

COMMENTARY

Scaling-up innovation as a means of tackling health inequalities

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Abstract

Issue. The introduction of inclusive healthcare innovations as a means of improving the welfare of marginalized groups is now being witnessed in developing countries as a crucial process of modernization and industrialization. In this respect, there has been much discussion regarding the most effective strategies of scaling up innovative healthcare interventions in these parts of the world.

Evidence. The topics of discussion have included accessibility and cost-effectiveness; sustainability; infrastructure to support implementation; political will; advocacy; strong leadership; tailoring the scaled-up approach to the local context; and various potential models of funding.

Implications. Given that policy advocacy plays a critical role in creating a favourable environment for inclusive healthcare innovations, intensive lobbying will be necessary as a means to achieve effective scaling-up in addition to tackling the respective development challenges more efficiently. With this in mind, funders will need to mobilize substantial investment for innovations that respond to the most pressing global public health issues.

The introduction of inclusive healthcare innovations in order to improve the welfare of excluded groups, such as rural inhabitants, marginalized groups and people from socio-economically disadvantaged backgrounds, is now being witnessed in developing countries as a crucial process of modernization and industrialization [1]. For instance, the sanitary napkin making machine operating in India produces affordable sanitary pads for poor women [2]. Not only does this innovation improve women's health by reducing the level of reproductive tract infections but it also provides them with economic activity, thus empowering them out of poverty. Unfortunately, other pilot projects that have been launched in developing countries and which have been able to demonstrate impressive success often remain confined to the original target areas. Because factors such as poor infrastructure and limited finance resources remain pertinent issues of concern in developing countries, "scaling-up" innovations to achieve broad impact at the national level remains a significant challenge in these regions of the world.

Scaling-up focuses on taking workable healthcare interventions, programs or policies shown to be efficacious on a small scale and expanding, adapting, and sustaining them in different ways over time for greater development impact. As opposed to routine adoption,

Key words

- developing countries
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- innovation
- policy
- public health
- scaling-up

scaling-up involves an explicit intent to expand the reach of an intervention to new settings or target groups and is accompanied by systematic strategy to achieve this objective [3, 4]. Although the body of global health literature has been giving increasing attention to the issue of how best to scale-up health interventions [3, 5], unfortunately, few studies exist that provide methods and frameworks for the effective scale-up of public health interventions [6, 7].

Several frameworks have been described in the literature for scaling health interventions [3, 5, 8-12]. Despite the majority of these frameworks having specifically been developed for scaling-up in low- and middle-income countries, they are generally applicable to scaling-up public health action in high-income countries as they have a similar focus on improving health status through action directed toward the health of an entire population, or sub-population, rather than individuals [7]. For example, according to the ExpandNet/World Health Organization (WHO) framework, effective scaling-up is guided by four key factors: systems thinking; a focus on sustainability; the need to determine scalability; and respect for gender, equity and human rights principles [3]. Other factors which have been shown to increase the odds of successful scale-up include tailoring the scale-up approach to the local con-

text [3-5, 13], keeping the intervention simple [5], active engagement of a range of implementers and of the target community [3, 14-16] in addition to including strong leadership and governance [5, 14-17].

Clarifying what the specific intervention achieves is also of key importance. Towards this end, the "hardware" (*i.e.* technologies and products) and "software" components (*i.e.* training, supervision and other managerial operations) of the intervention or program should be clearly defined. Emphasis also ought to be placed on the policy context and political system of the target region/country such as the availability of donor support, the socioeconomic and cultural context in addition to the people's needs and rights [18]. As exemplified by the successful scale-up efforts in tackling the HIV/AIDS and tuberculosis epidemics in Uganda [19] and South Africa [19], an approach that promotes data collection, evaluation of data, as well as a rapid and consistent dissemination of results [20] can bring forth fruitful rewards. The adoption of such an approach could very well help perpetuate the building of operational research systems that serve to link the respective project to the policy development process.

As an example of successful innovation in the developing world, mobile phones have proven a valuable asset [21]. Indeed, the International Telecommunication Union (ITU) asserts that of the current 7 billion mobile cellular subscriptions globally, 5.4 billion have been reported to be from developing countries (*i.e.* 78% of global subscriptions) [22]. Perhaps more impressive are the recent data which also stem from the ITU stating that of the 3.2 billion people worldwide who are using the internet, 2 billion are from developing countries [23].

With increasing dissemination of information and communications technology in developing countries a variety of innovative solutions which broaden the scope for development-policy action have emerged. Examples are found in the fields of transparency and citizen participation (E-governance), education (E-learning), finance (E-finance) and rural health care (E-health). Given their high impact, yet low-tech/cost approaches and penetration, mobile technologies have proven an invaluable source for innovation in the realm of public health via mHealth technologies [21]. For instance, it has been reported that mobile phones can be useful for cervical cancer [24] prevention and Ebola [25] monitoring. mHealth strategies do, however, have their limitations. As a relatively new concept, their effectiveness is not fully known. Further, mobile phone coverage is not universally available within countries.

In a society where people are living longer, non-communicable diseases are becoming an increasingly important aspect of public health concern which require

urgent solutions that have wide reach, strong potential for scale-up and the ability to extend existing health systems in the community. The economic burden from age related conditions such as dementia is significant, and threatens the sustainability of health systems in high-income countries and the development of health systems in low and middle-income countries [26]. Indeed, the recent World Alzheimer Report 2015 placed the current annual societal and economic cost of dementia at US \$818 billion, and it is expected to become a trillion dollar disease in just three years' time [27]. Despite the training of healthcare workers to use basic treatment guidelines (*i.e.* WHO mental health Gap Action Programme [28]) for dementia, little research is carried out on scaling-up of cost-effective care strategies and integrated models of care. Towards this end, the Home Care Program was conceived as an innovative solution to close the treatment gap for families of people with dementia in India [29]. This program evaluates the benefits of a low-cost, home-based intervention aimed at supporting families affected by dementia. In view of the lack of specialists to deal with dementia, lay health workers are trained to provide home-based care for people with dementia under the supervision of a psychiatrist. Not only has this innovative healthcare intervention proven effective in improving the level of general health and in reducing distress caused by behavioural problems of dementia in the caregivers, but it also resulted in a reduction in the total number of deaths in people with dementia in the intervention arm [29].

The developments we are currently witnessing could very well represent the harbinger of revolution in which developing countries emerge as successful medical innovators in their own right, given their know-how and understanding for sustainable inclusive innovation. Because policy advocacy plays a critical role in creating a favorable environment for inclusive innovations, intensive lobbying will be necessary as a means to achieve effective scaling-up in addition to tackling the respective development challenges more efficiently. Against this background, funders will need to mobilize substantial investment for innovations that respond to the most pressing global public health issues. The challenge will however be to ensure that funding streams for innovation are sustained over time.

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