

a population-level overview

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BACKGROUND

- In recent years the UK & Ireland (UK/I) vertical HIV transmission rate (VTR) has declined to <0.3% among pregnant women diagnosed with HIV. Very few transmissions to diagnosed women still occur in the UK/Ireland, with the majority of children seen for HIV care now being born to undiagnosed women or born abroad.
- We explore the changing characteristics of children diagnosed with HIV and seen for care in the UK/Ireland in 2000-2018 using two observational population-level surveillance datasets

RESULTS

- 1606 children were diagnosed between 2000-18; annual number of new diagnoses peaked at 157 in 2003, declining to 20-50 since 2012-18 ($p < 0.001$), Figure. The proportion of children born abroad increased from 63% (2000-04) to 73% (2012-18) ($p < 0.01$).
- Median [IQR] diagnosis age declined from 2.4y [0.3, 4.9] <2005 to 0.3y [0.1, 1.6] in ≥ 2010 among domestic-born, versus 9.2y [5.9, 12.3] and 3y [2.3, 4.5] in children born abroad, respectively.
- The proportion with children with CDC Stage C at diagnosis declined from 32% (2000-04) to 12% (2015-18) among domestic-born, and 20% to 15% among children born abroad, respectively.

Table: Characteristics at time of UK/Ireland diagnosis by place of birth

	Born UK/I (n=549)	Born abroad (n=1057)	p-value
Acquisition: vertical	532 (98.2%)	920 (96.3%)	0.05
Ethnicity:			
Black African	388 (71.5%)	925 (88.3%)	
White	50 (9.2%)	28 (2.7%)	
Other	105 (19.3%)	(9.0%)	<0.001
Maternal HIV diagnosis:			
Before pregnancy	43 (8.1%)	12 (1.4%)	
During pregnancy	87 (16.3%)	20 (2.4%)	
After pregnancy	402 (75.6%)	813 (96.2%)	<0.001
Reason for child's diagnosis:			
Child symptomatic	205 (37.5%)	419 (41.2%)	
Mother diagnosed	169* (31.0%)	124** (12.2%)	
Other family member diagnosed	166 (30.4%)	443 (43.6%)	
Other	6 (1.1%)	30 (3.0%)	<0.001
Median age at diagnosis, years [IQR]	1.5 [0.3, 4.9]	8.6 [5.3, 12.0]	<0.001
CDC Stage C at diagnosis	144 (26.2%)	179 (16.9%)	<0.001

ART INITIATION

UK/Ireland-born children: 90% (491/545) were ever on ART; the median time from HIV diagnosis to ART initiation was 0.7y [0.2, 3.2] overall and declined from 0.9y [0.2, 4.1] <2005 to 0.4y [0.06, 1.4] in children diagnosed ≥ 2015 ($p = 0.002$).

Children born abroad and diagnosed in the UK/I: 87% (674/779) were ever on ART; median time from diagnosis to ART initiation was 1.2y [0.3, 3.7] overall and declined from 1.3y [0.3, 4.1] in children diagnosed 2000-04 to 0.3y [0.1, 0.4] in children diagnosed ≥ 2015 ($p = 0.002$).

Children previously diagnosed abroad:

Overall 26% (271/1057) of children born abroad were known to have been diagnosed abroad, increasing over time (Figure). 60% (162/271) started ART prior to entry to UK/I Median age at ART start in the country of origin of 5.4 [2.2, 8.4] years. In contrast, for children diagnosed but not treated abroad, median age at ART start was 10.9 [7.3, 4.0] years.

*143/169 UK/I born children diagnosed as a result of antenatal screening (from the pregnancy resulting in the transmission or a subsequent pregnancy)

** 9/124 of those born abroad were diagnosed in UK/I as result of antenatal screening in subsequent pregnancy

METHODS

- All children aged <16 years at HIV diagnosis are reported to the Integrated Screening Outcomes Surveillance Service (ISOSS), part of Public Health England's Infectious Diseases in Pregnancy Screening Programme. Children are followed up longitudinally in the Collaborative HIV Paediatric Study (CHIPS) whilst in paediatric HIV care.
- Descriptive statistics summarise characteristics of children diagnosed with HIV between 2000-18 at first diagnosis in UK/Ireland by place of birth (domestic versus abroad) and calendar year of diagnosis. Age of diagnosis is described by year of birth.

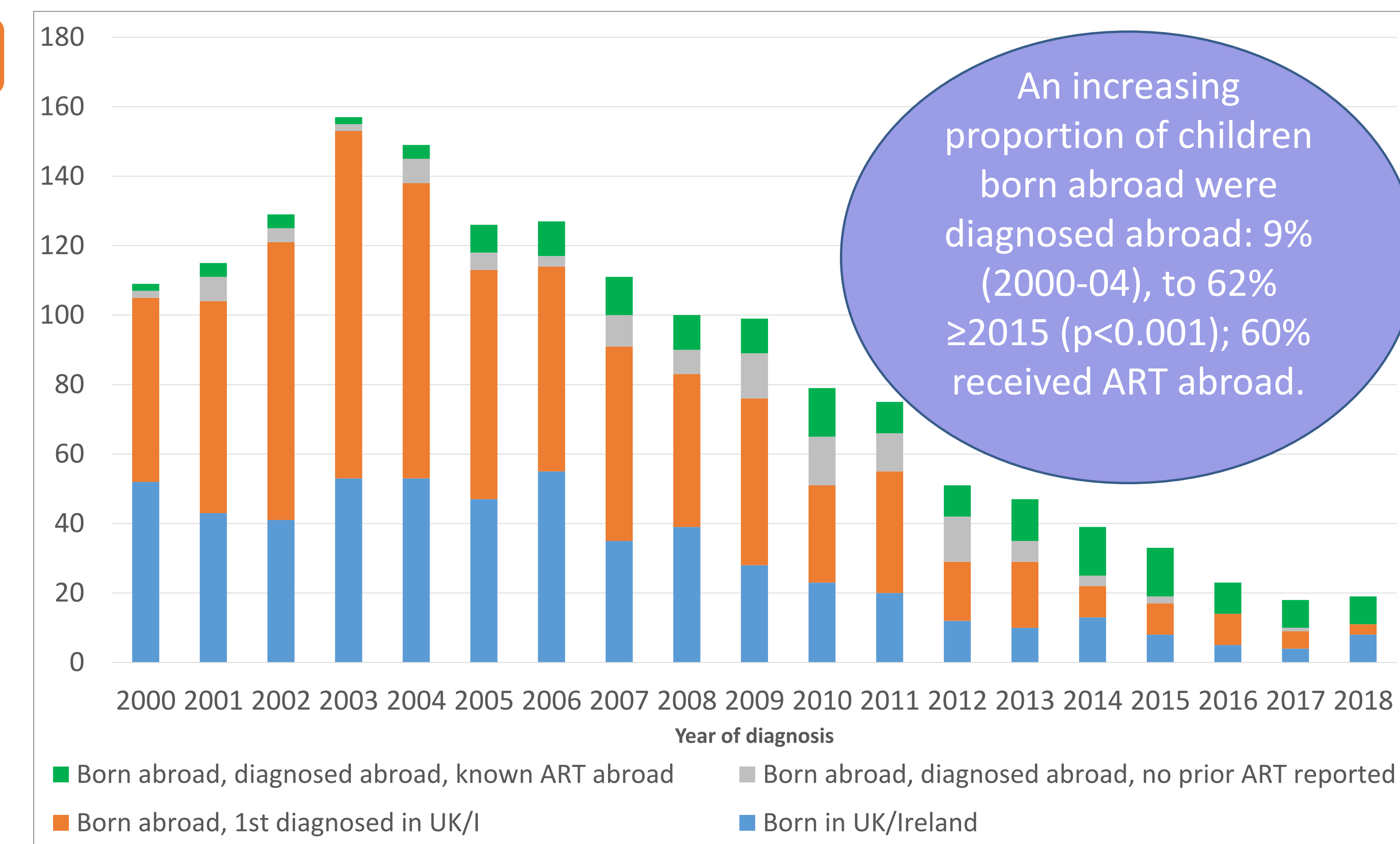


Figure: Number of children diagnosed with HIV in UK/Ireland by place of birth, diagnosis and treatment

CONCLUSIONS

- The decline in new paediatric HIV diagnoses reflect the success of prevention of VT domestically and globally. In the UK specifically there is an uptake of over 99% of the HIV screening test in pregnancy, supported by the work of the Infectious Diseases in Pregnancy Screening Programme. An increasing proportion of children born abroad are now arriving already diagnosed and treated.
- Initiatives to increase ascertainment of HIV status in children have included the 'Don't forget the children' campaign in the UK/I. The antenatal screening programme offers a further opportunity for sibling testing both for children born in the UK/I and abroad.
- Paediatric HIV surveillance remains vital to ensure this vulnerable population receives high quality specialist care and optimal health outcomes.

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