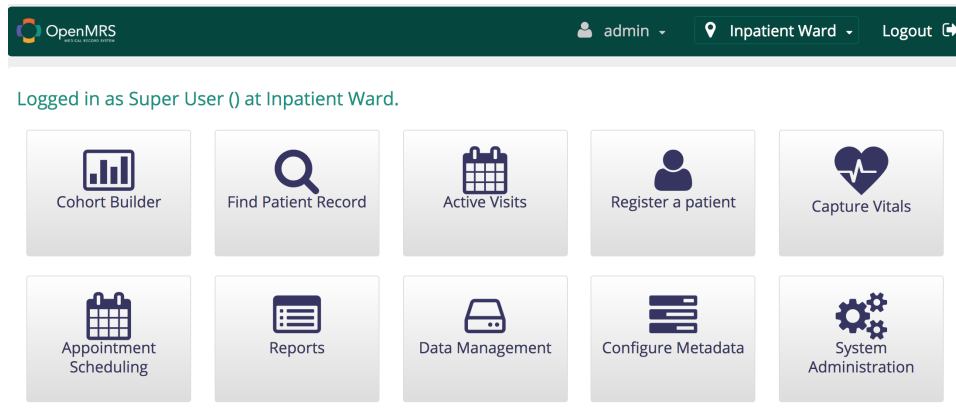


Cohort Builder Open Web App User Guide

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How to access the cohort builder:

- Click on the **Cohort Builder** button on the [homepage](#) of the OpenMRS application after logging in.

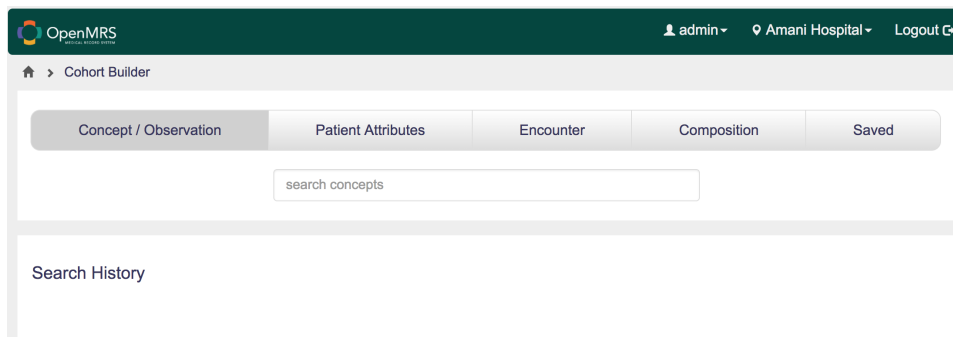


About the OpenMRS cohort-builder OWA

The OpenMRS cohort-builder OWA is used to make search queries against a dataset of patients with different query options, the cohort-builder currently has 5 active tabs each offering the user with different option and parameters to make search queries.

These are :-

1. The Concept / Observation tab
2. The Patient Attributes tab
3. The Encounter tab
4. The Composition tab
5. The Saved tab



The Concept / Observation tab

This tab gives the user the option to search via concepts or observations existing in the system.

Concepts are the individual data points collected from a population of patients. They include both questions and answers. An example here would be **who le blood sample**, with the question; **Does the patient value have a whole blood sample?**

OpenMRS MEDICAL RECORD SYSTEM admin Amani Hospital Logout

Home > Cohort Builder

Concept / Observation Patient Attributes Encounter Composition Saved

Whole blood sample

Patients whose observation has value Whole blood sample

Date Range? Since: DD-MM-YYYY and/or Until: DD-MM-YYYY Optional

Search Reset

Search History

Observations denote anything actively measured or observed during an encounter. For example a patient's weight, age or blood pressure.

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Home > Cohort Builder

Concept / Observation Patient Attributes Encounter Composition Saved

Height (cm)

Which observations? Any

What values? < Enter a value cm

Date Range? Since: DD-MM-YYYY and/or Until: DD-MM-YYYY Optional

Search Reset

Search History

The Patient Attributes tab

This tab gives the user the option to search via demographics and a person attributes

1. **Search by demographic:** This allows you search for patients with a descriptive characteristic, in a particular sector of a population. There are 5 search options namely:-
 - a. **Gender** - Search by gender option i. e Male or Female
 - b. **Age** - Filter patient search results by age range i.e. 0-14

- c. **Birthdate** - Filter patient search results by birthdate range ie 20 Feb 1988 - 03 May 2006
- d. **Alive** - Search only for patients who are alive.
- e. **Dead** - Search for deceased patients.

2. **Search by person attribute:** This allows you search for patients with specific information that further describes them.

There are numerous search options namely:-

- a. **Birthplace** filter by place of birth
- b. **Citizenship** - Filter patient results by specifying their country of origin
- c. **Civil Status**
- d. **Health Center** - Filter by details of health center attended by patients
- e. **Health District** allows you to filter by similar health districts
- f. **Mother's Name** - Filter by similar mother's name
- g. **Race** - Filter results by the patients racial background
- h. **Telephone number** - Filter by similar phone numbers
- i. **Unknown patient**
- j. **Test patient**

The screenshot shows the OpenMRS Cohort Builder interface. At the top, there is a navigation bar with the OpenMRS logo, user 'admin', location 'Amani Hospital', and a 'Logout' button. Below the navigation bar, the 'Cohort Builder' page is displayed with tabs for 'Concept / Observation', 'Patient Attributes', 'Encounter', 'Composition', and 'Saved'. The 'Patient Attributes' tab is active. Under this tab, there are two main search sections: 'Search By Demographic' and 'Search By Person Attributes'. The 'Search By Demographic' section includes filters for Gender (set to 'All'), Age (Between: [] And: []), and Birthdate (Between: DD-MM-YYYY x And: DD-MM-YYYY x). There are radio buttons for 'Alive Only' and 'Dead Only', and 'Search' and 'Reset' buttons. The 'Search By Person Attributes' section includes a 'Which Attribute' dropdown (set to 'Any') and a 'Values' dropdown (set to 'Select specific attribute to Enable'), with 'Search' and 'Reset' buttons. At the bottom, there is a 'Search History' section.

The Encounter tab

An **encounter** is a single, specific interaction between the patient and a provider.

This tab gives the user the option to search via patients encounter and the location at which they interacted with the service provider.

1. **Search by Encounter:** This searches for patients with a specific type of activity or encounter. For example, check in, checkout, transfer, admission e.t.c.

There are numerous search options namely: -

- a. Of Type allows you to filter by the type of the encounter
- b. Location allows you to filter by the location of the encounter
- c. At least this many allows you to filter by the minimum encounter count
- d. Upto this many allows you to filter by the maximum encounter type
- e. From - To allows you to filter by the date range in which the encounter(s) occurred.

2. **Search by Location:** This allows you search for patients by the encounter location e.t.c Amani hospital, inpatient ward, isolation ward e.t.c.

Here the filters are applied according to the following:-

- a. **Patients belonging to** a group of encounters from a specific location.
- b. **According to** the timeline of the encounter

The screenshot shows the OpenMRS Cohort Builder interface. At the top, there is a navigation bar with the OpenMRS logo, user information (admin), hospital name (Amani Hospital), and a Logout button. Below this is a breadcrumb trail: Home > Cohort Builder. The main interface has five tabs: Concept / Observation, Patient Attributes, Encounter (selected), Composition, and Saved. The 'Encounter' tab is active, displaying two search sections: 'Search By Encounter' and 'Search By Location'. The 'Search By Encounter' section is titled 'Patients having encounters' and includes fields for 'Of Type' (a dropdown menu), 'At Location' (a dropdown menu), 'From Form' (a dropdown menu), 'Atleast this many' (a text input), 'Upto this many' (a text input), 'From' (a date input), and 'To' (a date input). There are 'Search' and 'Reset' buttons at the bottom of this section. The 'Search By Location' section includes 'Patients belonging to?' (a dropdown menu) and 'According to Method' (a dropdown menu), with 'Search' and 'Reset' buttons at the bottom.

The Composition tab

This tab allows a user to combine multiple cohorts using the logical operators:- '**AND**', '**OR**', and '**NOT**'.

To use this query, you need to have query results from the **other queries** in your **search history**. These are the queries which will then be combined to yield new results.

Example: There is a cohort of patients who weigh less than 100 KG at **#1**, and a cohort of patients with ages between 23 and 35 years at **#2** in the search history.

You can create a query with a composition '**1 AND 2**' and add a brief meaningful description for the new query. To view a result for the combined queries.

There are two input boxes on this tab namely:

1. **Composition:** This is where the operations are entered e.g **1 AND 2** from the example above
2. **Description:** This is a memorable name or description for the search composition that is being created. Eg. for the above example, we could add a description "**Patients weight < 100, age 23 -35**". (checkout image below for a visual sample).

OpenMRS admin ▾ Amani Hospital ▾ Logout ↗

Home > Cohort Builder

Concept / Observation Patient Attributes Encounter **Composition** Saved

Boolean Search

This query combines multiple cohorts using the logical operators:- 'AND', 'OR', and 'NOT':

To use this query, you need to have query results from the **other queries** in your **search history**. These are the queries which will then be combined to yield new results.

Example: There is a cohort of patients who weigh less than 100 KG at #1, and a cohort of patients with ages between 23 and 35 years at #2 in the search history. You can create a query with a composition '1 AND 2' and add a brief meaningful description for the new query. To view a result for the combined queries.

Composition: (Required)

Description: (Required)

Search History

#	Query	Query Definition Options	Results	Cohort Definition Options
2	All Patients with ages between 23 and 35 years	Save Delete	16 result(s)	Download Save
1	Patients with ANY Weight (kg) < 100	Save Delete	95 result(s)	Download Save

The Saved tab

This tab gives the user the option to search for a saved cohort or definition, it has two fields namely

1. **Search Saved Definitions** allows the user search for a saved definition by it's name
2. **Search Saved Cohort** allows the user search for a saved cohort by it's name

Concept / Observation

Patient Attributes

Encounter

Composition

Saved

Search Saved Query Definitions

Query Definitions can be found on the third column on the Search History table below. You can only search for Query Definitions that you have saved using a Name.

Saved Definitions:

Search

Search Saved Cohort Definitions

Cohort Definitions can be found on the last column on the Search History table below. You can only search for Cohort Definitions that you have saved using a Name.

Saved Cohorts:

Search

- **The Search history:** This is where an history of executed searches are saved and displayed to the user, each search can be saved either as a cohort or as a definition. There are numerous fields under this component, namely
 1. **Query:** This is where the name or description of the query is displayed
 2. **Query Definition Options**
 - a. **Save:** This saves a definition to the database
 - b. **Delete:** This removes a definition from the search history
 3. **Results:** This contains a list of all the patients contained in the search result
 4. **Query Definition Options**
 - a. **Save:** This saves a cohort to the database
 - b. **Delete:** This removes a definition from the search history

Search History

Clear Search History

#	Query	Query Definition Options	Results	Cohort Definition Options
2	All Patients	Save Delete	100 result(s)	Download Save
1	Patients with ANY Weight (kg)	Save Delete	95 result(s)	Download Save

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Frequently asked questions:

- Is there a limit to the number of cohorts and definitions that can be saved?
 - No there is no limit to the amount of cohorts and definitions that can be saved.