



2018 Q4

impact report

Dear Friends,

Our patients in Mali have borne many forms of crisis in recent years, from a coup d'état to an Al Qaeda occupation, from an internally-displaced persons crisis to Ebola traversing the border into Mali. In our rural sites in the Bankass district of Mali, the past three months have brought a new crisis—a violent inter-ethnic conflict fueled by extremists to the doorsteps of our patients. Their families and their livelihoods have been threatened. This crisis has taken the lives of our patients.

What constitutes a crisis? At Muso, we have asked this question since day one. We often see crises as individual moments or events. Acute, rather than chronic. Yet when our founders moved into the neighborhoods of Yirimadio in 2005 and first experienced their neighbors dying around them, first saw the ways in which the health system was designed to exclude patients and ensure they reached care late, they saw a crisis. When we look to the child mortality data, showing that over five million kids still die each year before their fifth birthday, we see a crisis. Today, as Muso's brave team members in Bankass work to care for every patient in the midst of a deteriorated security situation, we know this work is more important now than ever before. While investment in health care can stabilize fragile states, infants born in conflict zones are more than [twice as likely to die](#). During armed conflict, most people are killed not by bullets, but by disease and malnutrition. In a country with one of the world's highest child mortality rates, crisis has taken on a new form. The stakes could not be higher.

In this moment of acute crisis, we have been heartened by the outreach, solidarity, and support offered by our community. Our team on the front lines has received notes and videos of solidarity, introductions to experts in the field of crisis response, and emergency funding from our partners. Words of support from health workers at the front lines of the Ebola response in Liberia and foundation partners in Palo Alto, from colleagues in England and in Togo, are a tangible demonstration of the interconnectedness of our shared work. Please see more information on the security situation in Bankass over the past quarter, as well as the steps Muso has taken to respond to this crisis, on page 3 of this report.

Thank you for your support at this critical time. Your partnership has never mattered more.

With gratitude,

The Muso Team

MILESTONES

SERVICE TO DATE

 HOME VISITS
4,440,661

 CLINIC VISITS
502,178

 CHWS
381

PROACTIVE CARE IN Q4



CHW HOME VISITS FOR ACTIVE CASE FINDING, DIAGNOSIS, TREATMENT AND FOLLOW UP

Q4 2018 318,987 HOME VISITS

Q4 TARGET 425,000 HOME VISITS



COMPREHENSIVE AND FREE CLINIC-BASED CARE

Q4 2018 33,854 CLINIC VISITS

Q4 TARGET 25,000 CLINIC VISITS



818
New Pregnancies Detected Through Proactive Care

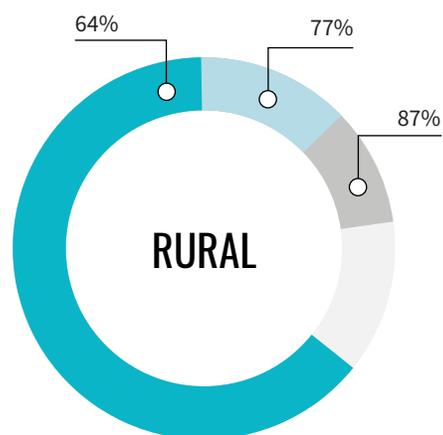
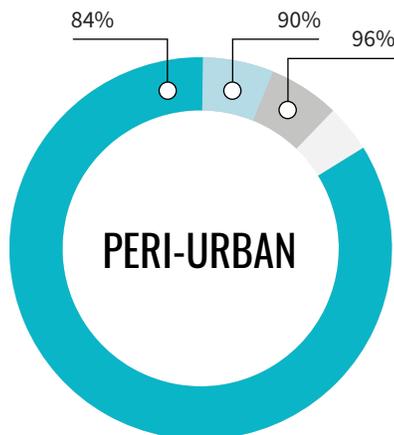


1,542
Family Planning Dispensed

SPEED

MUSO CHWs AIM TO REACH EVERY PATIENT WITHIN 24 HOURS OF THEIR FIRST SYMPTOM

 24 Hours Target 65%  48 Hours Target 80%  72 Hours Target 90%



*In order for our study team to remain unbiased, we are unable to disaggregate data between the passive and proactive arms of the randomized controlled trial embedded in our rural expansion. We therefore anticipate some indicators will be lower than they might be otherwise, as our seven RCT sites are comprised of half passive CHWs, who are not conducting proactive case detection.

NB: In order to align with national reporting standards across all health care sites in Mali, Muso's month runs from the 26th to the 25th.

QUARTER 4 PROGRESS



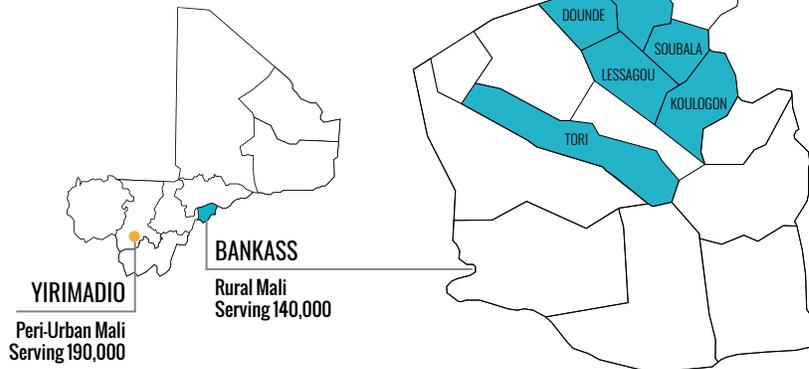
Successes

- In addition to their daily pursuit of providing proactive, universal access to health care, Muso CHWs and clinicians detected and are currently in the process of shutting down a measles outbreak in Yirimadio.
- Muso's strategic plan for growth is on track, with our landscape analysis process underway. We have narrowed down a short list of potential country partners, and are now exploring where Muso's strategies and expertise could be of greatest service.



Challenges

- In December, the security situation in Bankass worsened further, with extremist activity and inter-ethnic tensions devolving into instances of violence, including in sites where Muso works.



Yirimadio Operations

In the peri-urban areas we serve, Muso Community Health Workers detected a new measles outbreak through their door-to-door home visits, and are now working to care for the patients affected and end the outbreak. Thirty cases were detected in Yirimadio through the end of December, all identified through the daily proactive case detection home visits conducted by Muso CHWs. Yirimadio, a peri-urban area, continues to grow rapidly as thousands of vulnerable patients move in to Yirimadio from other parts of Mali each year. A CHW identified the first patients with measles in this outbreak by visiting a newly arrived family during her daily proactive case detection home visits.

The week the first case was detected, we immediately arranged trainings for CHWs, health center providers, and CHW Supervisors on identification, infection control, accompaniment, management, and follow-up for suspected cases. CHWs have conducted daily monitoring visits at the households of all 30 confirmed cases for 21 days, to monitor evolution, recovery, and effective isolation of patients, and for early detection of new cases among contacts within the affected households. We have also coordinated with the government around an urgent mass vaccination campaign, ahead of a scheduled national campaign next year.

Home visit numbers are up from Q3, though still lag behind target and last year's Q4 numbers. See below for a discussion of ongoing challenges with the Medic-Muso CHW App, as well as new performance management tools we are integrating into the App to support CHW performance.

Bankass Operations

Over the course of the past few weeks, the security situation has deteriorated considerably in the rural Bankass District of Mali, where Muso today cares for 140,000 patients across eight sites. After many months of increased tension, in December extremist activity and inter-ethnic tensions resulted in multiple instances of violence touching Muso's patients and health workers.

The Bankass District of Mali faces some of the worst poverty, gender and health inequity in the country and in the world— this is why the Malian Ministry of Health asked Muso to expand into these rural communities in 2016, delivering and testing Proactive Care together. As conflict in northern Mali continued and moved southward into the Mopti region and districts surrounding Bankass, Bankass remained largely unaffected until recently. Unfortunately, an intensification of extremist-fueled inter-ethnic conflict in a neighboring district displaced civilians into Bankass in recent months, including armed individuals and members of “self-defense” militias. In this context, multiple factors have compromised the security and safety of the communities we serve.

In December, we saw confrontations between militias associated with Peuhl and Dogon ethnic groups, with multiple injuries and fatalities, and several Peuhl villages and hamlets burned by Dogon militias as reprisals for attacks on Dogon individuals by Peuhls believed to be affiliated with radical and extremist elements. This [Human Rights Watch](#) report offers helpful context on the conflict.

In response to these incidents and to protect the safety of our team and our patients, Muso has activated a comprehensive coordinated response, including:

- We have reinforced security measures at both our Bankass and Bamako offices, and key leaders have received specialized security training.
- We have procured additional stock of medications and supplies for clinics and CHWs in affected areas, so that if our and the government's ability for resupply is interrupted, teams are protected from stockout and interruptions to patient care.
- We have increased our capacity to monitor security status at a local level, through our extensive network of relationships with local community leaders and CHWs, as well as through agencies specializing in security. Through these mechanisms, we have been alerted to potential risks before any incidents may occur, allowing us to safeguard team members from these potential risks by modifying their movements. This has included temporarily relocating CHWs, particularly those serving a village of a different ethnicity.

Our teammates say that they do not want to leave the side of their patients and their communities while their patients' lives are at stake. We continue to take all possible measures to keep our team safe, and in turn to provide care for our patients, today and every day.

QUARTER 4 PROGRESS

Research and Data Systems

To improve the quality of patient care and follow-up across community and health center levels and build comprehensive, closed-loop systems, our team is working to ensure all patients have unique identifiers to designate them within both the Medic-Muso CHW App as well as the Electronic Medical Records system used at the health center level. In our rural sites, where our population-level ProCCM Trial is underway, a population census was conducted prior to intervention and continues annually, providing a costly but reasonably functional method of identifying patients across multiple levels of care.

By contrast, in our peri-urban sites, the infrastructure does not exist to conduct an exhaustive annual census and maintain a master list of patient identifiers. Implementation of such a system in the urban communities we serve is further complicated by the mobility and rapid growth of the population. Yirimadio's population of nearly 200,000 is located on the outskirts of Bamako, one of the fastest growing urban centers in the world. Conducting a census in a dynamic, peri-urban, rapidly-growing area like Yirimadio is both expensive and of questionable value. For the moment, we have opted for a simple coding system as we continue to problem-solve.

Bankass CHWs are now exceeding their average home visit targets, while on average Yirimadio CHWs are still not reaching their home visit targets. Slowness continues to impede the usability of the CHW App. In problem-solving with our Medic Mobile colleagues, the issue is clear: with Muso CHWs delivering more than 1 million proactive case detection home visits in 2018, the amount of data per health worker is higher than in any other health system the App supports. While the software could easily scale to more health workers, individual health workers with a large amount of data on their phones are seeing the software slow down. The Medic team anticipated needing to address this issue eventually, and has risen to the challenge, prioritizing a fix that will more intelligently filter which documents need to be stored on the phone in order to support offline use, and which documents can be stored in the cloud and removed from the phone. As more CHWs across the globe serve for longer periods of time and in high-volume health systems, the work the Medic team is doing today will increasingly benefit organizations across their portfolio of partners.

Through our partnership with Medic Mobile, we are additionally conducting R&D on a number of new tools to support CHW performance against speed, coverage, and quality criteria, including a) UHC Mode, which uses real-time data to help CHWs visualize in their smartphone App which households aren't getting enough home visits; b) the CHW Supervisor App, which provides decision support, task management support, and real-time data collection support for CHW Supervisors as part of our 360° Supervision model; and c) mRDT View, which uses computer vision to help capture images of malaria test results done by CHWs and ensure correct diagnosis and treatment.

Partnerships

In Q4, Muso collaborated through our partners in the [Community Health Impact Coalition](#) to produce along with UNICEF and USAID, the [Assessment and Improvement Matrix](#) diagnostic tool to support CHW program design. This tool guides policymakers and practitioners on integrating high-impact, evidence-based strategies into their national community health systems, including each of the key elements of the Proactive Care approach Muso has tested over the past decade.

As the results of Muso's studies are incorporated into the recommendations of these global bodies, we will build our capacity to provide technical support over the course of 2019 to enable practitioners to adapt these recommendations to their contexts and put them to work for millions of patients.

In early December, Malian Minister of Health Samba Sow visited the Yirimadio Community Health Center, where Muso has been working since 2008. The Minister offered words of high praise for the collaboration between Muso, the health center, and the community, and expressed his hope that the child mortality results we have achieved in Yirimadio be translated to the entire country. The visit was part of a larger national health reform effort being led by Minister Sow. Muso has been working closely with Ministerial and other partners to provide technical support to the reform process.

Team Updates

In Q4, Nick Parker joined the Muso team as our US Finance Manager. He brings over five years of accounting experience with small business and nonprofit organizations, and provides accounting, finance, and administrative support to key organizational functions, including grant management, US operations, and administration.



CHW Profile: Oumou Niaré

Oumou Niaré was inspired to become a Community Health Worker (CHW) with Muso because our Proactive Care model targets malaria, a disease that she had seen bring suffering to too many in her community.

Oumou's favorite part of being a CHW is performing the "porte à porte," in which she goes door to door visiting households in her community. Every day she makes her rounds, actively seeking out cases of childhood illness, checking up on the status of pregnant women, and inquiring about the health of entire families. Oumou has noticed that her simple presence often soothes the pain of the sick and the anxiety of their family members. She sits with those who are ill, listening carefully to their needs and ensuring that they both receive and understand the treatment they need; she finds meaning in being able to assure the ailing and their families that they can and will return to health. Oumou's greatest desire for the future of her community is for Muso's community-based model of care to grow and continue to flourish. She has seen the transformative impact that she, as a CHW, can have on families in need, and she believes that all people deserve the same thorough care, attention, and dedication that she gives to her patients.



"My dream is for all Malian communities to be able to live in good health and dignity."

- Oumou Niaré, Muso CHW

FINANCIALS

Total revenue raised in Q4 of \$2.7 million beat projected revenue numbers by \$400K due to delayed income from Q3 landing, and unprojected funds raised from current partners in December in response to the security crisis in Bankass.

Expenses of \$1.3M came in under budget of a projected \$1.5M in spending over the quarter. An 18-month high in the exchange rate of USD to XOF (West African Franc) helped us beat our projected conservative spending estimates. Additionally, some non-immediate spending was deferred to early 2019 in an effort to preserve our Board-mandated cash reserve level during delays in committed revenue in late Q3 and early Q4.

Statement of Financial Position

	2018* as of Dec 31 2018	2017 as of Dec 31 2017
ASSETS		
Cash and Cash Equivalents	2,806,927	2,297,834
Pledges Receivable		637,000
Prepays & Other Assets	61,906	47,243
Fixed Assets, net	96,403	74,356
Total Assets	2,965,235	3,056,433
LIABILITIES AND NET ASSETS		
Accounts Payable & Accrued Expenses	121,171	270,867
Other Current Liabilities	62,165	
Total Liabilities	239,491	270,868
Net Assets		
Unrestricted	2,089,614	1,003,911
Temporarily Restricted	636,130	1,781,655
Total Net Assets	2,725,744	2,785,566
Total Liabilities & Net Assets	2,965,235	3,056,433

* unaudited

Statement of Activities

	2018*	2017
Total Revenue	6,495,179	5,382,302
Total Expenses	5,775,815	4,742,705
Net Revenue	719,364	639,597

* unaudited

Total Budget Over 3 Years

