

HIV treatment cascade among pregnant women with pre-conception diagnosis: 2017-2022

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BACKGROUND

- UNAIDS “treatment cascade” targets have been met in England since 2017 and the **UKHSA HIV Action Plan** aims to end new transmissions by 2030. **Pregnant women represent an important group** of focus to achieve this.
- In England antenatal HIV screening coverage is 99.8% and **~90% of women living with HIV becoming pregnant are already diagnosed**. Nearly all women receive antenatal ART.
- We present a **treatment cascade for pregnant women** living with HIV in **2017-2022**.

METHODS

- The **Integrated Screening Outcomes Surveillance Service**, within the NHS Infectious Diseases in Pregnancy Screening Programme, collects **data on all pregnancies in women diagnosed with HIV** by delivery and their infants in England.
- We describe a **treatment cascade for pregnancies in women diagnosed pre-conception with an antenatal booking in 2017-2022**, reported to ISOSS by end of December 2023.
- Analysis is restricted to livebirths with antenatal booking 2017-2022 and known viral load at delivery (≤ 30 days pre-delivery and < 7 days post-delivery).

RESULTS

- Of the **2,464 pregnancies** included, there was a trend with increasing % of women on pre-conception ART by most recent time period: 88.1% (809/918) were to women on pre-conception ART in 2017-18, 92.2% (780/846) in 2019-20 and 93.0% (651/700) in 2021-22, $p < 0.001$, **Figure 1**.
- There were differences in age, ethnicity and timing of antenatal booking between women who were on ART at conception and those who started during pregnancy, **Table 1**.

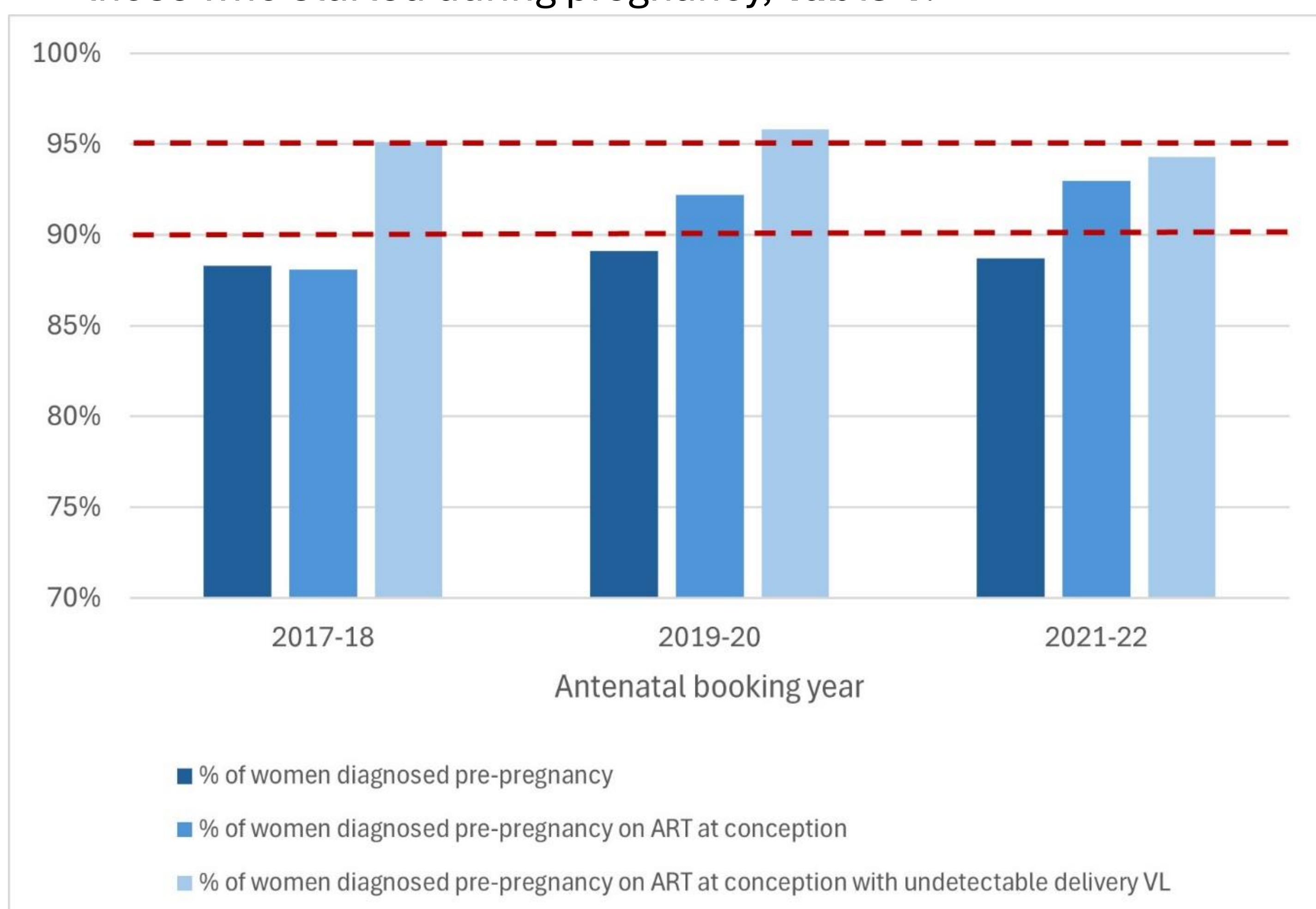


Figure 1: Diagnosis and treatment cascade for pregnant women seen for antenatal care in England, 2017-2022

NB: For second and third bars, %s are proportion of previous bar

CONCLUSIONS

- In these pregnancies where mothers had an established HIV diagnosis from before the pregnancy, the proportion not on treatment at conception is small and declining over time.
- The 91% of women on pre-conception ART contributed nearly three-quarters of the pregnancies with detectable delivery viral load.

Timing of ART initiation

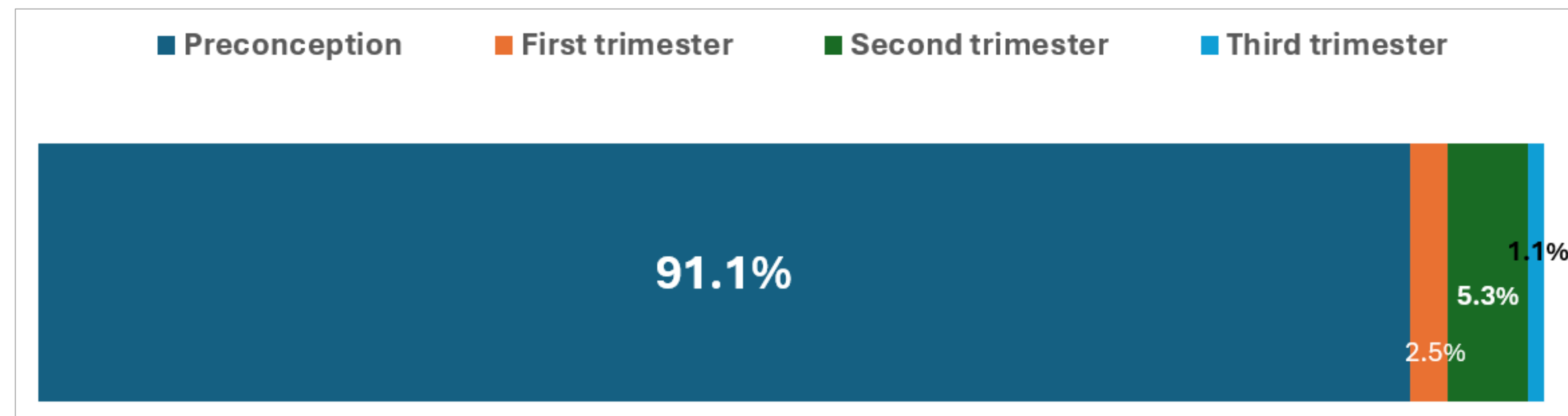


Figure 2: Timing of ART start for women diagnosed pre-pregnancy (n=2,458)

NB: excludes 2 women not on ART and 4 women started ART during pregnancy (timing unknown)

Delivery viral load

Overall, 93.8% (2310/2464) of women with pre-conception diagnosis delivered with undetectable viral load (< 50 copies/ml). Among 152 pregnancies with delivery viral load > 50 copies/ml, 110 (72.3%) were in women who conceived on ART.

Women on pre-conception ART

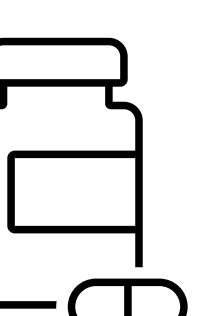
- 91.1%** (2240/2464) of pregnancies **conceived on ART**, **Figure 2**.
- First pregnancy viral load was undetectable (< 50 copies/ml) in **89.7%** (2009/2240) and **delivery viral load undetectable** in **95.1%** (2130/2240) (no change over time), **Table 1**.
- Among those with detectable first viral load, 81.4% (188/231) had undetectable delivery viral load (no trend over time).

Table 1: Maternal demographics and pregnancy characteristics by timing of ART start

| | ART started pre-conception (n=2240) n (%) or median (IQR) | ART started antenatally (n=222) n (%) or median (IQR) | P-value |
|--|--|--|---------|
| Maternal age at EDD (yrs) (n=2,462) | | | |
| <20 | 8 (0.4%) | 0 (0%) | <0.05 |
| 20-29 | 415 (18.5%) | 56 (25.2%) | |
| 30-39 | 1357 (60.6%) | 133 (59.9%) | |
| ≥ 40 | 460 (20.5%) | 33 (14.9%) | |
| Ethnicity (n=2,201) | | | |
| Black African | 1235 (61.8%) | 131 (65.1%) | <0.01 |
| Black Caribbean | 81 (4.1%) | 18 (9.0%) | |
| White | 476 (23.8%) | 32 (15.9%) | |
| Other | 208 (10.4%) | 20 (10.0%) | |
| Region of birth (n=2,453) | | | |
| Africa | 1464 (65.6%) | 148 (67.6%) | 0.87 |
| Europe (not UK) | 185 (8.3%) | 15 (6.8%) | |
| UK | 437 (19.6%) | 42 (19.2%) | |
| Rest of the world | 146 (6.5%) | 15 (6.8%) | |
| Antenatal booking (n=2,162) | | | |
| <13 weeks | 1489 (75.7%) | 121 (61.4%) | <0.001 |
| ≥ 13 weeks | 478 (24.3%) | 76 (38.6%) | |
| Delivery viral load | | | |
| <50c/ml | 2130 (95.1%) | 180 (81.1%) | <0.0001 |
| Median delivery viral load | 100 copies/ml (range: 51-85,000) | 90 copies/ml (range: 51-1million) | |

Women not on pre-conception ART

- 99.1%** (222/224) of women **received ART antenatally**: among these 28.2% started treatment in the first and 12.0% in the third trimester.
- The proportion with undetectable delivery viral load did not differ by ART start in first trimester vs. later.
- These data highlight the need to support diagnosed women with respect to treatment initiation and adherence, before and during pregnancy, and to understand barriers to timely HIV-related and antenatal care.



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ACKNOWLEDGEMENTS

Many thanks to everyone who reports to ISOSS, the ISOSS team, the CERP members and the IDPS team. Full list of CERP membership on: www.ucl.ac.uk/isoss
The ISOSS Annual Report is available on gov.uk

FUNDING & GOVERNANCE

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

