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Introduction

Despite declining HIV mother-to-child transmission in South Africa, challenges still persist, including 4.3% transmission at 18 months, poor maternal retention and low infant testing (PNC) in Khayelitsha, a low-income, high HIV prevalence area in South Africa.

Methods

We compared maternal and infant outcomes between PNC and a group of historical controls, in Khayelitsha:

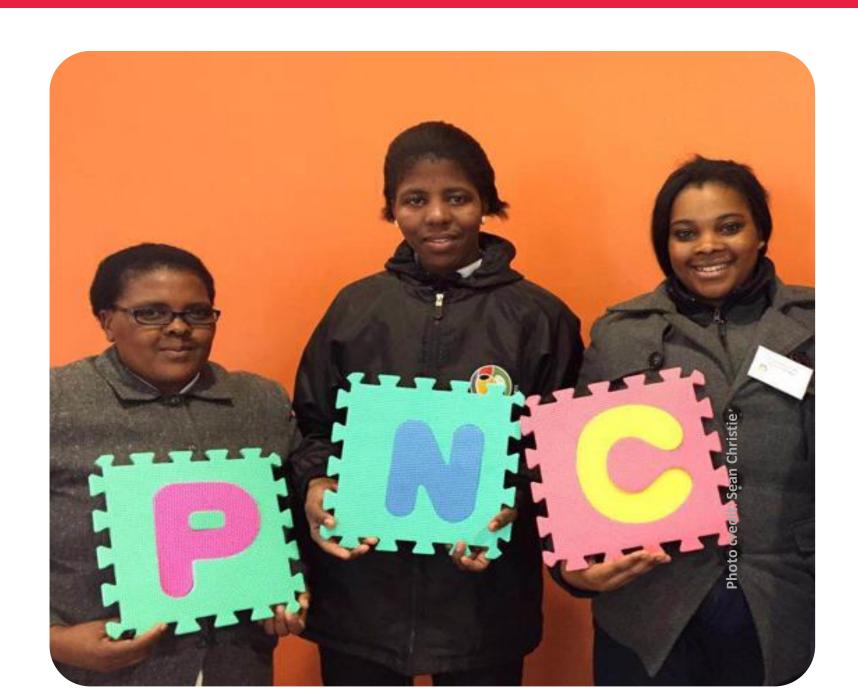
and a group of installed controls, in Kilayentsila.			
Postnatal clubs	Controls		
The Mother-Infant Pairs (MIPs) was HIV-uninfected exposed infants	ere HIV positive mothers and their		
MIPs enrolled in PNCs from June 2016-December 2018	MIPs with babies born from November 2015 to June 2016 with a negative 6-week PCR		
The model comprises of psychosocial support, early childhood development, and integrated maternal and child health	Infants tested with birth PCR through another study and referred back into standard of care. Results of subsequent infant tests and mother's viral load followed up		
A peer mentor facilitates a group session of 3-11 MIPs and each MIP consults with a nurse	Mothers counselled on infant testing at birth and traced if infants were not known to have tested		

 We evaluated the additional cost burden to the health facility of PNCs

Definitions:

- Maternal VL completion:
 - 12 months: 7-365 days after delivery
 - 18 months: 12-18 months after delivery
- Maternal viral suppression: <400 copies/mL</p>
- Infant rapid test completion at 9 months (8-10 months old) and 18 months (17-19 months old)
- For both cohorts, we excluded babies that seroconverted from subsequent testing denominators.

PNCs provided women with peer support and integrated care, and uptake. To address these challenges, MSF, City of Cape Town Health and mothers2mothers developed postnatal clubs significantly improved maternal viral load monitoring & infant testing at a minimal cost.



Results

Table 1: Maternal VL completion and suppression and infant testing in postnatal clubs and historical controls

	Historical		Risk Ratio
	controls	Postnatal clubs	(95% CI)
	n=221	n=141	[PNC/controls]
Infants			
9 months rapid completion (8-10mth)	112/221 (51%)	114/141 (81%)	1.6 (1.4-1.9)
18 months rapid completion (17-19mth)	70/220 (32%)	90/140 (64%)	2.0 (1.6-2.6)
Seroconversions*	2	1	
Mothers			
0-12month viral load completion	149/221 (67%)	140/141 (99%)	1.5 (1.3-1.6)
0-12 month viral load suppression	141/149 (95%)	134/140 (96%)	1.0 (0.96-1.1)
12-18month viral load completion	65/221 (29%)	107/141 (76%)	2.6 (2.1-3.2)
12-18 month viral load suppression	63/65 (97%)	101/107(94%)	0.97 (0.9-1.0)

^{*}Control group: two infants seroconverted before 18 months.. *PNC cohort: one infant seroconverted (after exiting the PNC) before their 18 months test

Table 2: PNC costs to the health facility, on top of normal running costs

Costs due to PNC	1783.55
HR	0.00
Fixed Costs (medical and non medical)	995
Consumable costs (medical and non-medical)	788.55
Total number of babies per PNC	250
Cost per infant per year	7.13

- PNCs entailed minimal additional cost.
- To address the last mile towards elimination of MTCT, PNC is a cost effective integrated model.

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