

Connect for life

Empowering Patients & Health Systems



**The app for health
workers that allows
real-time feedback
on their patients.**

About

Connect for Life provides innovative solutions that aim to help decrease new infections through the Treatment as Prevention program, by keeping the patients engaged in the therapy and raising their awareness on well-being by leveraging mobile health technology.

Connect for Life focuses mainly on intensifying the communication between medical workers and patients as well as their caregivers. The goal is to provide them with regular guidance in terms of the treatment plan, but also to offer valuable feedback on the progress towards recovery. To succeed, the application can send multiple message types designed to positively affect the life quality of patients with HIV, TB, and other diseases by offering health care support and medical management. Examples of message types that can be used are adherence reports, adherence feedback, visit reminders, and health tips. Connect for Life™ uses cell phones to send short messages to influence behavior, such as health tips and adherence reminders.

Messaging patients helps reduce situations where they could experience stigma. It also removes the challenges of limited access to medical facilities, by introducing the possibility of remote contact with a doctor, and enabling following up on your patient any time, anywhere.

Challenge

Access to health information is the most important aspect of health care. The role of Connect For Life is to bring health care closer to people, outside the medical facilities. It provides health information where straightforward contact wasn't always possible.

1

1st phase

Migrating the custom modules used by the old version of Connect for Life (built for MOTECH) to the OpenMRS ecosystem. Among the modules to transferred was the SMS module (allows sending SMS messages through external providers, ex.Nexmo), the ETL-Lite module (a module allowing execution of simple database to database ETL processes), and the Call Flow module (allows connecting with external IVR services providers, ex. Voxeo, IMI mobile and execute complex call flows based on user interactions).

2nd phase

Migration of the underlying logic controlling when to execute call flows and send messages to patients or caregivers. In order to achieve this, we have built a new OpenMRS called Messages. This module allows setting up different message types and connecting them to SMS messages or call flows that will target patients.

2

Solution

Connect for life
admin - Isolation Ward - Logout

Register a patient

Demographics

What's the patient's name?

Name
Given (required) Middle Family Name (required)

Gender
Birthdate
Address
Language
Phone Number
Patient Location
Aadhar Number
ART Number
Relatives

Confirm

The first version of Connect for Life was developed on top of the MOTECH Platform. We assisted that effort as MOTECH experts and a bridge between Connect for Life and the MOTECH community. As MOTECH experts, we have ensured the code quality followed MOTECH guidelines and helped the CFL team to avoid impediments or falling into any pitfalls.

Move forward a few years, and Connect for Life has been deployed in several clinics, serving multiple doctors, patients, and caregivers. In some implementations, Connect for Life in fact veered towards not just a mobile health platform, but a full-blown medical record system, used by the clinic as the central registry of information. Moreover, the MOTECH Platform, on which the system was built, has become stale and lacking any active development or support. Because of these two facts, a decision was made to transition the Connect for Life platform into an OpenMRS distribution.

There were multiple reasons for choosing OpenMRS as the base for the Connect for Life, the most important of them:

- High adoption across clinics in developing countries that are targeted by Connect for Life. Since OpenMRS is already deployed in multiple locations, it is easier to find local expertise in the system, compared to introducing a completely new system.
- Many features provided by OpenMRS by the box - a ready to use Medical Record System to build on top of. Thanks to using OpenMRS, Connect for Life can focus on just the mobile health aspects, leaving the medical record management (often requested by users) to OpenMRS.
- A large number of custom modules available for OpenMRS.
- The OpenMRS community - active, made of great and passionate volunteers, always ready to help.

Our key responsibility was to efficiently transfer the Connect for Life system from MOTECH to the OpenMRS.

We approached this challenging task in several phases:

3

3rd phase

Adjusting the OpenMRS platform so that it fits the Connect for Life requirements. This phase consists of introducing changes in the look and feel of the system, as well as the implementation of missing features supporting effective and user-friendly usage of the application.

4th phase

Creating a Connect for Life OpenMRS distribution that contains new branding, further changes in the application's UI, and provides a consistent and complete Connect for Life experience out of the box. This phase is still ongoing too.

4



Calendar Overview

Patient

< July 2020 > month week day Manage messages

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28 13:21 Health tip	29 13:21 Health tip	30 13:21 Health tip	1	2 13:21 Health tip	3 13:21 Health tip	4 13:21 Health tip
5 13:21 Health tip	6 13:21 Health tip	7 13:21 Health tip	8	9 13:21 Health tip	10 13:21 Health tip	11 13:21 Health tip
12 13:21 Health tip	13 13:21 Health tip	14 13:21 Health tip	15	16 13:21 Health tip	17 13:21 Health tip	18 13:21 Health tip
19 13:21 Health tip	20 13:21 Health tip	21 13:21 Health tip	22	23 13:21 Health tip	24 13:21 Health tip	25 13:21 Health tip
26 13:21 Health tip	27 13:21 Health tip	28 13:21 Health tip	29	30 13:21 Health tip	31 13:21 Health tip	1 13:21 Health tip
2 13:21 Health tip	3 13:21 Health tip	4	5	6	7	8

Display:

- Adherence report daily
- Visit reminder
- Adherence report weekly
- Health tip
- Adherence feedback
- Adherence report daily 2

Result

Connect for Life is to be a configurable system deployed in clinics in developing countries. Patients registered in the system receive pill reminders by phone and answer whether they took their medication so that the adherence to treatment is tracked systematically. The CFL also provides health tips to the patients' mobile phones. Thanks to such advice, good habits in the area of nutrition or lifestyle can be adopted more broadly. Connect for Life is now built on top of OpenMRS, so it provides medical record management features out of the box and adds mHealth support to the platform through the custom modules it introduces.

The CFL project made access to affordable healthcare (information) easier and more efficient. It keeps people still informed.



React



docker



Amazon ECR



Technologies used

#Java #Spring Framework #Maven #ReactJS #Docker #AWS Elastic Container Service & Registry #Bitbucket #MySQL #SonarQube #IntelliJ #Groovy Server Pages



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#Java #Maven #React #Docker #OpenMRS #Spring #MySQL #SonarQube #IntelliJ #Groovy