healthycent$ Site Map

Home

Menu

Other Resources

Settings & Accessibility

Click on menu to expand options

Typing in procedure search bar

Search

Clicking on one option displays the Results page

Results

Results > About

Results > Sort

Results > Filter

3 options above map included to adjust displayed results or learn more about the searched procedure

Clicking on a specific site will show a site specific page

Site Result

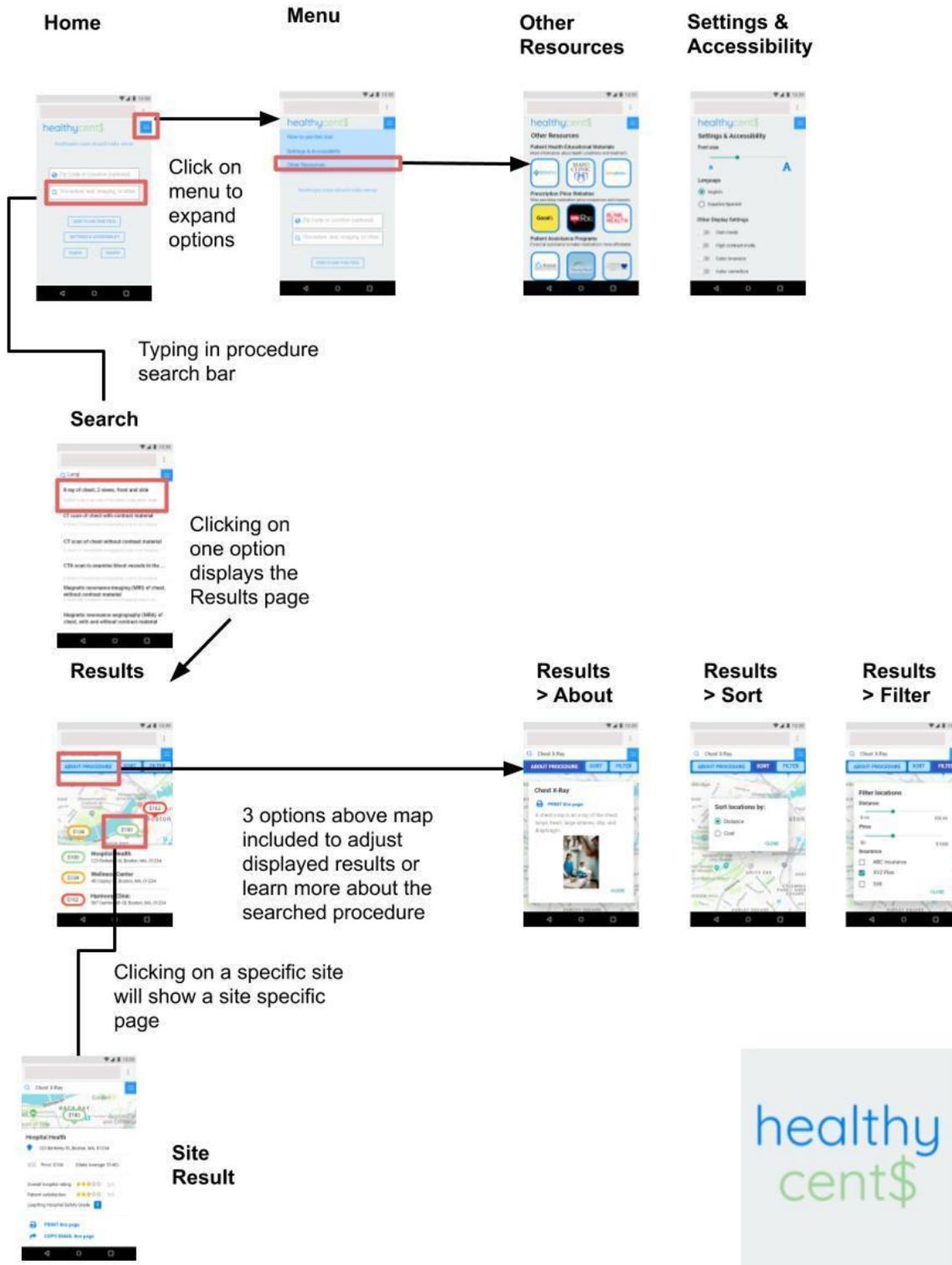healthy cent$

Figure 1: Site Map

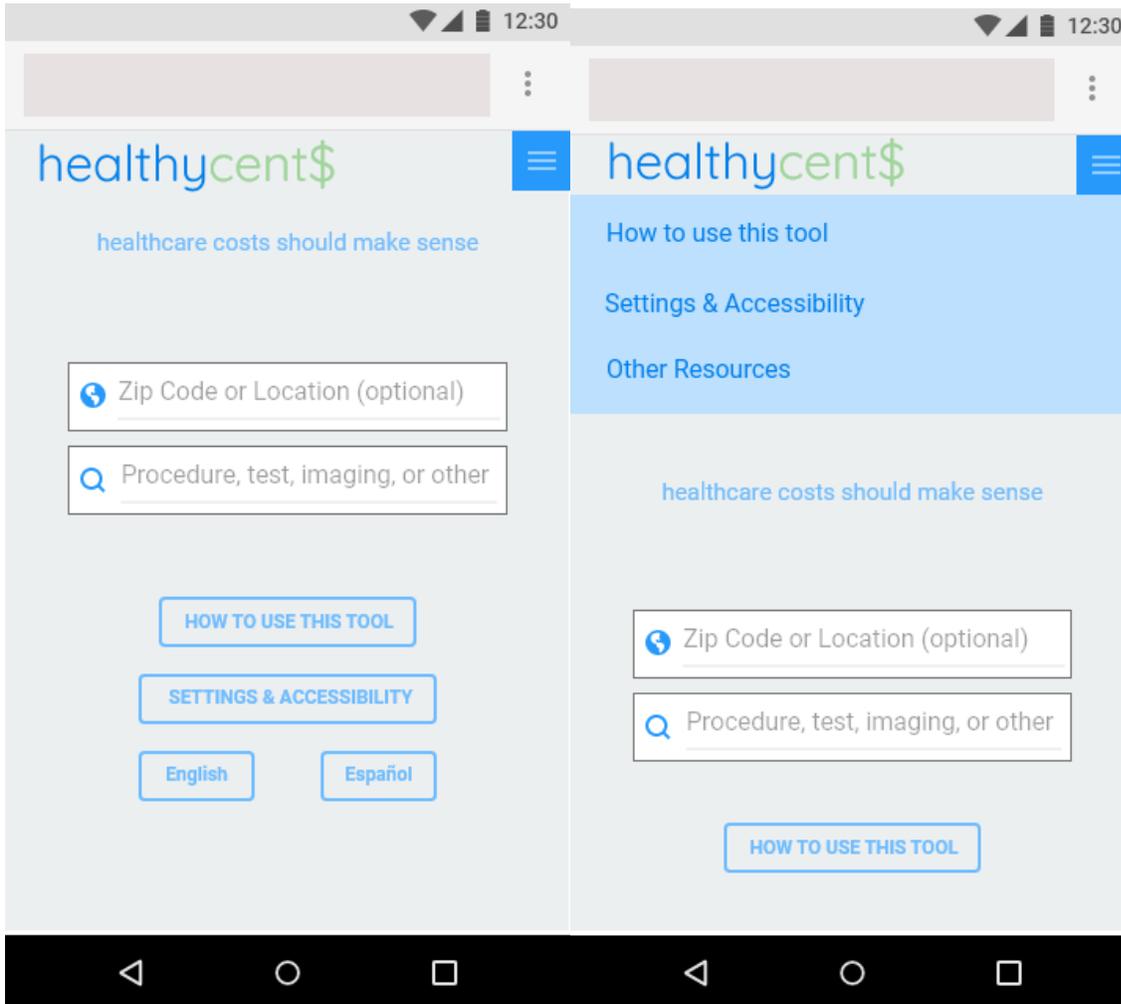# Home and Menu Pages

Figure 2: Home   Figure 3: Menu

Key Features:

- Zip code: zip code text box for putting in location of potential hospitals/healthcare facilities of interest. Upon input of any text, a dropdown appears below the textbox that lists closest matching zip codes. User can continue typing and press enter, or select from a list of zip codes in dropdown. Should the patient not enter a zip code, the application will default to the location of the device.
- Procedure box: procedure textbox for putting in procedure name. Upon input of any text, the screen will change to that of the 'Search' page. (see 'Search' page Figure 6)
- Menu (hamburger menu) in upper right corner → clicking on menu button pulls up options for 'How to use this tool', 'Settings & Accessibility', 'Other resources' (as seen in Figure 3). The menu will be located on the upper right corner of every page. Additional buttons for these pages are also on the home page for convenience. The 'How to use this tool' page is not included in this wireframe document for the sake of brevity.
- English/Español: Button option for changing language of page to Spanish.

Settings & Accessibility and Other Resources Pages
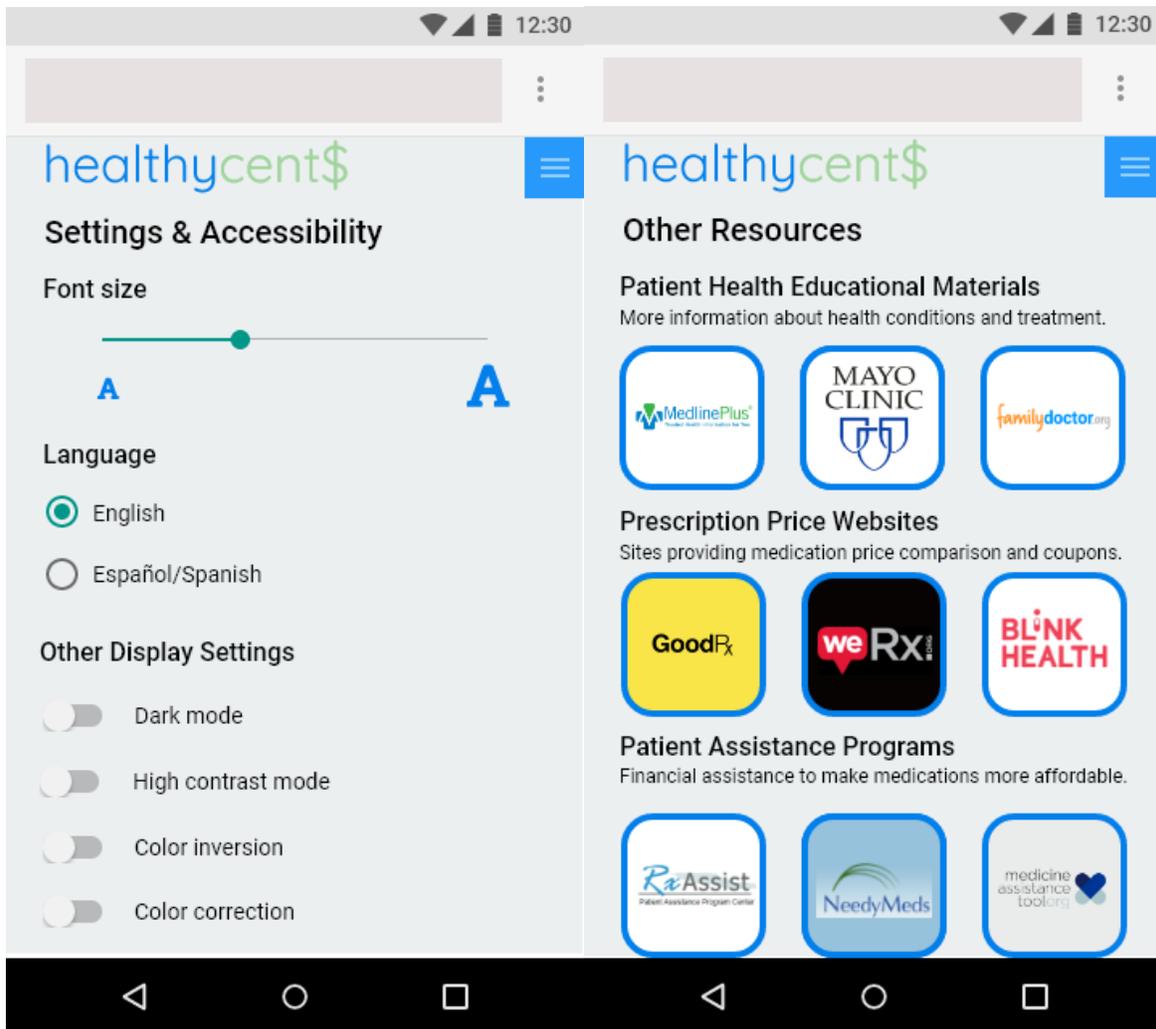

Figure 4: Settings and Accessibility   Figure 5: Other Resources

- Offering language options in Spanish and English (seen in Figure 4).
- Accessibility options to increase font size and/or increase contrast of text on background as well as color correction option to adjust colors on screen for users with color blindness.
- External links to websites around patient health, medication price comparison, patient assistance programs, and potentially other websites such as medication information websites to encourage patient engagement in health (seen in Figure 5).
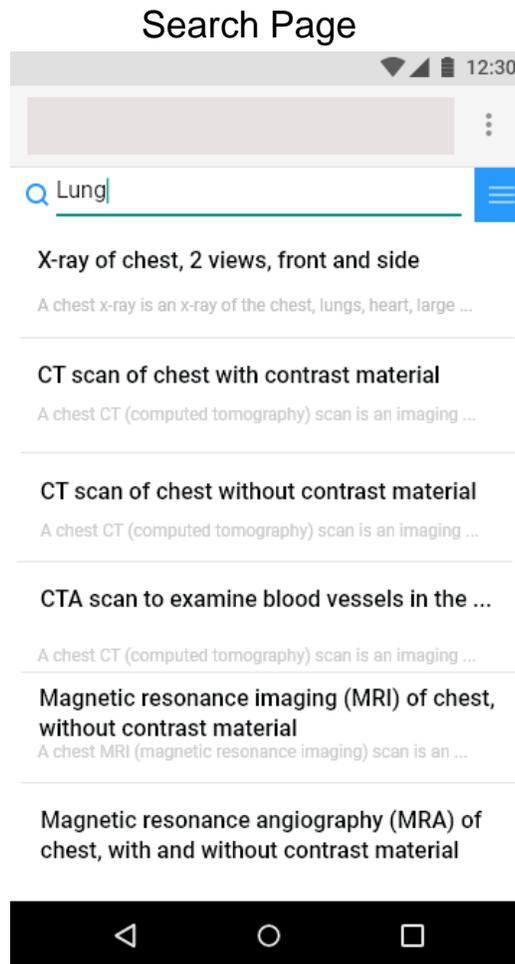
Search Page

Figure 6: Search

- When the user types into the search bar of procedure textbox on the home page (Figure 2), a relevant list of procedures will appear (as seen in Figure 6). A brief description of each procedure type, ideally drawn from NIH Medline Plus data, will be included with each listed procedure below the procedure name.
- Depending on the text entered into the procedure text box the populated list will be different:
    - Body part => list all available procedures that can be performed on body part
    - Procedure name (name of surgery, imaging modality, test name) => list closest matching procedure name
    - Disease name => list diagnostic tests, imaging, surgeries associated with disease
- The user then clicks on the procedure listed that most closely matches the procedure they are looking for.
- The user will be able to type in relevant 'plain English' key words. This may require procedures to be manually tagged on the back end with potential keywords that might be related to the given procedure (e.g. "lung" for "chest x-ray").
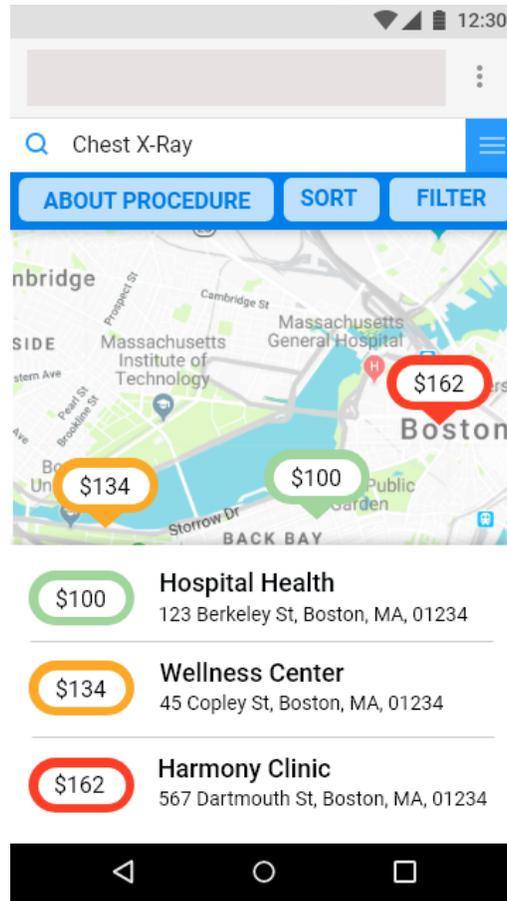
Results Page

Figure 7: Results

- The search bar at the top of the page allows the user to type in the name of a new procedure and will default back to the Search page (Figure 6) when text is changed. This search bar is accessible on the Results page and the Site Result page.
- Three buttons under the search bar, when selected, shows 1) a popup with more information about the procedure they searched for, 2) a popup that allows them to sort through results, and 3) a popup to filter results on the map.
- Clickable colored markers with the cost data at a given site are displayed on the map. Red corresponds to above average (more than one standard deviation above), yellow corresponds to average, and green corresponds to below average (more than one standard deviation below). We have a color correction mode on the Settings and Accessibility page given that we are using green and red here as prominent markers that may not be considered user-friendly in users with color-blindness. By default the prices displayed are out of pocket cost of procedure without insurance. The user can see prices with insurance by selecting the appropriate insurance type in the filter popup (see Figure 9). After selecting insurance type, the displayed costs will update to show the price with the corresponding insurance applied.
- Clicking on a marker will bring up details about the site. See the Site Result page (Figure 8) for more information.

- Below the map is a scrollable list of sites displayed on the map, arranged by cost by default.
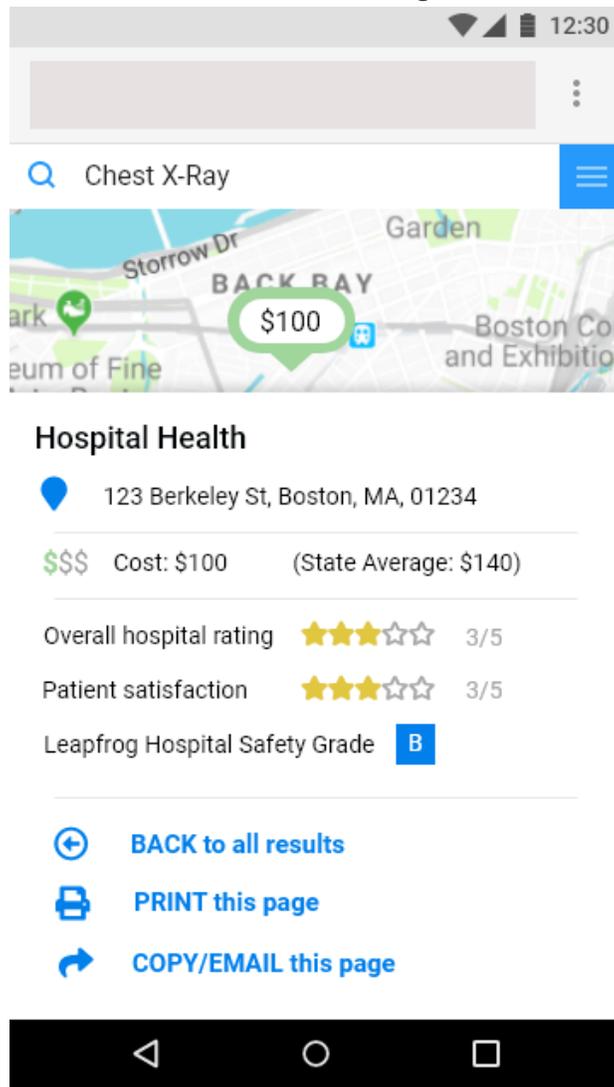
Site Result Page

Figure 8: Specific Site Result

- When the user clicks on a map marker representing a healthcare facility/hospital on the Results page (Figure 7), a card (on the bottom of the page) will pop up providing information about that hospital.
- This card may include information such as the address of the facility, estimated cost of procedure from the state database, along with the calculated state average or median cost of the procedure (the average of all sites' cost estimates for the given procedure).
- External information will be drawn from CMS data for overall hospital rating and patient satisfaction. If data access is granted, the page will also include the hospital's safety grade from Leapfrog.
- The user will be provided a clickable option to print this page. They will also have the option to copy or email the link to this page.
- If the user clicks on the 'Back to main results' button, the user will return to the main Results page (Figure 7).
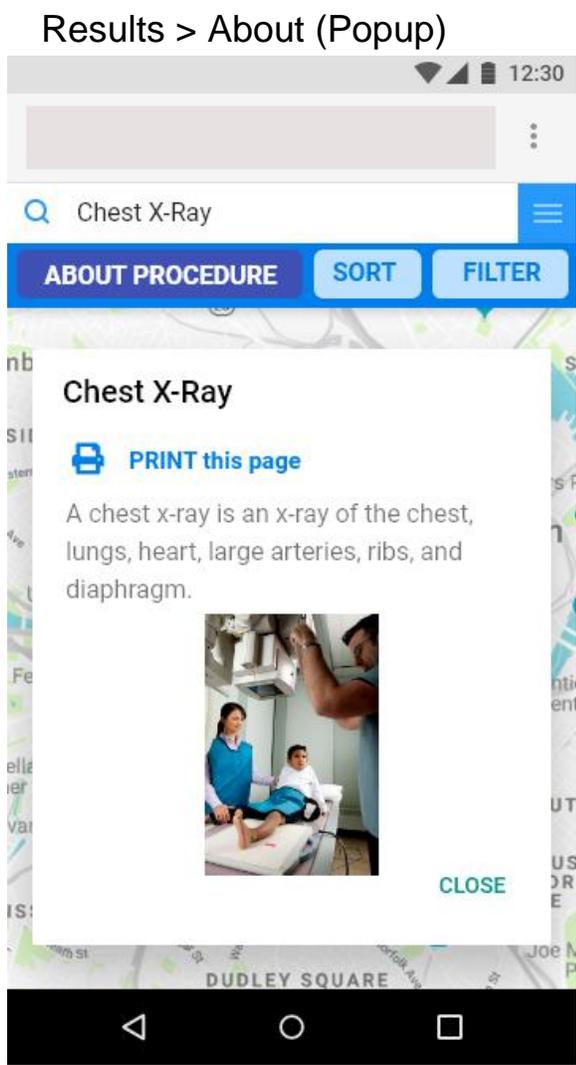
Results > About (Popup)

Figure 9: "About" button popup

- The user accesses this popup by clicking on the 'About Procedure' button on the Results page (Figure 7).
- The About popup will draw patient education material from Medline Plus (NIH patient education website) that explains the imaging, testing, or other procedure being searched for.
- The user can close the popup to return to the main map and list of results (see Results page Figure 7).

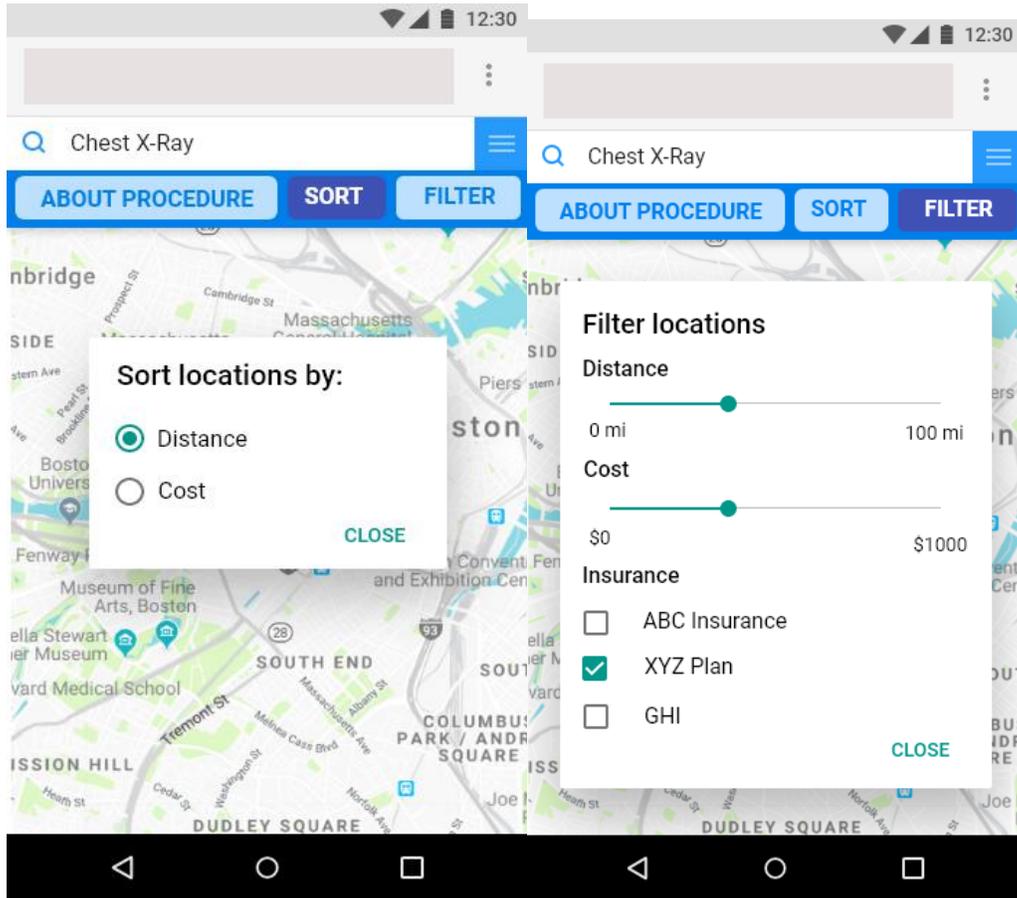# Results > Filter, Results > Sort (Popups)

Figure 10: 'Sort' button popup   Figure 11: 'Filter' button popup

- When the 'Filter' button is clicked on Results page (Figure 7), the Filter popup (Figure 11) allows the user to view fewer or more locations on the map depending on insurance information for the service, cost for the consumer, and distance away from the center of the map. The insurance option is more relevant for the New Hampshire data set, in which insurance type is included. Depending on which options are selected, the colored markers will change accordingly after the popup is closed.
- When the 'Sort' button is clicked on the Results page (Figure 7), the Sort popup (Figure 10) allows the user to sort the listed results based on distance or cost.
- The user can close the Filter or Sort popup to return to the main map and list of results (see Results page Figure 7).

Notes About Design

- Some design components for this wireframe are from the following sites:
  - https://material.io/archive/guidelines/resources/sticker-sheets-icons.html
  - https://www.behance.net/gallery/55462459/Wires-wireframe-kits-for-Adobe-XD
- Certain icons in this wireframe are from Font Awesome, https://fontawesome.com/, a widely used open-source icon set.
- The sample map used is from:
  - https://snazzymaps.com/style/103732/wireframe-map-v2
  - An alternate map platform, such as Google Maps or OpenStreetMap, would be a viable replacement outside of the wireframe stage.
- Fonts used on the wireframe include Quicksand and Roboto, open source fonts available on Google Fonts.
  - https://fonts.google.com/specimen/Quicksand
  - https://fonts.google.com/specimen/Roboto
- Externally linked example sites on the 'Other Resources' page include:
  - https://medlineplus.gov/
  - https://www.mayoclinic.org/diseases-conditions
  - https://familydoctor.org/
  - https://www.blinkhealth.com/
  - https://werx.org/
  - https://www.goodrx.com/
  - https://www.rxassist.org/
  - https://www.needymeds.org/pap
  - https://medicineassistancetool.org/en