A FRAMEWORK FOR THE IMPLEMENTATION OF E-HEALTH PUBLIC HEALTHCARE FACILITIES IN KENYA

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ABSTRACT

While Institute of Medicine, challenges health organizations towards providing quality healthcare service delivery, the global health care systems all face similar challenges associated with ever-increasing demands for services that far outstrips their capacities. The challenges facing the public healthcare sector in developing countries are mainly associated with weak healthcare systems. Weak and poor-quality health information systems contribute to failure of information flow across integrated health systems pathways. Use of electronic information systems facilitates effective communication; allow data management and effective tracking of resource use and health outcomes. It is agreeable that health information systems have immense benefits, yet their implementations vary greatly among different countries; hence benefits to beneficiary translational gap. Further, there is a growing need to strengthen this component of the health systems. However, the adoption, diffusion, acceptance and utilization of this innovation in the healthcare context are still poorly understood. This complicates development, implementation and assessment of system strengthening intervention policies and strategies. Using an analytical survey approach, this study examined the implementation of e-health, the interactions between implementation strategies and the complex healthcare setting in which they are being used, in Kenya context (a developing country). Qualitative and quantitative data were collected from a sample of 121 eHealth users from three healthcare facilities within Western Kenya region which had been purposively selected based on set criteria to form the study sites. The three study sites differed in respect of; their geographical location/coverage and economic endowment, levels of utilization and normalization of e-Health services, domains of e-Health used and service contexts. Descriptive, inferential and exploratory factor analysis of quantitative data was accomplished using SPSS v.21; while structural equation modeling was tested using WarpPLS v5.0. Thematic analysis of qualitative data was done manually. It was observed that health information system at the three study sites were predominantly manual paper-based, with poorly developed infrastructure for e-Health. The modal age-group was 36-45 years, the majority (38%) being nurses? The study revealed that the facilities understudy were all categorized in category 1, based on WHO-ITU mode of categorization albeit at different levels; one site was characterized by experimentation and early adoption where both the ICT and enabling environments are at an early stage; while the two other sites were categorized as experiencing emerging !CT environment and emerging enabling environment for e-health which has experimentation and early adoption, where the setup is mainly characterized by strengthening the infrastructure and making case fore-health. One study site was also noted as experiencing difficulties with the sustainability of the system due to funding challenges. The key determinants of e-Health implementation are diverse; however,

the study revealed that they can be broadly categorized into five distinct groups, namely: environmental factors, organizational factors, social factors, technology availability and innovation factors. On mechanisms in the implementation of e-Health systems, supportive structures and strategies are essential. The study has revealed that there are still environmental, organizational, technological and social challenges for diffusion of e-Health innovation. An implementation framework for mitigation efforts has been proposed. The implementation framework was informed by a conceptual framework which was tested and validated by the use of a structural equation model. The conceptual framework also informed the improved unified theoretical framework developed from two other theoretical frameworks and a model.