



SAVING LIVES, SAVING MONEY

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IN PARTNERSHIP WITH



Miller Center
for Social Entrepreneurship

THE ISSUE

Globally 800 women die every day due to preventable pregnancy related causes and childbirth. Despite advances in the last 20 years, there are significant gaps in availability, quality, and access to medical facilities, especially in low income countries.



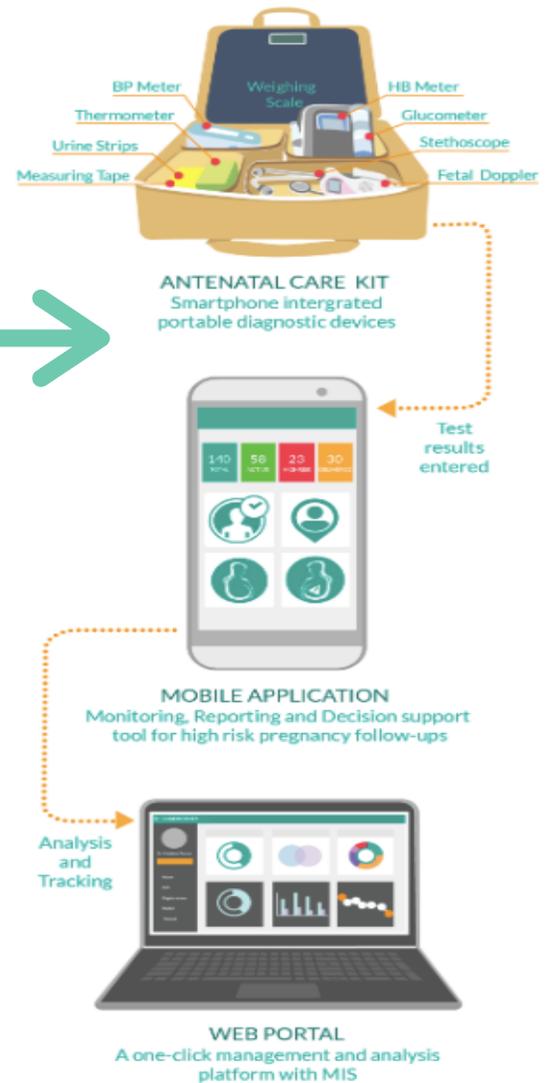
THE CONTEXT

India accounts for 20 percent of maternal fatalities globally, resulting in approximately 44,000 deaths every year. Mothers in the lowest income bracket have a 2.5 times higher mortality rate compared to other income brackets (World Health Organization, 2017).

THE COMPANY

CareNX is a social enterprise that has mobilized maternal health care in India. CareNX is addressing the gap in maternal health care with the help of technological innovations that make affordable maternal health care more accessible. The enterprise's three main goals are to bridge the access to standard health care, empower health workers to routinely reach pregnant mothers, and detect high risk pregnancies before the third trimester. Through the development of the self screening technologies, CareMother and FETON, CareNX has enabled access to quality care and worked to ensure positive pregnancy experiences.

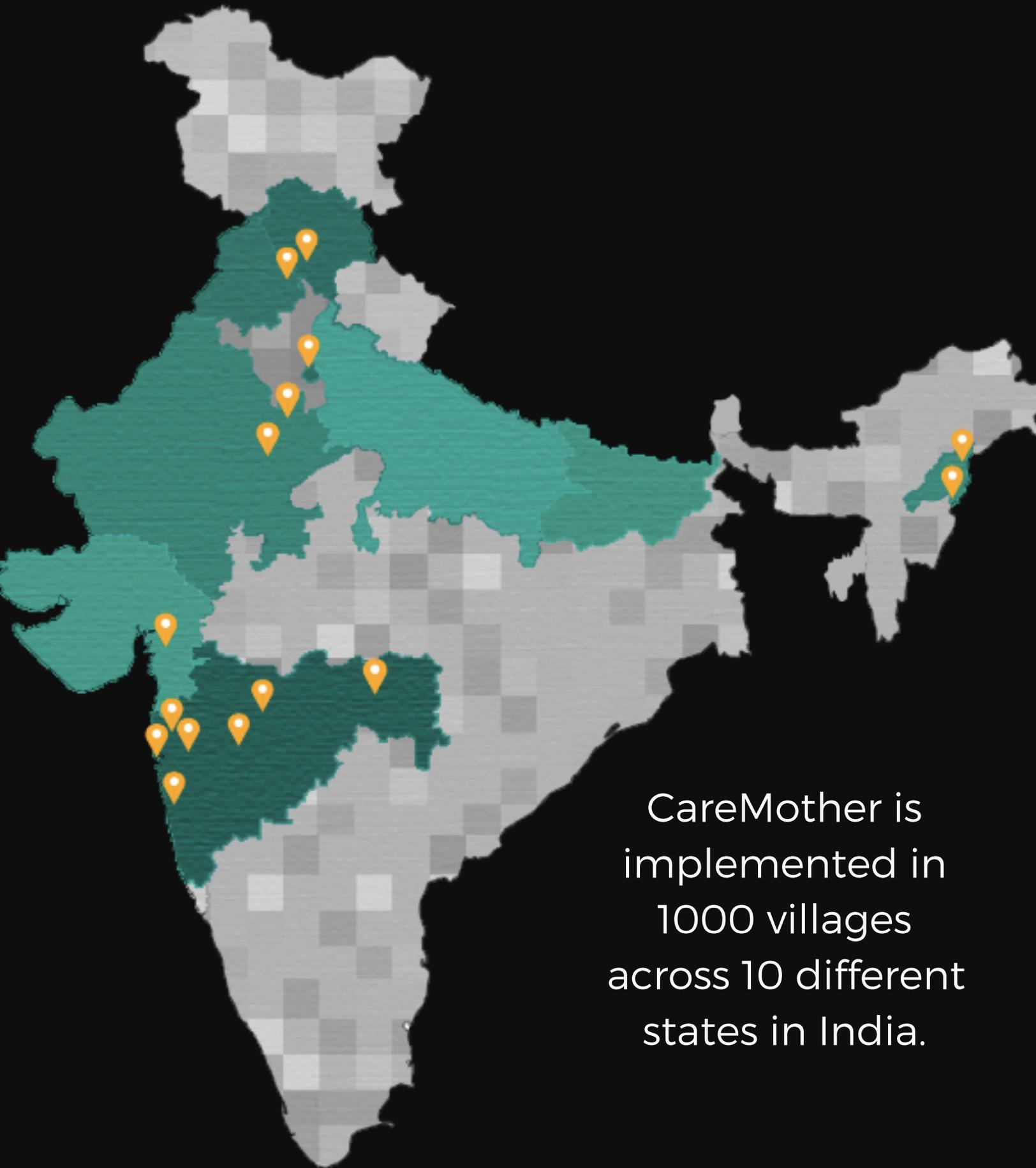
THE PRODUCT



CareNX has created technologies that have increased access to affordable care and aided in identifying high risk pregnancies. CareMother is a complete end to end maternal health care solution which includes a portable kit, mobile application, and web portal that is sold to government and private hospitals. These hospitals employ community health workers to provide personalized door to door care. The diagnostic test results are uploaded to CareMother's mobile platform and analyzed by doctors who initiate appropriate clinical interventions.

AN ECOSYSTEM OF SELF-MONITORED HEALTH CARE

FETON is a smart phone enabled, portable, fetal heart rate monitor that is nearly three times cheaper than a typical CTG machine. Currently, CareNX is selling FETONs to obstetricians as a way to drive down the price of hospital based maternal health care. CareNX's ten year goal is to use their products to create an ecosystem of self-monitored maternal health care.



CareMother is implemented in 1000 villages across 10 different states in India.

Hedgewar Hospital Administrator

Dr. Pratibha Phatak



At Hedgewar Hospital, in the heart of Aurangabad, Maharashtra, Dr. Phatak is fervently working to bring healthcare to rural villages. She is the founder of the non-profit arm of Hedgewar Hospital, more commonly known as Savitribai Phule Mahila Ekatma Samaj Mandal. Three years ago, Dr. Phatak invested in eight CareMother kits with the hopes of strengthening village-centered antenatal care. Through the adoption of the CareMother solution, Hedgewar's community health workers have successfully provided care for mothers residing in these remote villages. "It is my dream kit," Dr. Phatak proclaimed as she excitedly described the benefits of CareMother. "The kit has all of the best tools for bringing clinical care to the doorstep. When families hear the baby's heartbeat through the fetal heart rate monitor, they become more supportive of the community health worker and the pregnancy in general" Dr. Phatak explains.

Since implementation, she reports that CareMother has helped Hedgewar Hospital identify 40% more high risk pregnancies. Once high risk pregnancies are identified, Dr. Phatak monitors them through CareMother's dashboard.

Dr. Phatak states, "The dashboard has allowed to improve the management of Hedgewar Hospital's maternal health care by being able to track community health worker performance and high risk parameters per village." Due to early high risk identification, low birth weight and anemia rates have decreased significantly since CareMother's implementation. These improvements translate into direct cost savings for Hedgewar Hospital, as fewer mothers require prolonged medical attention.

“IT IS MY DREAM KIT”

Another major benefit of CareMother is that it decreases transportation costs. Dr. Phatak shares, "Before CareMother was implemented, Hedgewar was using a single mobile medical van to transport women to the hospital for prenatal care. CareMother is a much more cost effective solution. Since it is portable and can be distributed in multiple villages, it has reduced costs for the hospital." In addition to reducing Hedgewar's costs, CareMother has made maternal care cheaper for women, saving them 550 Rupees in hospital tests and 150 Rupees in daily wages.



Community Health Worker

Prabhavati Padul



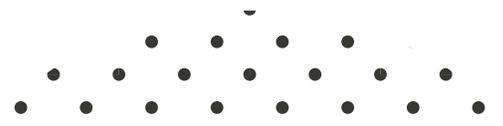
Mothers also constantly come to Prabhavati for advice, calling her with questions ranging from trivial to life-threatening. “Last month, 15 days before delivery, a mother came to me asking if she could travel. She was anemic so I told her not to. The next day she started bleeding and called me immediately. I called an ambulance and she made it to the hospital in time to deliver a healthy 3.5 oz baby boy” Prabhavati shares. Due to the increased trust fostered by the CareMother solution, Prabhavati feels like she “is finally doing something good” by delivering holistic and efficient care to mothers, who have come to see her as a pillar of support.

In a village an hour away from Aurangabad, Maharashtra, mothers lineup outside of Prabhavati’s home. It is Thursday, the weekly antenatal care day, and mothers await Prabhavati’s guidance and counsel. Prabhavati has been working with CareMother in six villages for the last three years through Hedgewar Hospital. Monthly, Prabhavati sees approximately 36 to 45 mothers. Before Prabhavati started using CareMother, she was a government Accredited Social Health Activist (ASHA). As an ASHA, the only tools Prabhavati had to identify high risk pregnancies were blood pressure and weight measurements.

Now, Prabhavati can provide proper antenatal care tests from her home and more accurately diagnose and monitor high risk pregnancies. “Mothers see me as a doctor” Prabhavati proudly states, as she explains how CareMother has given her more credibility as a medical professional in her community. Prabhavati used to go door to door to deliver care, but now mothers come to Prabhavati’s home, which has essentially turned into an antenatal clinic.

“MOTHERS SEE ME AS A DOCTOR”

Prabhavati was also excited to share that she held a smartphone for the first time during the CareMother training. She attributes an increase in technological and maternal health knowledge to the CareMother app. She uses the app to show mothers their test results and explain their high risk parameters. Prabhavati says that the increased maternal health knowledge she has gained with CareMother has given her the confidence to pursue a BA.



TESTIMONIALS

Mother

Bindu Yadav

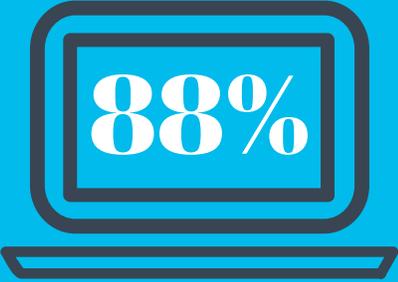
Sitting with 9 other mothers in crowded garage in the 10th largest city in the world, Bindu Yadav retells the story of how CareMother helped save her baby's life. Though this was Bindu's first pregnancy, she felt completely prepared for delivery. She had completed all four antenatal check ups, was taking her medicine, and going to monthly pregnancy club meetings.

However, when Bindu went to the hospital for her delivery, she realized she had lost her pregnancy file. This file contained all of her previous antenatal test results, sonographies, and doctors' notes from past visits.



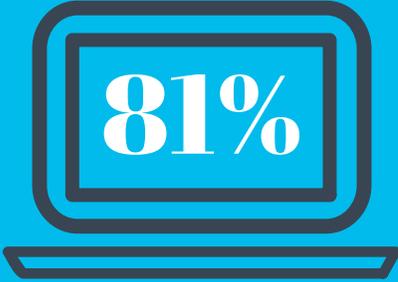
In a panic, Bindu called her community health worker, who had been using CareMother to track Bindu's antenatal care visits. Luckily, as part of the CareMother platform, Bindu's pregnancy files were uploaded onto the report capture feature of the app. As a result, Bindu's doctor was able to access the lost file, identify her pregnancy as high risk, and take the necessary precautions in order to ensure a safe delivery.

HOW FAR WILL YOUR INVESTMENT GO?



88%

interviewed of Community Health Workers reported it was easier to identify high risk pregnancies with CareMother



81%

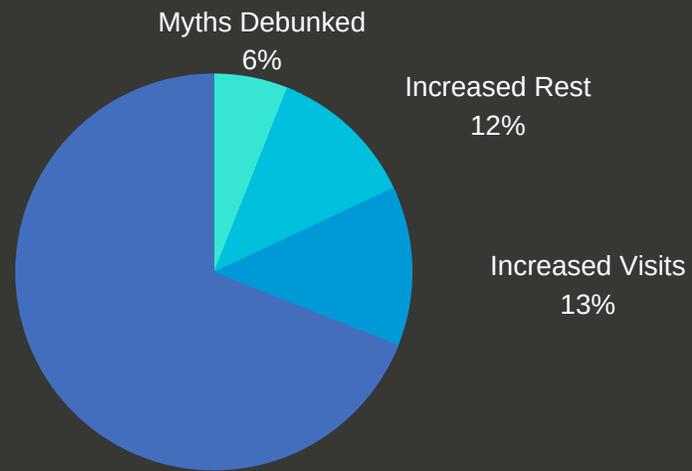
of interviewed mothers reported improved care after CareMother's implementation

Impact of CareMother on Community Health Workers Self-reported data from 26 CHWs



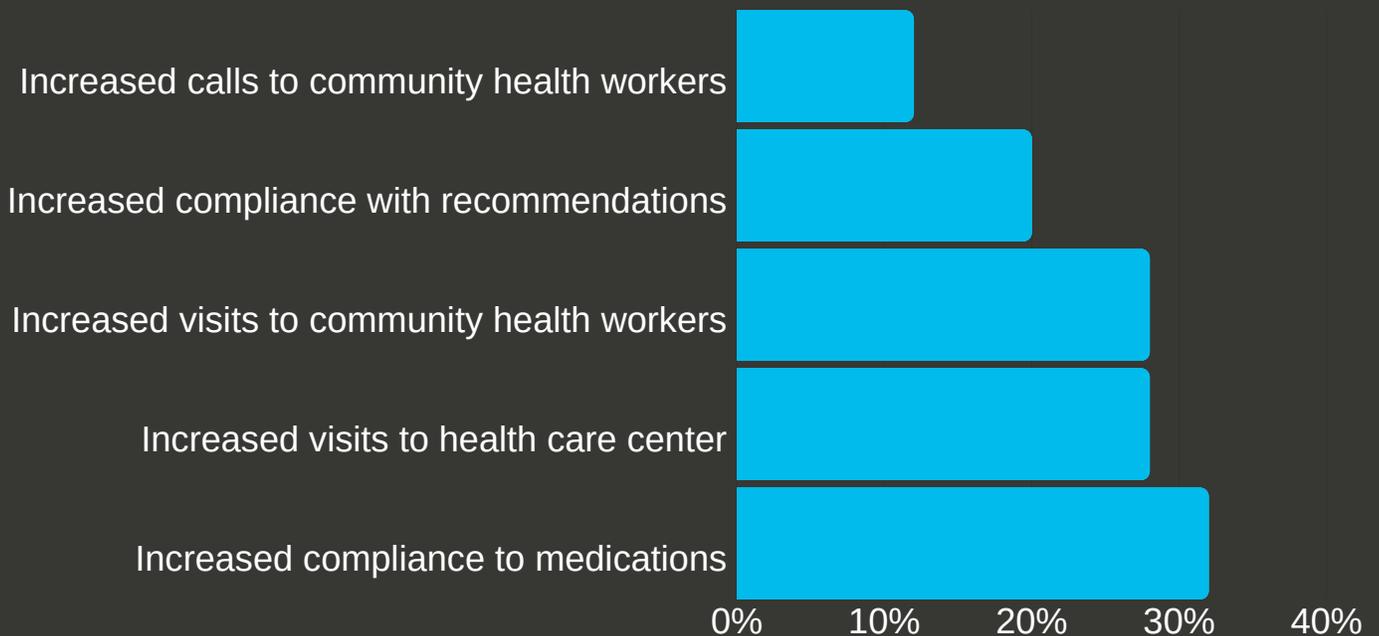


73%
of interviewed mothers
self-reported lifestyle
changes after
CareMother's
implementation



Mothers' Lifestyle Changes,
Self-reported data from 31 mothers

Observed Behavior Changes in Mothers Reported data from 26 CHWs



About Miller Center for Social Entrepreneurship

Miller Center for Social Entrepreneurship is the largest and most successful university-based social enterprise accelerator in the world. Founded in 1997, Miller Center is one of three Centers of Distinction at Santa Clara University and is located in the heart of Silicon Valley, the world's most entrepreneurial ecosystem. We leverage the entrepreneurial spirit and innovative ethos of Silicon Valley and underpin it with the Jesuit heritage of service to the poor and protection of the planet. CareNX participated in the Global Social Benefit Institute Accelerator in 2016 and hosted a team of Global Social Benefit Fellows to conduct research in 2018.



Miller Center
for Social Entrepreneurship



About the Research

In the summer of 2018, a research team from Santa Clara University's Miller Center for Social Entrepreneurship traveled to Mumbai, Maharashtra to evaluate the social impact of the CareMother solution, a smartphone-integrated portable diagnostic kit. The team traveled to 20 rural villages in Aurangabad, Talasari, Baddi and 3 urban neighborhoods in Mumbai to interview mothers, community health workers and hospital administrators. Jess and Varsha interviewed 31 mothers, 26 community health workers, and 9 hospital administrators in order to understand how using the CareMother solution has led to behavioral changes. For detailed description of data and methods, refer to the Description of Methods Appendices, found in the version of this document on Miller Center's web page.