MITRE / FLUX NOTES

PRE ENCOUNTER CARCINOMA OF BREAST FLUX NOTES CONCEPT v11.9

EDWIN CHOI, JUHAN SONIN, 8.DEC.2017

gоinvo

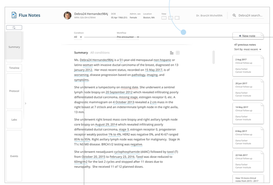
The following are interface concepts for Flux Notes Full, focused on a pre-encounter view within an oncology setting. These concepts continue to be refined based on new feedback and discussion. Near future design considerations include taking a responsive design appraoch to the visualizations so that it works at multiple sizes + describing how data loading would appear in the UI.

Red circles denote specific questions that can be asked to clinicians for validation and feedback.

Blue calls out new design updates.

1 FLUXNOTES VIEW MODE

1.1 FLUXNOTES VIEW MODE



"All docs" has been removed. Placing the option to toggle views for all and for each section in the header/toolbar area is more consistent and takes up less real estate, leaving a seen toggle, the user can customize their preferred view for future uses.

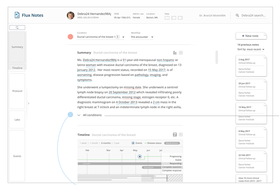
Is "cancer/tumor" the correct term?

Choosing a candidate will filter the patient record to show information relating to that condition, as well as any cancer/tumor closely connected with that condition. Hovering displays the associated cancer/tumor that the system has chosen to display to the clinician along with their chosen condition.

Timeline

When "all" conditions are chosen, conditions will be mapped onto the timeline visualization. This is non necessary when only a single condition is being viewed.

1.2 FLUXNOTES VIEW MODE

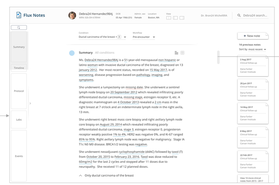


Each version of the patient record can be expanded to show information outside of the selected condition.

Cursor some choices expanses/collapse much more than button elements.

Instead of expanding once individual sections, should we explore a toggle between all conditions and the selected condition? Toggling would keep the user in the same general area of information, instead of potentially sections being expanded and others not, despite the Conditions' selection being 'diurtal carcinoma of the breast'.

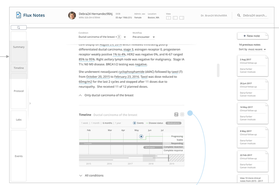
1.3 FLUXNOTES VIEW MODE



Summary Ductal carcinoma of the breast
Summary All conditions

Once the summary section is expanded to include all conditions, that inclusion is denoted now in the header section with lighter text.

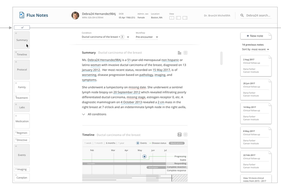
1.4 FLUXNOTES VIEW MODE



Other sections, like Timeline, have not been expanded to show information on all conditions. For this reason, 'Ductal carcinoma of the breast' is denoted in the header of Timeline.

An icon for "visualization" has been added.

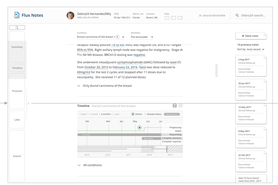
1.5 FLUXNOTES VIEW MODE



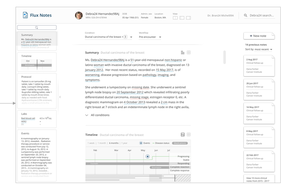
The user has both the ability to choose which categories of information to display (might improvisate amount of contents) and which to rearrange, all in one view.

1.6 FLUXNOTES VIEW MODE

1.7 FLUXNOTES VIEW MODE



1.8 FLUXNOTES VIEW MODE



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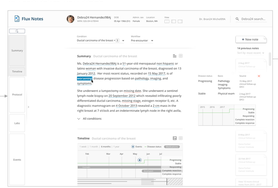
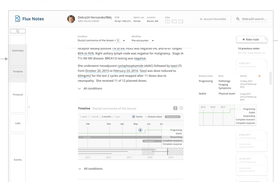
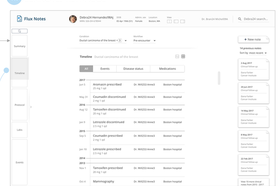


Clicking on a concurrent doc element brings up centralized information, which remains fixed in the display as the user scrolls through other parts of the record. It can be removed by clicking the red "x".

1.8 FLUXNOTES VIEW MODE

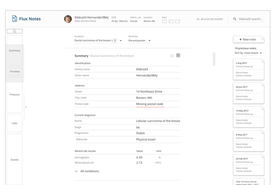


1.9 FLUXNOTES VIEW MODE



The scrollbar and the timeline area in the minimap changes to reflect the increase in height of the timeline section when the table view was toggled.

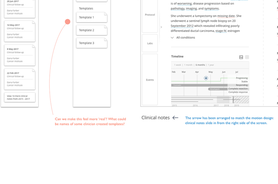
1.10 FLUXNOTES VIEW MODE



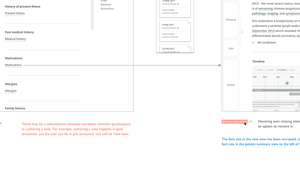
When a section of the patient record has a missing unsynced element (whether it's 1 or 100), that section is overlaid in light red as a visual indication.

2 FLUXNOTES DATA CAPTURE

2.1 FLUXNOTES DATA CAPTURE



2.2 FLUXNOTES DATA CAPTURE



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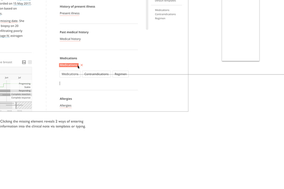

3 FLUXNOTES SEARCH MODE

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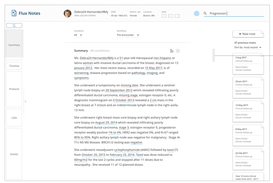
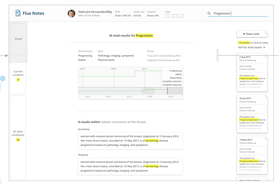


Consensual information and visualizations related to the search is returned, along with search results found within the filtered (in this case, lobular carcinoma of the breast) version of the patient record, and body search results from the entire patient record are returned.

The search bar expands when it is interacted with, to provide more toxo space for the user.

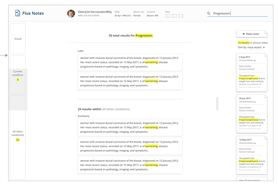
3.2 FLUXNOTES SEARCH MODE



The minimap changes to reflect the search mode the the user is in. The behavior of the minimap is that it will show search hits in new mode, except applied to the search results. This is for consistency in interaction/behavior.

How much differentiation should there be within the search results? Structured in unstructured information. Would it flow/ be useful? What is the criteria for the search results that are returned? For example, should "disease progression based on ..." information be returned? What is the threshold for what information is returned?

3.3 FLUXNOTES SEARCH MODE



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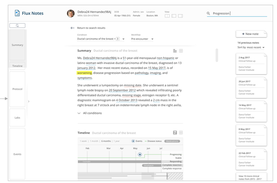

By clicking on a search result, the user will jump to that section of the patient record, but now always returns to the search results. Whose the text in the search for is erased, the yellow highlight disappears and the interface now reacts as default (as in 1.1).

4 FLUXNOTES BROWSE NOTES / CHANGE VIEW

4.1 FLUXNOTES BROWSE NOTES / CHANGE VIEW

"most recent" does still "lead reason" data for coming clinical notes was added.

Ability to sort notes by:
- Date (newest/oldest)
- Author type
- Specialty
  - Physician
  - Fellow
  - Nurse
- Specialty-specific
  - Urology
  - Oncology
  - Etc
- Encounter
  - Office visit
  - Phone visit
- Note type
  - Progress
  - H&P
  - Consultation
  - Etc

Expanding to review more notes will reveal 10 more notes at a time. Remain from most-recent —> older clinical notes.

How many notes should load upon expansion? Or should all notes be visible from the beginning? Is there a way to make this information more continuously load or should they only load when "view more" is clicked?

4.2 FLUXNOTES BROWSE NOTES / CHANGE VIEW

The first new (oldest note, when condition was diagnosed) has been removed, not enough of the basic notes are initially loaded to fill the entire space on the right side of the screen.

4.3 FLUXNOTES BROWSE NOTES / CHANGE VIEW

A subtle line is used as a indication to help keep the users visual place when previous notes are expanded to reveal more notes.

The first case in of previous case notes has been increased, to match the first case in the patient summary view to the left of the screen.

4.4 FLUXNOTES BROWSE NOTES / CHANGE VIEW

Returns to the default pattern record view (as in 1.1).

In the previous design, of other non-selected notes were lower opacity, which may communicate that these were disabled and unselectable. Here, a different visual treatment is used on the selected note, instead, reducing the visual weight of the other notes in order to communicate that of previous notes are selectable.

4.5 FLUXNOTES BROWSE NOTES / CHANGE VIEW

4.6 FLUXNOTES BROWSE NOTES / CHANGE VIEW

How organizes is showing the # of unfilled elements?

5 FLUXNOTES NEW NOTE MODE

5.1 FLUXNOTES NEW NOTE MODE

Can we make this feel more 'real'? What could be notes of some choices crossed complete?

Clinical notes ←

The prime has been arranged to match the manner design clinical notes slide is from the right side of the screen.

There may be a contradiction between workflow attention (prentiques) to authoring a note. For example, authoring a note happens over minutes, yet the user can be in pre-encounter and still be "new case."

5.2 FLUXNOTES NEW NOTE MODE

Hovering over missing elements in the clinical note reveals an option to remove it.

The font size in the new note has been increased, to match the font size in the patient summary view to the left of the screen.

5.3 FLUXNOTES NEW NOTE MODE

Clicking the missing element reveals 2 ways of entering information into the clinical notes: no templates or laying

5.4 FLUXNOTES NEW NOTE MODE

How often are modified clinical templates used? How long default templates used? How realistic is this use case?

5.4 FLUXNOTES NEW NOTE MODE

Concern: Had the concern back and forth and continual updating been a problem in the past? Is there a way that this does should be shown differently and save time been gained?

Assessment

Deborah Hernandez(Mrs.) is a 51-year-old premenopausal multo woman with Stage 2 T1c ER+ PR+ HER- breast cancer, diagnosed on 12 January 2012, treated with BRCA1/2 negative, estrogen+ PR+, progesterone receptor- (HR, +HER) regative IPL M-CT scan 10 Dec 2017 showed no evidence of recurrent disease. She has minimal residual neuropathy affecting her fingers bilaterally. She is on Tamoxifen, and she tolerates it well.

Plan

Will continue on Tamoxifen to complete 10 years, through 1/4/2021.

She had her 6th mammogram on 5/15/2016, with benign findings.

No unfilled elements

Remove unfilled elements and sign

How organizes is showing the # of unfilled elements?

Reason for visit

Breast cancer follow up

History of present illness

Deborah Hernandez(Mrs.) is a 51-year-old premenopausal multo woman who presents for a routine breast cancer follow up. She underwent a lumpectomy on mid-July date. She underwent a sentinel lymph node biopsy on 20 September 2012 which revealed infiltrating poorly differentiated ductal carcinoma, moderate grade, estrogen receptor 6 etc. A diagnostic mammogram on 4 October 2012 revealed a 2.1cm mass in the right breast at 7 o'clock and an enlarged lymph node in the right axilla. She underwent a lumpectomy on mid-July date. She underwent a sentinel lymph node biopsy on 20 September 2012 which revealed infiltrating poorly differentiated ductal carcinoma, moderate grade, estrogen receptor 6 etc. A diagnostic mammogram on 4 October 2012 revealed a 2.1cm mass in the right breast at 7 o'clock and an enlarged lymph node in the right axilla.

Timeline Ductal carcinoma of the breast

Events | Medications | Immunizations | Regimen

Clinical notes ←

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Timeline Ductal carcinoma of the breast

Events | Medications | Immunizations | Regimen

Remove unfilled elements and sign (appears once clinician has reviewed entire note)

Remove unfilled elements and sign (a few a percentage of remains)