



CliniPAK 360

Using 3G Point-of-Serve Data Capture Tools to Improve Health Care

Nigeria suffers one of the highest maternal mortality rates in the world: approximately 810 maternal deaths per 100,000 live births; in some Midwife Service Centers the predicted number is even higher at 1,000 deaths for every 100,000 live births.¹ In comparison, the maternal death rate in high-income countries is 10 per 100,000 live births. The difference between these numbers underscores the need for an enhanced and strengthened health system infrastructure. The CliniPAK 360 program, a collaboration between Qualcomm Wireless Reach and stakeholders including Etisalat Nigeria, InStrat Global Health Solutions, National Primary Health Care Development Agency (NPHCDA), Vecna Cares Charitable Trust, and State Primary Health Management Boards of several States in Nigeria, provides health care providers with mobile devices to capture, analyze and help diagnose clinical conditions that lead to maternal and/or infant mortality, and aims to decrease the number of deaths in these groups.

NIGERIA

2018 Statistics*

Population (est.)	 190.6 million
Life Expectancy	 53.8 years
GDP Per Capita (2017 est.)	 US\$5,900
Mobile Penetration	 88.8%

Challenge

- According to the World Bank, there are, on average, less than 2 midwives/nurses per 1,000 people and less than 1 doctor per 1,000 people in Nigeria.²
- Without adequate access to health services, long-term patient records that can be easily maintained across visits and services do not exist, nor do they connect patient data collected in the field with that collected in the clinic. Paper records are often lost and, especially in the case of maternal and child health care, many patients are missing basic, but essential health interventions.

Solution

- The CliniPAK 360 mobile solution captures patient data using advanced wireless technology and provides on-demand reporting, enabling health care administrators to increase productivity and streamline the clinical experience while creating a long-term impact on patient health management.
- Each midwife electronically documents key patient data points, including a mother's blood pressure, fetal heart rate, the existence of malaria and co-morbidities, infant birth weight, and maternal and/or infant death.
- Through advanced wireless data capture and on-demand reporting, Primary Health Centers have access to data on patients referred from the community. Using this information, clinicians

can track referred patients and follow up with those who have not sought medical attention within a necessary timeframe. Additionally, clinicians and doctors can provide directed care in a timely manner, eliminating redundant testing or questioning. Each of these advantages save clinicians' time and serve to drive down the number of maternal and infant deaths.

- The CliniPAK 360 program processes patient information through algorithms to identify risk factors, triage patients accordingly and provide clinical decision-making support to midwives. At-risk mothers are identified and referred to clinics or hospitals for follow-up care, ensuring that they receive appropriate attention.

*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 1,000 Midwives and Health Workers

Program stakeholders have grown these efforts such that CliniPAK 360-enabled tablets have been provided to over 1,000 midwives and health workers in 150, mostly rural, Primary Health Centers in six States in Nigeria since 2013.



Up-to-date Medical Records

The immediate availability of up-to-date medical data means clinicians and midwives can make informed, timely decisions that have life-saving potential. By early 2017, the program had captured data on nearly 200,000 unique patients nationally and capture rates continue to increase daily.



Inspiring New Programs

The success of the program work inspired the launch of an Ebola Disease Outbreak Preparedness and Surveillance Project launched in Ondo State where CliniPAK 360 is currently being used.



Improved Patient Care

The program has improved patient care and clinician efficacy at the facility level by reducing the hours spent on report compilation and verification per quarter by 80%, from 120 hours to 24 hours on average across all 140 facilities. This time savings allows clinicians to dedicate more time to serving patients.



Insights Generation:

The program has allowed extensive data analysis to determine performance drivers. Insights, contained in quarterly reports for each State, will inform important decisions, the impact of which will be continually tracked and reported.



Sustainability:

As of May 2017, Ondo State Government has taken over management responsibility and fully self-funded the scale up of the program statewide; several other States are currently evaluating the same measure of sustainable action.

Program Stakeholders



VECNA CARES

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¹Trends in Maternal Mortality: 1990-2010. Estimates Developed by WHO, UNICEF, UNFPA and the World Bank. Accessed April 2017. <http://data.worldbank.org/indicator/SH.STA.MMRT>

²World Health Organization Maternal Mortality Fact Sheet. Accessed April 2017. <http://www.who.int/mediacentre/fact-sheets/fs348/en/>

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