

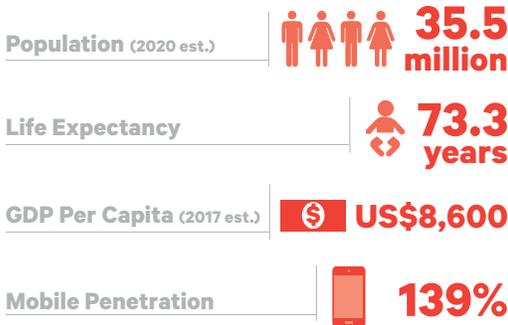


Mobile Ultrasound Patrol

Early Detection Of At-Risk Pregnancies Through The Use of 3G Technology

Every day, around the world, approximately 800 women die from preventable causes related to pregnancy and childbirth. Of those deaths, 40 percent are due to injuries or conditions related to placenta complications.¹ The only way of detecting abnormal placenta challenges is through an ultrasound. The Mobile Ultrasound Patrol is a program that seeks to improve care for women in emerging regions through early detection and treatment of major causes of maternal mortality. The medical examinations took place in three villages in Morocco — Oulmes, Boulemane and Ribat el Kheir — with reading physicians providing diagnoses in city centers in Morocco and France.

MOROCCO 2019 Statistics*



Challenge

- Every day, approximately 800 women globally die from preventable causes related to pregnancy and childbirth.
- Maternal mortality rates are higher among women living in rural areas and among poorer communities.
- Morocco is one of the nine countries in the World Health Organization Eastern Mediterranean Region to have adopted a national plan to accelerate progress on maternal and child health.²
- One of the most common reasons for maternal deaths is postpartum hemorrhage due to retained placental fragments (women dying during or within hours of giving birth due to heavy bleeding caused by placenta complications).
- Ensuring healthy lives and promoting the well-being for all ages is Goal 3 of the United Nations Sustainable Development Goals, with a specific focus on both maternal and child health.

Solution

- The Mobile Ultrasound Patrol program provides participating doctors and nurses with backpacks containing devices that are wirelessly connected to specialists in hospital clinics to ensure far reaching, high quality diagnostics.
- Patients, nurses and doctors access the system via mobile devices such as smartphones and phablets (phone – tablet).
- Images are captured with a Sonosite portable ultrasound device called the M-turbo.
- The images are wirelessly transmitted via WiFi through a dongle to a wireless-enabled Sony smartphone or tablet with a pre-installed application for encryption of medical data called DICOM.
- The images are transmitted from the mobile device via the 3G mobile network to a cloud-based image management platform provided by Trice Imaging Inc.
- The images are made available on a secure Internet landing zone. A link to the images is automatically routed to the reviewing physician via an encrypted email.
- The reviewing physician logs into the system on a phablet to review the images and complete a report.

*Sources: CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook>); Mobile penetration data provided by Ovum World Cellular Information Service and based on market intelligence.

Impact

98%

High Clarity Rating

A total of 575 exams including 3,108 images were wirelessly transmitted through 3G technology, with clinicians giving the ultrasounds a 98 percent perfect clarity rating.



Early Detection

94 of the exams exposed potential at-risk pregnancies.



Second Opinion

158 patients were flagged for a second opinion.



Advanced Wireless

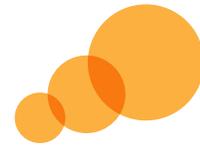
The use of advanced wireless technology led to:

- Shortened diagnostic review or second opinion time from two weeks to fewer than 24 hours.
- Reduced cost of a medical diagnosis from \$80 to \$2 per patient.
- Shortened transportation time of the medical data for review from four days to two seconds.



More Births at Clinics

Participating physicians also reported an increase in the number of patients seeking care at the health houses after the trial. The number of deliveries in these facilities increased, which is an important step in reducing the number of dangerous at-home births.



Plans to Scale

The Government of Morocco has committed to scaling this program to an additional seven health houses, for a total of 10, over the next year, expanding this program to more women who need it most.

Program Stakeholders



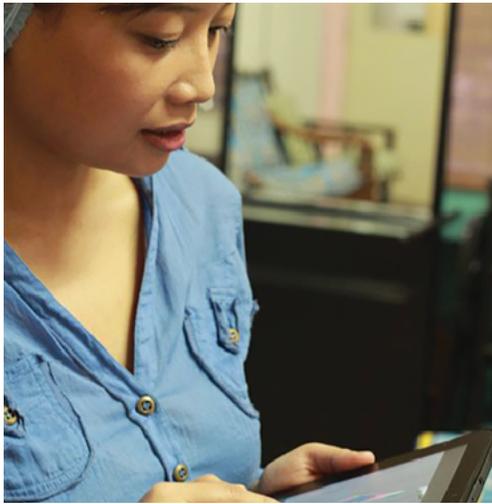
¹ World Health Organization, CIA World Factbook 2013 and ITU report 2011 Facts and Figures, <http://www.who.int/mediacentre/factsheets/fs348/en/>

² World Health Organization, Morocco Maternal Health Report <http://www.who.int/features/2014/morocco-maternal-health/en/>

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Qualcomm believes access to advanced wireless technologies can improve people's lives. Qualcomm Wireless Reach is a strategic initiative that brings wireless technology to underserved communities globally. For the last ten years, Wireless Reach has invested in programs that foster entrepreneurship, aid in public safety, enhance the delivery of health care, enrich teaching and learning and improve environmental sustainability, impacting over 20 million beneficiaries.



DevelopHer: Empowering Women in Asia

A mobile learning application paired with online mentoring helps women entrepreneurs become successful business owners

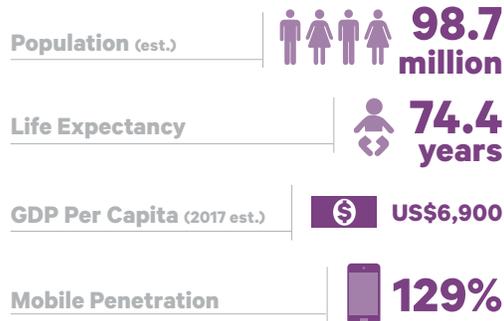
Entrepreneurship is growing rapidly across Southeast Asia. In Vietnam, women are one-third more likely than men to start a business.¹ Yet, while these women are often drawn to entrepreneurship out of necessity, they also face challenges accessing the resources and support they need to develop, grow and sustain their businesses. With help from the DevelopHer project, implemented in collaboration with the Cherie Blair Foundation for Women (the Foundation), women entrepreneurs across Vietnam can benefit from mobile learning tools and online mentoring support to overcome business challenges and take their enterprises to the next level.

Challenge

- Women's limited participation in the labor force perpetuates gender inequality, poverty and unequal economic growth. According to a recent report, Asian economies could add \$4.5 trillion to their GDP by 2025 by boosting women's economic participation.²
- Women entrepreneurs face common challenges when starting and growing businesses. These include lack of access to training, personalized support and business and support networks; lack of confidence; lack of innovative products, services and/or approaches; and difficulty managing family and business demands.
- In Vietnam, women entrepreneurs cite their top challenges as lack of market information and lack of access to resources, credit, business trainings and digital distribution channels. A 2017 University of Bedfordshire study found that women entrepreneurs in Vietnam felt that a mobile application addressing these challenges would improve their businesses.

VIETNAM

2019 Statistics*



Solution

- DevelopHer aims to unlock the potential of women entrepreneurs by combining the breadth of a mobile learning app with the depth of personalized, online mentoring. This approach empowers women to access critical information needed to build their skills and confidence and run their businesses more effectively. It also supports high-potential women entrepreneurs who are able to employ and mentor others and serve as leaders in their communities.
- DevelopHer enables the Foundation to offer its high-impact Mentoring Women in Business Programme across Southeast Asia. This cross-border, online program connects women entrepreneurs with dedicated mentors who provide one-to-one support over the course of a year. A bespoke online and mobile-enabled platform enables access to trainings and resources on mentoring, business, leadership, and financial literacy topics, and a learning and networking community of more than 6,000 participants in 100 countries.
- The program includes a mobile app, HerVenture, in Vietnam, which provides women entrepreneurs with access to tools, support and networks to start and grow their own businesses.
 - The app provides an inexpensive way for women who own micro and small businesses to receive essential business training, tips and support.
 - The app features information on how to launch a business, product customization and innovation, expanding market access, expanding business operations and workforce, and access to finance.
 - HerVenture is designed to meet the specific needs of users by suggesting a unique sequence of learning content tailored to each entrepreneur.
 - The app features a user-friendly interface, reminds and incentivizes users to progress through the learning, and features static content which users can interact with offline.
 - The content is delivered in bite-sized, easily digestible and engaging formats.

*Sources: CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook>); mobile penetration data provided by Ovum World Cellular Information Service and based on market intelligence.

Impact



Nearly 6,000 Women Entrepreneurs

In its first year, nearly 6,000 women entrepreneurs in Vietnam have downloaded the HerVenture app to their mobile devices and are benefitting from its business content. Over 360 high-potential women entrepreneurs in Vietnam and other Southeast Asian countries are offered in-depth, one-to-one support through the Mentoring Women in Business Programme. Women entrepreneurs who graduate from the mentoring component are encouraged to mentor others, expanding the program's reach and impact. Since first launching the app in 2018, it has reached over 18,500 women across Indonesia, Nigeria and Vietnam.



Economic Sustainability

DevelopHer aligns with Vietnam's strategy to increase the nation's economic sustainability. This strategy includes a focus on women entrepreneurs and aims to have 35 percent or more women entrepreneurs by 2020.



Gender Equality and Decent Work for All

DevelopHer works toward achieving gender equality as well as economic growth and decent work for all, which are Goals 5 and 8, respectively, of the United Nations' Sustainable Development Goals.

Program Stakeholders



¹ <http://gemconsortium.org/report/49860>

² <https://www.mckinsey.com/featured-insights/gender-equality/the-power-of-parity-advancing-womens-equality-in-asia-pacific>

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THRIVE Indonesia

An Integrated, Mobile Health Information System Enhances Maternal And Neonatal Health Outcomes

For millions of people in emerging regions, frontline health workers (FHWs) are the first and often the only point of contact for health care access. FHWs form the backbone of the health system, especially in resource-constrained environments which have a shortage of trained physicians and nurses. The THRIVE Indonesia program is demonstrating how a digital registry system, known as Open Smart Register Platform (OpenSRP), compared to a paper-based system, can improve FHW efficiencies, immunization coverage, continuity and quality of care, data quality, timeliness of Reproductive, Maternal, Newborn, and Child Health (RMNCH) interventions and reduce maternal and child morbidity.

INDONESIA

2019 Statistics*

Population (2020 est.)  **267 million**

Life Expectancy  **73 years**

GDP Per Capita (2017 est.)  **US\$12,400**

Mobile Penetration (est.)  **156%**

Challenge

- In Indonesia, FHWs include midwives, nutritionists, vaccinators, early childhood development professionals and family planning field workers. This division of responsibility has led to overlapping service delivery, duplicate data recording efforts, inefficient workflows, and difficulty reporting outcomes at the national level.
- FHWs rely on paper-based health registers for collecting and reporting data. These paper-based systems present challenges for communication, coordination and resource-sharing across all levels of Indonesia's decentralized health system.
- Indonesia's maternal and infant morbidity rates are high, despite the concerted efforts of the government, including establishment of the village-based Maternal Health Post, emergency referral system and maternal and perinatal death audits.¹
- Ensuring healthy lives and promoting well-being for all ages – and specifically for maternal and child health – is currently Goal 3 of the United Nations Sustainable Development Goals.

Solution

- The THRIVE Indonesia program in Lombok, Indonesia, is part of a multi-country research study led by the WHO and implemented by Summit Institute of Development (SID) to determine the local adaptation requirements, implementation components and effect of OpenSRP (the integrated, electronic mobile health platform), as an intervention on the performance of health workers delivering services across the RMNCH continuum of care.
- The program aims to show how OpenSRP customized to the Indonesian context, compared to the use of current paper-based systems, can improve FHW efficiencies, immunization coverage, continuity and quality of care, data quality and timeliness of RMNCH interventions, thereby reducing maternal and child morbidity.
- OpenSRP combines data collection, client management and reporting workflows into one linked mobile interface and allows health workers to access client information and decision-support tools.
- Participating FHWs use Samsung Galaxy Tab S2 and Sony Xperia Z3 tablets powered by Qualcomm® Snapdragon™ platform and pre-loaded with midwife, vaccinator, nutritionist and early child development professional applications. All participants receive training in the use of the technology.
- The electronic system features facial recognition of patients, allowing FHWs to rapidly pull up a client's health record through a simple point-and-click photo; real time data sharing to enable multiple FHWs in the same area to coordinate more efficiently; active feedback from FHWs and coaching from SID for improved provider performance and responsiveness; and SMS texts for service reminders and health promotion to increase on-time services.

*Sources: CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook>); Mobile penetration data provided by Ovum World Cellular Information Service and based on market intelligence.

Impact



Over 38,000 Beneficiaries

Including over 38,000 mothers and children, and 168 FHWs in 116 villages across Indonesia.



Increased Effectiveness

Use of OpenSRP has increased coverage rates for ante-natal care (ANC), post-natal care (PNC) and child immunizations by 18% on average across all villages in the preliminary research pilot, as compared to the use of a paper-based system.



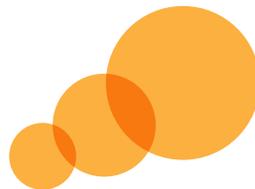
Increase in Quality of Care

The OpenSRP platform has enabled FHWs to conduct ANC, PNC and home visits to more mothers on time and with greater completion of required tasks, resulting in 6% improved quality of care and timeliness of service delivery on average across all villages in the preliminary research pilot.



Improved Outcomes

The ability to provide quality and timely care through the use of OpenSRP has led to a 25% decrease in maternal and child morbidity on average across all villages in the preliminary research pilot. These promising anecdotal results have prompted a more robust study to determine the statistical significance of the impact on a larger population.



Replication

The THRIVE OpenSRP program, which was started in Central Lombok District, has now been replicated in West Pasaman, West Sumatra, Mageland, Central Java, Banggai and Sulawesi.

Program Stakeholders



¹ Countdown Indonesia, "Indonesia Maternal and Child Health Data," <http://countdown2030.org/country-profiles/indonesia>.

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