

Comparison of pregnancy outcomes for mothers living with perinatally acquired HIV, behaviourally acquired HIV, and those not living with HIV

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Conflict of Interest

In relation to this presentation, I declare that I have no conflict of interest

Introduction

 What we know Aim Method Results What this study tells us Limitations Future directions

What we know

- HIV infection is associated with variable rates of adverse perinatal outcomes including IUGR and low birth weight infants, perinatal mortality; even whilst on ART^{1, 2}
- ART that contains boosted PI's may increase the risk of SGA infants³
- Higher rate of vertical transmission in perinatally acquired HIV compared to horizontally acquired HIV⁴
- Higher burden of adverse psychosocial outcomes in pregnant and non-pregnant women living with HIV including loneliness and inadequate social support, leading to depression⁵

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Aim

Three cohorts:



Mothers living with perinatally acquired HIV (MLWPaHIV)



Mothers living with horizontally acquired HIV (MLWHaHIV)

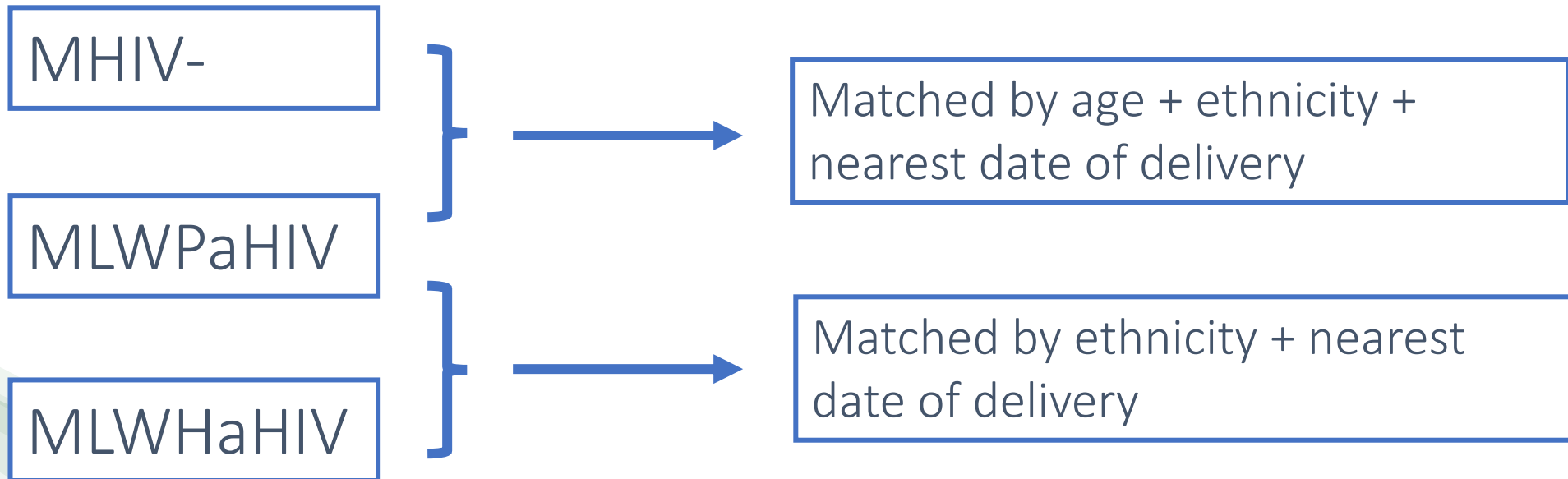


Mothers not living with HIV (MHIV-)

Comparison of **antenatal**, **perinatal** and **postnatal** outcomes for infants

Method

- Single London centre
- All mothers living with perinatally acquired HIV booked from 2015-2022
- Data extraction from electronic health records



Results

Table 1: Comparison of **demographics** of MLWPaHIV, MLWHaHIV and MHIV-

	Mothers living with perinatally acquired HIV (n=19)	Mothers living with horizontally acquired HIV (n=17)	Mothers not living with HIV (n= 33)
Booking age(years) Median (IQR)	25 (4)	35 (9)	24 (4)
Maternal BMI n (%)			
<18	0	1 (5.9%)	1 (3.1%)
18-24	15 (78.9%)	6 (35.3%)	15 (45.5%)
25-29	1 (5.3%)	5 (29.4%)	11 (33.3%)
>30	3 (15.8%)	5 (29.4%)	6 (18.1%)

All women were of black ethnicity apart from one MLWHaHIV of SE Asian ethnicity

Results

Table 2: Comparison of **antenatal outcomes** of MLWPaHIV, MLWHaHIV and MHIV-

	Mothers living with perinatally acquired HIV (n=19)	Mothers living with horizontally acquired HIV (n=17)	Mothers not living with HIV (n= 33)
Booking gestation n(%)			
<13 weeks	11 (64.7%)	8 (47.1%)	21 (63.6%)
13-26 weeks	6 (35.3%)	8 (47.1%)	9 (27.3%)
>27 weeks	0	1 (5.8%)	3 (9.1%)
Booking VL >200 c/ml	6 (31.6%)	3 (17.6%)	-
Delivery VL >200 c/ml	0	1 (5.9%)	-
Social Care	11 (57.9%)	7 (41.2%)	8 (24%)
Child protection plan	5 (26.3%)	1 (5.9%)	1 (3%)
Maternal hypertension	3 (15.8%)	1 (5.9%)	1 (3%)






Results

Table 3: Comparison of **perinatal and postnatal outcomes** of MLWPaHIV, MLWHaHIV and MHIV-

	Mothers living with perinatally acquired HIV (n=19)	Mothers living with horizontally acquired HIV (n=17)	Mothers not living with HIV (n= 33)
Mode of delivery n(%)			
Elective C/section	6 (31.6%)	7 (41.2%)	0
Emergency C/section	5 (26.3%)	3 (17.6%)	5 (15.2%)
Vaginal delivery	8 (42.1%)	7 (41.2%)	28 (84.8%)
Preterm delivery <37/40	6 (33.3%)	4 (23.5%)	3 (9%)
Low birth weight (LBW) <2500g	8 (47%)	4 (23.5%)	4 (12%)
Neonatal Unit admission	5 (29.4%)	2 (11.7%)	2 (6%)
Any breast/chest feeding	0	5 (31.2%)	32 (97%)

One intrauterine death at 28/40 for a MLWPaHIV

What this study tells us

-  More mothers living with **perinatally acquired HIV** had a **VL>200c/ml at booking** than mothers living with horizontally acquired HIV but achieved viral suppression by delivery
-  Mothers living with perinatally acquired HIV were more likely to have **hypertension in pregnancy** and all mothers living with HIV were more likely to have caesarean section deliveries
-  Mothers living with perinatally acquired HIV more likely to have **preterm, low birth weight infants requiring neonatal care** as compared to mothers living with horizontally acquired HIV and mothers not living with HIV
-  There was **no vertical transmission** in any of the mothers living with HIV
-  Mothers living with perinatally acquired HIV were more likely to have **social care involvement** and infants subject to a **Child Protection Plan**

Limitations



Single centre study with low sample size



Data extraction from e-records and initial antenatal booking- missed details



Additional **confounding factors**

- Maternal mental health
- Social support
- Socio-economic status
- Drug/alcohol use
- Co-morbidities
- ART treatment

ART by 3 rd Agent	MLWPaHIV n (%)	MLWHaHIV n (%)
Boosted PI	7 (37)	6 (38)
Integrase	6 (32)	1 (6)
NNRTI	1 (5)	4 (25)
Boosted PI + integrase	4 (21)	1 (6)
LA-ART	1 (5)	
Triple NRTI		3 (19)
Entry inhibitor		1 (6)

Future directions

In this single centre cohort comparison study MLWPaHIV were more likely to have preterm infants requiring neonatal care when matched for age, ethnicity and year of delivery

High rates of social care involvement highlights the need for early engagement and enhanced support for MLWPaHIV even as compared to MLWHaHIV

Ongoing research to address the impacts of PaHIV as compared to HaHIV



Thank you!

MLWPaHIV	LBW <2500g	Gestation	Maternal HTN	Boosted PI	NNU care
	2060g	34+0	Y	Y	Y
	2140g	36+2		Y	Y
	560g	26+3	Y		Y
	1077g	31+3			Y
	2120g	34+0		Y	Y
	2065g	38+0			
	2460g	40+2			
	2380g	37+5	Y		

MLWHaHIV	LBW<2500g	Gestation	Maternal HTN	Boosted PI	NNU care
	2120g	34+0		Y	
	2060g	34+0		Y	
	1335g	31+0		Y	Y
	804g	31+0			Y