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Title: Leveraging E-health for Health System Strengthening to improve Health Outcomes in Ghana

Introduction

The International Conference on Primary Health Care and Health Systems in Africa meeting in Ouagadougou, Burkina Faso, from 28 to 30 April 2008, reaffirmed the need to strengthen health systems to achieve better health outcomes. The World Health Assembly Resolution has also asserted that integration of public health care systems is essential for achievement of Sustainable Development Goal (SDG) as well as Universal Health Coverage (UHC).

Ghana, like most developing countries will most likely find it difficult to achieve all the health targets of the SDGs by the year 2030 due to health system challenges. E-health holds a lot of promise of help countries like Ghana to make the big strides that are needed for improving the health of our communities, especially those living in rural areas. E-health has the potential of strengthen a weak health system to make it adaptable to meet the needs of our population. In this article, we review the strides taken by Ghana in embracing eHealth solutions through strengthening governance and institutional capacity, which has accorded the country an opportunity to advance the UHC agenda.

Leadership and governance

Ghana has developed a National E-Health Strategy based on the recommendations of the Annual Ministerial Review of the United Nations Economic and Social Council in June 2009. The development of the national E-Health strategy constituted the first stage of a long-term undertaking aimed at raising the levels of performance of the health sector in all areas of service delivery. The strategy provides a framework for engaging consumers of health services and raising the overall health status of the population. The Data Protection Act and Electronic Transaction Act provide the broad legal environment for the practice of E-Health in Ghana.

Health workforce

In ensuring adequate and skilled human resource capacity, the Health Sector in Ghana has a training school that trains health information officers placed in the facilities and at district level. They are crucial in the deployment of E-Health solutions in the country, are comparatively younger, easy to train and can adapt and adopt new E-health interventions.

Facility based- clinical care services

To support clinical service delivery in Ghana, hospital information systems (HIS) development and deployment

has been pursued. Using the model of public private partnerships, vendors have been engaged to provide solutions for Hospitals. All these HIS are required to generate monthly summary statistical reports for the national aggregate platform DHIMS2.

Digital X-rays and automated laboratory analysers are available in key hospitals. The X-rays and laboratory results are sent to a remote site for a specialist to read and report back to the facility. To improve Early Infant Diagnosis for HIV, Dried Blood Samples (DBS) taken from babies born to HIV positive mothers are sent to the laboratory. The results from the laboratory are entered into an electronic system and the midwife then uses a mobile device to get access to the results from the laboratory.

Facilitating access to clinical care services and referral

Inequalities in access to care is a real concern in Ghana and the health sector has leverage Telemedicine to facilitate access and improve referral. National Identification of all citizens in Ghana has enabled the use of a unique identification number to track and offer service to clients. The health sector in Ghana has deployed the dhis2 eTracker to help track all registered pregnant women, children, and HIV and TB clients to ensure that they receive scheduled care. The adolescent health programme uses social media platforms used by the adolescents to reach them with health programmes.

Community Ownership and Participation -CHPS

To achieve the SDGs, promoting close-to-client community service delivery approaches is key. Community service delivery thrives on Community Ownership and Participation. Ghana is using the Community-based Health Planning and Services (CHPS) to promote community access to health service. Trained nurses are assigned to communities and supported by community health volunteers (CHV). The CHV support the work of the nurse through mobilization, providing health information and supporting disease surveillance. Due to its utility in these deprived environments and rugged terrains, the mHealth, a sub-component of E-Health has been used extensively to support community service delivery.

Medical Products, Vaccines and Technology

Frequent stock-outs of essential medicines are common mainly due to lack of stock data to guide decisions on procurement and supply. The Logistic Management Information System has been deployed at all levels to cover all the Regional Medical Stores in the country and is linked to all the health facilities to ensure visibility of stock out data by all managers at all levels.

Sustainable Financing

The Ghana National Health Insurance Scheme has improved financial access to health care. Members of the scheme include both the formal and informal sector. To reduce fraud and ensure transparency in the submission of claims by service providers, the scheme has leveraged the technology of biometric registration to ensure that clients are uniquely identified. A transaction code is generated for each verified patient that is linked to the insurance number and this code is used by the health facilities to submit their claims for reimbursement.

Health Information and Monitoring

Ghana has deployed the DHIS2 in all the 260 districts in the country. It is used to collect, collate, analyse and report routine health service data from public, private and faith-based facilities in the country. The African Development Bank in 2013 gave Ghana an award in facilitating health managers access data for decision making through use of the dhis2.

Conclusion

The Health Sector in Ghana has used various E-Health interventions to improve the health system and access to health services. Through the use of E-Health, some critical service delivery bottlenecks have been addressed. There is however need to strengthen the legal and policy environment to enable implementation of more recent advances in E-health to ensure that Ghana fully benefits from new innovations.