3ie-IFPRI Joint Seminar:
Information and Communication Technologies, Prenatal Care Services and Neonatal Health
September 10, 2015

Maria Fernanda Rodrigo, Associate Professional Officer at the Inter-American Development Bank (IDB), presented the paper "Information and Communication Technologies, Prenatal Care Services and Neonatal Health" at the 3ie-IFPRI joint seminar series in Washington D.C. on September 10, 2015. Rodrigo and her co-authors evaluated the impact of sending text messages with appointment reminders and healthy behavior recommendations to pregnant women in Peru.

This study implemented a randomized controlled trial in 16 health centers in the district of Ventanilla, Peru from March 2012 to January 2013. The 576 pregnant women in the treatment group received text messages that reminded them about their next prenatal appointment and suggested healthy practices based on the individual women's medical records, while the 586 women in the control group did not receive text messages. The main findings from this study indicate that the treatment group had 5 percent more prenatal visits on average than the control group at the 1 percent significance level. However, the authors did not find statistically significant effects on behavioral, birth, and maternal health measures for the whole sample.

The authors analyzed heterogeneous effects by dividing the sample in four groups according to the proximity to the health center and the level of education. The presenter reported that for the women who had secondary or higher education and who lived closer to health centers (within 500 meters), the treatment had significant effects on the level of vitamin intake compliance, infants' 1 minute APGAR scores (a 10 point scale for Appearance, Pulse, Grimace, Activity, Respiration at 1 minute post-birth) and birth weight. In contrast, there were not significant effects within the group of women living farther away from the health centers and with an educational attainment below secondary education.

Rodrigo concluded that SMS messaging was generally effective on increasing the number of pre-natal care visits, and that the effects regarding birth outcomes and positive behavioral changes were concentrated in the group who were more educated and had better access to health centers. Therefore, she argued that investment in human capital development (education) and service coverage (access to health care) are essential for ICT interventions to be more effective and beneficial.

James M. Tielsch, Chair of the Department of Global Health Milken Institute from the School of Public Health in George Washington University, was the seminar discussant. Tielsch expressed concerns over information safety and questioned the research's lack of ethical review. Tielsch and other attendees also wondered about sample size limitations and a lack of power calculation for the study, particularly for the subgroup results. Comments by seminar participants included that it would have been valuable to have a theory of change and that it would have been advisable to pre-test the text messages or do formative research to identify messages that are likely to resonate before implementing the intervention. Another limitation mentioned was that given the particular context of Peru—relative higher educational attainment and access to health services—the study does not provide lessons for more impoverished regions.

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