



TULASALUD

CommCare for Improving and Monitoring Community Health



OVERVIEW

Guatemala's northern highlands has one of the highest burdens of maternal mortality in the world due to a substantial majority of their population living below the poverty line and a severe lack of formal health services. To improve maternal care and reproductive health in Guatemala, TulaSalud introduced a digital health program for frontline health workers supported by CommCare. In collaboration with the Guatemalan Ministry of Health, the organization has enhanced its community-based digital health program by expanding its network of care beyond Alta Verapaz to three additional priority regions (Huehuetenango, Quiché, and Sololà) and increasing accountability at all levels.

SUMMARY



LOCATION

Alta Verapaz, Huehuetenango, Quiché, and Sololà (Guatemala)



SECTOR

Maternal, Newborn & Child Health (MNCH), Sexual and Reproductive Health and Rights (SRHR)



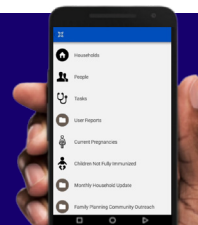
PARTNERS

TulaSalud, Tula Foundation, Guatemalan Ministry of Health, Government of Canada (via Global Affairs Canada)



FEATURES

Case Management, Decision & Diagnostic Support, WHO Z-scores, Clinical Workflow, Custom Reports, Transportation Coordination, Referral Follow-up



NUMBER OF USERS

4,000+

PROBLEM

Rural Guatemala suffers from a severe lack of formal health services and has one of the highest burdens of maternal mortality in the world. TulaSalud is focused on four regions of rural Guatemala with extremely high rates of maternal mortality, child malnutrition, and malaria. Many of the pregnancies in these regions are considered high-risk, and the children who are born often suffer from chronic malnutrition. In order to reach a population of nearly 3.4 million people, 72% of whom live below the poverty line, TulaSalud needed a solution that could provide those in need with the care they deserve.

TulaSalud introduced a digital health platform to combat these health issues, but they still faced technical challenges such as non-healthcare specific workflows, poor usage in rural areas, limited data flow and decision support, and no case management.

SOLUTION

From its inception, the aim of TulaSalud's digital health program has been to help frontline workers (FLWs) in primary health to better manage high-risk pregnancies and offer quality health services. Since then, they have developed complementary workflows to monitor the spread of malaria and combat chronic malnutrition in children. To improve the effectiveness and efficiency of rural health services in Guatemala at large, this digital health system enables the sharing of clinical and performance information with compliance supervisors, clinical supervisors and other service providers in the healthcare system – especially the Ministry of Health.

The image displays three screenshots of the TulaSalud digital health platform interface, illustrating its functionality for frontline workers (FLWs) in primary health.

Screenshot 1: Crear Persona (Create Person)

This screen shows a list of signs and symptoms under the heading "Signos y Síntomas de Peligro" (Danger Signs and Symptoms). The list includes:

- ☐ Edema o color rojo en herida de cesárea
- ☐ Salida de pus por herida de cesárea
- ☐ Dolor de Cabeza
- ☐ Dolor en la boca del estomago
- ☐ Vision borrosa
- ☐ Flujo con mal olor
- ☐ Sangrado vaginal
- ☐ Dificultad para Respirar
- ☐ Dolor o ardor al orinar

Screenshot 2: KAWOK FICHA ÚNICA (KAWOK Unique Card)

This screen displays a list of categories for the unique card, each with an icon:

- Comunidad
- Persona
- Mujer
- Embarazo
- Niño
- Población General

At the bottom, it shows the version information: "Formplayer Version: 2.47, App Version: 2659".

Screenshot 3: Kawok 3.0.4

This screen shows the main menu of the Kawok 3.0.4 application, listing several options:

- Aprendizaje
- Actividades
- Actualizar Usuario
- Comunidad

APP OVERVIEW

Seeking to replace their original digital health solution, TulaSalud turned to CommCare. Their hope was that a new application, called Kawok and based on CommCare, would be able to strengthen the Guatemalan Ministry of Health's system of care by improving access through an expanded network of app-enabled FLWs and increasing accountability at all levels with enhanced supervision.

The app itself serves two primary functions:

- ✓ A job aid for FLWs to improve their productivity and effectiveness at maternal and neonatal care, community surveying, malaria monitoring and treatment, and auxiliary nurse services. The application offers offline access to 38 health education and promotion videos translated in 8 Mayan languages, covering everything from pregnancy planning and risk signs, child malnutrition, breastfeeding, gender-based violence, and family planning.
- ✓ A monitoring and evaluation platform for various levels of the health system, from evaluating the productivity of FLWs to tracking and monitoring individual high-risk and upcoming pregnancies. All of these data help program administrators prioritize limited health system resources in high-risk communities and regions.

Today, FLW also use the application to keep track of the phone calls they make to patients, supervisors, and health clinics. As a whole, the program makes over 10,000 phone calls each week, analyzing those calls to understand the behavior of frontline workers, needs of patients, and value of the interventions.

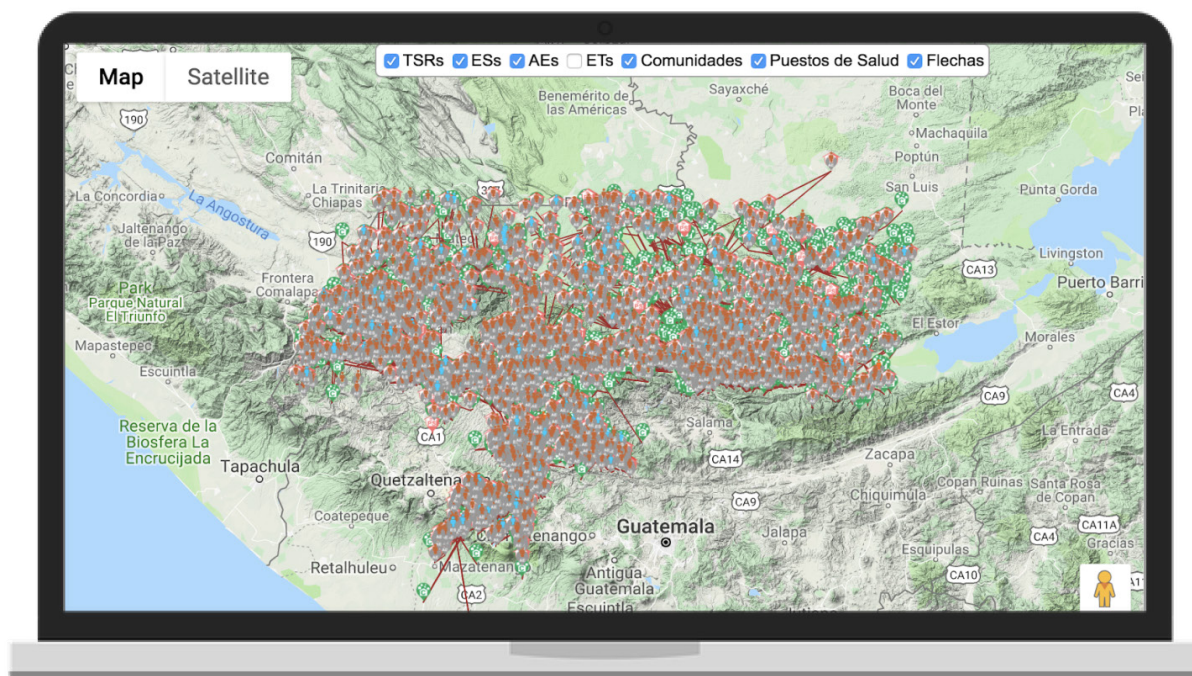


FEATURE HIGHLIGHT

Advanced Reporting

In order to better visualize incoming data, TulaSalud's IT team developed Kawok, a suite of tools built on CommCareHQ's platform that incorporates custom-built application development, reporting tools, and Google Earth.

Kawok enables TulaSalud staff to look up patient locations and health information on customized dashboards and maps as well as monitor disease outbreaks in real-time. Kawok is fully integrated with the Ministry of Health and several different regional and local health systems.



Kawok offers customized maps to track disease outbreaks in real time

An up-to-date map of Kawok's coverage in Guatemala is available at
<http://www.kawok.net/home/kawok-public>

IMPLEMENTATION

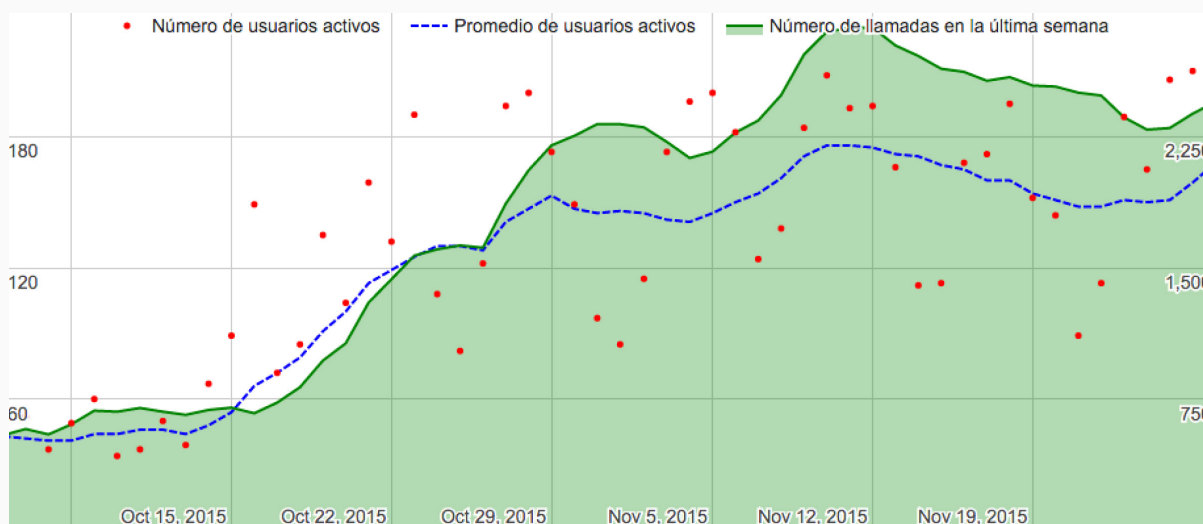
Kawok's initial implementation began in the district of Senahu, where Dimagi and TulaSalud conducted interviews and user tests with a small group of FLWs. These FLWs had been using CommCare in the field for six weeks at the time of interviews, and all had used TulaSalud's prior mHealth system. These FLWs were able to give direct feedback on CommCare, as well as provide comparative insight into the effectiveness of other mobile tools for their job.

In addition to these interviews, staff from Dimagi and TulaSalud shadowed FLWs on their patient visits to observe how the application was used in the field. These visits resulted in a final application design that included significant FLW feedback on:

- ✓ Usage of the application structure
- ✓ Effectiveness of CommCare and its ease of use
- ✓ Training needs
- ✓ Multimedia content (e.g. image testing)
- ✓ The community's perception of the mobile tool

After an effective pilot covering approximately one-third of Alta Verapaz, TulaSalud expanded their coverage to the entire region, introducing the application to more than 4,000 nurses, FLWs, and their supervisors. Since then, additional features have been added, including the modules for specific health crises and phone call tracking and support, and the program scaled to additional regions in Guatemala, including Huehuetenango, Quiché, and Sololà.

ACTIVE USERS AND APP USAGE OF KAWOK DURING INITIAL IMPLEMENTATION



Kawok had strong active user growth and usage over the initial months of its implementation

IMPACT

The introduction of the new CommCare-based app aided in each of the objective areas:

1

Extended Coverage

Using the application, FLWs have logged more than 300,000 cases, including 81,500 malnourished children, 22,000 pregnancies, across 700 communities in rural Guatemala that account for more than 3.4 million people. Service can also be administered in five Mayan indigenous languages (Akateko, Chuj-Coatán, Chuj-San Mateo, Q'anjobal, and Mam), ensuring no one goes without care.

2

Improved Quality of Care

Due to the integrated health care delivery modules and immediate feedback and support offered by the app, FLWs were able to spot risk factors in over 54% of the pregnancies they tracked.

3

Increased Accountability

TulaSalud and the local Ministry of Health track the performance of more than 4,000 frontline health workers and nurses, monitoring their actions and offering advice to improve their performance.



WHAT THEY HAVE TO SAY

"CommCare is a great mHealth platform that is very well designed, implemented, continually improved and supported. We could not have developed Kawok without CommCare."

Ray Brunsting
CTO, TULA FOUNDATION

"In this program, we receive the alerts for the high-risk pregnancies immediately, at the moment that we are with the patient."

Ramiro
FRONT LINE WORKER

WITH THANKS TO

Ray Brunsting

CTO, Tula Foundation

Stuart Davidson

Project Coordinator, Tula Foundation

Dimagi Inc.
585 Massachusetts Ave, Suite 4,
Cambridge, MA 02139
+1 617.649.2214
+1 617.274.8393

dimagi