By James Rwema;

The new Rapid SMS system in Rwanda is being used to track all pregnant women through monitoring antenatal care and help to identify and refer to women at risk in some remote rural areas in this East African nation.

Before the advent of this solution a decade ago, the system was initially used to fight stunting and malnutrition among children in their first 1,000 days before it was fully expanded since last year in monitoring maternal, newborn and child health through two years of age.

RapidSMS system is helping mothers and newborns get life-saving care in Rwanda

Since then Geraldine Uwamurera, a Community Health Worker (CHW) from Nyaruguru in Southern Rwanda used SMS only to reach family and friends, but little did she know that the same texting application would save lives of many mothers.

Uwamurera is part of the 45,000 CHWs across Rwanda who are operating at the village level to provide the first line of health service delivery where their role has greatly contributed toward tracking maternal and under five children health to prevent unnecessary deaths.

45,000 Community Health Workers across Rwanda are contributing toward reducing maternal and child mortality rates with Rapid SMS

Interactive real time communication

The mobile phone (mHealth) monitoring system is one of the innovations that is currently boosting smart health in Rwanda where Community Health Workers (CHW) like Uwamurera are relying on this solution to report on antenatal care visits, pregnant women with risks, report death of a child or a mother, and a simple text will avail an ambulance even in the remotest parts of Rwanda.

CHWs work in tandem with over 500 health centers in hard-to-reach communities across Rwanda. The health centers provide the same range of services as CHWs, as well as consultation with nurses, hospitalization, pharmacy services, evacuation, and arrangements of hospital visits, deliveries and caesarean sections.

CHWs who follow up pairs of mother-infant in their villages, were trained and equipped with mobile phones to allow interactive real time two-way communication with the health ambulance system.

Using mobile phones provided as part of the RapidSMS program, CHWs record new pregnancies including mother/infant identification and the first day of the last menstrual period into the RapidSMS system.

“We also record danger signs and symptoms suggestive of potential life-threatening event that warrant urgent attention,” Uwamurera said in an interview.

Through a message sent to a code, 3103, Community Health Workers (CHW) are able to notify the nearest health centre about a risky situation of an expectant mother.

While these mobile phones are being used to benefit maternal health services, Dr David Ndayishimiye, head of rapid SMS project at the ministry of Health explains to ‘Rwanda Dispatch that prior to these innovations, a lot of parents were having little or no knowledge at all about their pregnancies and their kids.

“Thanks to these solutions, the rate of maternal deaths and other unexpected deaths caused by avoidable conditions have been reduced significantly,” Dr Ndayishimiye said noting that with this system, it suffices to send an SMS or a simple beep, and all the actors involved in saving lives are mobilized.

Replicability and scalability

The RapidSMS technology receives short messages (sms) from CHWs and sends a short feedback message to a centralized computer which is able to monitor incoming information about emergencies and high risk cases in real time, and provides a reminder when follow up care is required.

The system allows a two-way flow of information. A registered CHW creates and send an SMS to the system using a short code telephone number. The message received by the server will immediately trigger a specific feedback to the sender. For each registered pregnancy, the system will send automated reminders of forthcoming antenatal care visit and due date of delivery to the CHWs.

In addition, end users never need a specific device or to install any software on their

phone. Rapid SMS is focused on commonly available, existing infrastructure to allow for replicability and scalability.

According to Dr Ndayishimiye, the application is a free and open source platform for mobile system built in Python and Django, where it was customized to track key maternal, newborn and child health indicators across all villages in Rwanda.

Whereas the platform's main solution aims to facilitate communication between CHWs and the ambulance system, health facilities staff, and the central government, some experts in public health sectors note that yet the system contributed in increasing the number of women who are delivering at a healthcare facility, there are still some problems that are not addressed by the RapidSMS.

According to Ruto Hinda, one of the senior researchers at the e-Health program at the School of public Health of the University of Rwanda, lack of trainings, lack of motivation fee among CHWs, remoteness and network coverage by the smart phones used in visiting pregnant women remains one of the biggest challenges with Rapid SMS reporting on child and maternal health in Rwanda.

Dealing with cases of diseases

Despite these limitations, however, Rwandan health officials are convinced that the adoption of the technology is significantly contributing to identify and refer to women at risk in remote rural zones and prompt death audit.

Rwanda has employed innovative slutions to improve reproductive, maternal, newborn, health.

In addition health officials said that the new system helps in decreasing transit time from arrival to hospital to entering theatres, thus, it reduces the rate of maternal deaths and other unexpected deaths caused by avoidable conditions.

Thanks to the achievements made through this innovation, the Rwanda Biomedical Center (RBC) is currently exploring the use of the same solutions in dealing with various cases such as malaria, diarrhea and pneumonia as another section of diseases that are slowly rising drastically in the country. (End item)