

SMS Mobile Technology to Improve Early Childhood Vaccine Coverage in Guatemala

Mobile technologies, such as Short Message Service (SMS) texts, have tremendous and untapped potential for improving immunization delivery and uptake in low- and middle-income countries (LMICs).

Over the past two years, the study team developed and demonstrated the feasibility and consumer acceptability of an SMS immunization reminder system in Guatemala which allowed healthcare workers to collect data on child immunizations and send text message reminders to parents to attend vaccination appointments. The specific aims for this project are:

1.) Optimize the mobile phone SMS reminder system previously developed. Modifications will include creating a dedicated system with increased automation that does not require periodic re-charging to avoid operator-error and eliminate intermittent system shut-downs and rebooting as experienced during our preliminary pilot study.

2.) Develop and implement a modified SMS delivery software platform at national and local levels. At the national level, the software platform will interact between the SMS immunization reminder system and the electronic immunization registry (Registro Nominal) available and operational at the health integrated information system of the MoH in Guatemala City. At the local level, the software platform will interact between the SMS immunization reminder/recall system and the electronic maternal-child registry created by our study group and already in existence in the Trifinio region.

3.) Implement and establish preliminary efficacy of the SMS reminder system in two different geographic and socio-economic areas of Guatemala. This includes conducting a randomized controlled trial to evaluate SMS reminders in increasing immunization timeliness and coverage for the infant vaccination series in public health clinics in Guatemala City and the Trifinio region, evaluating acceptance of SMS reminders through a qualitative assessment with key informant interviews and focus groups, and implementing a dissemination plan.