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Mobile phone text messaging plus motivational interviewing: effects on breastfeeding, child health and survival outcomes, a group sequential randomised standard of care-controlled trial (MTI-MI)

Moleen Dzikiti,^a Mark Cotton,^b Lehana Thabane,^c Louise Kuhn,^d Young T.^a

- ^aDivision of Epidemiology and Biostatistics, Department of Global Health, Stellenbosch University, South Africa
- b Department of Paediatrics and Child Health, Stellenbosch University, South Africa
- ^c Department of Clinical Epidemiology and Biostatistics, McMaster University, Canada
- d Institute G.H. Sergievsky Center, Columbia University, USA

Email:moleenz@sun.ac.za

Background: Lack of breastfeeding, at a minimum, doubles the risk of infant death in the first six months of life(1). Many infants in low resourced settings at high risk of infectious disease morbidity and death are deprived of the immunological and nutritional benefits of breast milk, if duration is short(2). In South Africa only 8% of infants have exclusive breastfeeding until 6 months of age, one of the lowest in Africa(3). Mobile phone text messaging as a simple, low-cost intervention improves medication adherence among patients with HIV, diabetes and tuberculosis. Motivational interviewing is beneficial across many health problems, including HIV viral load suppression, body weight loss, and alcohol and tobacco use (4). Combining several intervention approaches is more likely to influence behaviour change than an individual approach. We hypothesise that continued breastfeeding will be sustained among women living with HIV receiving weekly text messages plus motivational interviewing and that this will improve infant health outcomes.

Study Objectives: 1. To determine the effects of mobile phone text messaging combined with motivational interviewing versus standard of care on:

(a) Continued exclusive breastfeeding to six month of child age, (b) Continued any form of breastfeeding to 6 month of child age. 2. To determine the contribution of the combined intervention on improved infant health outcomes: (a) Infant morbidity (all –cause hospitalization) and death (all –causes, (b) Infant growth.

Methods

Design - a group sequential clinical trial

Population - 275 women living with HIV and their HIV exposed infants randomize at birth

Significance of study findings: Should we find that text messaging combined with motivational interviewing does sustain continued breastfeeding and improves child health and survival, in collaboration with the Western Cape provincial Vertical Transmission Prevention of HIV strategic program leads we will work with the health services to integrate both interventions into their processes

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Potential pregnant women visiting study site for delivery; trial information provided and are invited to participate Inclusion criteria: Exclusion criteria ■ Women living with HIV (≥18 years old) Not meeting inclusion criteria Initiating breastfeeding Formula feeding On antiretroviral treatment • give birth to more than one Owns a mobile phone infant • Birthweight < 2500g Gestational age <37 weeks Exclusion: No informed consent Randomization (time = at birth) Random allocation to standard of care Random allocation to weekly text messaging plus motivational time = at birth (n = 137)interviewing (n =138) Baseline questionnaire, Review clinical Baseline questionnaire, Review records clinical records Motivational interviewing plus weekly Infant feeding assessment, morbidity text messaging time = 2 weeks and growth outcome evaluation Infant feeding assessment, morbidity and growth outcome evaluation Motivational interviewing plus weekly text messaging Infant feeding assessment, morbidity Infant feeding assessment, morbidity time = 10 week\$ and growth outcome evaluation and growth outcome evaluation Weekly text messaging Final infant feeding assessment, Final infant feeding assessment, time = 24 weeks/exit study morbidity and growth outcome morbidity and growth outcome evaluation evaluation Participants loss to follow-up or completely discontinued breastfeeding

Figure 1: Study participant flow diagram: schedule of enrolment, interventions and assessments

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