***A Digital Labour and Delivery Solution (DLDS) for improved service provision***

**Sarah Kedenge1, Elizabeth Mwashuma1, Caroline Gitonga1, Alice Tarus1, Albert Orwa1, Caroline Kyalo1, Eddine Sarroukh1.**

**1Philips Research Africa**

Presenting author: Sarah Kedenge; sarah.kedenge@philips.com

**Background**

The World Health Organization (WHO) advocates the partograph as the single most useful tool for monitoring labour and reducing labour complications. Despite its effectiveness, sub-optimal utilization and poor recording of partograph parameters during labour are a matter of great concern for the quality of intrapartum care worldwide. The digital labour and delivery solution (DLDS) is a tablet-based solution envisaged to make monitoring of labour and delivery more systematic and efficient as well as provide a tool for easy communication between health care providers in maternity within and between health facilities. The primary aim of the study was to test the applicability, benefits, and limitations of the tablet-based DLDS in a low-resource healthcare setting in Kenya as efforts are made to achieve universal health coverage with increased access to quality services.

**Methodology**

The study was designed as an open-label exploration study, divided into two phases. The first phase involved the assessment of the healthcare professionals’ use of the partograph as per routine practice. The second phase involved both the use of the tablet-based solution and paper partographs. The study was implemented in two sites within Kiambu County, namely: Githurai Langata Health Center and Ruiru Sub-County Hospital.

.

**Results**

During phase one, a total of 22 midwives were trained. The one-day included a refresher on partograph use and potential gaps and training on research ethics. The midwives consented 82 pregnant women. From the partograph analysis, majority of the parameters were documented with only few with minimal or no entry. During phase two, 15 midwives from phase one were trained on the application and provided a user guide for reference. The midwives entered data for 75 pregnant women into the application. Their feedback was mainly positive with a large majority stating the partograph, history taking and discharge summaries as the most exciting features. The application scored 65% on the system usability scale, highlighting the need for some feature changes. The integration of the planned referral module was highlighted as key.

**Conclusions**

The findings from this study demonstrate the need for continued support and training in ensuring 100% completeness of partograph parameters. Feedback on the application demonstrated that with some modifications, the application provides a great opportunity to improve the efficiency and effectiveness in the management of patients during labour and delivery.