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An inferential analysis as to the impact of exposure to a peer Mentor Mother model on uptake of PMTCT services and maternal behavioural outcomes

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15 YEARS

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Background

- Peer-to-Peer “Mentor Mother” model to support eMTCT
- 15 years, 9 countries, almost 1.5 million HIV-positive women supported
- Currently employing almost 1700 full-time Mentor Mothers as lay health workers

The Evidence: Peer-to-Peer Approaches for eMTCT?

- *Cochrane* systematic reviews (2007, 2011 [1,2]): peer advice and support for mothers improves hygiene, recognition of illness in infants, and breast feeding.

- Cluster randomised trails in south Asia (see Lancet 2004, 2010 [3,4]): peer-to-peer approaches reduce neonatal mortality rates .

- Busza et al (2012 [5])eco-social model: successful ART delivery to pregnant HIV-positive women should include peer and family influences.

- mothers2mothers two **external impact evaluations** [6,7]: Kenya: The 18 month MTCT rate was 8.3% in m2m compared to 13.7% in non-m2m facilities (p = 0.005). Uganda: HIV infection at 18 months after birth was 6.8% in interventions versus 8.7% in control (p= 0.039).
- Both evaluations showed impact on wellbeing.

Key Literature (and the Challenge...)

1. Lewin S, Munabi-Babigumira S, Glenton C, et al. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. *Cochrane Database Syst Rev* 2010; **3:** CD004015.

2. Britton C, McCormick FM, Renfrew MJ, Wade A, King SE. Support for breastfeeding mothers. *Cochrane Database Syst Rev* 2007; **1:** CD001141.

3. Manandhar DS, Osrin D, Shrestha BP, et al, members of the MIRA Makwanpur trial team. Eff ect of a participatory intervention with women's groups on birth outcomes in Nepal: cluster-randomised controlled trial. *Lancet* 2004; **364:** 970–79.

4. Tripathy P, Nair N, Barnett S, et al. Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial. *Lancet* 2010; **375:** 1182–92.

5. Busza J, Walker D, Hairston A, et al. Community-based approaches for prevention of mother to child transmission in resource-poor settings: a social ecological review. *Journal of the International AIDS Society* 2012; **15**(Suppl 2): 17373.

6. HECTA consulting (2016), IMPACT AND ECONOMIC EVALUATION OF THE KENYA MENTOR MOTHERS PROGRAM (KMMP).

7. Zikusooka, C.M.; Kibuuka-Musoke, D.; Bwanika, J.B.; Akena, D.; Kwesiga, B.; Abewe, C.; Watsemba, A.; and A. Nakitende. (2014) External Evaluation of the m2m Mentor Mother Model as implemented under the STAR-EC Program in Uganda. Cape Town: Department of Programmes and Technical Support, mothers2mothers.

The Challenge

- Need for impact assessment, but using data emanating from day-to-day client management tools.

- Analysis needs to be as rigorous as possible even in absence of having data for a control group.

Study Objective

- To determine if exposure status to m2m (number of consultations with a Mentor Mother) is associated with uptake of services along the PMTCT cascade, as well as MTCT rates.

Methods

- Data drawn from longitudinal PMTCT records kept by Mentor Mothers at the health facility (client management tools).
- Stratified Random sample of 87 of the 350 facilities in 6 countries supported by m2m (stratified by district/region).
- In randomly selected facilities, census of all longitudinal client records for clients enrolled with m2m between June and November 2012, and concluding care in December 2014 (N=12,976: a 26-31 month cohort).

Methods Continued

INTERVENTION GROUP

High Exposure: Two or more m2m visits at the time of outcome measure

COMPARISON GROUP

Low Exposure: One m2m visit after outcome measure recorded (essentially not m2m clients)

ANALYSIS

Logistic regression adjusting for confounders

Limitations

- Quasi-experimental design
- Self-selection bias, clients self-select into the programme
- Recall bias for low exposure group; data regarding past PMTCT services accessed outside of m2m care are collected retrospectively by Mentor Mothers

Findings

			Unadjusted Frequencies	
Indicator			2+ m2m visits	1 m2m visit
Maternal Behavioural Outcomes_				
Using Family Planning			74%	65%
Exclusive breast feeding first 6 months			84%	75%
Uptake of Maternal PMTCT Services				
Antenatal Prophylaxis			96%	77%
Postnatal Prophylaxis			86%	74%
Uptake of Infant PMTCT Services				
Infant prophylaxis			96%	93%
Infant CPT			78%	72%
6-8 week PCR test			75%	58%
6-8 week PCR test results			72%	52%
Impact – Mother-to-Child Transmission Rate at 18 Months				
Infant HIV status HIV-negative			93%	70%

Findings

	Adjusted odds ratios		Unadjusted Frequencies	
Indicator	AOR	p-value	2+ m2m visits	1 m2m visit
Maternal Behavioural Outcomes_				
Using Family Planning	1.26	0.012	74%	65%
Exclusive breast feeding first 6 months	1.67	<0.001	84%	75%
Uptake of Maternal PMTCT Services				
Antenatal Prophylaxis	3.86	<0.001	96%	77%
Postnatal Prophylaxis	2.27	<0.001	86%	74%
Uptake of Infant PMTCT Services				
Infant prophylaxis	1.6	0.017	96%	93%
Infant CPT	1.63	0.001	78%	72%
6-8 week PCR test	2.31	<0.001	75%	58%
6-8 week PCR test results	2.42	<0.001	72%	52%
Impact – Mother-to-Child Transmission Rate at 18 Months				
Infant HIV status HIV-negative	6.4	<0.001	93%	70%

Conclusion

Case built for:

- Efficacy of peer-to-peer support models
- Delivered by a paid cadre of lay councillors, at the facility level

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