

Vertical HIV Transmissions in the UK- insights into the current picture and remaining challenges

Helen Peters¹, Kate Francis¹, Laura Smeaton², Claire Thorne¹

¹Integrated Screening Outcomes Surveillance Service, UCL Great Ormond Street Institute of Child Health

²Infectious Diseases in Pregnancy Screening Programme, Public Health England



BACKGROUND

- Vertical HIV transmission has become a rare event among diagnosed women living with HIV (WLWH) in the UK, with a transmission rate below 0.3% since 2012.
- Despite very high uptake of antenatal screening, a small number of vertical transmissions (VTs) occur among undiagnosed women.
- VTs are monitored by the Integrated Screening Outcomes Surveillance Service (ISOSS), part of PHE's Infectious Diseases in Pregnancy Screening programme.
- We describe the latest picture on VTs reported in 2014-2019.

METHODS

- ISOSS conducts active surveillance of all pregnancies to WLWH, their infants and any children diagnosed with HIV (<16yrs).
- ISOSS carries out enhanced data collection of VTs occurring in children born since 2006. Supplementary maternal and infant information is collected through interviews with paediatric, maternity and HIV clinicians involved in each case.
- A Clinical Expert Review Panel (CERP) establishes circumstances surrounding transmissions and any contributing factors.
- Cases reported 01/14 to 12/19 were reviewed.

CONCLUSIONS

- Two-thirds of recent VTs in the UK involved undiagnosed women. Issues identified here support findings from previous reviews; seroconversion was a common factor, highlighting the importance of sexual health awareness in pregnancy.
- Over half of women experienced adverse social circumstances and this is likely to be an underestimation. ISOSS collects data on inequalities for all pregnancies in women living with HIV, strengthening PHE and stakeholder initiatives.
- Ongoing enhanced data collection and ISOSS CERPs provide valuable insights into the circumstances of the few transmissions still occurring in the UK. ISOSS will also be able to provide data on evolving patterns in this group including maternal demographics to support work to address the changing needs of this group.

RESULTS

There were 35 VTs in infants born to 33 mothers (1 set siblings, 1 twin pair). Years of birth ranged from 2006-2019 and infant age at diagnosis from birth-11years. The CERP identified and agreed on the main factors contributing to transmission (shown below). In some cases there were overlapping/multiple factors identified.

Table: Maternal and paediatric characteristics

	Number of cases (%)
Timing of maternal diagnosis	
Before pregnancy	7 (20%)
During pregnancy	4 (11%)
After pregnancy	24 (69%)
Child UK region of birth	
London	15 (43%)
Midlands & East of England	7 (20%)
North of England	6 (17%)
South of England	3 (9%)
Wales & Scotland	4 (11%)
Median maternal age (IQR)	33 (IQR: 28, 36)
Maternal region of birth	
Sub-Saharan Africa	26 (74%)
Eastern Europe	3 (9%)
UK	6 (17%)
Other	0 (-%)

Two-thirds of children born to women diagnosed after pregnancy

Three-quarters from sub-Saharan Africa and one in ten from Eastern Europe

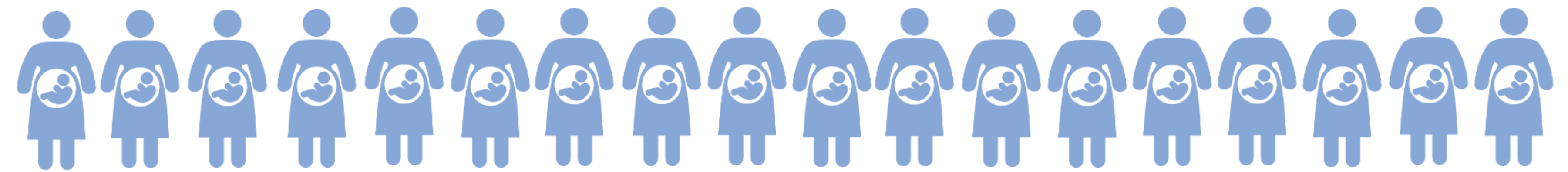
Over half of mothers (54%) experienced adverse social circumstances reported at the time of pregnancy

Complicating issues identified*	
Safeguarding (5 cases)	Intimate partner violence (5)
Mental health issues (9)	Uncertain immigration status (5)
Housing issues (7)	Financial issues (4)
Drug/alcohol misuse (3)	English language issues (7)

* Overlap in issues in many cases

Women diagnosed after pregnancy (n=24)

16 women screened negative in pregnancy (with confirmed negative test), seroconverting at some point during pregnancy or breastfeeding. Among this group some women reported new partners or multiple partners in pregnancy. There were also a number of women whose partner did not disclose their HIV status, as well partners who died with HIV-related symptoms



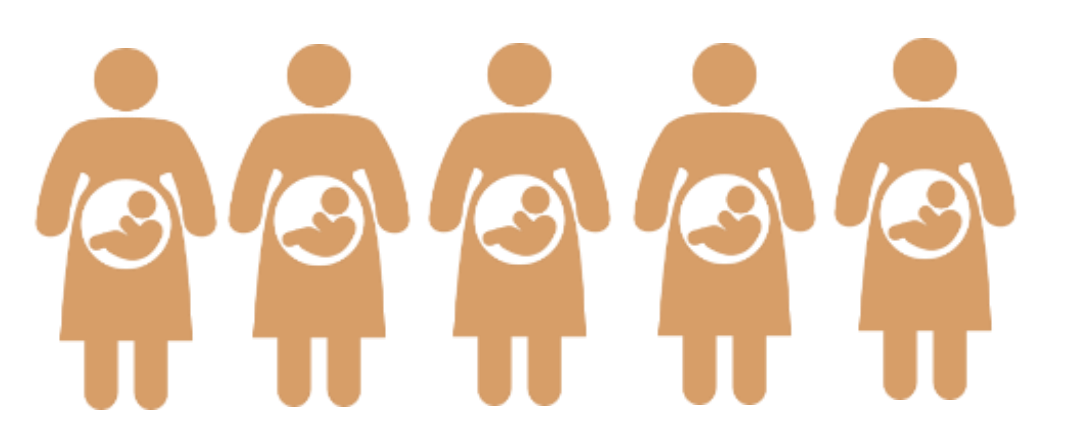
Five cases were to women who declined HIV screening in pregnancy (accepted all other infectious disease screening), all pre 2010. One woman declined HIV screening in two pregnancies with both siblings diagnosed with HIV.



Other cases to undiagnosed women included late booking or unable to determine whether the women had seroconverted or if the women had declined screening

Women diagnosed before or during pregnancy (n=11)

In 5 cases the transmission was postnatal and likely due to non-disclosed breastfeeding. Among these there were additional complicating factors including mental health issues and social services involvement. Some women also had engagement/adherence issues with health care services in pregnancy.



Other cases to diagnosed women included those who booked late/unbooked for antenatal care or no specific contributing factor identified

FUNDING AND GOVERNANCE

ISOSS is funded by Public Health Infectious Diseases in Pregnancy Screening Programme. Patient data is collected under legal permissions granted to PHE under Regulation 3 of the Health Service (Control of Patient Information) Regulations 2002

ACKNOWLEDGEMENTS

Thanks to all of the HIV CERP members, respondents who report to ISOSS and to the rest of the ISOSS team.

CONTACT

www.ucl.ac.uk/isoss
Helen.peters@ucl.ac.uk

