

OpenHIE in Action

Here you can experience some of the OpenHIE workflows in action for yourself. The above video shows a presentation of OpenHIE in action. On the rest of this page we will show you how to run through this demo on your own using our demo servers if you so wish. This will allow you to get a feel for how the different components of OpenHIE fit together and what the workflows can do for a particular implementation.

During this demo we will share both patients and their clinical documents to the HIE and fetch these details using a completely separate system. This shows how continuity of care can be achieved between independent systems using the OpenHIE workflows.

The particular workflows that are exercised during this demo are the following:

- [Create patient demographic record workflow - V1.0](#)
- [Update patient demographic record workflow - V1.0](#)
- [Query patient demographic records by identifier workflow - V1.0](#)
- [Query patient demographic records by demographics workflow - V1.0](#)
- [Save patient-level clinical data workflow - V1.0](#)
- [Query patient-level clinical data workflow - V1.0](#)

Step 0

The demo is setup so that a new patients get registered and a new documents get provided for them on the hour, every hour. We use our integration tests to do this and this enables us to ensure that the demo environment is working correctly as well as providing existing patient data and documents for us to use throughout this demo.

Step 1 - OpenMRS PoC - Patient import

First we will start by importing the patient that has been created by the integration test into our OpenMRS point of care (PoC) system. This patient was shared with the HIE and is stored in the client registry. We can query the client registry to pull down their demographic details and import this patient available in OpenMRS. Login to the OpenMRS PoC system using the following details:

- URL: <http://139.59.167.9:8080/openmrs>
- Username: admin
- Password: Admin123

Once logged in click the HIE Patient Search in the header. This will take you to a screen with a few fields to search by. Enter 'Patient' in the Family name field so that we can find our test patients that are created by the integration tests and click on search. After a few seconds some results should be displayed. These results are all the patients that matched the search criteria in the client registry.

You now have the option to import a patient or view any patient that has already been imported. Choose to import one of these patients and click Import Patient on the patient details page. The patient has now been imported from the Client Registry into the point of care system.

Step 2 - OpenMRS PoC - Fetch shared document from the HIE

While viewing the patient in the point of care system choose the HIE Document tab. The OpenMRS PoC system will automatically contact the Shared Health Record (SHR) and check if there are any existing clinical documents available for this patient. From here you may choose to view or import document as you please. You should see that there is one document available that our integration tests have stored in the SHR. Click on view 'View / Import' to view the document. This fetches the document from the SHR and display it to you in a human readable format. Unfortunately, importing the document does not work yet in this demo so click on cancel to go back.

Step 3 - OpenMRS PoC - Add and share clinical documents

While viewing the patient dashboard in the point of care system choose the Form Entry tab. There should be one form available: 'Demo ANC Visit'. Choose this form.

Enter a location of 'Mediumtown Rural Clinics' and provider of 'Lucy Lambert' and enter some test data in the fields below the demographic information and click 'enter form'. This will save some encounter data into the OpenMRS PoC system. We must also create a visit for this patient and attach this encounter to that visit. Click on 'Start visit' near the top left of the dashboard and add a visit of type 'Antepartum Summary'. Also, change the date of the visit to yesterday's date so that the encounter that we just made falls within this visit. Next, click on add encounter and start typing 'Antepartum' to find our new encounter. Choose the found encounter and then click save.

To share the visit that we have just created with the HIE, click on the HIE Document tab on the patient dashboard, then choose 'Export Patient Data'. Change the export template to 'Antepartum Summary' and leave the rest of the default values untouched. Click on Preview Document to see what the document that you are about to share will look like and then click Share Document to share the document with the HIE. The demo may falsely report an error occurred while exporting however click close and refresh the patient dashboard in the OpenMRS PoC and you should see a second document listed there. The document has been sent to the SHR and stored there for other system to pull down and view. You may click view to see pull down and see the document that you have just shared.

Step 4 - View the standards based transactions in the Interoperability layer

To get a better understanding of the transaction that took place behind the scenes to enable this exchange of information to take place you may review these transactions in the interoperability layer software, the OpenHIM.

To login to the OpenHIM use the following details:

- URL: <http://openshr-preprod.jembi.org>
- Username: demo@user.org
- Password: demo

Here you may view the pix/pdq messages that manage a users identity and demographics as well as the XDS registry and XDS repository messages that allow document to be stored and retrieved for a patient. The interoperability layer also provides an HIE administrator with visibility of what is happening within a health information exchange and enables them to debug any issues with the interoperability between the various systems involved. It also acts as a secure interface into the HIE so that only those systems that are allowed to share or read patient information are empowered to do so.

At this point if you are interested in digging deeper into the technical aspects of the demo it would be a good opportunity to review the OpenHIE workflows listed above to get a better understanding of what happens behind the scenes. You may also try to match up the transaction that you see in the OpenHIM with the workflow diagram interactions.

If you have any more questions or comments about this demo please get in touch with the OpenHIE DevOps community mailing list which can be found here: <https://groups.google.com/forum/?hl=en&fromgroups#!forum/ohie-devops>

Credits

- Credit goes the Mohawk college team for putting together many of the OpenMRS PoC components for the demo
- The rest of the components come from an OpenHIE community effort to develop reference implementations of the components prescribed by OpenHIE