

GRAVID: An Indigenous m-Health Tool for Smart & Connected Communities

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Abstract

The rapid proliferation and ubiquitous nature of mobile technology within the emerging Internet of Things (IoT) driven smart and connected communities (SCC) paradigm promises a unified framework for tackling community-based health challenges. Maternal and child mortality remains a major public health problem in sub-Saharan Africa, with one of its leading cause being inadequate provision of nutrients (or under-nutrition). This paper presents an indigenous mobile health (or mHealth) solution, named *GRAVID*, to address the gap of unavailability of context-based information on nutrition, medical, drug and substance use appropriate to meet identified needs of gravid women and subsequently their babies (for 5 years); within the African context. *GRAVID* also provides a monitoring tool for healthcare givers to track the progress of the gravid woman they oversee. The project was implemented with Android software development kit (SDK) for cost-effective development and widespread community coverage. It is intended that this solution will also provide a source of collecting data to update necessary information as well as addressing related community-based issues to reduce the maternal and child mortality rates.

Keywords— Maternal and Child health, Nutrition, Mobile Health (or mHealth), Smart & Connected Communities