

Wave 3 mHealth Guidance Piece

This document will discuss important points to keep in mind for planning, implementing, and evaluating a mHealth component in your proposal, as well as lessons learned from previous TB REACH-funded mHealth projects.

In designing interventions with outcomes in line with the core objectives of TB REACH, potential grantees can choose from a wide range of possible tools. Several grantees in Wave 1 and Wave 2 have turned to mHealth, the use of mobile and wireless communication technology for health care services, as one way to deliver on targets of innovation, cost-effectiveness, sustainability, and additionality in TB case finding and treatment. For an applicant who has determined that mHealth is an appropriate tool for their proposal to achieve its intended outcomes, we have provided the following recommendations for consideration.

Five main areas of opportunity for mHealth in TB control are treatment adherence, monitoring TB diagnosis and treatment (i.e. DOTS monitoring), mobile diagnosis, disease surveillance, and health awareness and information dissemination. Several Wave 1 and 2 projects have shown that mHealth applications can have unique advantages; it is important to maximize the strengths of mHealth tools towards accomplishing your proposal's priorities and avoid using them only for the sake of innovation.

For example:

- SMS/MMS systems are quick and require low bandwidth networks; they allow for real-time data transfer and reporting that cuts down delays in making diagnoses and initiating treatment.
 - o In remote areas of [Lesotho](#), SMS systems were used with riders on horseback to track sputum collection and results; mean turnaround time was shortened by days.
 - o In Vietnam, mobile phones are being used to transmit microscopy images from community clinics to district hospitals for rapid diagnosis of smear-positive TB cases.
- In some areas, mobile phones are more ubiquitous than other technologies. Efforts in case detection, diagnosis, and information dissemination can be decentralized to remote areas.
 - o An SMS awareness campaign in [Laos](#) was able to reach high-risk populations that might not have access to other media sources.
- mHealth holds different kinds of appeal across sectors, and can link stakeholders in new ways. It is possible to push mHealth uptake and innovation by making a business case.
 - o A highly successful project in [Pakistan](#) used a mobile phone screening tool to improve diagnosis and reporting of TB cases from private clinics to the government. The phones also provided a means for dispensing cash incentives to health workers for successful case identification, monitoring, and treatment.

The implementation process requires early planning and allocation of resources with the goal of sustainability and scalability. As part of providing a good description of the mHealth component, the applicant needs to take into account any associated logistical details, some of which are listed below.

- Building local capacity: early involvement of local needs, input, and expertise
- Hardware needs: electricity sources, availability of network connection, device compatibility
- Software needs: security and privacy measures, language options, user interface, error prevention/data quality checks, generalizability, SMS character limitations
- Existing platforms: mHealth is a swiftly growing field. It is helpful to connect with other systems already in place, even if they are located elsewhere or geared towards different health outcomes. A project in Zimbabwe, addressing TB/HIV co-infection by linking HIV testing and counseling referrals to TB treatment centers, takes advantage of existing infrastructure and avoids the silo effect of many TB interventions.

The Stop TB Partnership can link applicants to other projects, further guidance, and resources through the [mHealth Alliance](#).

A common obstacle for scaling up mHealth initiatives is the lack of supporting information for formal impact evaluation. We recommend that proposals contain mechanisms for effective monitoring and evaluation of the mHealth component, particularly if the component is large.

- Structure the intervention so there is a method of measuring the isolated effects of the mHealth application; for example, if mHealth is being used for education and awareness, provide for focus groups or knowledge surveys both before and after implementation.
- Integrate any reporting functions into existing health data systems; reporting to the NTP is required by TB REACH, but any additional mHealth reporting should feed into the same systems. Most NTP reporting is paper-based, but it can serve as a useful back-up or quality assurance for electronic data, especially early in a project.
- Establish measures of success. There are two levels of mHealth success: whether the technology worked, or whether it was the right tool to get the job done. Cost-benefit and health outcome measures are more valuable than feasibility or usability studies.

There is great potential for making an impact in TB care and control through mHealth, and so we hope you find these recommendations useful in crafting and executing a successful project with mHealth. When used correctly, it can serve as an extremely effective and innovative way to improve overall TB case finding among those who have not been reached in the past.