

Digital Square Notice E0: Shelf Readiness OCL for OpenMRS

Two Sentence Overview

OpenMRS believes that shelf-ready, interoperable software means allowing users to easily manage terminologies and metadata that supports OpenMRS integration into the larger healthcare ecosystem. By bringing together implementers, community members, and representatives from Open Concept Lab (OCL) and other global goods, this investment will be used to develop an OCL for OpenMRS MVP that addresses priority use cases, including those that support interoperability workflows, subscribe to OCL for standard concepts, and simplifies the workflow to build and share clinical content.

II.Executive Summary

OpenMRS is a high quality, open source, integrated electronic medical records platform (EMR) aimed at resource-constrained settings where structured patient record keeping systems (specifically, EMR systems) can improve health outcomes. OpenMRS is a scalable, modular, open source platform used by institutions and nations across the globe to build customized medical record systems that can meet the needs of varied situations. Over the past decade, the OpenMRS community has become a robust organization of developers, implementers and users actively building and supporting life saving health systems worldwide. As OpenMRS continues its growth in over 5,500 health facilities in 60+ countries to date, it increasingly is recognized as a de-facto EMR standard, supported by the OpenMRS community.

One of OpenMRS' strengths is its concept-based data model that allows clinical content to be configured for each implementation. Despite the advantages of a concept-based model, to date this approach has led to a lot of chaos, as every installation is free to create their own concepts in isolation. Over the years we have created a starter set for the OpenMRS Reference Application as well as several methods for sharing concepts. The CIEL Dictionary is a curated and widely used dictionary. At the same time, implementations want their own dictionaries with a combination of content from CIEL and their own custom concepts. None of these have made it easy to follow best practices, or led to large-scale adoption of concept sharing.

III.Consortium Team

In addition to being an open source EMR, OpenMRS is an open source community that functions as a consortium, with many organizations working in LMICs supporting the work of individual OpenMRS contributors. As such, the community seeks to engage and motivate both volunteers and supporting organizations to actively contribute to all aspects of the software development and implementation process.

The OpenMRS Community currently supports an OCL for OpenMRS squad, which consists of volunteer contributors, contributors from OpenMRS implementers such as Partners In Health, MSF, and AMPATH, and representatives from other global goods such as CIEL, OCL and Bahmni.

The OpenMRS community provides the following to the OCL for OpenMRS squad:

- a) access to community best practices; community members with project management, subject matter expertise, business analysis, documentation, development and quality assurance skills and experience; publicity and outreach; and mentorship to build capacity of OpenMRS implementations
- b) community support from OpenMRS leadership, including a dedicated community director and technical project manager. Examples of such support include community events such as design forums, OpenMRS university sessions, the annual Implementer's meeting, hackathons, the OpenMRS blog, and routine community meetings designed to support those working on specific OpenMRS projects/modules.
- c) operational and infrastructure support. This takes the the form of communication channels (Talk, Wiki, IRC channel/Telegram, audio/video conferencing technology), software development tools (JIRA, github, server hosting), and other operational support

IV. Project Description

i. Background or problem statement

Open Concept Lab (OCL) promises to be a shelf-ready, shared service that would allow every OpenMRS installation to manage their concepts, with an easy pathway that enables them to reuse existing, expert-defined concepts 90% of the time and create custom concepts when specific for the implementation. However, the current OCL authoring interface is designed for generic concept management, and does not allow the typical OpenMRS user to actually carry out the standard workflows needed for proper management of an OpenMRS-compatible concept dictionary.

OCL for OpenMRS, a dedicated authoring interface for managing OpenMRS-compatible concept dictionaries, is designed to address this gap. OCL for OpenMRS allows users to manage dictionaries in the cloud in a shared environment, combine expert-defined, standard content with custom concepts, and update a OpenMRS instance via subscription to an OCL collection. OCL for OpenMRS can provide implementations with access to data dictionaries with mappings to international standards and published as a part of Computable Care Guidelines (CCG). Additionally, OCL can serve as a resource for indicator metadata used for indicator reporting. Once functional, OpenMRS implementations can use the subscription functionality embedded in the OCL for OpenMRS module to access this metadata.

The OpenMRS community has developed an MVP; however, this MVP does not support workflows for any implementation. A true MVP would increase OpenMRS' shelf-readiness at a critical moment, when OpenMRS and other global goods need to share COVID-19 content. The clinical information for US, China, Haiti, Sierra Leone, et al is the same. The current, manual process clearly is not adequate and having shelf-ready content is necessary now more than ever.

ii. Objectives

We propose to coordinate the OpenMRS community to collaborate on developing and releasing an OCL for OpenMRS MVP module through an OCL Squad project cycle. We propose working with Partners in Health, MSF, and one country implementation to validate the requirements, incorporate external standards (such as those published as part of the DH&I / WHO CCG working group), and to provide iterative feedback on the product.

iii. Deliverables & Schedule

Objective 1: Coordinate the development of an OCL for OpenMRS MVP

- Activity 1.1: Create sources in OpenMRS for custom concepts that are not in any standard library. (months 1-3)
- Activity 1.2: Manage users to access an organisation. (months 1-3)
- Activity 1.3: Create an organization in OCL (months 1-3)

Objective 2: Strengthen the adoption of the OCL for OpenMRS module across OpenMRS implementations.

- Activity 2.1: Develop and implement a communication strategy for engaging implementations in the development process and increasing future adoption and use of the OCL for OpenMRS module. (month 1-3)
- Activity 2.2: Showcase the OCL for OpenMRS module during the OpenMRS Implementer's Meeting (months 3-6)
- Activity 2.3: Gather input from the OpenMRS community and implementers on enhancements to the OCL for OpenMRS module, and develop a published and managed roadmap for the product (months 6-9)

iv. Risk Mitigation

- Risk of community resistance to full adoption of the OCL for OpenMRS MVP tooling. This is mitigated by holding community webinars, trainings, and gaining early buy-in.
- Risk of sustainability of the OCL for OpenMRS MVP tooling within the community at-large, due to the requirements of needing a more advanced level of understanding of managing terminologies and the complex implementer ecosystem of using standardized terminologies and the need for custom terminologies.