Identifying the Need for m-health: A Community Capability Approach

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Background and Purpose: Mobile-Health, or m-health, is regarded as an enabler for rural communities to access medical services through mobile devices. Research points to the fact that many of these initiatives fail in rural communities, not only to meet the expectations of the communities, but also to bring about any development. The traditional view of development utilizes tangible indicators such as the gross domestic product of a region to assess development. Within the African context, however, for an initiative to be deemed successful, it must provide the answer to a very fundamental question: "Have our need(s) been met?" A positive response to an intervention in this respect can lead to development.

We propose an approach to identify m-health needs within a rural community based on an amendment of Sen's Capability Approach (CA) paradigm to include *community* capabilities, as communities as entities play such an important role within the African landscape. Sen defines development as human development and capabilities as being what people are effectively able to do and to be. Sen argues that the assessment of capabilities should focus on what people are able to do and be by removing obstacles from their lives. We applied our approach within a rural South African community.

Methods: Our proposed framework views community health-needs as *capability-deprivation* that can be expressed as either a lack of an opportunity itself or a lack of the means to take advantage of an opportunity.

The developed framework requires the investigation of both "the community" and "m-health" as two entities that together define the community health-capability. The community entity consists of *current health-capabilities and health-goals*; what the prevalent *technology within the community* delineated to health is; and finally the community's *potential health-capabilities*. Potential capabilities can be defined as the projected outcomes in terms of capability development that the introduction of the relevant intervention could produce. The community entity elements are influenced by external factors (not explained here for purposes of brevity).

The m-health entity on the other hand comprises of what *outcomes* m-health can enable; what affordable, familiar technology is *prevalent* as a delivery mechanism for m-health; as well as what intended and unintended *potential capability development* a particular m-health intervention can have. Predetermined characteristics and the identified pitfalls of m-health influence the subsequent elements respectively.

Results: The community identified very little current health-capabilities. This capability deprivation stems not only from the lack of access to health related services in the area, but also from the inability to make use of these services when they are available due to transport-deprivation. The community, in terms of its capability set, can make use of- and has access to mobile phone technology.

One potential capability was identified as "being healthier"; a result of regular access to health-related services. M-health has the ability to address some of the identified health-needs such as regular access to certain health-information, health-guidance or streaming video consultations. The smart-phone was

identified as the affordable technology that fulfils the predetermined characteristics of an m-health delivery mechanism.

Conclusions: The proposed framework addresses community health-needs analysis with regard to m-health from a community-capabilities perspective. This first iteration of the framework performed adequately and showed promise as a reliable working part of a larger Community Capability Approach (CCA) framework to attain human development as a result of an m-health intervention.

Keywords: M-Health, Capability Approach, Needs Analysis, Community Capabilit ies, Human Development