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Meese, Halea

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Demand Side Interventions for the Prevention of Mother to Child Transmission of HIV

Halea Meese
Public Health

Mentor: Nancy Padian, Public Health

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The rate of mother to child transmission of HIV/AIDS is 20–45% without any intervention, but effective prevention measures can drastically reduce the rate of transmission to 2% in non-breastfeeding populations and 5% in breastfeeding populations [6]. Treatment measures for the prevention of mother to child transmission (PMTCT) include the use of antiretroviral drugs (ARVs) by the mother during pregnancy, labor, delivery, and for the infant after delivery as well as the adoption of safer breastfeeding practices and the use of ARVs as prophylaxis. Despite the availability of prevention measures, roughly 370,000 children per year are newly infected with HIV [6]. Supply side problems are decreasing due to an expanded funding commitment from the global community, but demand side issues persist such as under-enrollment of eligible women in PMTCT programs and loss to follow-up (LTFU). PMTCT begins as a woman is offered an HIV test, accepts the opportunity to take the test and receives her results. In order to complete the PMTCT cascade, an HIV-infected pregnant woman must then accept treatment, adhere to it, and assuming her pregnancy is successful, adhere to infant treatment and adopt safe breastfeeding practices or replacement feeding [4].

Objective

Thus far, no reviews have summarized the various methods to increase uptake and retention of HIV positive women in PMTCT programs, known collectively as “demand creation interventions.”

Stage 1: In PubMed, systematically review all interventions focused on improving rates of uptake, retention rates, rate of completion of ARV therapy, decreasing rates of LTFU and if available MTCT rate of the participants.

Stage 2 (in progress): Conduct a search of other relevant databases, including ongoing trials and grey literature, scan reference lists.

Demand Side Interventions for the Prevention of Mother to Child Transmission of HIV

Halea Meese¹
Advisor: Nancy Padian²

¹College of Letters and Science, University of California, Berkeley ²School of Public Health, University of California, Berkeley

BACKGROUND

Credence
The rate of mother to child transmission of HIV/AIDS is 20-45% without any intervention, but effective prevention measures can drastically reduce the rate of transmission to 2% in non-breastfeeding populations and 5% in breastfeeding populations (WHO 2010). Treatment measures for the prevention of mother to child transmission (PMCT) include the use of antiretroviral drugs (ARV) by the mother during pregnancy, labor, delivery, and for the infant after delivery as well as the adoption of safer breastfeeding practices and the use of ARV as prophylaxis. Despite the availability of prevention measures, roughly 370,000 children per year are newly infected with HIV (WHO 2010). Supply side problems are decreasing due to an expanded funding commitment from the global community, but demand side issues persist such as under-enrollment of eligible women in PMCT programs and loss to follow-up (LTFU).

Intervention
PMCT begins as a woman is offered an HIV test, accepts the opportunity to take the test and receives her results, in order to complete the PMCT cascade, an HIV-infected pregnant woman must then accept treatment, adhere to it, and assuming her pregnancy is successful, adhere to infant treatment and adopt safe breastfeeding practices or replacement feeding (Dzongir et al. 2008).

Stanger EM, Chi BH, Chou R, et al.

OBJECTIVE
Thus far, no reviews have summarized the various methods to increase uptake and retention of HIV positive women in PMCT programs, known collectively as "demand creation interventions".
Stage 1: In PubMed, systematically review all interventions focused on improving rates of uptake, retention rates, rate of completion of ARV therapy, decreasing rates of LTFU and if available MTCT rate of the participants.
Stage 2: In progress: Conduct a search of other relevant databases, including ongoing trials and grey literature, scan reference lists.

METHODS

Criteria for Considering Studies for this Review
Types of Studies:
*Published in 1994 or after;
*Interventions included in this study may occur in any part of the PMCT cascade and during breastfeeding
***Types of Participants:** pregnant women of unknown serostatus, HIV positive pregnant women, accredited health care providers, usual partners/husbands of pregnant women, traditional birth attendants and lay counselors in low- and middle-income countries as defined by the World Bank.
***Types of Interventions:**
*Social Media
*Insurance
*Mobile Participation
***Primary Outcomes:**
*Number of pregnant women who:
*received HIV counseling and testing for PMCT and received their test results
*received with a complete course of ARV prophylaxis for PMCT
*completed a course of ARV prophylaxis for PMCT
*received infant doses of ARV during antenatal care
***Study designs:** case series, case reports, case control studies, cohort studies, randomized controlled clinical trials.

Figure 2: Study Flow Diagram

Allen Taker et al. 2011

RESULTS

Included Studies

Intervention Type	Specific Intervention	Author	Location	Design	Key Finding
Male involvement	Partner invitation to antenatal care	Aluisio A Nairobi, Kenya	Rwanda, Kenya	prospective cohort study	
Excluded studies					
Intervention Type	Specific Intervention	Author	Location	Design	Reason for Exclusion
Social Media	Peer health worker with mobile technology	Chang LUI	Uganda	cluster randomized trial	publication pending
Social Media	Peer mentors utilizing mobile technology	Rothman-Bronck M	Rwanda, Kenya, South Africa	cluster randomized controlled trial	insufficient data

DISCUSSION

- Though extensive research has been conducted on the three included interventions, a dearth exists in that focused on mother to child transmission of HIV
- Broader inclusion criteria of intervention types would provide a better summary of demand side interventions.
- Findings from qualitative studies may provide good starting point for future interventions

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Results

Stage 1 of the search strategy produced 906 studies, of which 627 titles and abstracts were screened after the removal of duplicates. Three full-text articles were screened while the remainder were excluded because they did not meet inclusion criteria. A total of one article was included in the systematic review (one article was excluded as it was ahead of print and one was excluded since the inclusion criteria for data were not met). The included study was a prospective cohort design conducted by Aluisio et al. in Nairobi, Kenya and focusing on partner invitation to antenatal care [1].

Discussion

Though extensive research has been conducted on the three included interventions, a dearth exists in that focused on mother to child transmission of HIV. Broader inclusion criteria of intervention types would provide a better summary of demand side interventions. Findings from qualitative studies may provide good starting point for future interventions and thus should be incorporated into analysis.

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