eRegistries: digital health solutions for Universal Health Coverage for women and children

Abstract

The World Health Organization has highlighted the importance of transformative mHealth technologies in the field of maternal and child health. Integrated mHealth tools and electronic registries are priority areas for health systems strengthening and universal health coverage. Digital technologies have the power to transform health systems, with functionalities ranging from electronic health records to inventory management to personnel management. Although this shift has been widely heralded, the reality has been more mundane, with a focus on shifting paper-based forms into an electronic format, without considering how to optimize the information beyond populating existing forms. While this broad field typically has little focus on controlled research studies, we partner with the Centre for Intervention Science in Maternal and Child Health (cismac.org) at the University of Bergen, and draw upon their expertise in cluster randomized controlled trial design and implementation.

eRegistries places data utilization at the center of a data collection system, with integrated decision support tools at all levels of the health system, from the clients themselves through policy makers (www.eregistries.org). We present research desmonstrating four ways a harmonized set of individualized clinical data in digital format from eRegistries can be used to improve the healthcare system: 1) clinical decision support (eRegQual trial); 2) automated provider feedback; 3) linking to the Lives Saved Tool, a policy guidance system, and 4) SMS messages to clients (eRegCom trial). We share preliminary data and Illustrations from on-going cluster randomized trials of eRegistries functionalities in two settings – Bangladesh and Palestine.

List of presentations

Introduction: eRegistries – what, why and how? - Session Leader: J. Frederik Frøen (15 min)

The speaker will introduce the eRegistries approach and provide a summary of on-going projects with an overview of the eRegistries implementation strategies and stakeholder engagement approaches, and the cluster-randomized trials in Bangladesh and Palestine.

Presentation 1: Decision Support - Mahima Venkateswaran (15 min)

Preliminary results will be presented from the cluster-randomized trial in Palestine (eRegQual) implementing clinical decision support tools to improve health outcomes related to antenatal care, comparing digital data collection to existing paper based data collection.

Presentation 2: Feedback Tools - Fatema Khatun (15 mi)

Dr. Khatun will discuss 1) theories used and 2) final design of automated feedback tools for clinical providers of antenatal and delivery care for improved quality of care in Palestine and Bangladesh.

Presentation 3: Individualized SMS - Binyam Bogale (15 min)

This presentation will discuss 1) the theories used and 2) the final design of automated and clinically tailored SMS messages to pregnant women during antenatal care for improving utilization of health care services in Bangladesh and Palestine, in the setting of cluster-randomized trials (eRegCom).

Presentation 4: Policymaking - Ingrid Friberg (15 min)

Dr. Friberg will demonstrate the utility of clinical registry data in supporting policy and health systems decisions by using the Lives Saved Tool in Palestine.

Panel discussion - Moderators: Michael James Frost and J. Frederik Frøen (15 min)

Speakers will discuss practicalities of implementation of digital tools, synergies and challenges of working in both implementation and research, and data-utilization experiences from stakeholder perspectives.