55px

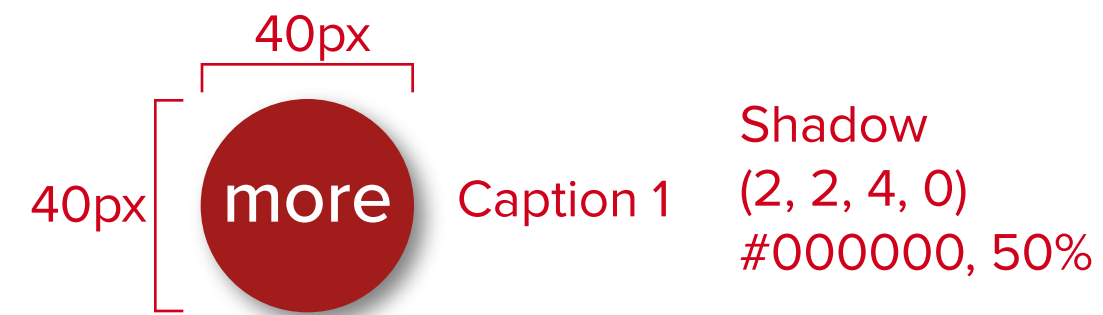
**Temperature**  
34.5 °C



**Temperature**  
34.5 °C

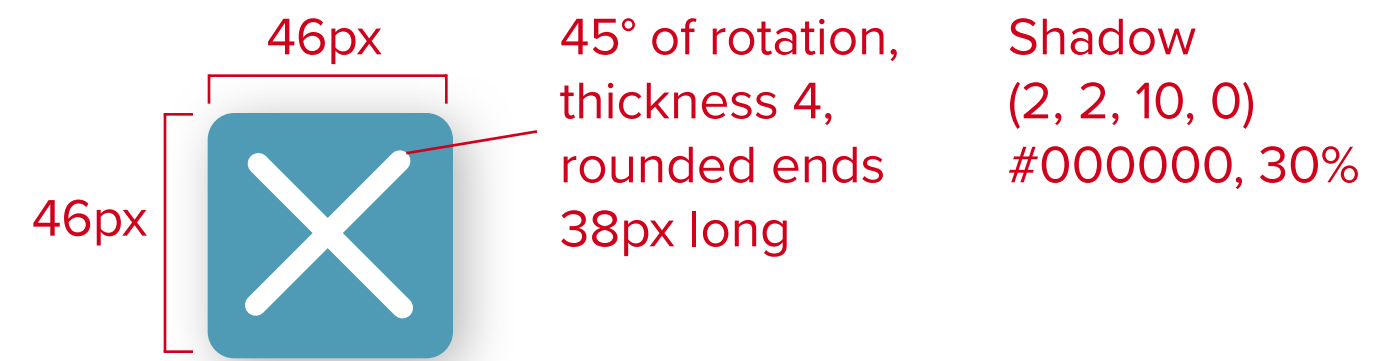
# BUTTONS

## Other Buttons



### More Button

More buttons only appear on the critical areas of the trend graphs

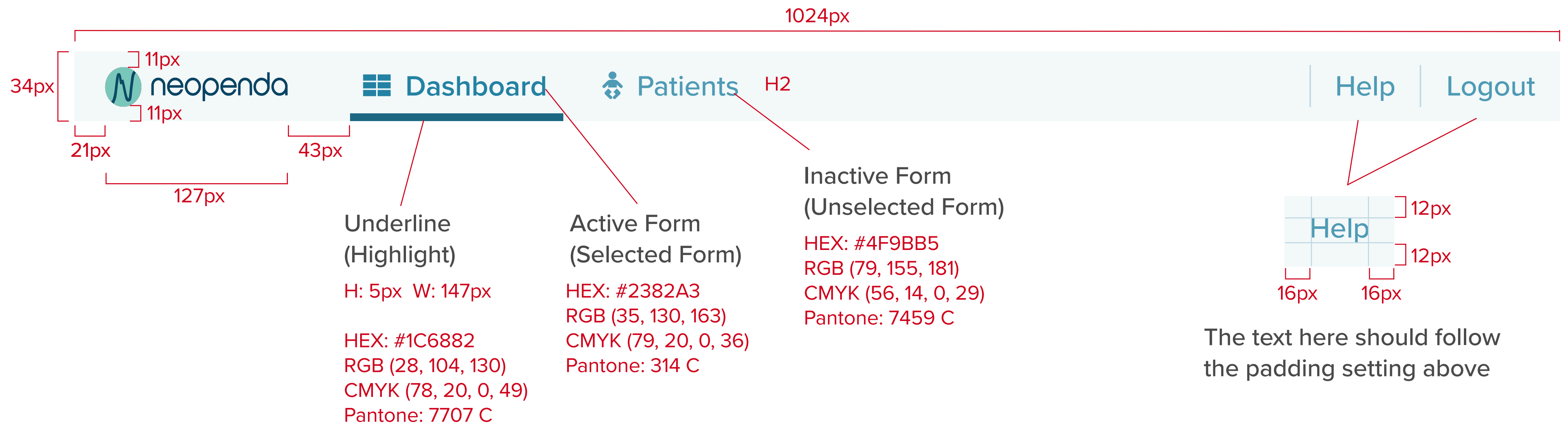


### Close Button

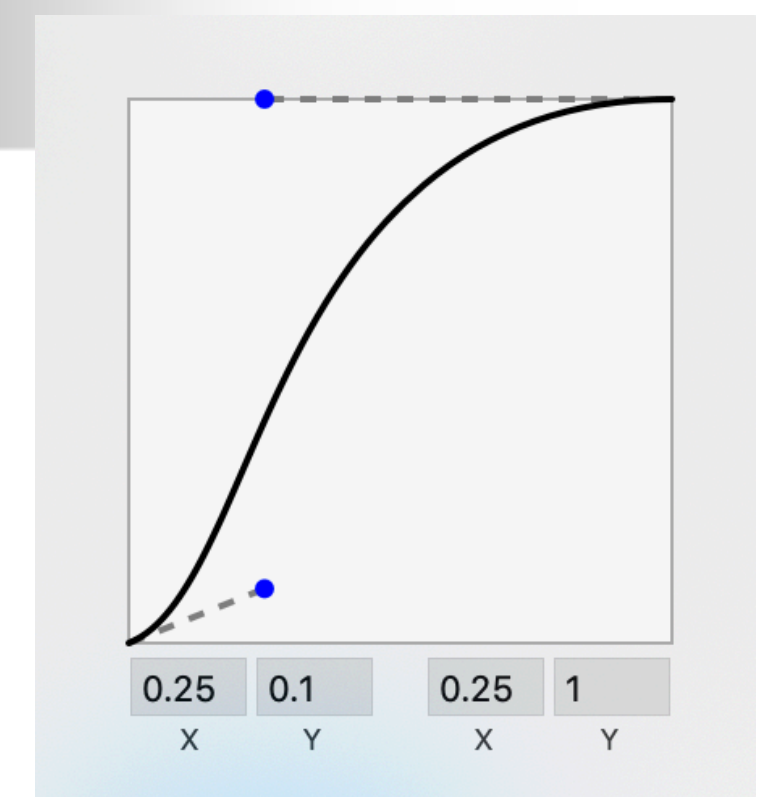
Close button is used on the overlay, e.g. the trend graphs.

# Top Navigation

The top navigation is composed of the logo, the main functions (dashboard and patients), and the administrative functions (help and logout.)



When switching between dashboard and patients the underline should slide to the item tapped in 0.3 sec with the “default” animation transition treatment.



# SIDE PANELS

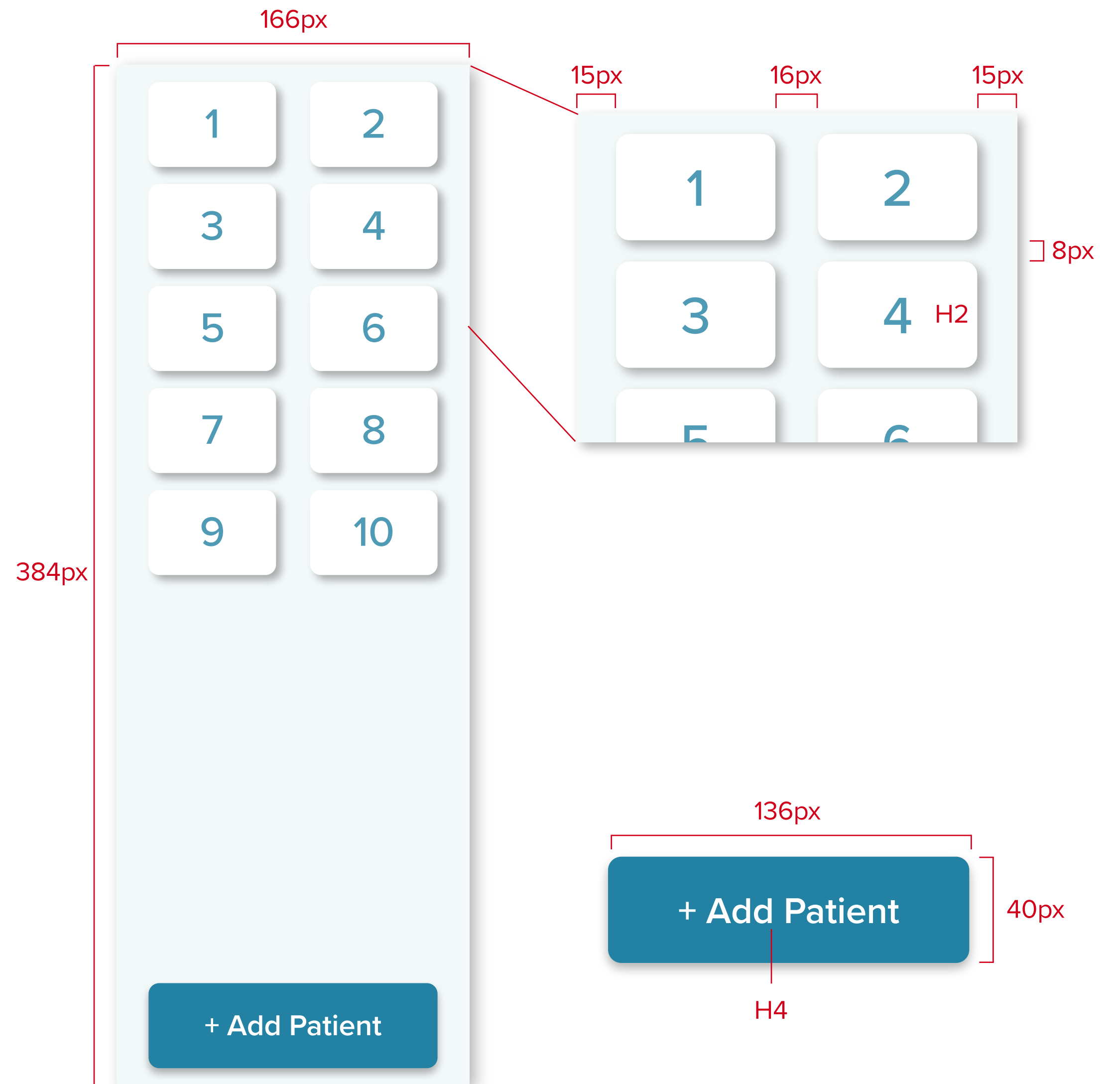
## Side Panels

There are three forms of side panels that serve different functions.

### Dashboard:

The side panel on the dashboard contains numbers that allow users to quickly access to the corresponding vital card, when the number is tapped, by quickly scrolling to the position of the vital card.

The side panel also has an add patient button that has different specification from the primary CTA button in order to fit in the side panel. Users can easily and quickly add a new patient to the system with it.



Side Panel Shadow  
(2, 2, 4, 0)  
#000000, 30%

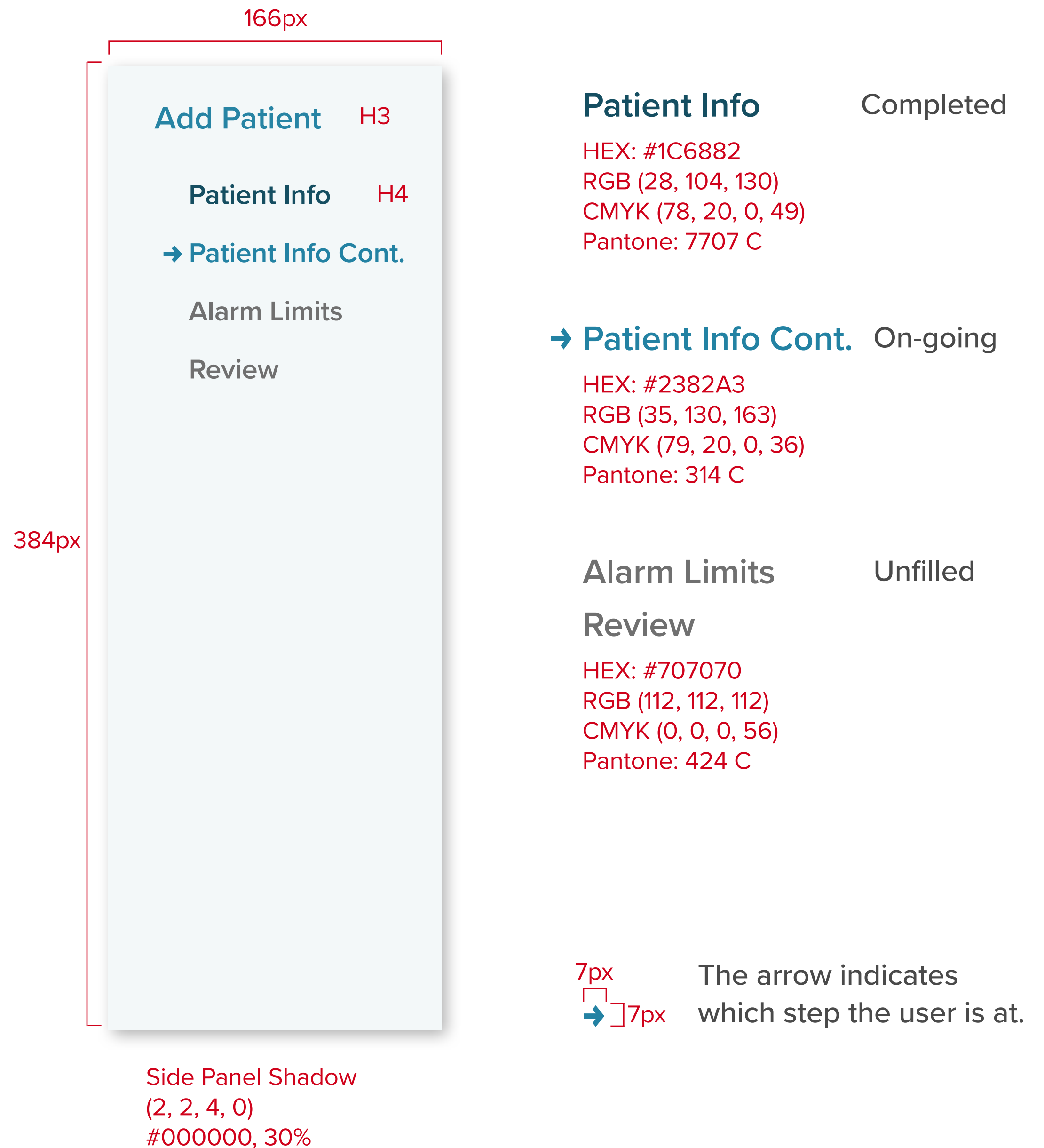
# SIDE PANELS

## Side Panels

There are three forms of side panels that serve different functions.

### New Patient Form:

The side panel on the new patient form provide the progress of the add patient flow. Users can go back the the previous completed, not cannot proceed to the next step until the current form is completed.



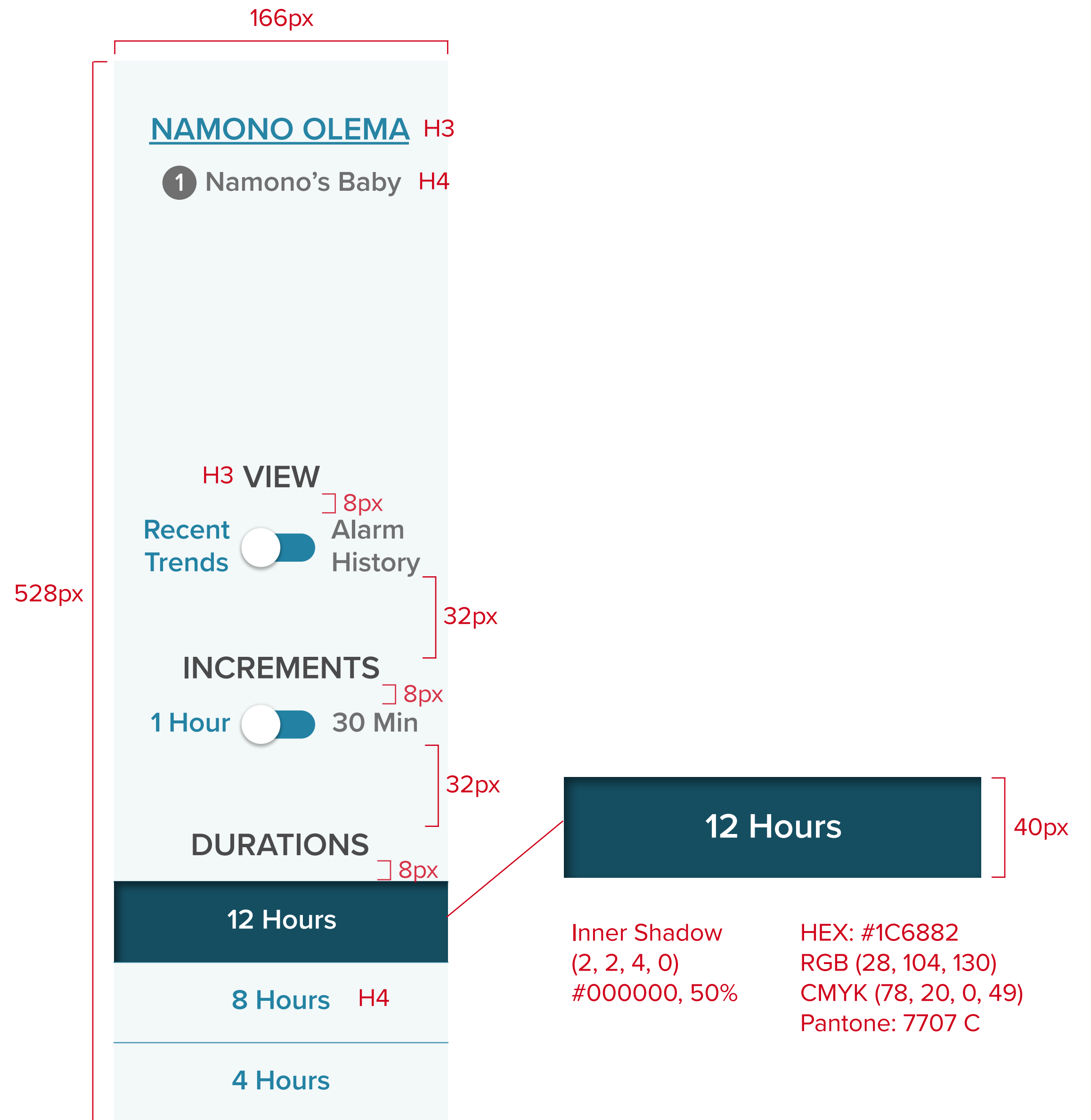
# SIDE PANELS

## Side Panels

There are three forms of side panels that serve different functions.

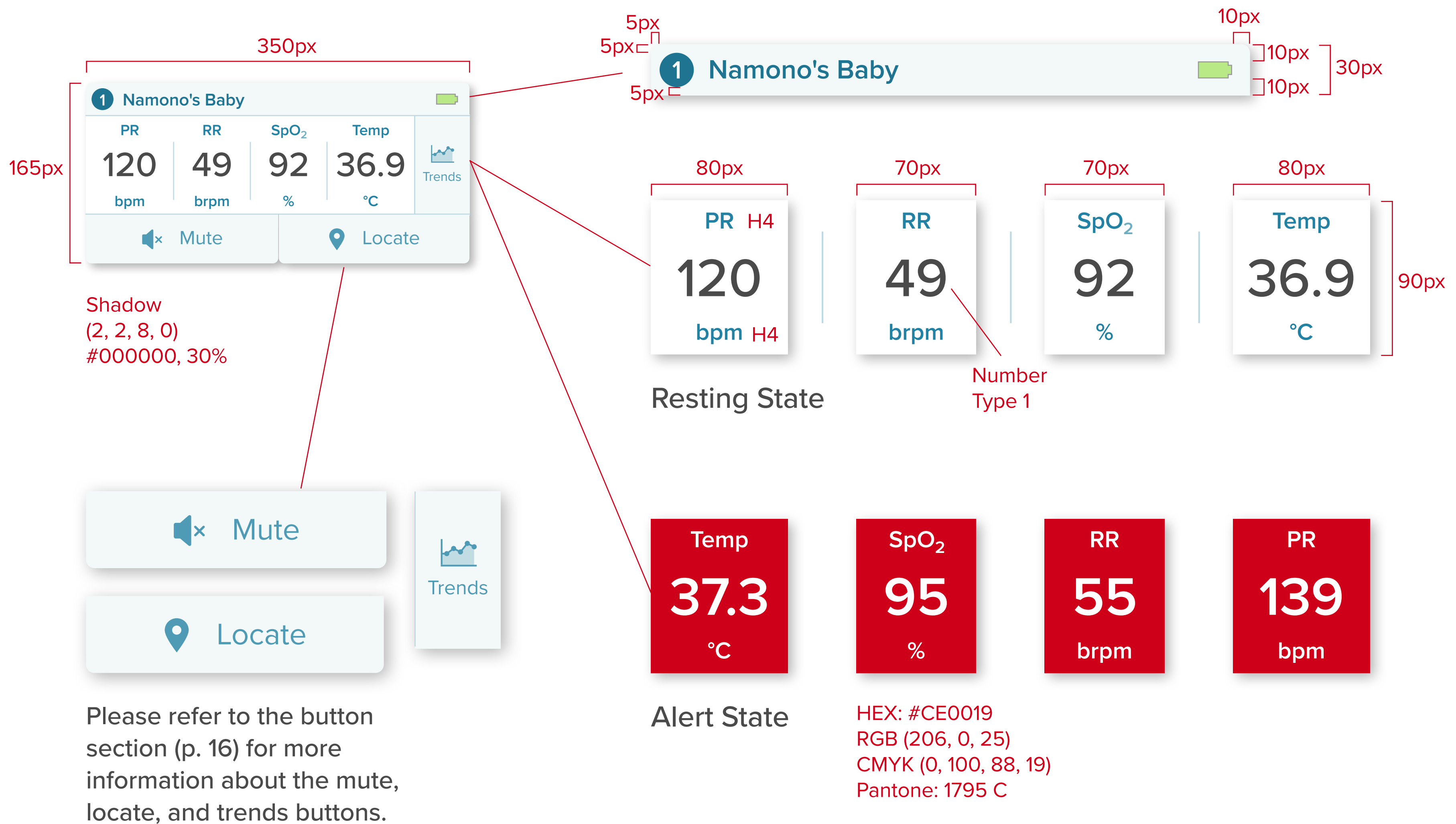
Trends:

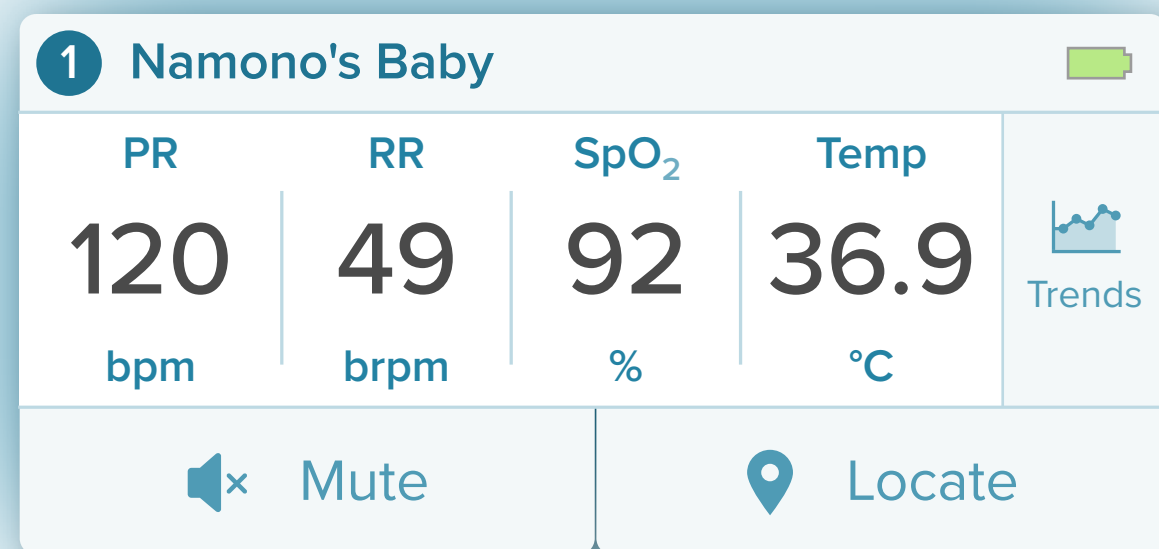
The side panel on the trend graphs works as the filter for users to find the information or trend graphs needed.



# Cards

Vital cards is composed of a title bar, four vitals, and trends, mute and locate buttons.





### Resting State-Selected

Shadow (Highlight)  
(0, 0, 30, 0)  
#2281A3, 100%

## Vital Cards Can Be Highlighted When

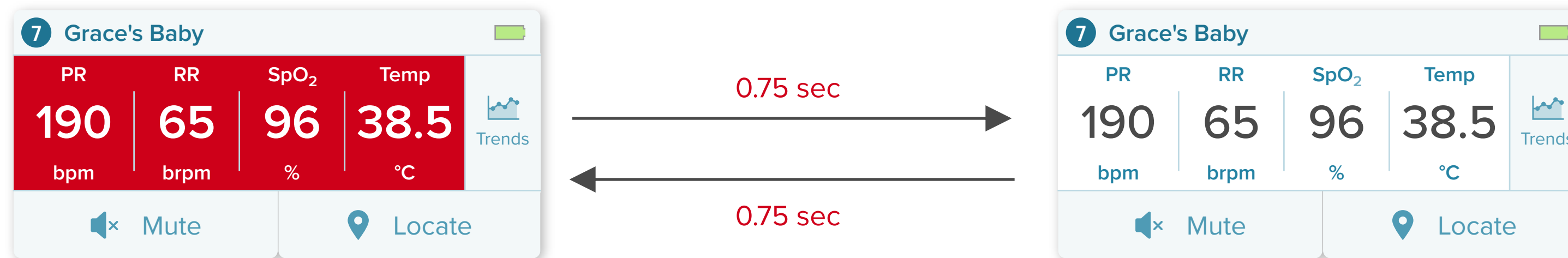
### 1 Accessing the vital card from the side panel

When users tap a number on the side bar, the dashboard automatically scroll to the position of the corresponding vital card with the blue highlight, indicating the card selected. Once users interact with the card, the highlight turns off.

### 2 Brought to the dashboard from the notifications

If users are brought to the dashboard from the pop-up notifications with one or more patients, the corresponding vital cards will be highlighted until users interact with them. This help users keep track of the babies that are taken care of and the babies that are not. Especially in the cases that multiple babies have critical events at once, users can simply check the highlighted cards and baby without taking a note of which babies are affected and not treated yet.

## The Flashing



### Emergency State

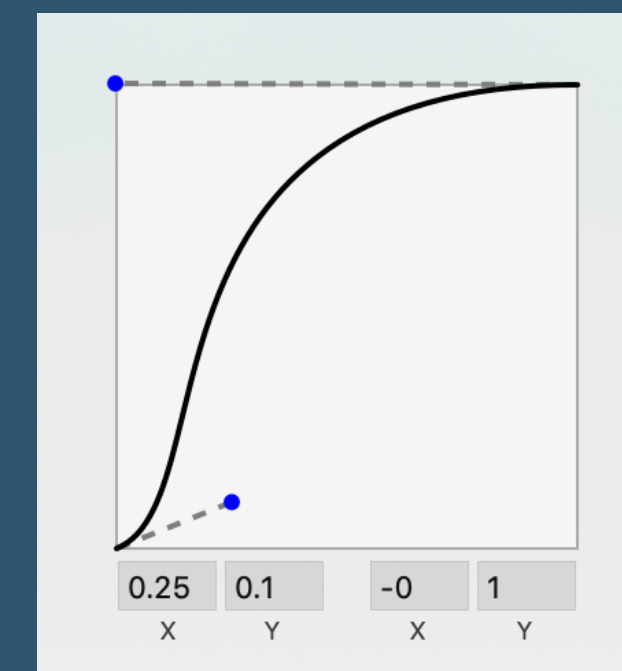
Emergency state of starts with flashing animation between the red background/white text and resting background/text. The background stops flashing and stays in red once the users hit the mute button. By doing so, users can easily distinguish which baby has been taken care of as well as minimizing alarm fatigue.

### Emergency Transition State

A complete cycle of the animation is 1.5 sec: 0.75 sec of red background turning to white and 0.75 sec of the white background turning back red. The animation is in loop until the users tap the mute button, resulting in the red background and with white text.

### Animation Transition

Duration: 1.5 sec  
(0.75 + 0.75)



# Lists

The list view is used for patient information and the alarm history. It makes complicated information more digestible to our users.

## Patient List

HEX: #F3F8F9  
RGB (243, 248, 249)  
CMYK (2, 0, 0, 2)  
Pantone: 656 C

1024px

15px

15px

24px

60px

Device #	Given Name	Surname	MRN	H3	H4	Trends	Generate Report	Remove
1	Namono	Olema	472905	Body	Locate	Trends	Generate Report	Remove
2	Dembe	Suruma	673829		Locate	Trends	Generate Report	Remove

24px 24px  
Padding: 24px

HEX: #F8F8F8  
RGB (248, 248, 248)  
CMYK (0, 0, 0, 3)  
Pantone: N/A

## Alarm History

HEX: #F3F8F9  
RGB (243, 248, 249)  
CMYK (2, 0, 0, 2)  
Pantone: 656 C

22px

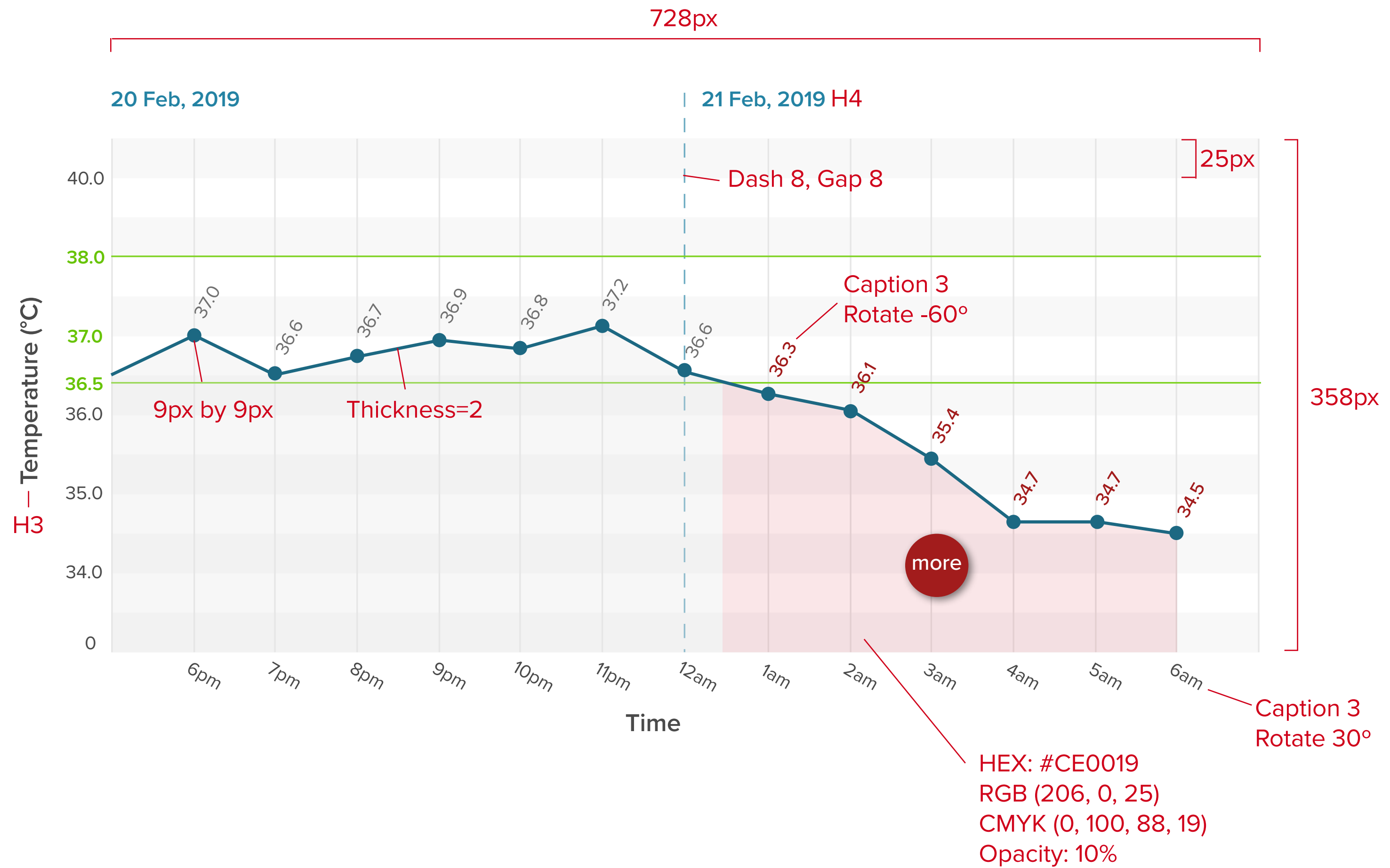
21px

Date	Time	Temperature	Notes
21 Feb 2019	6:00am	34.5°C	Alarm muted at 6:04am, 1-hour reminder on
21 Feb 2019	5:00am	34.7°C	Alarm muted at 4:14am, 1-hour reminder on

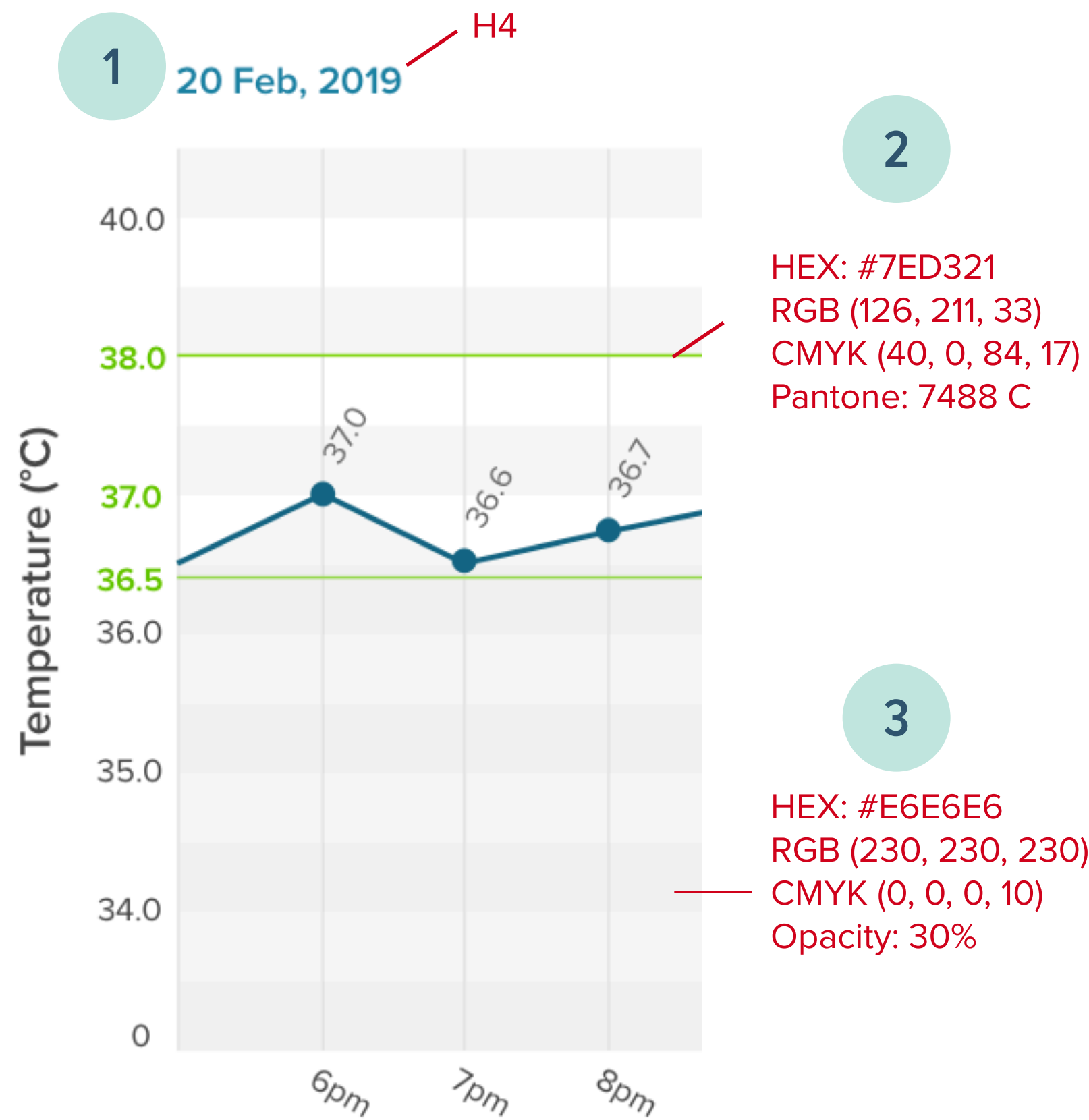
HEX: #F8F8F8  
RGB (248, 248, 248)  
CMYK (0, 0, 0, 3)  
Pantone: N/A

# Trends

The data shown on the trend graphs are control by the filters on the side panel with different durations and increments.



# Trends



1

The date should be shown in the format of day, month, year, which is commonly used in Uganda.

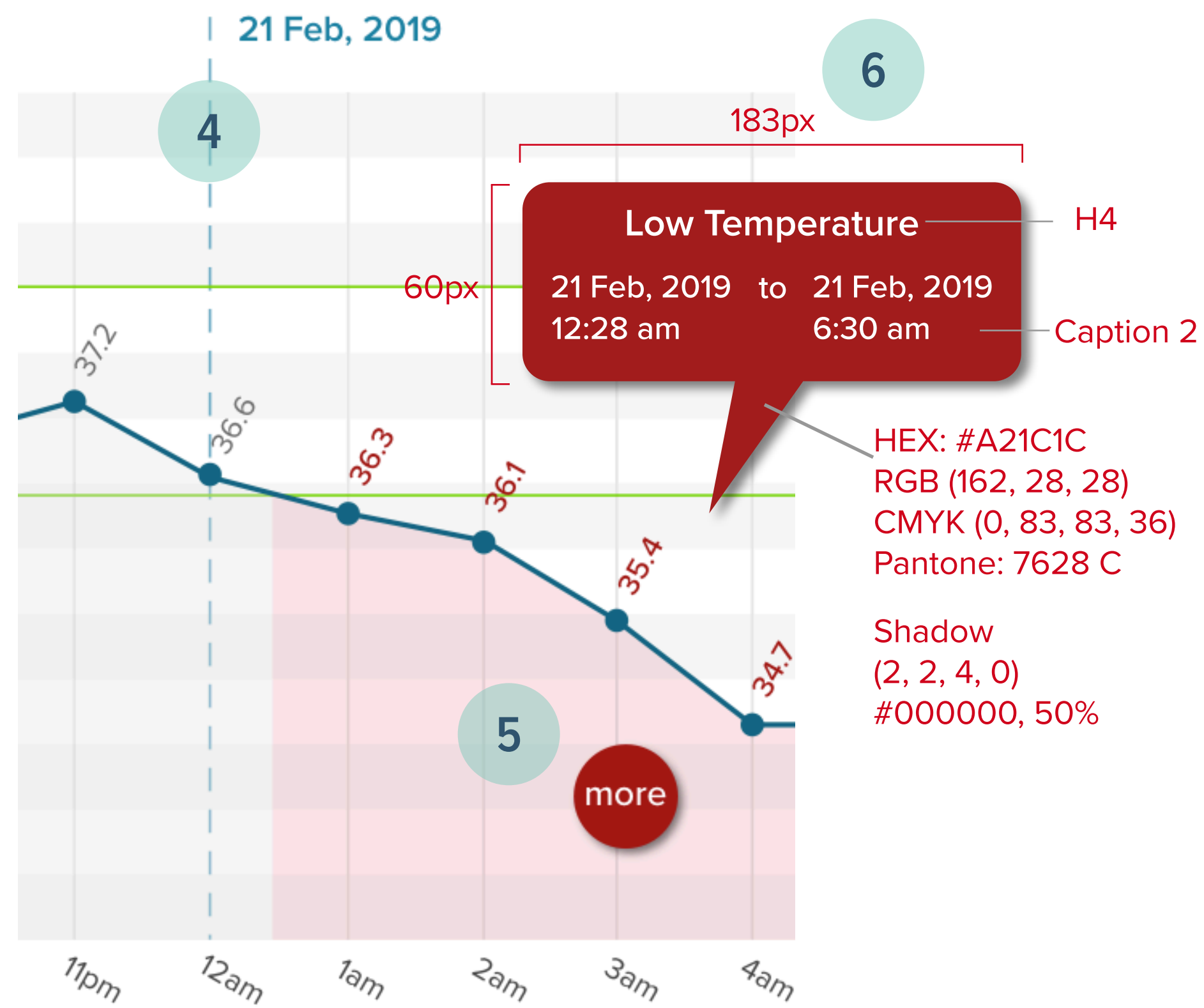
2

The vital standard is outlined with the green lines to show the “safe” range. The numbers are marked in green on y-axis for the safe range.

3

The area within the normal range is shaded with transparent gray to reduce visual distractions.

## Trends



4

The dash line appear at 12:00am to show the day change or shift change.

5

The critical area is in transparent red, which shows the emergency while not covering up the graph grids.

6

Once users tap the red area or the more circle, a call-out box appears. The call-out box provide the information of what the critical event is, the date and time it started, and the date and time it ended.

# Forms

In this section, you will find the specifications of the form field and dropdown menu used on the new patient forms.

## Form Field

Display Name (Deivce or bed number) **H3**

e.g. "Mary's Baby" **H4**

40px

40px

## Alarm Limits

Low High

38px 120 **H3** 190 **H4**

bpm bpm

82px 80px 22px 22px

Alarm limits are pre-filled with standard vital numbers. If users change any of the number, the number will turn red.

## Dropdown

11 Body Copy

30px 30px

147px



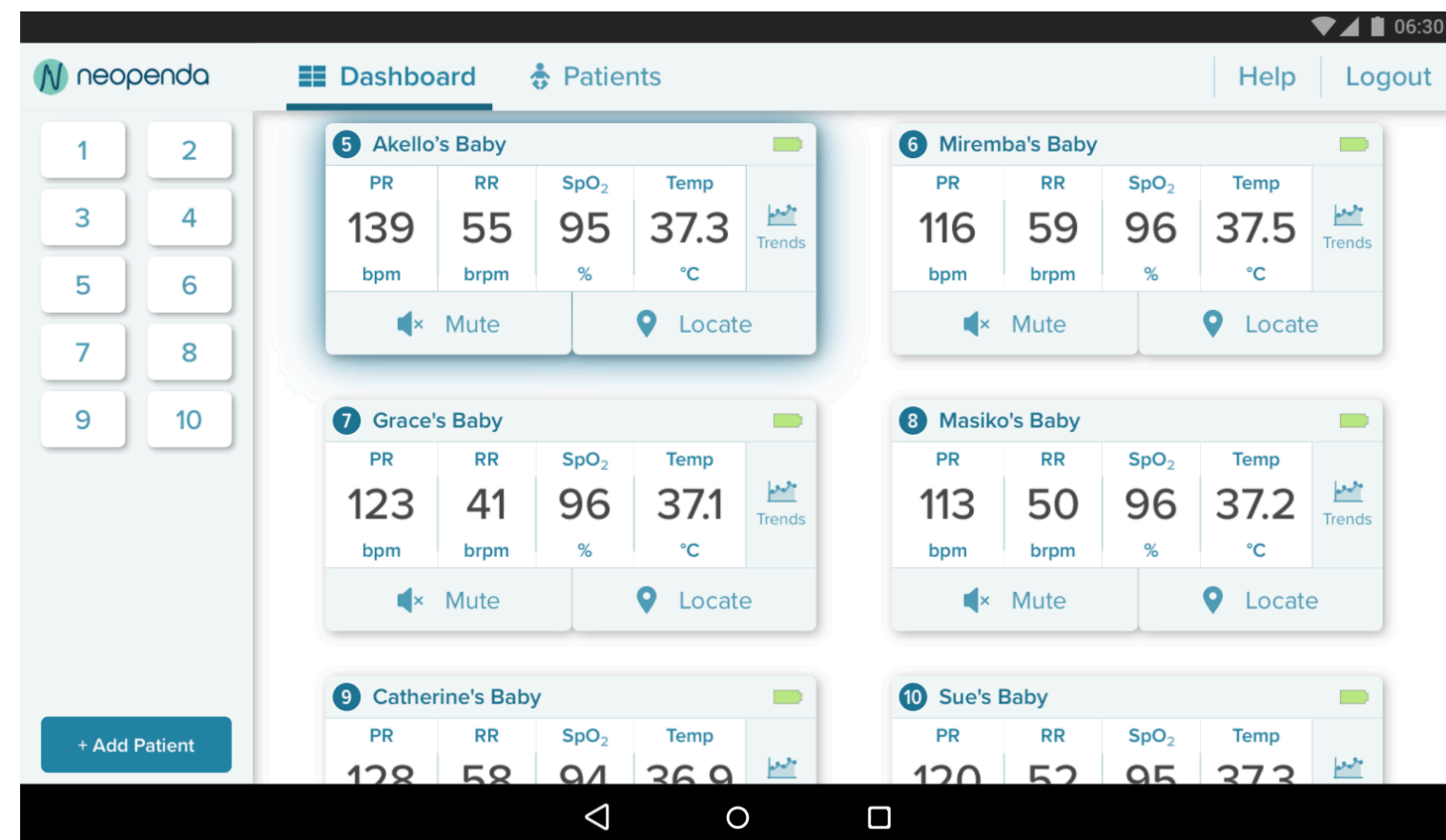
# MICROINTERACTIONS

# Microinteractions

In this section, you will find the rules, and specifications of the microinteractions used in the app.

## Dashboard—Tap & Scroll

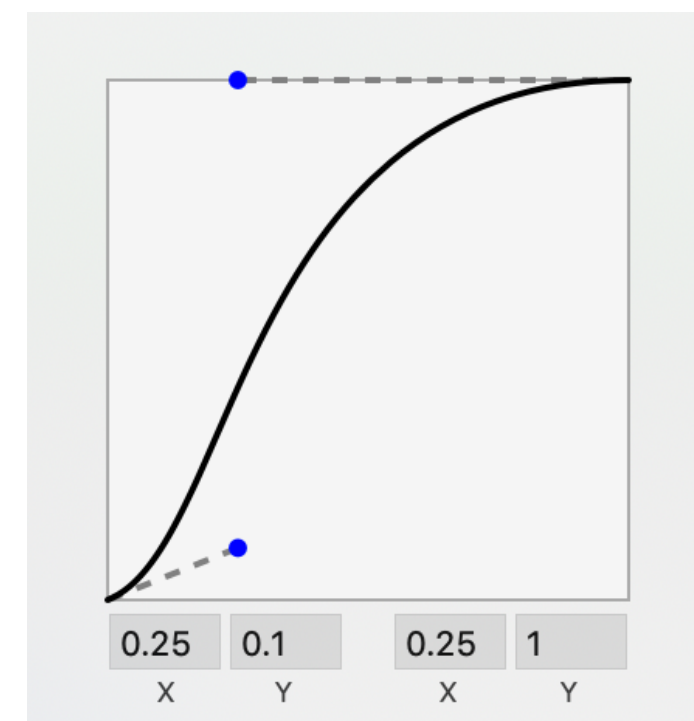
When users tap a number on the side bar, the dashboard automatically scroll to the position of the corresponding vital card with the blue highlight, indicating the card selected. Once users interact with the card, the highlight turns off.



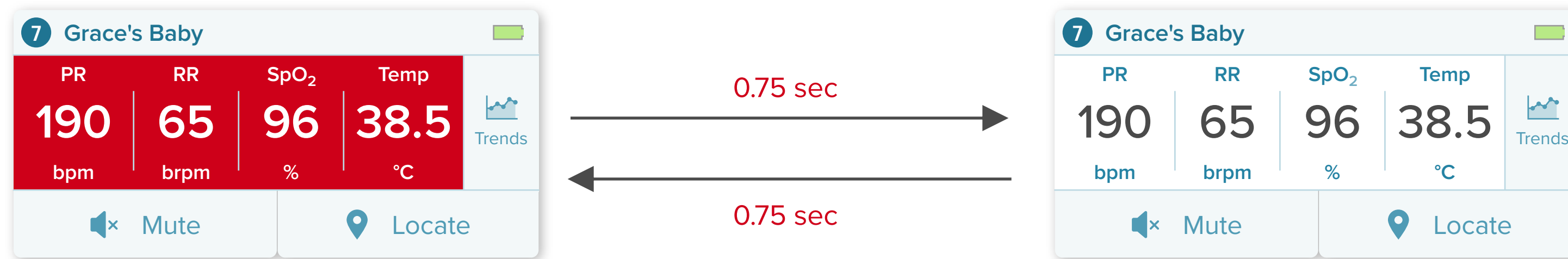
The process of the scrolling takes 0.3 sec, with the animation of transition below.

### Animation Transition

Duration: 0.3 sec



## Dashboard—Flashing Vital Cards



### Emergency State

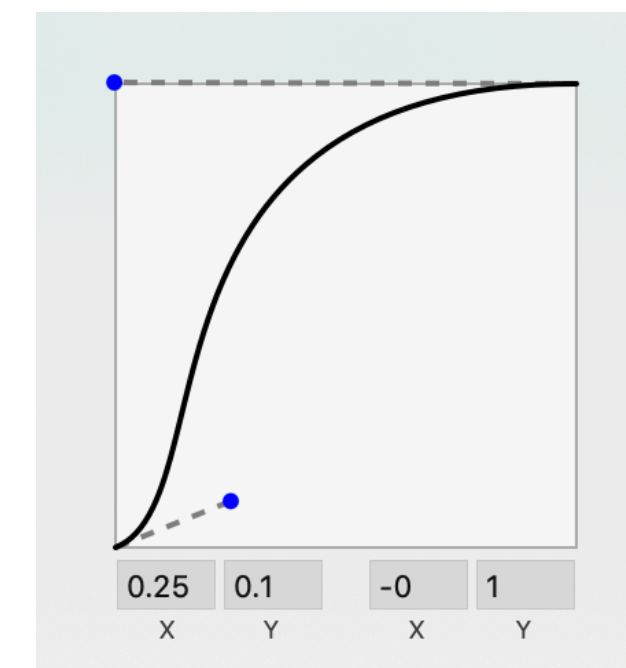
Emergency state starts with flashing animation between the red background/white text and resting background/text. The background stops flashing and stays in red once the users hit the mute button. By doing so, users can easily distinguish which baby has been taken care of as well as minimizing alarm fatigue.

### Emergency Transition State

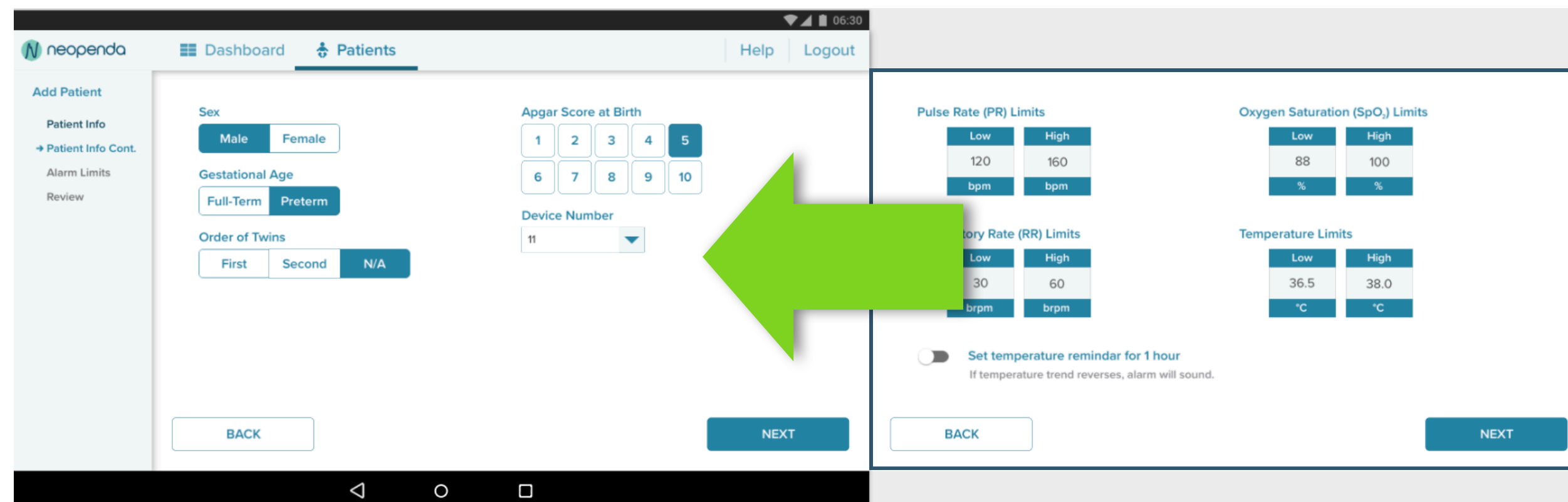
A complete cycle of the animation is 1.5 sec: 0.75 sec of red background turning to white and 0.75 sec of the white background turning back red. The animation is in loop until the users tap the mute button, resulting in the red background and with white text.

### Animation Transition

Duration: 1.5 sec  
(0.75 + 0.75)



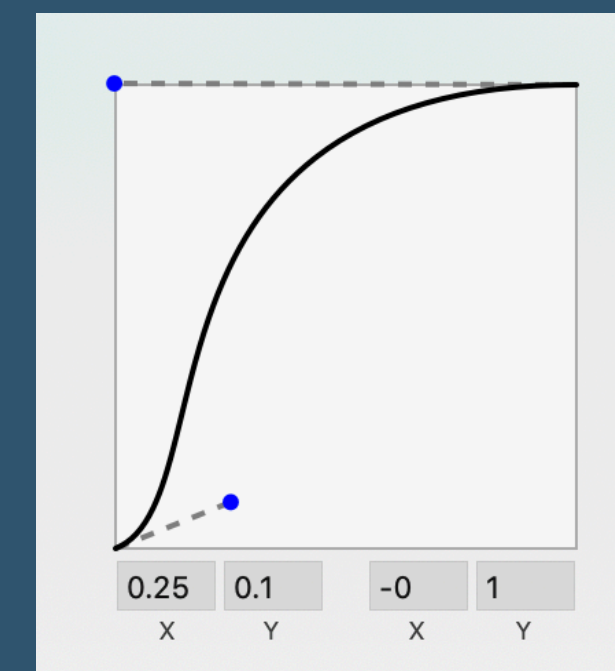
## New Patient Form—Screen Transition



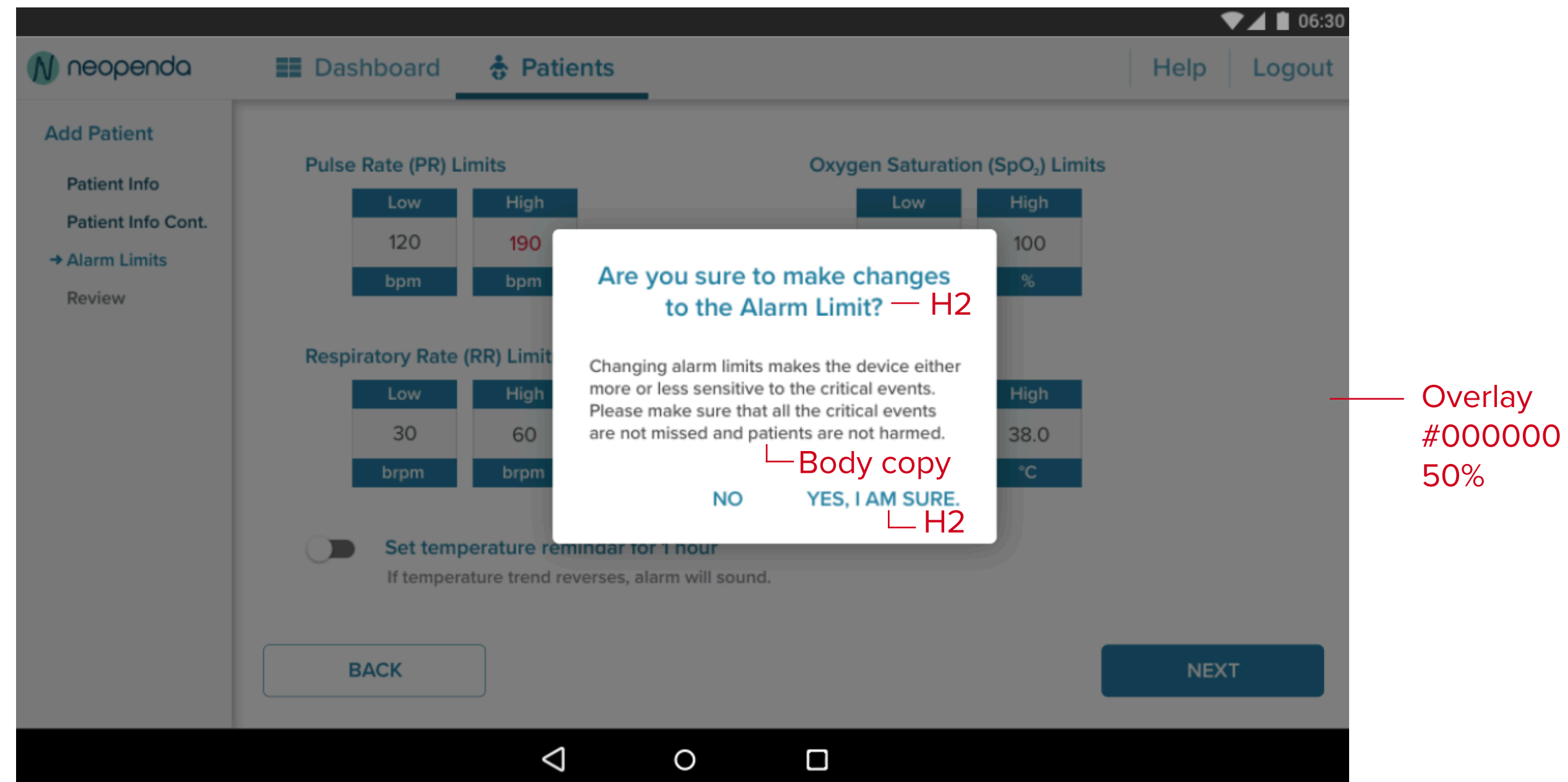
Transition between screens during the new patient form process should be “push left” when proceeding to the next step, and “push right” when going back to the previous step. The side panel should stay without being moved. The duration of the transition is 0.3 sec.

Animation Transition

Duration: 0.3 sec

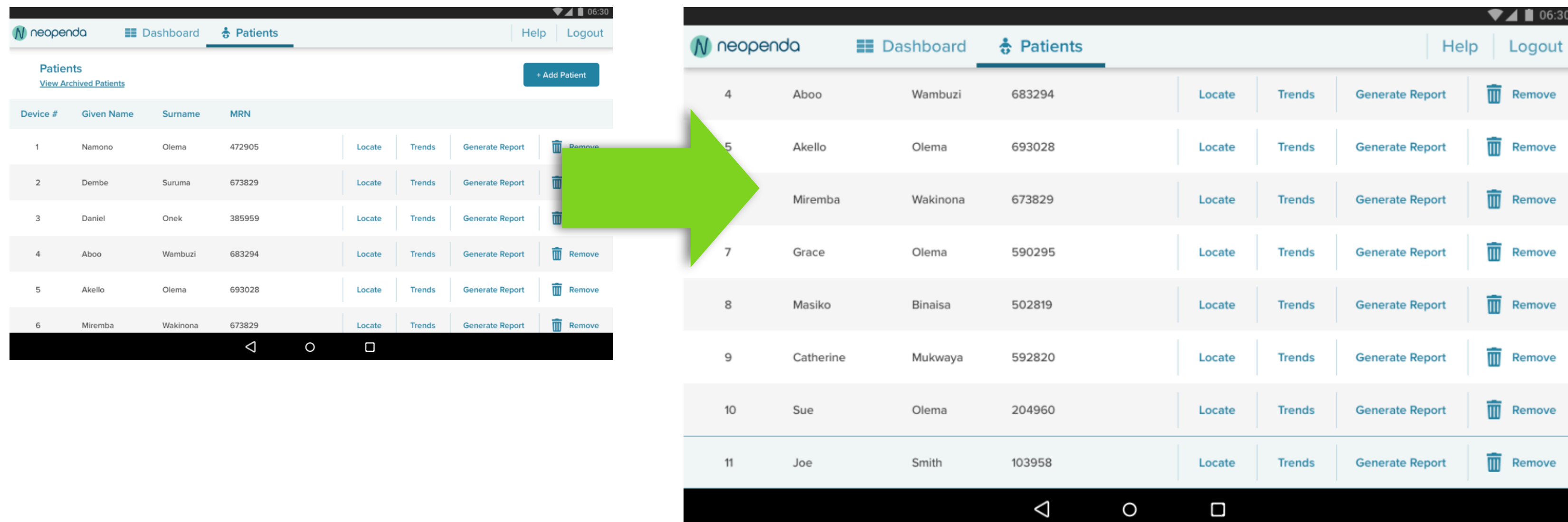


## New Patient Form—Alarm Limits



If any of the pre-filled number is changed, the number turns red. Additionally, a pop-up will show up when users proceed to the next step to reconfirm the changes made. The background should stay the same with a dark transparent overlay on it to tone down the presence.

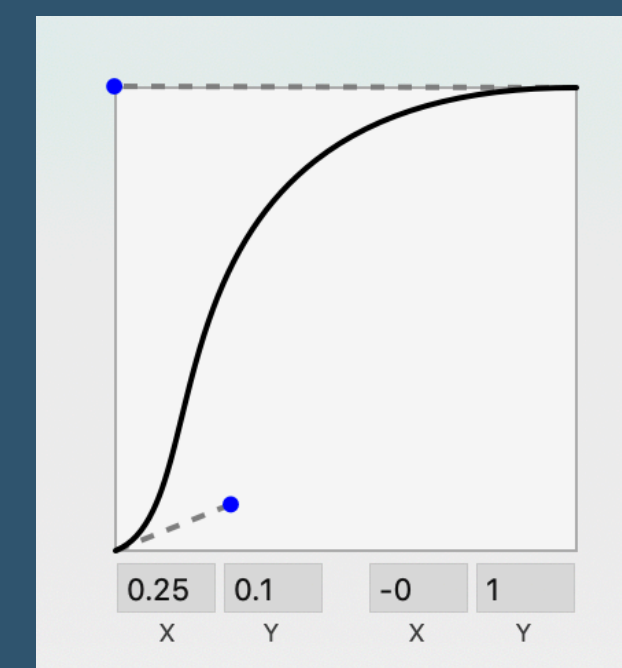
## Patient List—New Patient Added



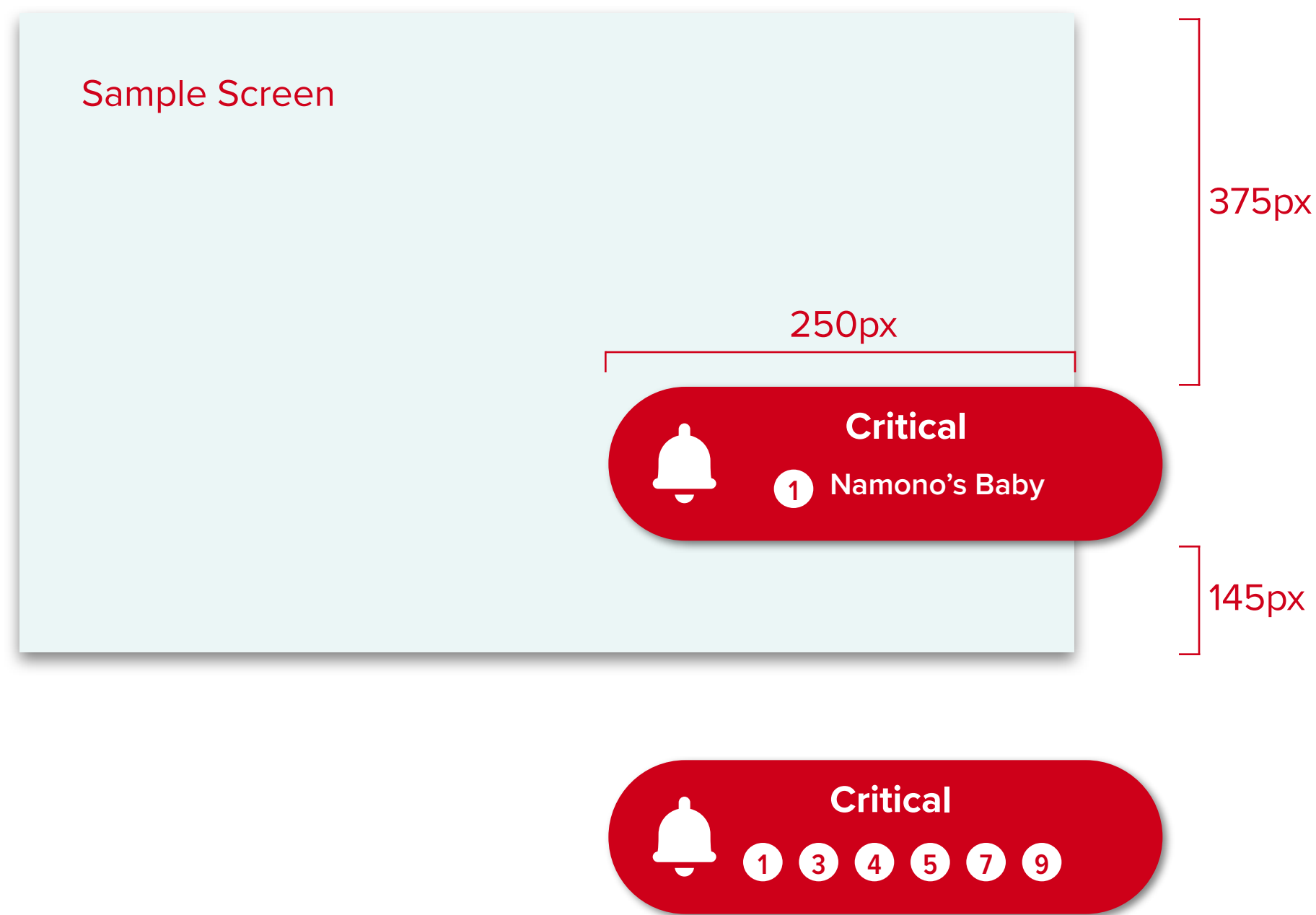
After the new patient is successfully added, users are led to the patient list with a automatic scroll down to the new added patient, which is also highlighted in blue background and border. The duration of scrolling down is 0.75 sec.

Animation Transition

Duration: 0.75 sec



# Notifications

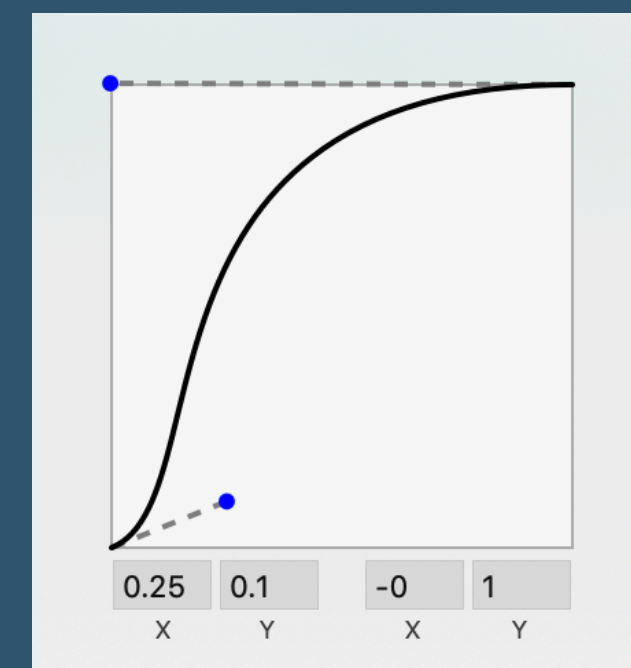


Notification box slides out from the right of the screen when any critical event happens out of the sight, e.g. the user is not on the dashboard screen, or the critical event happens on the vital card that cannot be seen without scrolling.

When there are more than one critical events happening, the notification will only show the baby numbers instead of the number and the name.

## Animation Transition

Duration: 0.3 sec





neopenda

Created in March 2019