



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.

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.

INDONESIA

2018 Statistics*

Population (2017 est.)  **260.5 million**

Life Expectancy  **73 years**

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

Mobile Penetration (est.)  **151%**

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



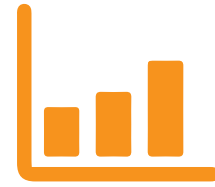
Over 17,000 Beneficiaries

Including over 17,000 mothers and children and 46 FHWs in 22 villages.



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.



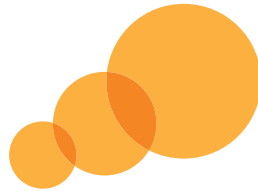
Increase in Quality of Care

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 23% 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.



Plans to Scale

Future plans include the possibility of scale-up to all 250 FHWs in Central Lombok District, working together with the District Health Office, Provincial Health Office and Ministry of Health of Indonesia.

Program Stakeholders



HARVARD T.H. CHAN
SCHOOL OF PUBLIC HEALTH



World Health Organization



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

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