

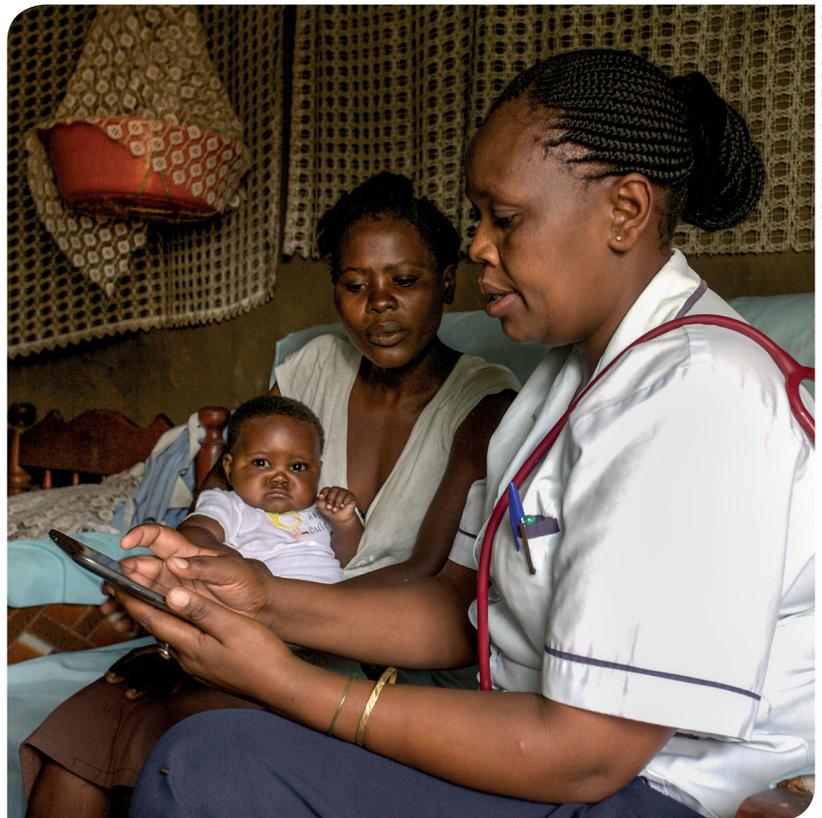
Using mobile phones for nutrition surveillance

The use of mobile phones may offer innovative opportunities to make nutrition surveillance more effective, timely and credible. This brief provides highlights from an evidence review on the impact of using mobile phone technology for nutrition (and other) surveillance in resource-low settings.

Undernutrition remains one of the major challenges in low-income countries. The consequences of undernutrition in early childhood are especially devastating and can lead to lifelong physical and mental impairments. Nutrition surveillance – or the systematic and periodic collection of information on nutrition – is vital to the capacity of governments and other agencies to track their progress towards reducing undernutrition, to promoting the accountability of their actions and to improving their ability to respond promptly to changes in nutrition status brought about by food price volatility and natural disasters. Mobile phones may have the potential to improve speed and data quality and lower costs of nutrition surveillance.

A critical evidence review on the impact of using mobile phone technology for nutrition (and other) surveillance was conducted in February 2013. The search identified over 30 mobile phone-based surveillance systems. However, only nine studies assessed the impact of using mobile phone technology for nutrition (or related) surveillance. The remaining studies only offered descriptions of the design and/or the general operation and functionalities of mobile phone-based surveillance systems and were therefore excluded. The evidence that was available was of poor methodological quality, based on small pilot studies and centred on feasibility issues.

Despite the general lack of high-quality evidence from evaluation studies and many unknowns (e.g. cost-effectiveness of mobile phone-based surveillance, how to develop a sustainable business model), the available evidence suggests that mobile phones may play an important role in nutrition surveillance by reducing the time it takes and enhancing data quality. Both of these are essential for reliable and effective nutrition surveillance but long timescales and poor data



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quality are often shortcomings of traditional paper-based systems. Mobile phone technology also seems to have considerable but still underused capacity to support effective analysis, presentation and communication of surveillance data to stakeholders at local, district and national levels. A much better understanding of the barriers to and enablers for bringing this capacity to fruition is needed. The empowering potential of mobile phone technology very much remains an attractive yet empirically unsupported idea.

Nurse Caroline C. Mibei visits Caroline Adhiambo and her child during a community consultation in a village near Kisumu, Kenya.

“The available evidence suggests that mobile phones may play an important role in nutrition surveillance by reducing the time it takes and enhancing data quality.”

Recommendations

1. Need for rigorous evaluation studies on the impact of using mobile phones for nutrition surveillance

Evidence on the impact and use of mobile phone technology for surveillance was scarce and methodologically weak. Well-designed evaluation studies with clear objectives are needed.

2. Need for cost-effectiveness evaluations of the use of mobile phone for surveillance

There is currently no convincing evidence on the cost-effectiveness of mobile phone-based surveillance systems. While substantial costs may be saved during the collection of data, the initial start-up costs and operating costs might outweigh the cost savings.

3. Need for more focus on analysis, visualisation and reporting of surveillance data

The functional possibilities of mobile phones may be a powerful tool in the timely and user-friendly analysis,

visualisation and reporting of surveillance data. Given that underuse of surveillance data is a huge challenge, a better understanding of how mobile phones may improve this essential component of surveillance is urgently needed.

4. To ensure sustainability address technical, financial and ethical challenges of mobile phone based surveillance from the outset

5. Establish government support and strategic partnership with the private sector for sustainability and scale-up of mobile phone-based surveillance

Support from the government, including alignment with local surveillance needs and a strong healthcare system that can respond (and in many cases) deliver surveillance, are important for sustainability and to support scale-up. A strategic and effective partnership with the private sector may be a promising approach for the design of a sustainable and scalable surveillance system.

Further reading

Barnett, I. (2013). *Using Mobile Phones for Nutrition Surveillance: A Review of Evidence*. Working Paper. Brighton, IDS.

www.ids.ac.uk/publication/using-mobile-phones-for-nutrition-surveillance-a-review-of-evidence

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www.childcount.org/reports/ChildCount_Kenya_InitialReport.pdf

Blaschke, S.; Bokenkamp, K.; Cosmaciuc, R.; Denby, M.; Hailu, B. and Short, R. (2009) *Using Mobile Phones to Improve Child Nutrition Surveillance in Malawi*, Brooklyn NY: UNICEF Malawi, UNICEF Innovations, Mobile Development Solutions
www.eldis.org/go/home&id=57992&type=Document

Credits

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