

The association between ethnicity and late presentation to antenatal care among pregnant women living with HIV in the UK and Ireland

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Introduction

- Approximately 1500 pregnancies are reported annually in the UK and Ireland in women diagnosed with HIV; 75% are in black African women
- National guidelines recommend that all pregnant women attend their first antenatal appointment ("antenatal booking") by 13 weeks of pregnancy
- Late booking is estimated at 15% in the general population¹
- We aimed to:
 - quantify the extent of antenatal late booking in women in the UK and Ireland diagnosed with HIV, and
 - explore the association between late booking and maternal ethnicity

Methods

- An analysis of data from the National Study of HIV in Pregnancy and Childhood (NSHPC): confidential anonymised population-based surveillance in the UK and Ireland since 1989
- We included all pregnancies in women diagnosed with HIV prior to delivery with an estimated delivery date in January 2008-December 2009
- Late booking:** antenatal booking at ≥ 13 weeks of pregnancy
- African ethnicity:** of black/mixed ethnicity and born in sub-Saharan Africa, and **other black ethnicity:** black African or Caribbean ethnicity and born outside of sub-Saharan Africa
- The analysis was stratified by whether a woman had been diagnosed with HIV (i) **prior to** or (ii) **during** the reported pregnancy
- Logistic regression models were fitted to estimate adjusted odds ratios (AOR)

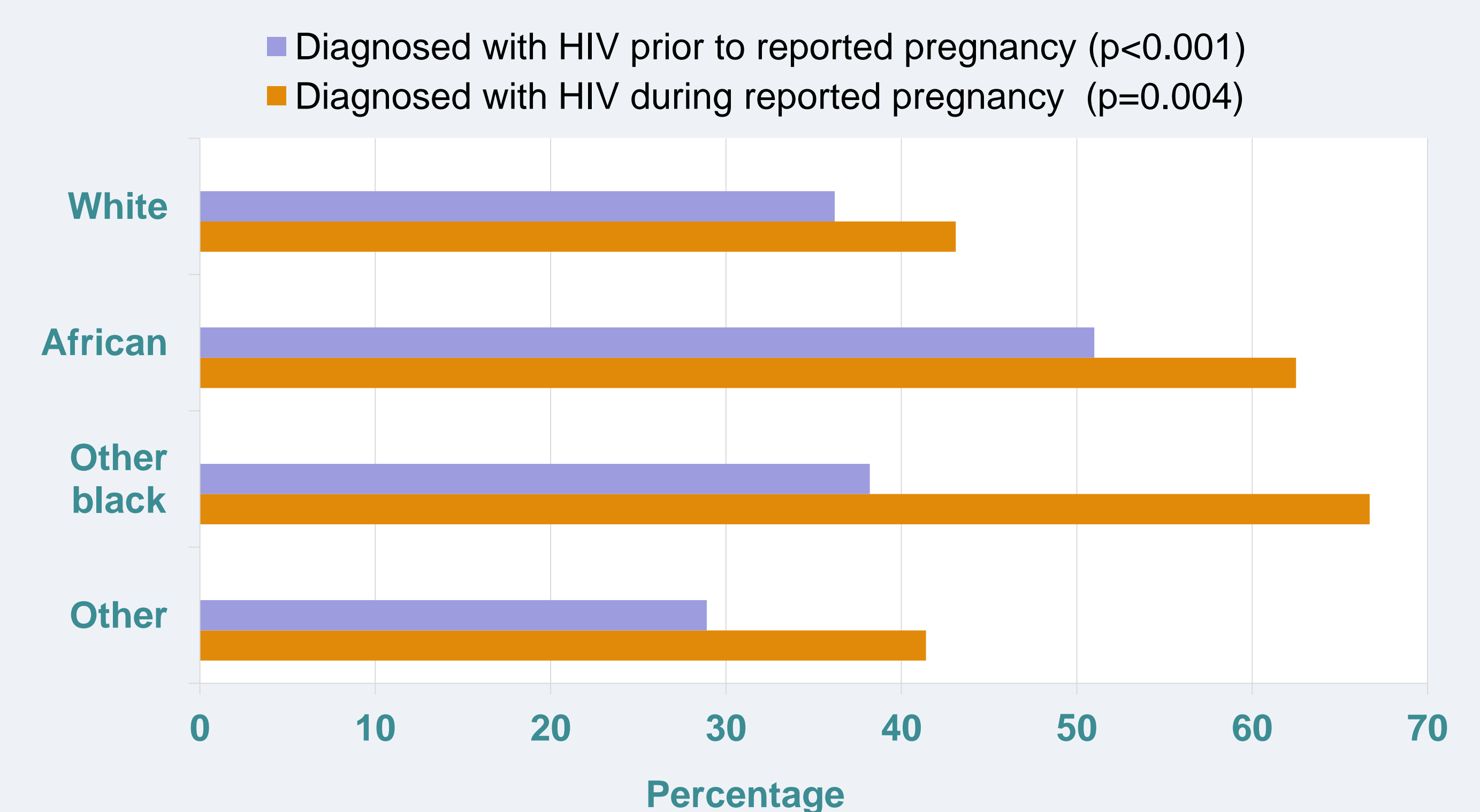
Results

Table 1: Baseline characteristics

	ANC booking <13 weeks (%)	ANC booking ≥ 13 weeks (%)	p-value*
Maternal age at delivery, years (n=1379)	<25	48.2	0.976
	25-34	48.5	
	≥ 35	47.8	
History of injecting drug use (n=1709)	No	48.9	0.298
	Yes	58.6	
1 st CD4 count in pregnancy, cells/mm ³ (n=1569)	≥ 500	50.4	0.090
	200-499	49.6	
	<200	41.4	
ART at conception (n=1621)	Yes with earliest viral load <50copies/ml	59.2	<0.001
	Yes with earliest viral load ≥ 50 copies/ml	46.7	
	No	43.4	
Parity (n=1584)	0	53.0	0.021
	1	49.5	
	2	45.5	
	3	41.0	
Reporting region (n=1708)	London	49.6	<0.001
	England (not London)	52.3	
	Wales, Scotland, Northern Ireland	46.2	
	Ireland	29.5	

*p-value obtained by χ^2 test; † restricted to women diagnosed with HIV prior to reported pregnancy ‡ p-value obtained by χ^2 test for trend; ANC, antenatal care; ART, antiretroviral therapy

Figure 1: Percentage of late booking by timing of HIV diagnosis



Association of late booking and maternal ethnicity

Table 2a: Women diagnosed with HIV prior to reported pregnancy

	Adjusted odds ratio† (95% CI)	p-value
White (n=107)	1	
African (n=667)	1.80 (1.14, 2.82)	0.011
Other black (n=47)	1.33 (0.64, 2.76)	0.445
Other (n=34)	0.69 (0.29, 1.64)	0.405

† Adjusted for age, ART at conception, parity and reporting region; CI, confidence interval

African women were more likely to book late

Table 2b: Women diagnosed with HIV during the reported pregnancy

	Adjusted odds ratio‡ (95% CI)	p-value
White (n=51)	1	
African (n=288)	2.98 (1.45, 6.11)	0.003
Other black (n=27)	3.74 (1.28, 10.94)	0.016
Other (n=24)	1.00 (0.61, 1.63)	0.988

‡ Adjusted for age, parity and reporting region; CI, confidence interval

African and other black women were more likely to book late

Prevalence of late booking

- There were 2721 eligible pregnancies; 63% (1709) had data available on antenatal booking date
- Overall, antenatal booking was late in 51% (871) of pregnancies
- Antenatal booking was ≥ 28 weeks in 5% (90) of pregnancies
- Women diagnosed with HIV during the current pregnancy were more likely to present late for antenatal care than those previously diagnosed (59.1% vs. 47.5%, $p < 0.001$)

Conclusions

- This is the first large-scale study in the UK to explore antenatal booking in HIV-positive women in the UK and Ireland
- We found that antenatal booking was late (≥ 13 weeks of pregnancy) in over half of all pregnancies in women living with HIV
- African women were approximately 2-3 times more likely to book late than white women whilst women of other black ethnicity were nearly 4 times more likely to book late
- Late booking means women miss the opportunity of early screening for HIV (if not already diagnosed) and other conditions, and have less time to engage with HIV services
- Further work is required to understand the barriers to accessing antenatal services in this population
- In the meantime healthcare providers should raise awareness of the importance of early antenatal booking in both women living with, and at risk of, HIV

References: 1. Redshaw, M., & Heikkila, K. (2010). *Delivered with care: A national survey of women's experience of maternity care 2010*. Oxford: National Perinatal Epidemiology Unit, University of Oxford.

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