

HIV vertical transmission in England: the current picture

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Background

- The **UK has met 90-90-90 targets since 2017** and a major success is the low vertical HIV transmission rate (VTR)
- This reflects **high uptake of HIV antenatal testing** (currently 99.8%) and the impact of the NHS Infectious Diseases in Pregnancy Screening programme (IDPS) and **HIV treatment and care services**
- A **small number of vertical transmissions (VT)** still occur in England, and it remains important to understand the factors driving these
- Building on previous work (ISOSS 2021 Annual Report¹), **we present an update to the VTR (infants born 2018-2019)**, and **describe 13 VTs reported to ISOSS between 01/06/2020-31/12/2021**

Methods

- The **Integrated Screening Outcomes Surveillance Service (ISOSS)** is part of the NHS IDPS programme commissioned by NHS England
- ISOSS reports cover all pregnancies to women living with HIV in England¹, their infants and any children diagnosed with HIV**
- ISOSS carries out additional data collection of VTs occurring in children born since 2006**, including those where the mother was not diagnosed until after delivery. ISOSS interviews paediatric, maternity and HIV clinicians involved in each case
- The **IDPS Clinical Expert Review Panel (CERP)** reviews circumstances around transmissions, including complicating issues, and establishes any contributing factors

¹ as of 2020 ISOSS is an England only service

Results

Overall reports of vertical transmissions (births 2006-21)

In total there were 156 children with vertically-acquired HIV reported: 108 were reported by 2014, 35 reported between 2014 and 2020, and **13 reported between 2020-2021** (Figure 1).

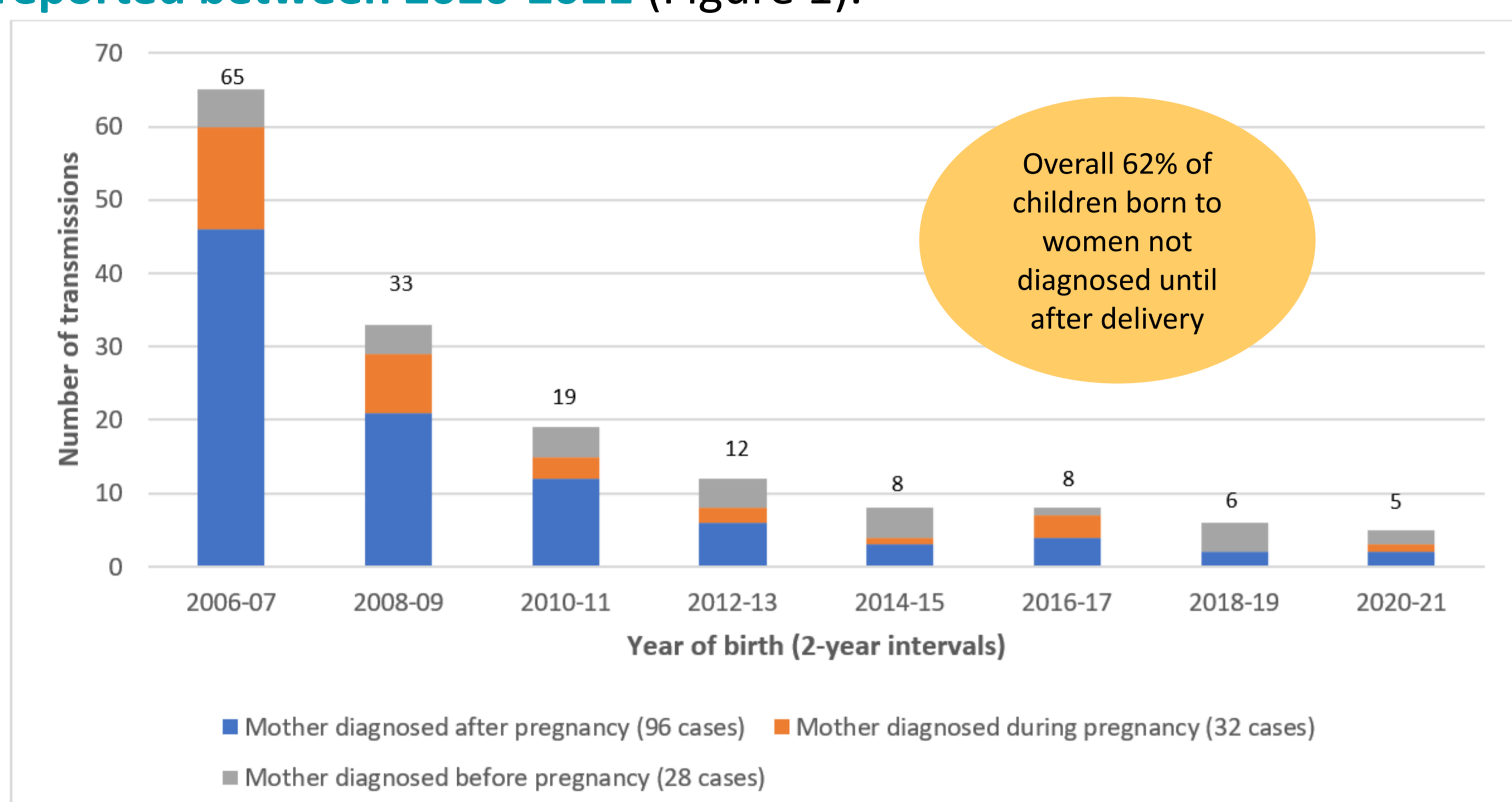


Figure 1: All reported vertical transmissions (2006 to 2021) by timing of maternal diagnosis and year of birth (n=156)

Vertical transmissions reported, England 2020-21 (n=13)

- Children's age at diagnosis ranged from birth to 7 years
- Region of child's birth was: London (6), Midlands (2), East of England (2), North East/Yorkshire & Humber (2) and South West (1)
- 6 children were born to women diagnosed pre-pregnancy, 1 to a woman diagnosed antenatally, and 6 to women diagnosed postnatally
- Most (12/13) children were born to women born outside the UK, with 9 from sub-Saharan Africa and 3 from Eastern Europe. Median maternal age at delivery was 34 years (Q1: 31, Q3: 39)

COMPLICATING ISSUES (VTs reported 2020-21)

Over half of women (7 of 13) were reported to have experienced adverse social circumstances at the time of pregnancy.

Complicating issues identified*

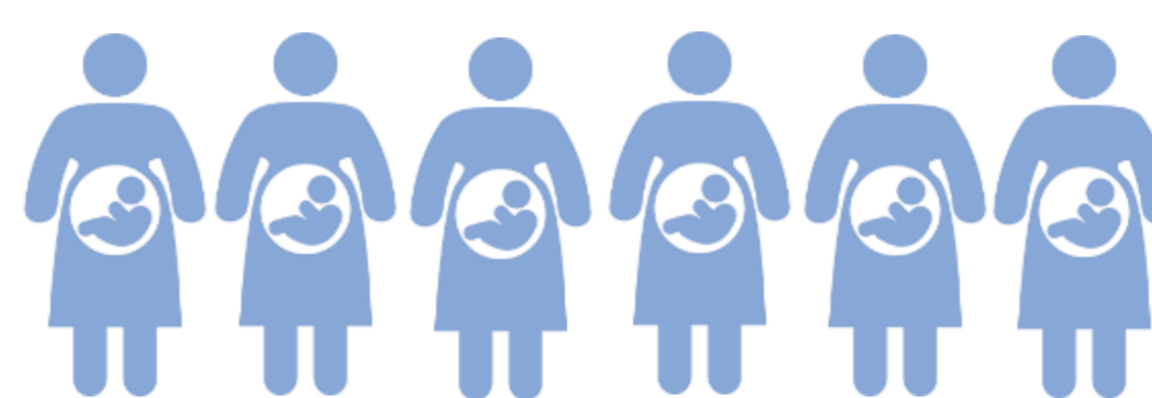
Safeguarding (4) Translation required (2)
Mental health issues (3) Uncertain immigration status (2)
Housing issues (3) * Overlap in issues in 4 transmissions

Conclusions

The **sustained low VTR** reflects ongoing successes of the screening programme and clinical management. Issues identified by the CERP support previous findings; seroconversion remains a common factor, **highlighting the importance of sexual health awareness in pregnancy**. Increasing complexities seen in the small number of VTs still occurring in England, mean that **ongoing monitoring by ISOSS and the insights provided by the CERP remain vital**.

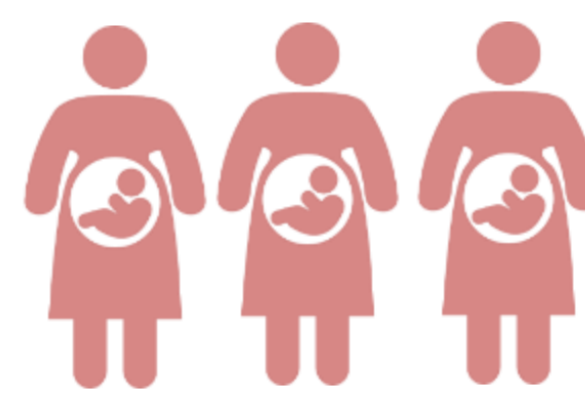
CONTRIBUTING FACTORS (VTs reported 2020-21)

The CERP identified and agreed on the main factors contributing to the 13 transmissions reported 2020-21 (shown below). In some cases there were overlapping and/or multiple factors identified.



6 women **screened negative in pregnancy (with confirmed negative test)**, seroconverting at some point during **pregnancy or breastfeeding**.

Among these: 1 woman **rescreened later in pregnancy** following partner's diagnosis; **5 women tested positive after delivery**, 3 following child's diagnosis and 2 following their partner's diagnosis.



3 women had **issues with adherence to ART and engagement with healthcare services in pregnancy**.

All 3 women were **diagnosed before pregnancy**: 1 declined treatment, 1 had issues tolerating ART and 1 had issues remembering to take ART. All had diagnosed **mental health issues and involvement from social services**. Viral loads at delivery ranged from 13,000 to 395,000 copies/ml.



One woman had received **no antenatal care and was screened in labour with the result available after delivery** and post-initiation of breastfeeding.

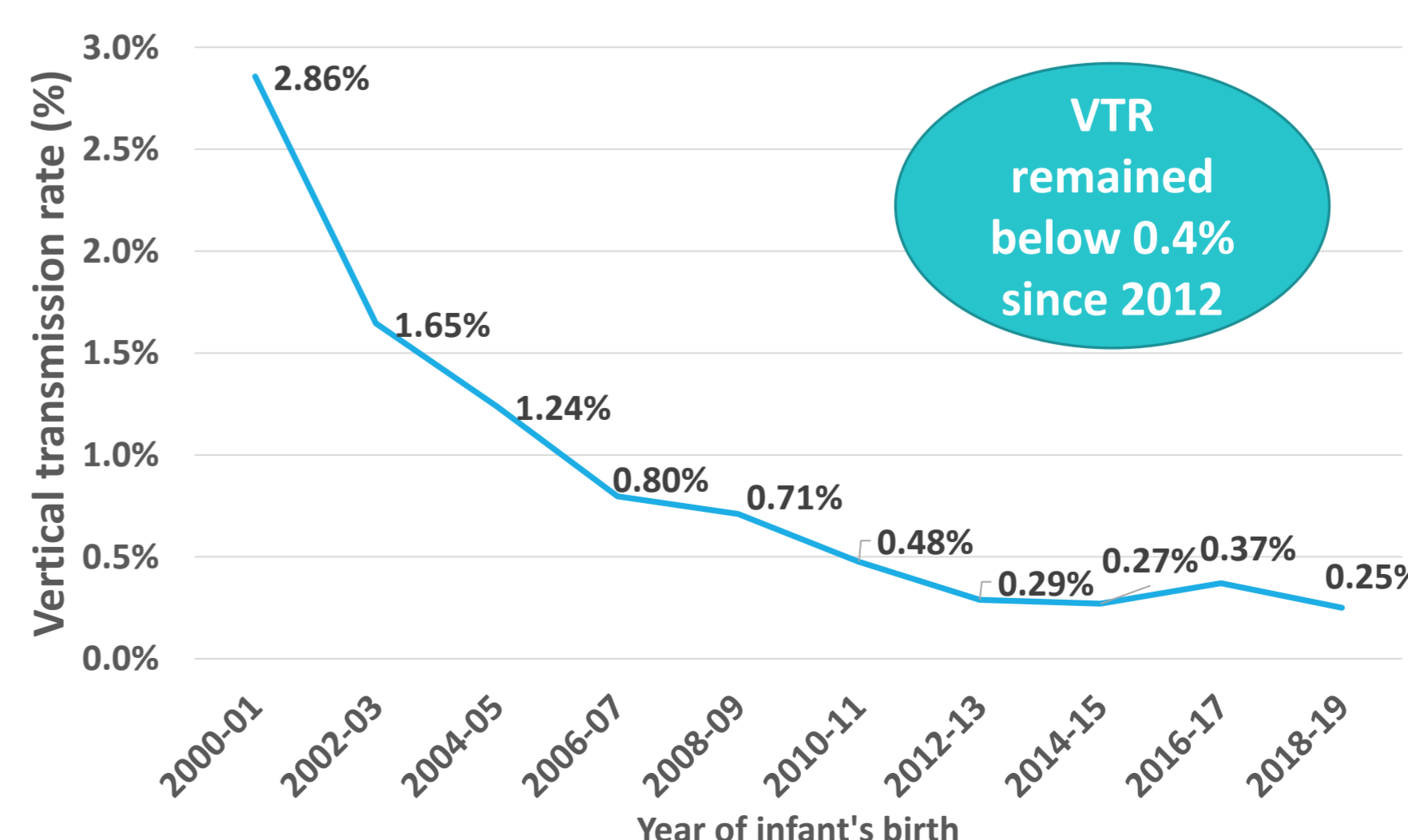


One transmission was **postnatal** likely due to **non-disclosed breastfeeding**. This woman had been **supported to breastfeed in a previous pregnancy** but was advised against breastfeeding in this pregnancy due to detectable viral load and **issues with engagement** with healthcare services.

In two transmissions **no contributing factors were identified**

Vertical transmission rate, 2018-19

- There were 3 VTs among 1205 infants with known infection status born in 2018-2019 to **women diagnosed by delivery**
- Maternal disengagement with healthcare services and late antenatal booking (≥ 20 weeks gestation) were identified as contributing factors



VTR for 2018-19:
0.25%
(95% CI 0.05, 0.73)

Funding and governance

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Acknowledgements

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The ISOSS Annual Report is available on gov.uk

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