Community Health Workers (CHWs) as Innovators:
Insights from a Tele-Education Pilot for CHWs in Detroit, Michigan

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ABSTRACT

Community health workers (CHWs) have a longstanding role in improving the health and well-being of underserved populations in resource-limited settings. CHWs are trusted in the communities they serve and are often able to see through solutions on community challenges that outside persons cannot. Notwithstanding, such solutions often must be low-cost, easily implementable, and permit knowledge gaps among CHWs to be filled via appropriate training. In this sense, use of cost-effective information technology (IT) solutions can be key to increasing access to knowledge for these community agents. This paper highlights insights gleaned from a pilot study performed in Detroit, Michigan with a group of CHWs in basic grant-writing training via an e-platform, the Community Health Innovator Program (CHIP). The results are discussed within the context of learning theory. It is concluded that e-platforms are necessary for CHWs to leverage knowledge from multiple sources in an adaptive environment towards addressing ever-evolving global health challenges.

KEYWORDS
Community Health Innovator Program (CHIP), Community Health Workers (CHWs), E-Platform, Global Health, Information Technology (IT), Learning Theory

1. INTRODUCTION

Increasingly, eHealth/mHealth applications (Braun et al., 2013; Agarwal et al., 2015) have evolved to change the daily practices of community health workers (CHWs) worldwide in areas ranging from child and maternal health (Little et al., 2013), tuberculosis (TB) and HIV/AIDS treatment (Odendaal and Lewin, 2014), as well as cardiovascular disease (Surka et al., 2014). CHWs play a longstanding role in resource-limited settings as they provide an important link between healthcare providers and the needs of the community. Results from different CHW programs around the world have shown an increase in (a) the number of patients counseled; (b) patient enrollment in health programs; and (c) the number of visits that patients make (Vaughan et al., 2015). Even so, convenient access to information technology (IT) solutions is rapidly being realized over the years, thereby creating new opportunities to improve the necessary low-cost, high impact outcomes of previous CHW-led solutions.

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CHWs are motivated to serve their communities to the best of their abilities. They are oftentimes chosen to be the community liaisons as they provide an important link between communities and resources (Ludwick et al., 2014; Rahman et al., 2010; Mpembeni et al., 2015). In almost all settings, the CHWs are held in high esteem and regarded as highly trusted community leaders for serving in their communities (Kowitt et al., 2015; Mishra, 2014). Despite these views, most CHWs do not receive adequate training on non-health related topics due to limited funding, time, and resources; oftentimes, in many underserved communities, health outcomes are defined, not by CHWs, but by external, non-community members and organizations (Merzel and D’Afflitti, 2003; Cheadle et al., 1997). This, in turn, makes improving health outcomes difficult when the solution to the problem is not owned or innovated by the community itself (Chambers, 1994). Ongoing conversations with global community stakeholders by the current project team reveal the need for additional training for CHWs. This idea is at the core of the Community Health Innovator Program (CHIP), a program to empower CHWs through IT solutions.

This paper highlights a piloted model of CHIP aimed at applying IT strategies for improved outcomes in global health. Section 2 overviews the basis of CHIP and its broader use for CHWs within a knowledge-sharing model. Section 3 explores the idea of “reverse innovation” (RI) and its relationship to interdisciplinary CHW-mentor interactions. The e-platform designed to support the CHIP is then presented in Section 4. Section 5 describes the pilot and Section 6 summarizes the findings. Section 7 reviews insights gleaned through the lens of RI and learning theories to develop strategies for future CHIP training. Section 8 closes the paper with some concluding remarks, specifically projecting how the current work on CHIP may be extended into the future.

2. BACKGROUND

Given the need to empower CHWs, the authors and other stakeholders formed a multidisciplinary group (heretofore known as the “CHIP team”) comprising experts in public health, ITs, community health, social sciences, business management, and governmental affairs. The CHIP team reviewed the extant literature and conducted focus groups along with other types of communications with CHWs and other stakeholders.

2.1. CHWs as Innovators

Several key themes emerged from dialogues and interactions of the CHIP team members with the relevant stakeholders. First, a need for multidisciplinary training among CHWs was identified. Such training will inspire CHWs to innovate and implement broader health solutions in their communities. In particular, a desire for value-added professional development for CHWs in several areas such as business case analysis, project management and grant-writing abilities was noted (Li et al., 2014; Wennerstrom et al., 2014; Zhang et al., 2016). Second, due to limited time, funding, and resources, in-person training for CHWs in international settings poses a major challenge; consequently, an e-platform provides a convenient solution to support knowledge sharing and training activities. Importantly, virtual training has been shown to result in operational efficiencies and cost savings (Sissine et al., 2014). Finally, as indicated, communities are more receptive to health behavior interventions when they are implemented and owned by the community itself (Chambers, 1994).

Utilizing a framework built on interconnectivity, our proposed model of CHIP adopts an e-platform with its ever-increasing spread of knowledge to enable community actors to originate ideas that will have the potential to transform not only their own communities, but other communities globally. The CHIP plans to help nurture ideas that can be adapted to flourish in other similar settings. In other words, CHWs as “Innovators” will work with peers residing in different regions to export their techniques and programs to other CHWs who face similar problems in their community. The final stage of the CHIP curriculum will involve connecting the Innovator, the Mentor, and Innovators from additional sites so as to find clever ways of addressing unique as well as more common health challenges with low-cost, implementable solutions. Such a knowledge exchange can occur in multiple