

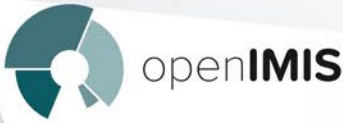


open**IMIS**



The open source software for health financing





In June 2018, the openIMIS initiative, together with Digital Square (the program designed by the United States Agency for International Development in partnership with the Bill & Melinda Gates Foundation) offered a co-financing opportunity to further develop openIMIS through Notice C – Modular Transformation of openIMIS. That is when SolDevelo decides to take up the challenge.

About

The openIMIS Initiative is a group of partners who support and extend the reach of openIMIS globally. They are a dedicated community of users, development partners, implementers, software developers, and academic institutions. The shared goal is to improve health financing operations by offering a seamless exchange of data related to patients, health service providers, and payers for health care.

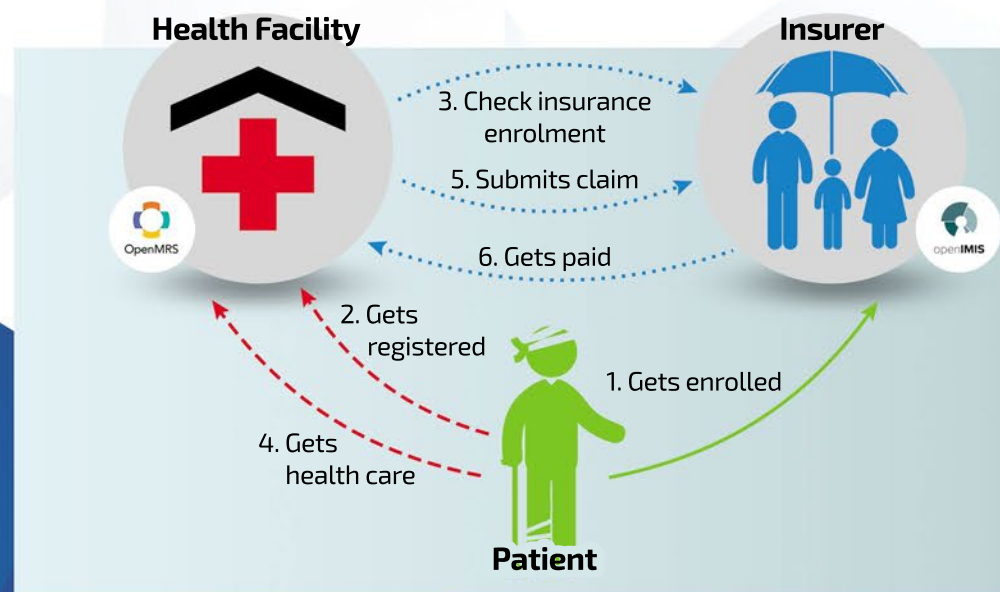
These teams are continuously engaged in developing and implementing the openIMIS software through technical expertise, knowledge sharing, and financial contributions. The openIMIS Initiative promotes global exchange around the openIMIS software and links global and local communities to their mutual benefit. Their mission is to ensure that the open source community continuously improves the software and its applicability to efficiently manage health financing schemes.

The Initiative was founded and is financed by the Swiss Agency for Development and Cooperation (SDC) and the German Ministry of Economic Cooperation and Development (BMZ).

Challenge

In low- and middle-income countries, the implementation of health financing schemes may be a great struggle. It is so mainly because the access to appropriate digital technologies is a real obstacle there.

The Challenge was to connect openIMIS insurance system with OpenMRS Medical Data Management System. The main purpose of connecting these two open-source health projects was to save time and resources of the healthcare providers in developing countries. Thanks to this, people will reach access to affordable healthcare easier and faster.



Solution

The development process was split into two parts: the openIMIS side and the OpenMRS side.

On the openIMIS side, we implemented a module acting as an FHIR server. We used an open source implementation of FHIR STU3 that is used as the main standard of communication between openIMIS and OpenMRS. On the OpenMRS side, we applied a module responsible for checking a patient's insurance enrollment status and managing their billing. We also implemented an app module that extended the user interface in OpenMRS using extension points (fragments) in other modules, such as e.g. the Registration App Module, responsible for the patient registration interface. Another improvement was the extension of the interface responsible for recording patient visits – it is now to support their billing details, too.

The final product was:

- OpenIMIS FHIR module integrated acting as a FHIR server
- OpenMRS claims module, able to communicate with openIMIS by FHIR
- OpenMRS claims app that extend patient registration and form interface with insurance billing
- Extensions to the OpenMRS FHIR module
- Comprehensive documentation for the OpenMRS module
- Comprehensive documentation for the openIMIS module

How does it work?

A person enrolled by the Insurer would receive the insurance card with a unique insurance number. Once they get sick, they would go to a health facility that uses OpenMRS. The patients' insurance ID number would be entered in their OpenMRS record and enable getting details from openIMIS on their eligibility. In other words, details needed to establish the client's identity and insurance benefits will be provided from openIMIS to OpenMRS. When the patient's treatment is undertaken by the health facility, the generation of claims will be managed in OpenMRS. Once the treatment is completed, the relevant details from OpenMRS are sent to openIMIS in order to get reimbursement. After the thorough assessment, information on the amount to be paid is sent back to OpenMRS.



Result

It is not difficult to deduct that the Notice C1 project will make access to affordable healthcare easier and more efficient. As a result, healthcare facilities will be able to receive all the necessary information on their patients' insurance, enroll them faster in the system and provide their medical services without any bureaucratic setbacks. For now, the developed OpenIMIS FHIR module is used by DHIS2 for integration in systems in India and Bahmni (Nepal).



Technologies used

#python #c# #visual basic #java #angular

