NO MORE
POVERTY
DEATHS
Dear Friends,

It began with a moral question. As health care providers, when does our responsibility to patients begin? Typically, health care systems define their responsibility as for the patients who walk through their doors seeking care. I, like many of the world’s physicians and health care providers, was taught that I am responsible for providing quality health care for every patient who walks through the door asking for care.

But this reactive definition of health care carries an enormous problem with it: every year, hundreds of millions of patients don’t even make it to the door of a health facility. Delayed and arrested by fees they cannot pay and distances they cannot travel, nearly half our world still does not make it to the essential medical care they need and deserve. This may be the greatest moral crisis of our time.

So we need to redefine. And we start with our responsibility: for the communities Muso serves, our moral mandate belongs to every patient, and begins the moment someone becomes sick, not the moment they reach the hospital door. It can no longer be morally acceptable for us to wait behind the walls of our clinics and hospitals, as our patients struggle alone to scale the formidable roadblocks on the path to care. From that first symptom, it’s our responsibility to find our patients, and to meet them with care.

This radical mandate—health care for everyone, every moment—has forced us to crack open the conventions of how we define health care. We’ve had to redefine where health care happens, who provides health care, and how we measure success.

As we’ve built Proactive Care, we’ve learned that some of the world’s best health care providers have never had a chance to go to school. We’ve learned that some of the world’s most important health care can happen in a home on the edge of the Sahara. We’ve learned that our patient is also the homeless nine month old boy, living in a ditch with his mother, and also the nine year old girl spiking a fever from malaria in the middle of a sandstorm more than 17 kilometers from the nearest clinic. We’ve learned that we need to measure our failure or success by whether health improves for everyone, not just the patients who reach us.

In 2017, the Muso team and you, Muso’s community of partners, patients, providers, and supporters, have redefined health care. Because of you, Proactive Care now reaches more than 300,000 people across two regions of Mali. Because of you, the Malian government now mobilizes toward connecting more than 3 million of its most marginalized citizens with care. Thank you for rising to meet our patients where they stand in the struggle for health care for all.

Ari Johnson, CEO
THE CRISIS

5,600,000
CHILDREN DIED IN 2016 BEFORE THEIR FIFTH BIRTHDAY

300,000
WOMEN DID NOT SURVIVE PREGNANCY OR CHILDBIRTH

NO ONE SHOULD DIE WAITING FOR HEALTH CARE

A SIMPLE IDEA

PROACTIVE CARE = EARLY CARE = LIVES SAVED
REIMAGINING WHAT A HEALTH SYSTEM CAN BE WITHOUT BARRIERS

PROACTIVE SEARCH
Community Health Workers and community members search for patients through door-to-door home visits, to connect them with care early. Dedicated supervisors provide 360° Supervision to support this process.

RAPID ACCESS CLINICS
Muso removes point-of-care fees, builds infrastructure, and trains staff so that government clinics can provide universal, early access to care.

DOORSTEP CARE
CHWs provide a package of life-saving health care services in the home. These include family planning, pregnancy testing, newborn screening, and treatment for children with malaria, diarrhea, pneumonia, and malnutrition.

THE MUSO MODEL
PROACTIVE CARE
CARE DELIVERY IN 2017

1,442,955

CHW home visits for active case finding, diagnosis, treatment and follow up

99,208

Comprehensive and free clinic-based care for vulnerable patients

RAPID ACCESS

- within 24 hours
- within 48 hours
- within 72 hours
- after 72 hours

PERI-URBAN

- 75%
- 84%
- 94%
- 6%

RURAL*

- 57%
- 68%
- 79%
- 21%

*Rural speed is calculated as averages between passive and proactive CHWs. 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.
EXPANDING OUR REACH
TO SOLVE A GLOBAL INJUSTICE
In February 2017, Muso launched seven rural health centers in the district of Bankass, in eastern Mali. This expansion provides care to nearly 100,000 of Mali’s most vulnerable rural citizens, and its launch marked the rollout of one of the world’s largest research studies on community health.

In partnership with the Malian Ministry of Health, Muso’s expansion and RCT support a historic national scale up of CHWs to remote areas of Mali. Muso’s nine operational research hubs across Mali help guide and innovate on the government’s national scale-up.

**Expansions**

- **Yirimadio**
  - 1 peri-urban site
  - 175 community health workers
  - 1 CHW per 1,000 people

- **Bankass**
  - 8 rural sites
  - 200 community health workers
  - 1 CHW per 700 people

**The Patients We Serve**

- **Muso Expansion**
  - Launch of rural sites

- **Graph**: Year progression from 2009 to 2017 showing the increase in the number of patients served.
TOWARD HEALTH EQUITY

There is no reason that children born anywhere should have a greater risk of dying because they are poor. No patient should die because they can’t access care. Muso conducts rigorous research to create global solutions to global injustices, testing strategies to accelerate the global effort for universal health care and child survival.

A seven-year study of the area of Muso’s intervention was published in BMJ Global Health in 2018.¹ When the study began, 1 in 7 children died before they could celebrate their fifth birthday. Seven years later, child deaths had become rare—only 1 in 142. In 2015, these communities in Mali were down to 7 deaths per 1,000 live births, a rate comparable to the United States.

After Muso’s Proactive Care approach to health care launched, the number of patient visits in study communities increased tenfold. The rate of fever among children dropped by 55%, and child death became a rare event in the communities served. To learn more about the study and its limitations, visit www.musohealth.org/research.

To better understand the impact of the ProCCM approach on child mortality and access to health care, a team of researchers across seven academic institutions has together launched a large randomized controlled study, the ProCCM Trial, which will follow 100,000 patients from 2017 to 2020 (see page 16 for further details).


The drop in childhood mortality is jaw dropping.

– Kevin Starr, Managing Director Mulago Foundation

UNDER-FIVE CHILD MORTALITY RATES [2015]

<table>
<thead>
<tr>
<th>Country</th>
<th>Under-Five Mortality Rate per 1,000 Live Births</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somalia</td>
<td>137</td>
</tr>
<tr>
<td>Mali</td>
<td>114</td>
</tr>
<tr>
<td>India</td>
<td>45</td>
</tr>
<tr>
<td>Mexico</td>
<td>15</td>
</tr>
<tr>
<td>China</td>
<td>11</td>
</tr>
<tr>
<td>USA</td>
<td>7</td>
</tr>
<tr>
<td>ProCCM Communities</td>
<td>7</td>
</tr>
<tr>
<td>Canada</td>
<td>5</td>
</tr>
<tr>
<td>Iceland</td>
<td>2</td>
</tr>
</tbody>
</table>

² http://www.childmortality.org
CHW DASHBOARD STUDY

Muso, in partnership with Medic Mobile, has prototyped and deployed a cutting-edge CHW Dashboard. A data analytics platform provides personalized feedback for each CHW on the quantity, speed, and quality of the care they provide, to tailor supervision of each CHW to their precise strengths and weaknesses. We have put the CHW Dashboard to the test in a Randomized Controlled Trial. The RCT’s findings will be published in 2018.

RANDOMIZED CONTROLLED TRIAL

A 2013 Harvard/University of California San Francisco study brought attention to Muso’s Proactive Care health system as a global model for child survival, but it is important to note that the study had significant limitations. It was not designed to produce causal conclusions on the role of active case finding. That is why investigators from University of California San Francisco, the London School of Hygiene and Tropical Medicine, the University of Bamako, the Malian Ministry of Health, and Muso together launched a large randomized controlled trial. The 2017-2020 RCT will build from the 2013 study’s findings by testing the impact of one of the model’s core components: CHW active case finding.

The study tests whether CHWs who proactively search for patients will increase early access to treatment and decrease child mortality compared to passive CHWs, which is Mali’s current model. The RCT follows nearly 100,000 people in 137 village clusters in rural Mali over the course of three years. The 137 clusters are then randomized to receive care either from a proactive CHW who conducts door-to-door case finding, home visits, or from a passive CHW stationed at a health post.

Muso conducts rigorous research because our patients deserve evidence-based health care systems. With more than 40 countries across the world committing to put Community Health Workers at the front lines of their health systems, the global community is in urgent need of evidence-based strategies to support these efforts. Muso is testing global solutions to support these CHW-led initiatives, to identify what strategies work, what strategies do harm, and what strategies can accelerate the global effort for universal health care and child survival.

Muso’s studies don’t set out to prove the validity of our model, but to help us learn, to help us improve, to provide us with evidence to better serve vulnerable communities.

PRENATAL CARE STUDY

Through Muso’s new Proactive Reproductive Health initiative, CHWs provide home pregnancy testing, proactively, door to door. New research efforts are being developed to test whether this approach enables CHWs to find more pregnant patients, earlier, so they can be protected and healthy during their pregnancy.

FAMILY PLANNING STUDY

A new study in development will assess whether communities receiving proactive care have increased access to family planning. Mali’s baseline utilization rate of family planning measures is just 18%.

RESETTING THE GOALPOSTS

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Muso’s studies don’t set out to prove the validity of our model, but to help us learn, to help us improve, to provide us with evidence to better serve vulnerable communities.

This is the beginning of a new phase of programming and operations research in the movement to end preventable child and maternal deaths.

- Henry Perry, Senior Scientist
Johns Hopkins University
Dedicated supervisors provide 360° Supervision to support the entire Proactive Community Case Management process. This ensures CHWs have active and regular mentorship for improved performance, including efficiency and quality of care.

1. GROUP SUPERVISION

Supervisor leads a group discussion of the common challenges and potential solutions faced by CHWs, reviews and reinforces key competencies and skills, coordinates stock monitoring and resupply for each CHW, and organizes the month’s individual monthly supervision sessions.

2. PATIENT FEEDBACK AUDIT

Supervisor conducts home visits without the CHW present to receive performance feedback on a monthly basis.

3. CHW SHADOWING

Once per month, supervisor directly observes as the CHW provides care during home visits.

4. ONE ON ONE FEEDBACK

Supervisor and CHW sit down together to set goals and identify areas of strength and improvement using personalized performance metrics and visual displays.

Instead of Once a month, once per month Is there a way for us to make it clearer that points (2),(3) and (4) happen as part of one integrated 360 degree field supervision visit per CHW per month, and that group supervision meetings happen 2-4 times per month? The integration of points 2 3 and 4 was key to the work flow design and to making such an intensive supervision format feasible for supervisors to pull off for each CHW each month.
TOGETHER, WE WILL WORK TO MAKE THE DEATH OF A CHILD RARE IN EVERY COMMUNITY

Muso has served the Malian Ministry of Health as an operational research partner for the past decade. We work with the Ministry to develop and test health care innovations with the potential to improve child mortality and early access to care. Muso and the MoH jointly test innovations that are designed for government implementation at national scale.

To prepare for government implementation at scale, Muso focuses on redesigning and strengthening existing government health systems: we work through government primary care sites, tap into government distribution channels as much as possible, train and support Ministry of Health clinical staff, and evaluate the impact of these innovations with policy makers.

In our years of partnership, the Ministry has adopted several key strategies we have tested together, including paid, professionalized Community Health Workers providing an integrated package of doorstep health care. With Mali’s national national CHW scale-up underway, the Malian government is now working with Muso on further research to increase the impact of this national effort.

BY 2020
335,000 PATIENT REACH BY MUSO
3.4M PERSON IMPACT OF ROLL-OUT IN MALI

PARTNERSHIP WITH THE MALIAN GOVERNMENT
In the Malian communities Muso serves, a new generation of children is growing up who doesn’t know life before universal health coverage and regular home visits from their Community Health Worker.
2017 FINANCIAL RESULTS

REVENUE & SUPPORT

<table>
<thead>
<tr>
<th>Year</th>
<th>2017*</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants</td>
<td>$5,135,179</td>
<td>$3,314,246</td>
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<tr>
<td>Contributions</td>
<td>$247,223</td>
<td>$258,944</td>
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<tr>
<td>In Kind</td>
<td>$0</td>
<td>$48,642</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$5,382,302</strong></td>
<td><strong>$3,623,832</strong></td>
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ASSETS

<table>
<thead>
<tr>
<th>Year</th>
<th>2017*</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and Cash Equivalents</td>
<td>$2,297,834</td>
<td>$968,538</td>
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<tr>
<td>Pledges Receivable</td>
<td>$637,000</td>
<td>$1,174,000</td>
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<tr>
<td>Prepaids &amp; Other Assets</td>
<td>$47,243</td>
<td>$39,073</td>
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<tr>
<td>Fixed Assets, Net</td>
<td>$74,356</td>
<td>$72,108</td>
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<tr>
<td><strong>Total Assets</strong></td>
<td><strong>$3,056,433</strong></td>
<td><strong>$2,217,609</strong></td>
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</table>

LIABILITIES AND NET ASSETS

<table>
<thead>
<tr>
<th>Year</th>
<th>2017*</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts Payable &amp; Accrued Expenses</td>
<td>$270,868</td>
<td>$213,759</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>$270,868</strong></td>
<td><strong>$213,759</strong></td>
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</table>

Net Assets

<table>
<thead>
<tr>
<th>Year</th>
<th>2017*</th>
<th>2016</th>
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<tbody>
<tr>
<td>Unrestricted</td>
<td>$1,033,011</td>
<td>$304,800</td>
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<tr>
<td>Temporarily Restricted</td>
<td>$1,781,635</td>
<td>$1,699,000</td>
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<tr>
<td><strong>Total Net Assets</strong></td>
<td><strong>$2,814,646</strong></td>
<td><strong>$2,003,800</strong></td>
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</table>

**Total Liabilities and Net Assets** | $3,056,433 | $2,217,609 |

*Unaudited

EXPENSES

<table>
<thead>
<tr>
<th>Year</th>
<th>2017*</th>
<th>2016</th>
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<tbody>
<tr>
<td>Program</td>
<td>$4,284,374</td>
<td>$3,943,075</td>
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<tr>
<td>General and Admin</td>
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<td>Fundraising</td>
<td>$198,914</td>
<td>$170,903</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$4,742,705</strong></td>
<td><strong>$4,307,025</strong></td>
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Net Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>2017*</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Revenue</strong></td>
<td><strong>$639,597</strong></td>
<td><strong>$(683,133)</strong></td>
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</table>

2017 EXPENSES

- Program: 50%
- General and Admin: 6%
- Fundraising: 4%