

## CASE STUDY

## HEALTH

# TulaSalud: CommCare for Improving Community Health

*Monitoring pregnancies, malaria, and malnutrition in Guatemala with support from the Ministry of Health and the Tula Foundation*

### PROJECT OVERVIEW

Alta Verapaz is a rural region of Guatemala with one of the highest burdens of maternal mortality in the world. With an indigenous population of nearly 1 million people, 78% of Alta Verapaz lives below the poverty line and has a severe lack of formal health services. To improve maternal care in Alta Verapaz, as well as address extremely high rates of malnutrition and malaria, TulaSalud adopted CommCare in 2012 to enhance their community mobile health (mHealth) program.

## At a Glance

**Implemented:** Guatemala, 2012

**Sectors:** Maternal health, malaria & malnutrition

**Features:** Patient registration & tracking, decision & diagnostic support, WHO Z scores, clinical workflow, custom reporting, transportation coordination, & referral followup

**Impact:** Over 1000 potential malaria cases have been registered, with over 50% confirmed in a lab within 3 days



## BACKGROUND

TulaSalud's vision is using CommCare to help reduce maternal and infant mortality rates, monitor disease outbreaks, and integrate last mile communities with the national health system in Guatemala. In partnership with the Tula Foundation, the Guatemalan Ministry of Health, and Dimagi, TulaSalud has successfully leveraged CommCare to fulfill these objectives in approximately one-third of Alta Verapaz. TulaSalud aims to expand the coverage of care to the majority of rural areas in Alta Verapaz in 2014.

### TulaSalud's goals for adopting CommCare:

- Strengthen the Guatemalan Ministry of Health's system of care
- Improve access to care through an expanded network of CommCare-using community health workers (CHWs)
- Increase accountability at all levels of the Guatemalan health-care system with enhanced supervision
- Explore how technology can be leveraged to improve health outcomes

### HOW TULASALUD LEVERAGES COMM-CARE

After a few years of using a different mHealth system, TulaSalud switched to CommCare in 2012 as a pilot project. The organization made the switch to reduce challenges associated with

their previous mHealth system, including that CHWs were continuing to use paper forms and re-enter data despite being equipped with mobile phones during home visits. The program also faced technical challenges such as non-healthcare specific workflows, poor usage in rural areas, limited data flow and decision support, usability in Spanish and no case management.

From its inception, the aim of TulaSalud's mHealth program has been to help CHWs better manage high-risk pregnancies. Since then, they have developed a complementary application to monitor the spread of malaria, as well as plans for a module to combat chronic malnutrition in children. To improve the effectiveness and efficiency of rural health services in Guatemala at large, this mHealth system enables the sharing of clinical and performance information with compliance supervisors, clinical supervisors and other service providers in the healthcare system.

### COMM-CARE AS A CHW JOB AID

In their first year of using CommCare in 2012, TulaSalud equipped nearly 200 CHWs with mobile applications across 700 communities for maternal and neonatal care, community surveying, malaria monitoring and treatment, and auxiliary nurse services. To date, they have created over 25,596 cases, including 7238 pregnancies. Reflecting the severity of the public health crisis in Alta Verapaz, over 54% of these pregnancies had one or more risk factor.



The customized applications are designed to help CHWs provide basic health service delivery through immediate feedback and support during home visits. They also help CHWs more easily and efficiently track and monitor pregnant women.

### COMM-CARE FOR M&E

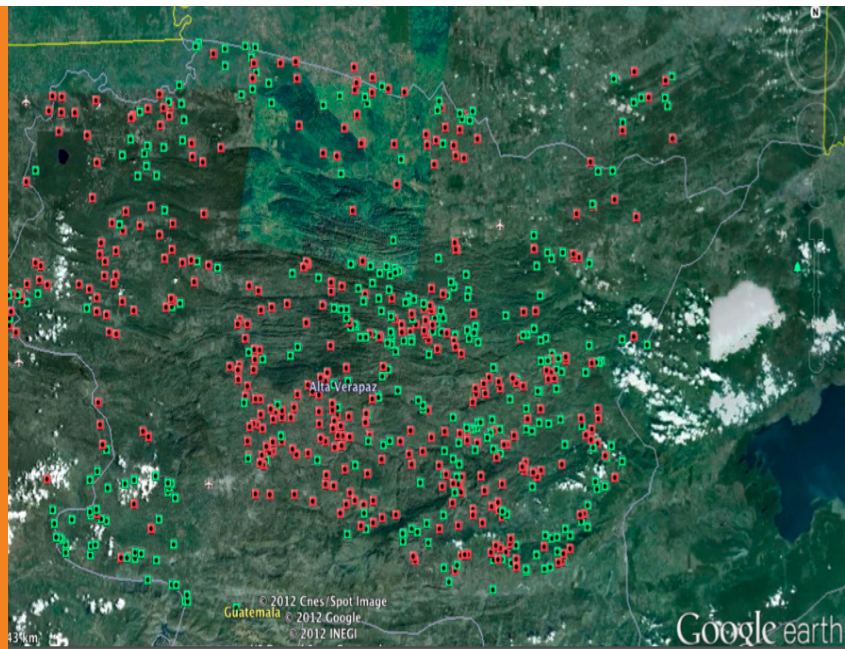
All data collected by CHWs is sent to CommCare's web-based platform, where it is made available for reporting and analysis by various levels of the health system. With this data from CommCare, **TulaSalud staff** can evaluate the productivity and performance of CHWs, by monitoring the number and duration of visits completed and the number of patient forms submitted. Additionally, **physicians** at TulaSalud are able to use the system to monitor individual high-risk pregnancies and upcoming deliveries. They also use Kawok to provide

## Feature Spotlight

### 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 incorporate custom-built application development and reporting tools and Google Earth.

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



direct support to CHWs calling with emergencies or questions of care. Finally, like TulaSalud staff, **Ministry of Health staff** are able to analyze pregnancy and CHW performance data, and access these customized maps to enhance their ability to monitor disease outbreaks in real-time.

## IMPLEMENTING COMM CARE

Kawok's initial implementation began in the district of Senahu, where Dimagi and TulaSalud conducted interviews and user tests with a small group of CHWs. These CHWs had been using CommCare in the field for six weeks at the time of interviews, and all had used TulaSalud's prior mHealth system in the past. These CHWs were able to give direct feedback on CommCare, as well as provide comparative insight on the effectiveness of other mobile tools for their job. In addition to these interviews, staff from Dimagi and TulaSalud shadowed CHWs on their patient visits to observe how the application is used in the field.

These visits resulted in a final application design that included significant CHW feedback on the usage of the application; application structure; effectiveness of CommCare and its ease of use; training needs; multimedia content (e.g. image testing); and the community's perception of the mobile tool.

TulaSalud has plans to nearly triple CommCare deployments in 2014.

*"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, in the moment that we are with the patient."*

-Ramiro, CHW

CommCare 2014  
commcarehq.org

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