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Improving Access to Quality Diagnostic Tools in Low and Middle Income Countries (LMICs) Through Social Innovation-Lessons Learnt

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Introduction

In vitro diagnostics are essential for the successful delivery of healthcare; conducting routine public health surveillance; rapid detection and containment of infectious diseases [1], responding to health emergencies, and dealing with the growing problem of antimicrobial resistance, and detecting and managing the communicable and rapidly growing problem of non-communicable diseases in Low- and Middle-Income Countries (LMICs) [2]. However, there is still a lack of effective tools that are affordable and appropriate for resource constraint settings and even if suitable diagnostic tests are available, they are often not accessible to poor populations [3]. One approach to improve access to products or services in LMICs is the use of social innovation [4]. While we acknowledge that multiple interpretations and definitions exist, we define social innovation as an approach to the implementation of healthcare delivery interventions by cross sectoral actors in response to needs expressed by the community. Crucially, it empowers people at the local level.

Quality Diagnostics

To promote how to improve access to quality diagnostics in LMICs using social innovation in LMICs settings, a workshop was held in April 2016 in Geneva, Switzerland during the Geneva Health Forum 2016 (GHF). The aims of the workshop were [1] to learn from examples of the social innovators, and to see how they can be applied to diagnostics; [2] to identify key factors of successful social innovations and how to scale up these models; [3] to identify the obstacles and limitations and how they can be addressed; and [4] promote new collaborations and engage academia in social innovations.

Participants working with social innovations in their capacity participated in a workshop. Participants included social innovators and representatives from academia, international organizations and NGOs. The workshop consisted of 6 teleconferences over 6 months followed by a closed meeting and an open workshop along with the participants of the GHF.

Literature Review

Literature review was performed and the lessons learnt from social innovations were weighed up during the teleconferences to note key factors from the innovations. During the workshop at the GHF the social innovators participating in the workshop presented their work, the types of innovation models they use and the setbacks they have faced during the planning and implementation of their innovations. Four case studies working in different settings and following different models were presented. The four cases were: Operation ASHA-(INDIA), e-health for TB detection and drug compliance; Embryo (INDIA), local innovations such as a drug adherence monitoring system; Learner Treatment Kit (Malawi), detection and treatment of malaria in primary school children by teachers; and project HOPE (Peru), detection of cervical cancer by self-testing promoted by local volunteer women [5]. Four main learning outcomes were identified that form the pillars of the innovations: Feasibility, Replicability, Sustainability and Scalability.

It was noted that for social innovations to be feasible, leveraging of existing resources to delivery in hard-to-reach populations, using community members to implement the innovation and centering the innovation around end user needs are key. There were examples of innovation, which used integrated school-based health service delivery by teachers to provide malaria case management to school children, and women from the community trained to help women for cervical screening, as example of using community participation in social innovations.

For replicability, standard operating procedures (SOPs) allow the use of innovations in different settings and in this technology-driven world; technology is playing a significant role in social innovations. An example of the use of technology to track adherence to medicines or keeping record of the patients at the local level was presented.

Simple models and continuing market analysis are crucial for scalability of the innovations. As the innovations must have minimal costs per patient, government support, co-funding, and co-ownership with government buy in; resource pooling and allocation are identified

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as important factors in the sustainability of social innovations which demonstrates the role of the government as vital.

Conclusion

The conclusions of the workshop were that social innovation in diagnostics can be a solution to improve access to diagnostic tools and services for marginalized and hard-to-reach populations but the innovation should address unmet needs (cost/clinical) with context appropriateness. Support and involvement from the community and local governments for such initiatives are vital. Business models can be adapted for the social innovations. The innovations should be adapted to the region, affordable and acceptable to the culture. Finally, more research and seed funds are required to further advance the field of social innovation.

This workshop highlighted the features that make a social innovation successful. The findings of the workshop will be useful for other groups that advocate, fund, and develop social innovation initiatives to improve health care in low-resource settings. More information is available at [http://socialinnovationinhealth.org/].

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