

FLUX NOTES

COMPONENTS DOCUMENT v02

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This document outlines the component breakdown for the design of MITREs Flux Notes (Full). This v01 document is meant to describe major standard components and areas of functionality that have been designed thus far through March 2018, and can be grouped together and serve as a planning tool for implementation and a guideline for modularity of components. Future revisions will include additional components as they are developed.

Principles

Theme

A linear narrative, supported by charts and visuals, present the patient data. The clinician records notes on pages of notepaper.

Space

The interface is tidy, comfortable, and boasts plenty of breathing space. The spaces of the user interface are subtly divided by soft borders and boundaries. Interactive elements blend into the record.

Depth and layering

The patient record and the tools to manipulate the record are flat. Although some temporary elements require layering, visibility is controlled with collapsing and expanding. Depth and shadows are reserved for elements that are portrayed with physical concrete forms.

Icons

Graphical elements are simple, familiar, and monochrome. If the functionality is unclear, resort to concrete representative objects such as pills, pencils, and scraps of notepaper, rather than using vague symbols such as arrows and boxes.

COLOR PALETTE

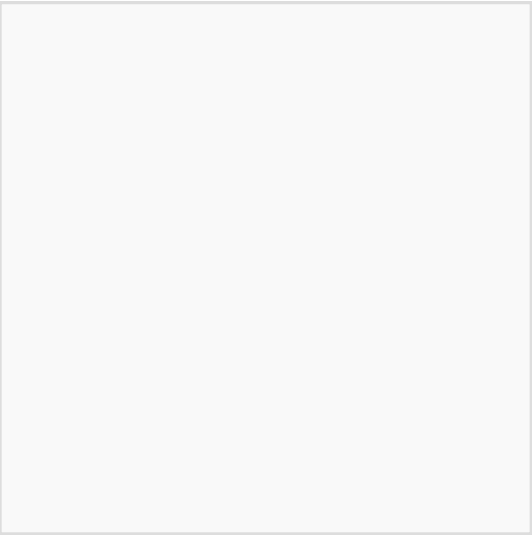
COLOR PALETTE: Primary Palette

Background



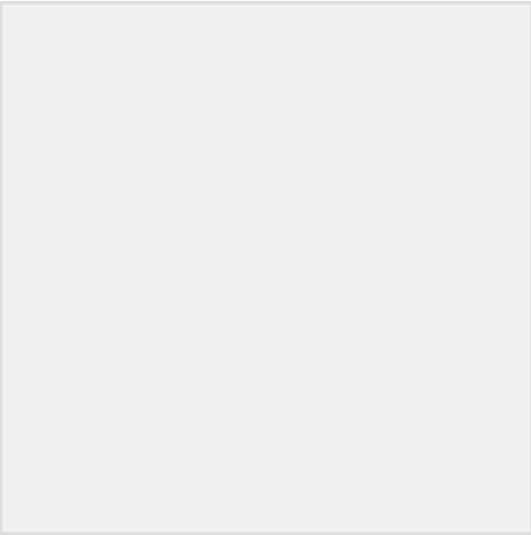
Background

hex FFFFFFFF
rgb 255 255 255



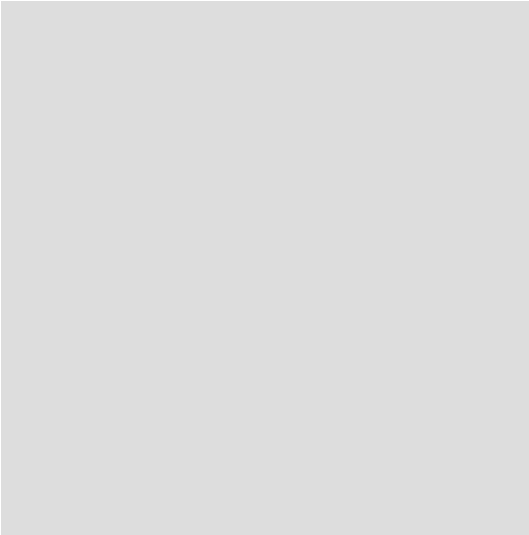
Contrast gray

hex F9F9F9
rgb 249 249 249



Feature gray

hex FoFoFo
rgb 240 240 240



Line gray

hex DDDDDD
rgb 221 221 221

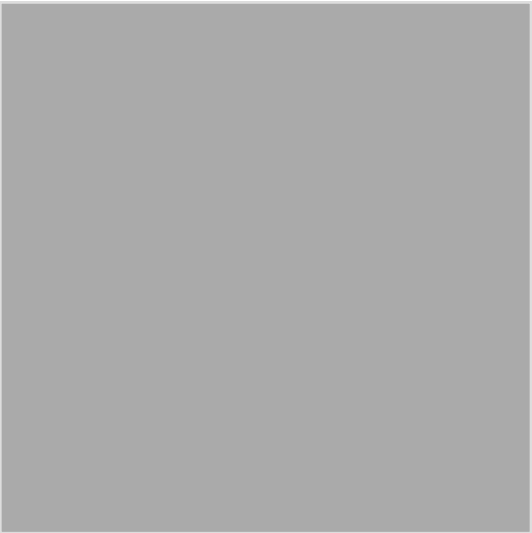
Apply contrast gray to alternate cells in tables or to assist visibility of distinct areas such as the header. Apply Feature gray to small UI features such as scroll bars, selection boxes, and inactive buttons. Use Divider gray for section dividers and outlines.

Type



Body gray

hex 3F3F3F
rgb 63 63 63



State

hex AAAAAA
rgb 170 170 170



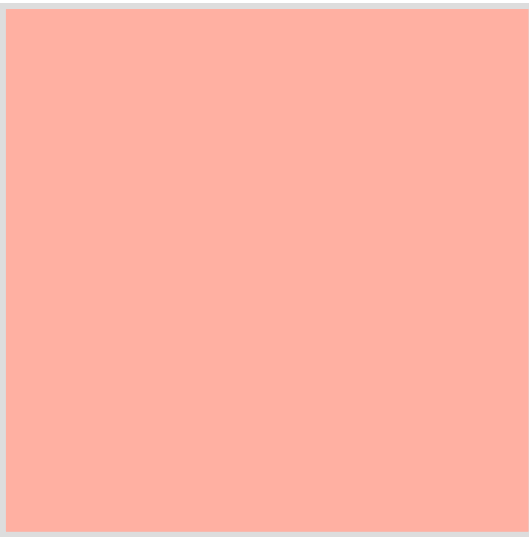
Warning Red

hex C8oBoB
rgb 200 11 11

Apply State gray to text that changes with the state of the display, such as mode text, missing data text, condition text, and filter text.

COLOR PALETTE: Primary Palette

Alert



Missing Data Red

hex FFBoA2
rgb 255 176 162



Warning Red

hex C8oBoB
rgb 200 11 11

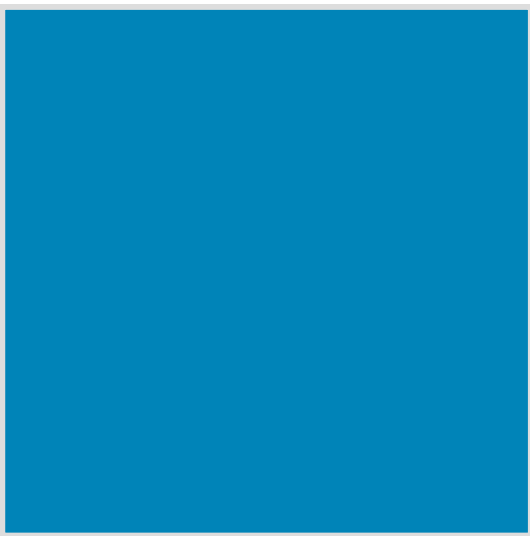
Missing Data Red is reserved for underlining text pointing to missing data in the SHR. It should not be used to color text or as a solid block. Warning Red is used to alert the physician to exceptional data, as either a text color or as the coloring of a graphical element.

Interactive



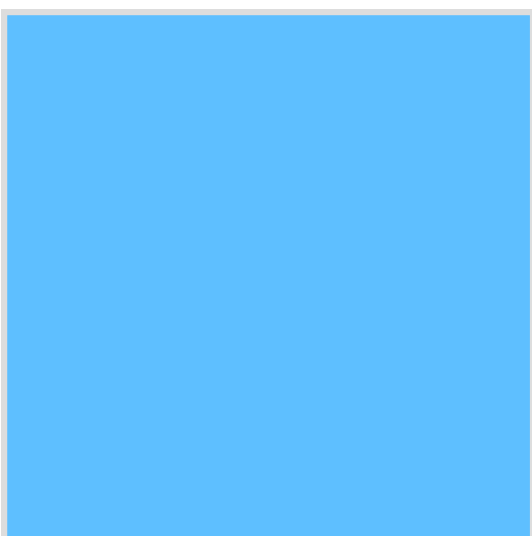
Interface Blue

hex o28DEA
rgb 2 141 234



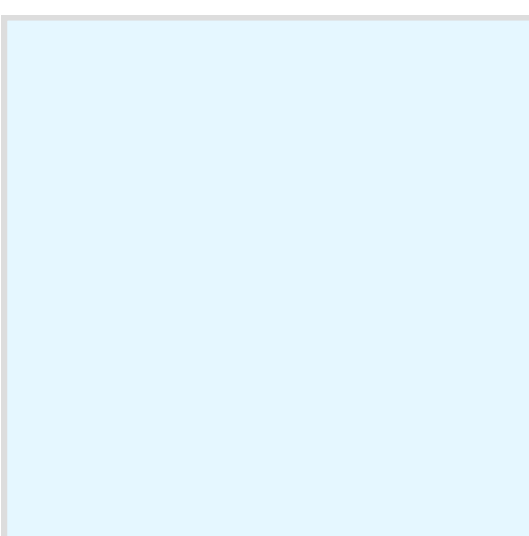
SHR Context Dark

hex oo84B8
rgb 0 132 184



SHR Context Line

hex 5EBFFF
rgb 94 191 255



SHR Context Light

hex E5F7FF
rgb 229 247 255

Interface Blue is intended for user interface elements and for indicating items slected in the user interface (expansions, dropdowns, etc.). SHR Context Dark and Light are used to underline or highlight text and elements that are linked to structed data in the SHR.

COLORS: Deuteronopia Example

Most common color deficiency that affects 5% of all males. The following is an example of how the palette would look for users with this color deficiency.

Background



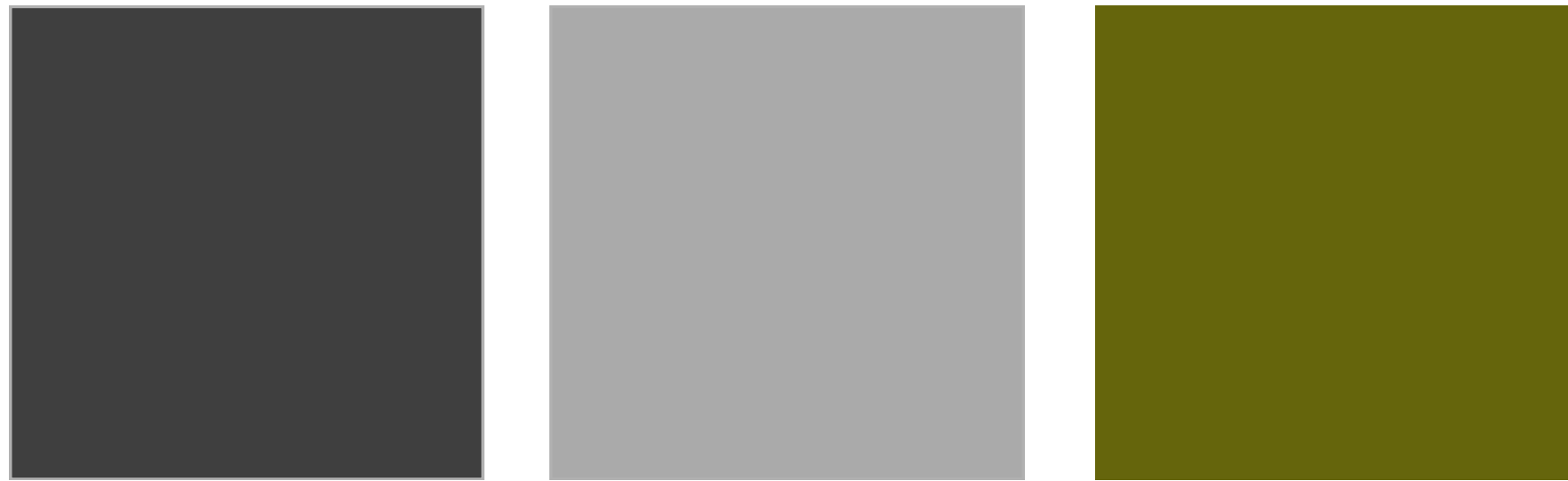
Background Contrast gray Feature gray Divider gray

Alert



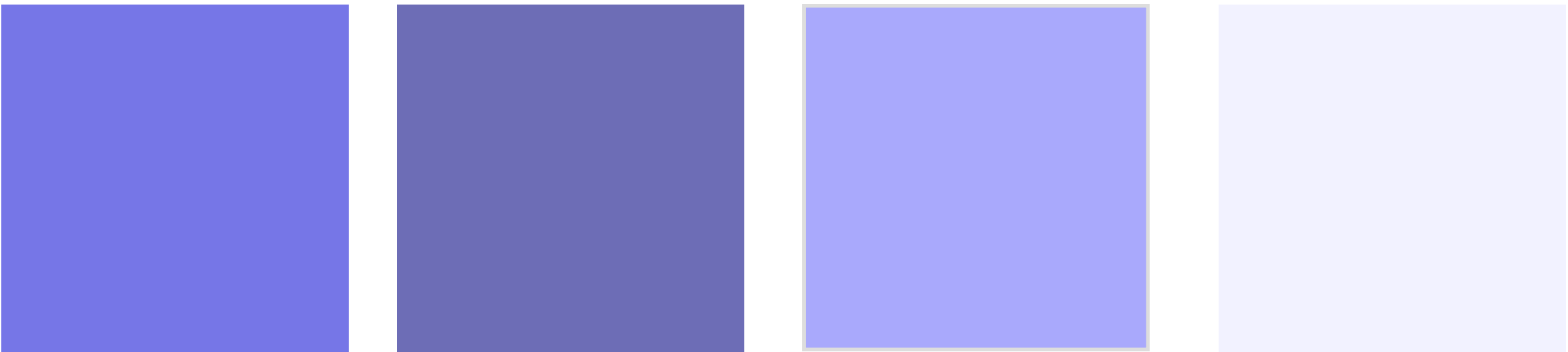
Missing Data Red Warning Red

Type



Body gray State Warning Red

Interactive



Interface Blue SHR Context Dark SHR Context Line SHR Context Light

COLORS: Projection / Low Contrast Placeholder

TEXT STYLE

TEXT STYLE: Reusable Styles

Use regular weight on all body text, table cell content. Also use regular weight with subsection headers, UI element labels, and interactive text, all of which are given emphasis with other techniques.

Use semibold weight for section headings, column headings, and timeline titles.

Section header	Open Sans Semibold #3F3F3F RGB (63, 63, 63) 16px
Text emphasis visual view	Open Sans Regular #3F3F3F RGB (63, 63, 63) 16px
Subsection header	Open Sans Semibold #3F3F3F RGB (63, 63, 63) 14px
Narrative body text	Open Sans Regular #3F3F3F RGB (63, 63, 63) 14px
Tabular column header	Open Sans Semibold #3F3F3F RGB (63, 63, 63) 14px
Tabular body text	Open Sans Regular #3F3F3F RGB (63, 63, 63) 14px
Right context tray #@ shortcuts	Open Sans Regular #3F3F3F RGB (63, 63, 63) 12px
Tabular missing data	Open Sans Regular #A1A1A1 RGB (161, 161, 161) 12px
Previous notes label text	Open Sans Regular #3F3F3F RGB (63, 63, 63) 10px

LAYOUT

LAYOUT: Narrative View

Section title



Color: Interface Blue (#028DEA)

Color: State (#AAAAAA)

Subsection title

NARRATIVE TEXT 14 FONT REGULAR. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading. [Narrative text placeholder](#). Narrative text should be fairly large to enable ease of reading. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading.

Font-size: 14px
Color: Body gray (#3F3F3F)
Font weight: regular
Line height: 20px (1.4x font-size)

NARRATIVE TEXT 14 FONT REGULAR. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading. [Narrative text placeholder](#). Narrative text should be fairly large to enable ease of reading. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading.

Width: 1px
Color: State (#AAAAAA)

Section title



Width: 1px
Color: State (#AAAAAA)

Subsection title

NARRATIVE TEXT 14 FONT REGULAR. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading. [Narrative text placeholder](#). Narrative text should be fairly large to enable ease of reading. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading.

Width: 1px
Color: SHR Context Line (#5EBFFF)

NARRATIVE TEXT 14 FONT REGULAR. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading. [Narrative text placeholder](#). Narrative text should be fairly large to enable ease of reading. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading.

LAYOUT: Tabular View

Section title

— Subsection title

NARRATIVE TEXT 14 FONT REGULAR. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading. [Narrative text placeholder](#). Narrative text should be fairly large to enable ease of reading. Narrative text placeholder. Narrative text should be fairly large to enable ease of reading.

Section title

— Subsection title

Column header	Column header	Column header
Cell text	Cell text	Cell text
Cell text	Cell text	Cell text
Cell text	Cell text	Cell text
Prev 1 2 3 ... 6 Next1-3 entries of 18		

Width: 1px

Color: Line gray (#DDDDDD)

Color: Contrast Gray (#F9F9F9)

— Subsection title

Left hanging labels

Content of the subsection, such as tables, charts, and timelines, are left aligned on the graphic. If there is left hanging text, it hangs into the margin.

> Expandable subsection

LAYOUT: Visual View

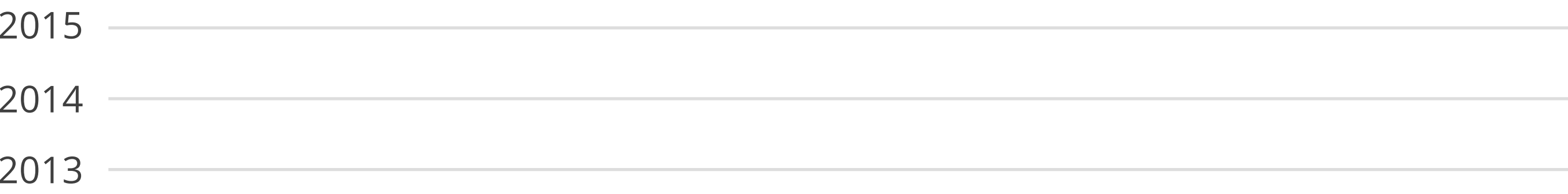
Section title CONDITION



Text emphasis
Additional narrative or descriptive text

Text emphasis
Additional narrative or descriptive text

Left
hanging
labels






Width: 1px
Color: Line gray (#DDDDDD)







ICONS

ICONS




Global

-  Close
-  Close (warning)
-  Dropdown
-  Search
-  New element







Navigation

-  View mode record (deselected)
-  View mode record (selected)
-  View mode split (deselected)
-  View mode split (selected)
-  View mode notes (deselected)
-  View mode notes (selected)


Clinical notes

-  Structured phrase mode
-  Clinical notes mode
-  Delete the clinical note












Patient record exploration

-  Narrative mode (deselected)
-  Narrative mode (selected)
-  Tabular mode (deselected)
-  Tabular mode (selected)
-  Visualization mode (deselected)
-  Visualization mode (selected)

Visualizations

-  Morning
-  Afternoon
-  Night

Timeline

-  Inpatient (deselected)
-  Inpatient (selected)
-  Outpatient (deselected)
-  Outpatient (selected)
-  Medications (deselected)
-  Medications (selected)
-  Allergy panel
-  Grade 2
-  Grade 3
-  Grade 4
-  Grade 5

INTERACTION

INTERACTION: Structured Data

SHR inline structured data

She underwent a lumpectomy. She underwent a sentinel lymph node biopsy on 20 September 2012 which revealed infiltrating poorly differentiated ductal carcinoma, estrogen receptor 0, etc.

The structured data element is automatically populated and is interactive.

Width: 1px
Color: SHR Context Line (#5EBFFF)

SHR inline structured data - selected

She underwent a lumpectomy. She underwent a sentinel lymph node biopsy on 20 September 2012 which revealed infiltrating poorly differentiated ductal carcinoma, **estrogen receptor 0**, etc.

The user is selecting the interactive structured data. A popup is appearing.

Color: SHR Context Dark (#0084B8)

SHR inline structured data - tentative insertion

She underwent a lumpectomy. She underwent a sentinel lymph node biopsy on 20 September 2012 which revealed infiltrating poorly differentiated ductal carcinoma, estrogen receptor 0, etc.

Data has been captured but not validated or signed off by the provider.

Width: 1.5px
Color: SHR Context Line (#5EBFFF)

Note entry structured data

Debra Hernandez672 is a 51 year old Female. Patient was diagnosed with Invasive ductal carcinoma of breast on 13 Jan 2012. Breast cancer diagnosed in Right breast. Primary tumor size was 30 mm. Histological grade was High grade or poorly differentiated.

Tags and shortcuts in the note editor are replaced with highlighted text that is non-interactive.

INTERACTION: Example Text Interaction Mockup

* This design continues to be iterated and should be seen as an applied example of the components documentation. The following is the latest concept as of 9 March, 2018.

Interactive text

1 W | 1 M | 6 M | 1 Y

- Expanded menu
- option 1
- option 2
- option 3

Interactive text is underlined, accompanied by an icon, or within a menu. Hovering over interactive text presents the text as white over a blue rectangular backing.

Medications All conditions



Current medications (6)

Medication	Dosage	Timing	Start	End
Adriamycin	6 10 ⁹ /L	6 cycles	10 Feb 2012	Missing date
Cyclophosphamide	10 mg	6 cycles	10 Feb 2012	30 Aug 2017
Tamoxifen	20 mg	qd	1 Nov 2013	13 Aug 2016
Letrazole	2 mg	qd	5 Sep 2015	1 Jun 2016
Coumadin	2 mg	qd	5 Mar 2015	1 Jun 2015
Aromasin	25 mg	qd	5 Oct 2014	1 May 2014

M E N U S

MENUS: Popups

Text with something **worsening** in the EHR.

Insert “Worsening disease status”

+

Insert “Worsening”

+

View source

▼ Insights

Recent status

Mar

Apr

May

Today

Jan 20

Feb

Mar

Progressing

Responding

> Additional future functionality...

Popup menus open as layered boxes, casting a narrow shadow. They always toggle open to simplify and ease the interface (do not click-hold). Again, hovering changes the item to white on blue.

If the menu options are functional, then the preference is to word as a command. If the options of a menu are distinct in character, they are separated by thin lines.

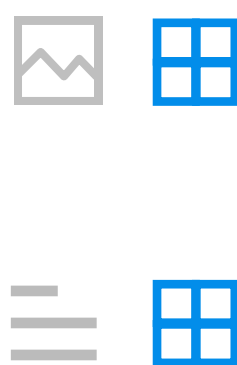
Menus: Arrow dropdowns

- > Collapsed Menu
- ✓ Open Menu
 - option 1
 - option 2
 - option 3
- > Collapsed Again

Arrow dropdown menus expand and collapse within the content layer. Following content and menus are pushed down. Adjoining menus should be exclusive, meaning only one can be open at a time.

TOGGLE MENUS: Normal Weight

Section view



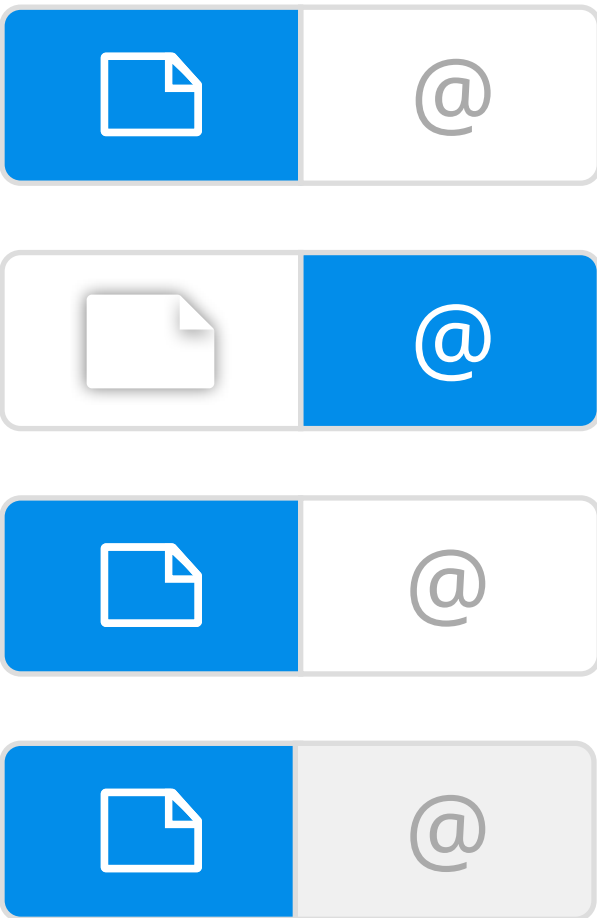
Horizontal Toggle Menus come in two flavors, regular and bold. Use the regular flavor when the functionality is simple, there is no text, and the menu should not attract attention away from its region.

The inactive selection is grey, and the active selection is blue.

Select the viewing mode of a section or subsection. Options are graph, tabular, and narrative.

TOGGLE MENUS: Heavy Weight

Right Sidebar View

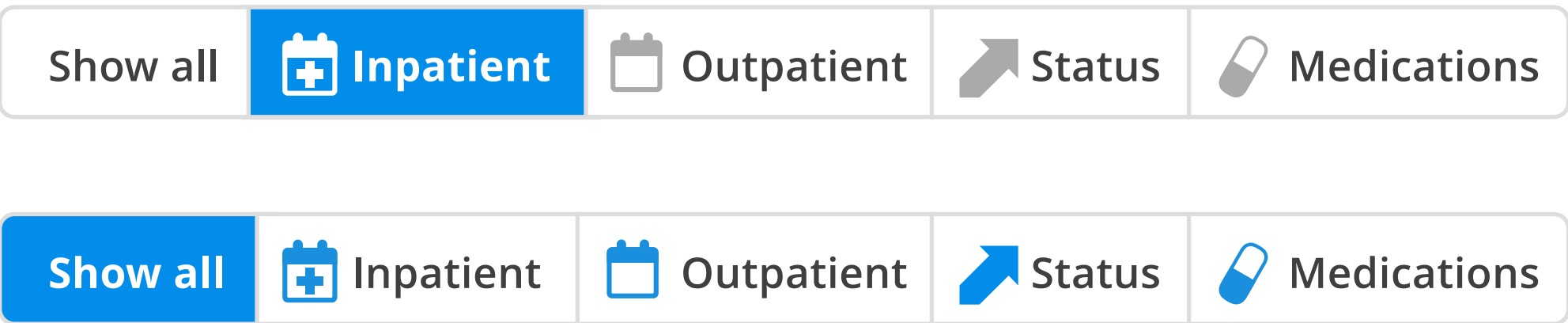


Use the bold toggle for large important switches in the UI, such as the toggle in the right sidebar that selects between notes and context templates.

The menu is a rounded rectangle, with thin dividers between the buttons. Unselected buttons white with grey graphics. The selected button is blue with white graphics. Text is always standard text color.

Inaccessible options are grey on grey.

Timeline Selector



The Timeline Selector is an example of mixed text and icons, and the use of a “Show all” function. Note that the coloring of the unselected buttons changes to indicate they are selected via the “All” option.

MISSING DATA

MISSING DATA

1 | She underwent a lumpectomy. She underwent a sentinel lymph node biopsy on 20 September 2012 which revealed infiltrating poorly differentiated ductal carcinoma, stage IV, etc. A diagnostic mammogram on 4 October 2013 revealed a 2 cm mass in the right breast at 7 o'clock and an indeterminate lymph node in the right axilla, 13 mm.

Width: 1px
Color: Missing Data Red (#FFBoA2)

In narratives, the phrase or sentence relying on the missing data is preferentially omitted. The missing data is indicated in the left margin with a vertical line, labelled by the number of missing data elements.

Current medications (6)

Medication	Dosage	Timing	Start	End
Adriamycin	6 10 ⁹ /L	6 cycles	10 Feb 2012	missing
Cyclophosphamide	10 mg	6 cycles	10 Feb 2012	30 Aug 2017
Tamoxifen	20 mg	qd	1 Nov 2013	13 Aug 2016

In tabular form, the cell is given the value “missing data”. “data” can be replaced with an appropriate single word. The text is underlined.

Width: 1px
Color: Missing Data Red (#FFBoA2)



Use the same motif to indicate missing data in graphics. A red line and number indicate how many features are missing in a portion of the graphic because of missing data. The particular placement depends on the implementation.

KEY SCREENS

KEY SCREENS: Pre-encounter View Mode

* The following design continues to be iterated and should be seen as an applied example of the components documentation. The following is the latest concept as of 9 March, 2018.

Flux Notes

Dr. Bran24 Michel09A

Debra24 Hernandez98Aj

Date of birth

5 Apr 1966 (51)

Admin. sex

Female

Location

Boston, MA

Workflow

Pre-encounter

Condition

Ductal carcinoma of the breast

View

Debra24 search...

Summary

Timeline

Medication

Allergies

Labs

Social

Disease status

Dr. Jraker299 referred ms. Debra24 Hernandez98Aj due to pain in left breast. Dr. Jraker299 is ms. Debra24 Hernandez98Aj's primary care physician for 12 years.

Summary

Ductal carcinoma of the breast

Ms. [Debra24 Hernandez98Aj](#) is a [51-year-old menopausal non hispanic or latino woman](#) with invasive ductal carcinoma of the breast, diagnosed on [13 January 2012](#). Her most recent status, recorded on [15 May 2017](#), is of [worsening](#), disease progression based on [pathology](#), [imaging](#), and [symptoms](#).

1

|

She underwent a lumpectomy. She underwent a sentinel lymph node biopsy on [20 September 2012](#) which revealed infiltrating poorly differentiated

2

|

ductal carcinoma, estrogen receptor 0, etc. A diagnostic mammogram on [4 October 2013](#) revealed a [2 cm](#) mass in the right breast at 7 o'clock and an indeterminate lymph node in the right axilla, [13 mm](#).

Timeline

All conditions

Show all

Inpatient

Outpatient

Condition status

Medications

1 W

1 M

6 M

1 Y

Ductal carc...

Feb

Mar

Apr

May

Jun

Jul

5

@

+ New note

Sort by

most recent

+ Search filters

47 previous notes

2 Aug 2017

Clinical follow-up

Dr. Free2 Will

Dana Farber Cancer Insti...

20 Jun 2017

Clinical follow-up

Dr. Free2 Will

Dana Farber Cancer Insti...

14 May 2017

Clinical follow-up

Dr. Free2 Will

Dana Farber Cancer Insti...

8 May 2017

Clinical follow-up

Dr. Free2 Will

Dana Farber Cancer Insti...

View 10 more clinical notes from 2015 - 2017

UPCOMING ADDITIONS

Components for:

Charts

Additional and updated key screens