Comparing PCR test outcomes of infants born to HIV positive women enrolled in the m2m programme antenatally progressing to postnatal care, vs. HIV positive women enrolled during their postnatal care

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BACKGROUND

In order to virtually eliminate mother to child transmission of HIV by 2015, barriers to the uptake of PMTCT services can be overcome by adopting robust support interventions. mothers2mothers (m2m) employs local mothers living with HIV (Mentor Mothers) to provide peer education and psychosocial support to pregnant women and new mothers as well as tracking and retaining them in PMTCT care. In six African countries, m2m's peer education and psychosocial support help women to live positively, disclose their HIV status, and access key PMTCT services. A cluster randomized control trial of a PMTCT intervention modelled on the m2m program shows that an average of four sessions led by HIV positive Mentor Mothers - in addition to the standard care recommended for all pregnant women - resulted in important longer-term impacts on overall maternal mental health and improved infant outcomes. [1,2]

AIMS & OBJECTIVES

This study aims to evaluate the effectiveness of the m2m peer education and psychosocial support program by assessing m2m psychosocial support service uptake and PCR test outcome among clients enrolled with m2m after delivery compared to clients enrolled during pregnancy and continuing in m2m care after delivery.

METHOD

m2m routinely maintains longitudinal client records documenting behavioural outcomes and uptake of PMTCT services. Consecutive records for all clients enrolled in m2m care between March 2012 and May 2012 were reviewed as at the end of December 2013. During this cohort period 5,162 HIV-positive clients were enrolled in m2m care across sites in Kenya, Lesotho, Malawi, South Africa, Swaziland, Tanzania and Uganda. Data were analysed using SPSS version 19.0.

RESULTS

Out of the 5,162 HIV positive women included in the study, 55% (2,852) had both antenatal and postnatal m2m visits, and 45% (2,310) had only postnatal m2m visits. 82% (n=4,217) had their infants tested for PCR, and only 7% (n=289) of those tested had not received their infant PCR test result.

Table 1: Characteristics of clients enrolled in m2m psychosocial support services

	Clients enrolled after delivery (n=2,310)	Clients enrolled during pregnancy and retained in m2m care after delivery (n=2,852)
Median age of clients at first visit (IQR)	27 years (23-32 years)	28 years (23 -32 years)
Received ARV during labour*	86%	94%

Table 1 shows that the median age of clients who enrolled with m2m during pregnancy and after delivery was higher compared to clients enrolled after delivery, however it was not statistical significant. In addition, 94% of clients who were enrolled in the m2m programme during pregnancy and after delivery received ARV during labour compared to 86% of clients who enrolled after delivery. Pearson chi-square test showed a p-value < 0.005.

Figure 1: Comparing the postnatal ARV uptake between clients enrolled in m2m after delivery vs clients enrolled during pregnancy and retained in m2m care after delivery

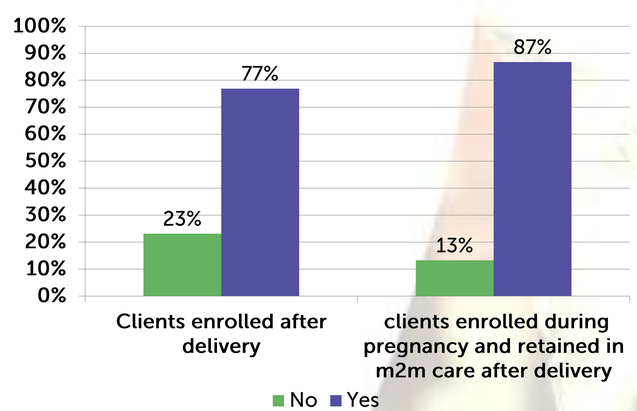

Figure 1 shows that clients enrolled during pregnancy and retained in m2m care after delivery had a higher uptake of postnatal ARV (87%) compared to clients enrolled after delivery (77%). Pearson chi-square test showed a p-value < 0.005. Fisher's Exact Test =0.000 at 95% CI

Figure 2: Comparing the infant PCR test outcome between clients enrolled in m2m after delivery vs clients enrolled during pregnancy and retained in m2m care after delivery

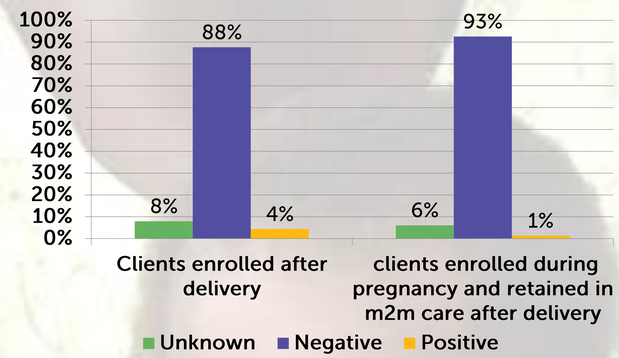

Figure 2 shows that clients enrolled during pregnancy and retained in m2m care after delivery had a lower infant positivity rate (1%) compared to clients enrolled after delivery (4%). Pearson chi-square test showed a p-value < 0.005.

Furthermore, by keeping other cofounding variables constant, binary logistic regression analysis shows that clients who received ARV during delivery were almost 3 times more likely to have an infant that tested HIV negative (PCR test administered at 6 to 8 weeks after birth) compared to clients who did not receive ARV during delivery (OR: 2.6; CI: 1.6-4.2), and clients who received ARVs after delivery were almost 2 times more likely to have a negative infant compared to those who did not receive any ARVs after delivery (OR: 1.8; CI: 1.1-4.2). Finally, m2m clients with both antenatal and postnatal visits were 4 times more likely to have an HIV negative baby tested at 4-6 weeks after birth compared to m2m clients with only postnatal visits (OR:4.1; CI: 2.8-7.6).

CONCLUSION

A limitation of this analysis is that no information is known about the nature and quality of psychosocial support or the uptake of PMTCT services that clients enrolled in m2m care after delivery may have received antenatally. However, results suggest that receiving peer education and psychosocial support from an m2m Mentor Mother antenatally with continued support postnatally may impact positively on reduced MTCT rates at 4-6 weeks after birth. HIV positive women who were exposed to m2m's psychosocial support services and the PMTCT standard of care during pregnancy with continued care after delivery had a higher likelihood of preventing the transmission of HIV to their infants measured at 4 to 6 weeks after birth compared to HIV positive women who were exposed to support from Mentor Mothers after delivery only.

1. Richter L, Rotheram-Borus MJ, Van Heerden A, Stein A, Tomlinson M, Harwood JM, Rochat T, Van Rooyen H, Comulada WS, Tang Z, (2014) Pregnant Women Living with HIV (WLH) Supported at Clinics by Peer WLH: A Cluster Randomized Controlled Trial, Aids Behav DOI 10.1007/s10461-014-0694-2.
2. Rotheram-Borus MJ, Richter LM, van Heerden A, van Rooyen H, Tomlinson M, Harwood JM, Comulada WS, Stein A (2014), A Cluster Randomized Controlled Trial Evaluating the Efficacy of Peer Mentors to Support South African Women Living with HIV and Their Infants, PLoS-ONE, 9(1): e84867.

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