

Mr. Yugi: mobile health with large potential in South Sudan

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Mr. James Yugi (*Figure 1*) is a nurse by profession with a wide range work experience for over 12 years in the private sector that includes humanitarian work, lecturing, clinical instruction and clinical work in hospitals.

He holds a Bachelor of Science Degree in Nursing and Master of Science Degree in Nursing, specializing in Community Health, both from the University of Eastern Africa, Baraton (UEAB) in Kenya. Upon completion, Mr. Yugi worked as a clinical instructor and lecturer in the Department of Nursing at the University.

For 4 years, he worked with the Adventist Development and Relief Agency (ADRA) in South Sudan to implement expanded program on immunization (EPI) and Maternal and Child Health (MCH) services while at the same time conducting community health workers' training program that trained community health workers (CHWs), traditional birth attendants (TBAs) and vaccinators. Later he coordinated field level activities that involved liaison with the government and other organizations, e.g., UNCHR to repatriate and integrate South Sudanese refugees back to South Sudan.

Mr. Yugi has been working for the American Refugee Committee (ARC) international in various capacities since 2011. He has been managing an integrated HIV and GBV program, implementation of Primary Health Care (PHC) Programs, Secondary Health Care Programs, Nutrition programs, expanded program on immunization (EPI) and Maternal and Child Health (MCH) services. The health programs engage the community through peer educators, community health volunteers and home health promoters to improve health status of community members.

He is currently the senior health coordinator overseeing the implementation of all country wide health programs the American Refugee Committee (ARC) is implementing in South Sudan and at the same time building the capacity of the program staff. As the senior health coordinator, he has ensured continued funding and growth of the health program portfolio from 3 to 6 health projects.

With a reporting challenge faced in many parts of South Sudan that included delay in timely reporting, he initiated



Figure 1 Mr. James Yugi.

the use of short text message app using simple mobile phones to send reports from health facilities to the relevant health department for timely action. This was the first of its kind in South Sudan.

mHealth: *What's the current development of mobile health in South Sudan? For example, how many hospitals or patients use mobile health such as apps, SMS or electronic health record to monitor health data?*

Mr. Yugi: Mobile health is still a new concept in South Sudan. There are about 61 health facilities using mobile health apps in South Sudan. These are the health facilities reporting weekly IDSR to the Counties. This was an initiative of the American Refugee Committee, funded from the Health Pooled Fund.

mHealth: *In your opinion, what kind of mobile health technology will have the largest potential for health management in South Sudan? Why?*

Mr. Yugi: Use of mobile phones to submit stock level reports for essential drugs is the current largest potential for

health management in South Sudan. South Sudan has been experiencing stock outs in essential drugs, and this has been partly attributed to poor reporting on drug stock levels from health facilities.

mHealth: What further efforts can be made to improve health quality in rural South Sudan in the near future?

Mr. Yugi: Firstly, roll out of the IDSR mHealth application to other counties with mobile phone networks. And secondly, use of mobile phones to submit reports for essential drugs.

mHealth: As the Senior Health Coordinator of American Refugee Committee South Sudan, do you and your team have any new and exciting health projects in plan or underway?

Mr. Yugi: We shall be writing proposals later this year for our new health program. We plan to roll out the use of mobile phones to send IDSR reports into a fourth County in South Sudan. We also plan to pilot use of mobile phones to transmit reports on the stock levels for essential drugs.

mHealth: How did you become interested in the field of mobile health? Could you tell us the story?

Mr. Yugi: In South Sudan, Health facilities submit weekly Integrated Disease Surveillance and Response (IDSR) reports every Monday to the County Health Departments (CHDs). CHDs relay the same information to the State Ministry of Health (SMOH) who subsequently submit to the national Ministry of Health. IDSR reporting is a system which enables more frequent monitoring of cases of a limited range of diseases. The reports are submitted weekly and should reach the CHD by Monday morning to

be relayed to the SMOH on the same day.

IDSR reports are usually delayed due to distances health workers need to cover to reach the CHD. Some health workers ride bikes (or pay from their own pockets) to take reports to the CHD. Some reports are also not legible. The reports are also submitted by phone calls which are expensive. Patients miss appropriate care when health workers take the reports. CHD staff may make typing or mathematical errors or take long while making entries into the District Health Information System (DHIS) software.

The developed system enables health workers to use their mobile phones to send IDSR reports in the form of SMS to CHD, which can then be imported into the already existing DHIS software.

To ensure that the app was properly working, ARC first tested the app in Kapoeta South County.

One main success is that the staff at the CHD and the facilities found the innovation interesting. They found it easy to use and for the first time, Kapoeta South, for example, was able to collect their IDSR reports from all the facilities by 10:30AM on Monday. The reports were submitted by 1PM the same day which is approximately 20 h before the deadline. This was a great improvement.

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

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