



A new era for community health in countries of low and middle income?

It is predicted that by 2030 there will be a worldwide shortage of over 14 million health workers.¹ To help to address this pressing problem, the World Economic Forum taking place in Davos, Switzerland, saw the launch of a new 4-year US\$100 million fund to support two non-governmental organisations, Last Mile Health and Living Goods, to train 50 000 community health workers (CHWs) in six countries.² The funding is contingent on both organisations raising \$50 million, which will then be matched by organisations and individuals including UBS, Richard Branson, Jeff Skoll, the ELMA foundation, and Chris Hahn of the Children's Investment Fund Foundation. This is a potentially game-changing development for the sector.

The project has two core components. The first is the use of mobile technologies for training, decision support, and data collection (known as mHealth).³ The partnership will continue to use Living Goods' SmartHealth App and a "new digital education solution" from Digital Campus, working in collaboration with Last Mile Health. This essentially presents videos and quizzes to CHWs on key topics such as pneumonia and malaria recognition, treatment, and prevention. The second is the social entrepreneurship model developed by Living Goods, whereby CHWs sell drugs and other health treatments such as oral rehydration solutions and soaps at a discounted price. They describe this work as creating "super scalable networks of 'Avon-like' health entrepreneurs".⁴

Various organisations training CHWs, including Last Mile Health and Partners In Health, have a tradition of designing programmes that take a "preferential

option for the poor",⁵ meaning they aim to provide the best care possible to marginalised poor people and often go to great lengths and expense to do so. This approach seems to contrast with organisations, such as Living Goods, which pursue more utilitarian strategies to train CHWs in lower-middle-income countries. This, alongside the ambitious programme of work that the partnership is seeking to achieve, raises several fundamental challenges.

The first challenge is to balance the funders' requirement for cost-effectiveness with the health-care needs of poor people. The role of private equity in public health is ethically complex and Kim and co-workers⁶ have cautioned against using cost-effectiveness as the main metric by which to judge global health programmes, arguing instead for a "broader normative framework for global health delivery".

The second challenge is to make digital education in mHealth a success. To do so, the complexities of the relationship between pedagogy and technology design and implementation must be addressed.⁷ More robust evidence on how mobile technology can support reflection, regular supervision, mentoring, and feedback is also required. Simplistic approaches that rely on exposure to information as a proxy for education should be avoided, particularly for CHWs dealing with the complex realities of caring for the most marginalised groups.

The third challenge is that of rapid scale-up. Frameworks have been developed that could help to identify approaches that are unlikely to be sustainable, achievable at scale, or contribute to health-system strengthening.⁸ This will ensure that appropriate attention is given to the dynamic interactions and complex social systems in which mHealth is being implemented.

The fourth challenge is more complex. As CHWs in the Living Goods

model are recompensed on the basis of the amount they sell, there could be a possibility of overtreatment.⁹ This could pose ethical concerns for CHWs: as they become better trained and their decision-making process improves, they could face having to choose between what is profitable for them and what is best for patient health. Training on how to negotiate these tensions for 50 000 CHWs will be required.

The fifth challenge relates to on-the-ground implementation. The CHWs in the proposed programme will probably have more training and can distribute drugs, unlike government-trained CHWs. This can leave the other active CHWs feeling demotivated and neglected.¹⁰ The potential for segregation to occur must be minimised.

In conclusion, although we welcome the positive potential of this initiative, we urge caution in its implementation. Work to fundamentally tackle the five challenges will be difficult, but it is needed to ensure health systems are strengthened through this new private-philanthropic partnership.

We declare no competing interests.

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**Niall Winters, James O'Donovan, Anne Geniets*
niall.winters@education.ox.ac.uk

University of Oxford, Department of Education, Learning and New Technologies Research Group, Oxford OX2 6PY, UK (NW, JO, AG)

- 1 WHO. Global strategy on human resources for health: workforce 2030. 2016. <http://apps.who.int/iris/bitstream/10665/250368/1/9789241511131-eng.pdf?ua=1> (accessed Feb 2, 2018).
- 2 Cheney C. New initiative leverages technology and philanthropy to reinvent community health care. 2018. <https://www.devex.com/news/new-initiative-leverages-technology-and-philanthropy-to-reinvent-community-health-care-91878> (accessed Feb 2, 2018).
- 3 Royston G, Hagar C, Long LA, McMahon D, Pakenham-Walsh N, Wadhvani N. Mobile health-care information for all: a global challenge. *Lancet Glob Health* 2015; **3**: e356-57.
- 4 Living Goods. 2018. <https://livinggoods.org/what-we-do/> (accessed Feb 2, 2018).

- 5 Farmer P. Pathologies of power: health, human rights, and the new war on the poor. Berkeley: University of California Press, 2003.
- 6 Kim JY, Farmer P, Porter ME. Redefining global health-care delivery. *Lancet* 2013; **382**: 1060–69.
- 7 Winters N, Oliver M, Langer L. Can mobile health training meet the challenge of 'measuring better'? *Comp Educ* 2017; **53**: 115–31.
- 8 Greenhalgh T, Wherton J, Papoutsi C, et al. Beyond adoption: a new framework for theorizing and evaluating nonadoption, abandonment, and challenges to the scale-up, spread, and sustainability of health and care technologies. *J Med Internet Res* 2017; **19**: e367.
- 9 Lenzer J. Unnecessary care: are doctors in denial and is profit driven healthcare to blame? *BMJ* 2012; **345**: e6230.
- 10 Mercader HF, Kyomuhangi T, Buchner DL, Kabakyenga J, Brenner JL. Drugs for some but not all: inequity within community health worker teams during introduction of integrated community case management. *BMC Health Serv Res* 2014; **14** (suppl 1): S1.