Real-time data sharing among rural health workers can save lives

Smartphones and tablets are no longer the preserve of technoparks and financial districts. According to a Telecom Regulatory Authority of India report from 2017, there are a little over 500 million mobile subscribers in rural India, of whom 109 million own smartphones. In 2016, the Boston Consulting Group reported that 70% of rural internet users use social networks while 30% use chat applications with search, purchases and other motives figuring in the list.

Digitization has crept into their work as well. It is no longer uncommon to see a teacher in a far-flung government school using a digital solution to track student attendance, or a farmer consulting an app for crop-specific information. From my own experience, WhatsApp is an increasingly popular project management tool in rural India. The government is not a laggard in this respect either with several innovative products such as the Swachh App by the ministry of drinking water and sanitation that acts as a real-time monitoring tool for sanitation coverage in rural areas.

The situation is no different in public health. I am personally aware of at least six applications catering to the three women frontline health workers alone—ASHA (accredited social health activist), AWW(*anganwadi* worker) and ANM (auxiliary nurse midwife). These three women drive delivery of health and nutrition services in villages across India. In my last column, I introduced three of them—Vimla, Manju and Priya, respectively. Applications catering to these women each serve as remarkable personal digital assistants. The ANMOL-ANM online app for ANMs was developed by the ministry of health and family welfare, with support from the United Nations Children's Fund. It enables ANMs to carry out functions such as growth monitoring, logistics planning and reporting in an informed manner. The common application software developed by the women and child development ministry for AWWs and now part of the National Nutrition Mission is another excellent example. It enables real-time access to information about the health of women and children in high malnutrition burden districts.

Replacement of myriad, voluminous registers with smart, hand-held devices is welcome. It makes workers' lives easier and everybody knows they urgently need that help. It improves the quality of data they produce. The elephant in the room, though, is yet to be addressed. As we discussed last week, the fundamental problem in rural healthcare delivery is that India's Vimlas, Manjus and Priyas do not share data with each other. This need not be the case.

As I had hinted, there is good news. A seamless digital solution shooting information between the three workers' devices exists. This "integrated AAA app" is a useful job aid for each of the workers, that helps them perform their tasks more effectively. The more significant factor is that the integrated app, enables these devices to talk to each other. The workers now have a common database to work with and can serve beneficiaries as a cohesive unit.

This has important real-world applications. Take the case of Sarita, a 25-year-old woman. Manju, the AWW, notices that Sarita shows signs of pregnancy. When she checks the relevant box in her version of the integrated app, it is relayed instantly to the other workers, Vimla and Priya. Vimla, the ASHA, visits Sarita's house and mobilizes her to visit the local *anganwadi* centre for the monthly village health and nutrition day. There, Priya the ANM, confirms Sarita's pregnancy and records her information in her app. Based on Sarita's low haemoglobin level, the app automatically tags her as a high-risk pregnancy. This information again flows instantly to the ASHA (Vimla) and AWW (Manju) so that they can offer counselling, as required. Early identification and commencement of counselling enabled by instantaneous communication between the three workers could thus save lives. And this is just one such use case.

In spite of the clear case for an integrated app, why should single-user personal digital assistants

rule the roost? It might be explained by workers belonging to different ministries—ANMs from health and AWWs from women and child development with ASHAs working with both ministries on an incentive basis. There are some encouraging signs with positive noises about inter-ministerial convergence. Rajasthan has showed the way with the health, and women and child development ministries working together on the AAA model and its evolution.

The integrated app has been tested extensively in the field with the three workers, cutting across ministerial barriers. Their feedback has been incorporated and the product is at an advanced stage of trial.

This is deadly serious business. Lives are at stake. The need of the hour is for administrators across the country to get our frontline workers (and their data) to talk to each other in real time.

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