Text4baby – national scale up of an mHealth programme. Who benefits?

Michelle HMMT van Velthoven • Azeem Majeed • Josip Car

Global eHealth Unit, Department of Primary Care and Public Health, School of Public Health, Imperial College London, London W6 8RP UK

Correspondence to: Josip Car Email: josip.car@imperial.ac.uk

Text4baby is a mobile health (or mHealth) education programme sending free text-messages to women who are pregnant or have a young infant, that was launched in February 2010. The programme is a public–private partnership supported by a number of industry and public sector partners that include government agencies, the White House Office of Science and Technology Policy, corporations, academic institutions, professional associations and non-profit organizations. By covering all of USA and now spreading into other countries, such as Russia, it is the largest scale up of an mHealth intervention globally.[1]

Text4baby was launched without evidence about the effectiveness of the intervention. With more than 300,000 women now signed up, the results of the first evaluation of the programme were presented in November 2011. These were self-reports of 122 women saying that they were satisfied with text4baby, that it helped them to remember an appointment and that it informed them about medical warning signs they did not know. More generally, 20 years since the introduction and unexpectedly widespread embracement of now ubiquitous text-messaging in personal and professional lives, the evidence base for text-messaging in healthcare delivery remains weak.[2]

It is now a norm that a new intervention is introduced in healthcare by following a due process of: developing theory – why should this intervention work?; modelling – how does it work?; feasibility testing in exploratory trials to optimize trial measures; definitive randomized controlled trial and finally evaluation following translation of research evidence into practice.[3,4]

Text4baby is a public health intervention 'designed to promote maternal and child health'.[1] The text4baby's first two goals are to demonstrate the potential of mHealth (specifically text-messages) to address the maternal and infant health problems and to reach under-served populations.[1] Considering that almost 90% of US adults are 'health-illiterate' and that the USA do not do well in maternal and infant health, these are welcome goals. However, it is unknown whether and to what extent text4baby addresses the health education needs of pregnant women. As with all (public) health problems, we need to understand them in depth and compare effectiveness of different solutions for addressing them.

The third goal of text4baby is developing evidence of efficacy of mHealth interventions.[1] Of five evaluations currently underway none is large scale. Yet despite the lack of evidence of effectiveness, the programme is growing into further domains. Voxiva, who powers the service recently created text2quit, a text messaging programme for smoking cessation based on text4baby, and a combination of the two is also coming; quit4baby.

When a large-scale intervention is implemented without clear evidence, hoping for the best may replace careful monitoring, and the intervention may become enduring, ineffective and even harmful. No matter how good ideas are, they do not always work as intended and may be seriously harmful (for example, the recommendation for babies to sleep on their stomachs). Sending text-messages to educate pregnant women may seem simple, cost-effective and without risk. However, rigorous evaluation should first confirm this and would further improve the intervention. The national programme seems to have been introduced without prior smaller scale rigorous evaluations and does not seem to have considered (or at least does not

thoughtful comments.

provide information about) how it addresses a number of questions. For example, how does this programme fit in with usual healthcare for pregnant women? Though the programme does not intend to interfere with usual care, unintended harms may occur. Women may misinterpret the information or a health worker may unintentionally rely on the information provided through messages. What is the additional value of the text messages to current health information? Do they achieve behaviour change?

The fourth goal of the programme is to catalyse new models for public–private partnerships in mHealth. The program's early success in terms of the number of women signing up is a major achievement. As the first national programme of its kind, text4baby should be rigorously evaluated to ensure that pregnant women and their babies benefit from the programme, and that the programme truly becomes a role model for public–private partnerships in mHealth.

References

1 Text4baby-website. See http://www.text4baby.org/ (last accessed April 2012)
2 Amoroso C, Flores Arango JF, Bailey C, *et al*. Call to action on global eHealth evaluation. In: Consensus Statement of the WHO Global eHealth Evaluation Meeting. Bellagio: The Bellagio eHealth Evaluation Group, 2011
3 Auerbach AD, Landefeld CS, Shojania KG. The tension between needing to improve care and knowing how to do it. *N Engl J Med* 2007;**357**:608–13
4 Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Medical Research Council. Developing and Evaluating Complex Interventions: New Guidance. London: MRC, 2008. See http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC004871 (last accessed 19 October 2012)