Obstetric and paediatric HIV surveillance data from the UK and Ireland

July 2019 update

Population, Policy and Practice Programme
UCL Great Ormond Street Institute of Child Health
National Surveillance of HIV in Pregnancy and Childhood (NSHPC)

- **Comprehensive observational surveillance** of obstetric and paediatric HIV in the UK and Ireland, in place since 1990

- **Maternity reports of all pregnancies in women with diagnosed HIV infection** through maternity units; demographics, pregnancy management, outcome

- **Paediatric reports of all HIV-exposed infants and infected children (<16 years)** through clinics; NSHPC confirmation of infection status; ongoing follow-up of infected children through CHIPS

- Complementary reporting schemes, no interventions, no enrolment; maternity and paediatric reports linked

- **Enhanced surveillance** of cases of reported breastfeeding

- **Audit** of newly reported infant transmissions
Pregnancies in women with diagnosed HIV, 1990 to date

25,001 pregnancies in diagnosed women since 1990

Source: pregnancies since 1990 reported to the NSHPC from all sources by June 2019
Pregnancy outcomes, 1990 to date

- **25,001** pregnancies
- **21,323** livebirths (85.3%)
- **204** stillbirths (0.8%)
- **1,619** miscarriages (6.5%)
- **1,029** other (4.1%)
- **826** terminations (3.3%)

Source: pregnancies since 1990 reported to the NSHPC from all sources by June 2019
Maternal demographics, early 2000s and now

<table>
<thead>
<tr>
<th>Country/region of report</th>
<th>2000-04</th>
<th>2015-</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>57.2%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Rest of England</td>
<td>30.9%</td>
<td>52.9%</td>
</tr>
<tr>
<td>Scotland</td>
<td>2.5%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Wales / N. Ireland</td>
<td>0.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Ireland</td>
<td>8.4%</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age (years)</td>
<td>29</td>
<td>34</td>
</tr>
<tr>
<td>IDU-acquired HIV</td>
<td>3.4%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Perinatal HIV</td>
<td>0.03%</td>
<td>2.7%</td>
</tr>
<tr>
<td>African-born</td>
<td>77.7%</td>
<td>67.4%</td>
</tr>
<tr>
<td>Eastern Europe*-born</td>
<td>0.3%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

* includes the Baltic states (Estonia, Latvia, Lithuania)

Source: pregnancies since 1990 reported through NSHPC maternity scheme by June 2019
Timing of maternal HIV diagnosis, 1998-2018

UK & Ireland pregnancies (all outcomes) reported to NSHPC by June 2019*

89% of pregnancies since 2015 have been in women diagnosed pre-conception

* includes data from all NSHPC reporting sources

** reporting delay for recent years
Timing of diagnosis & ART at conception, 1998-2018

UK & Ireland pregnancies (all outcomes) reported to NSHPC by June 2019

~80% of pregnancies since 2015 have been conceived on antiretroviral therapy

* contains pregnancies lacking information on precise timing of diagnosis and/or ART use

** reporting delay for recent years
Shifts in mode of delivery among diagnosed women, UK 2000-2018

Proportion of deliveries

- Elective caesarean
- Emergency caesarean
- Vaginal

Year of delivery (number of births)

UK deliveries reported to NSHPC by June 2019*

* includes data from all NSHPC reporting sources
** reporting delay for recent years
Children living with HIV, 1986 to date

~2400 children* living with HIV (under 16s) diagnosed since 1986 and reported by June 2019

- 90% vertical transmission
- Median age 22 years (IQR 18-26) at end of June 2019
- 12% have died
- 45% born in UK or Ireland
- 413 (17%) children were under 16 at end of June 2019 (298 (72%) of these have been seen for care since 2018)

* excludes 267 children with haemophilia reported through a separate scheme
Infection status of children born to diagnosed women

UK & Ireland births reported to NSHPC by June 2019

- Infected
- Indeterminate
- Not infected

*Incomplete due to reporting delay
Vertical transmission in UK/Ireland, 2000-2016

Data for 2000-11 from Townsend et al. AIDS 2014; data for 2012-14 from Peters et al. CID 2016; data for 2015-16 from Peters et al. HIV Drug Therapy Glasgow 2018
Perinatal HIV transmission audit: UK births 2006-2013

108 infants diagnosed with HIV infection and reported to NSHPC by April 2014*

- 62% of transmissions were in infants born to women undiagnosed by time of delivery

* 25 further cases reported since April 2014
Recent NSHPC publications

Surveillance of Congenital Anomalies After Exposure to Raltegravir or Elvitegravir During Pregnancy in the United Kingdom and Ireland, 2008–2018

Virginia Rasi, MD, Mario Cortina-Borja, PhD, Helen Peters, MSc, Rebecca Sconza, MSc, and Claire Thorne, PhD

National audit of perinatal HIV infections in the UK, 2006–2013: what lessons can be learnt?

H Peters, C Thorne, PA Tookey and L Byrne

Pregnancy incidence and outcomes in women with perinatal HIV infection

Laura Byrne¹, Rebecca Sconza¹, Caroline Foster¹, Pat A. Tookey¹, Mario Cortina-Borja¹ and Claire Thorne³

Protease inhibitors and preterm delivery: another piece in the puzzle

Graziella Favarato³, Claire L. Townsend³, Heather Bailey³, Helen Peters³, Pat A. Tookey³, Graham P. Taylor⁴ and Claire Thorne³

For a full list of publications, visit www.ucl.ac.uk/nshpc/publications.
Pregnancies in women with perinatal HIV (PHIV)

- Of 630 women reported to NSHPC in childhood, 45 (7%) had at least one pregnancy reported.
- Pregnancy incidence rate lower in PHIV than in women of similar age in general UK population.
- 70 pregnancies among 45 women with PHIV were compared with 184 pregnancies among 118 age-matched women with behaviourally-acquired HIV (BHIV).

Women with PHIV were 3x more likely to have detectable viral load near delivery [OR 3.22 (CI 1.22-8.48)].

For a link to full publication, visit www.ucl.ac.uk/nshpc/publications.
Congenital anomalies & exposure to raltegravir or elvitegravir, 2010-2018

- No reported congenital abnormalities among 31 live-born infants exposed to EVG-based regimens
- 23 reported congenital anomalies among 886 live-born infants exposed to RAL-based regimens

<table>
<thead>
<tr>
<th>Timing of first RAL exposure</th>
<th>N</th>
<th>(%)</th>
<th>Infants with anomaly</th>
<th>Prevalence of anomalies</th>
</tr>
</thead>
<tbody>
<tr>
<td>At conception</td>
<td>222</td>
<td>(25.0%)</td>
<td>5</td>
<td>2.25% (95% CI 0.73, 5.17)</td>
</tr>
<tr>
<td>1st trimester</td>
<td>40</td>
<td>(4.5%)</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>2nd/3rd trimester</td>
<td>602</td>
<td>(67.9%)</td>
<td>17</td>
<td>2.82% (95% CI 1.65, 4.48)</td>
</tr>
<tr>
<td>Timing unknown</td>
<td>22</td>
<td>(13.5%)</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Overall</td>
<td>886</td>
<td></td>
<td>23</td>
<td>2.59% (95% CI 1.65, 3.86)</td>
</tr>
</tbody>
</table>

Prevalence of congenital anomalies among raltegravir-exposed infants by timing of first exposure (data source: Rasi et al. 2018 JAIDS)

For a link to full publication, visit [www.ucl.ac.uk/nshpc/publications](http://www.ucl.ac.uk/nshpc/publications).
Ethics
MREC/04/2/009; CAG ref: 15/CAG/0190

Acknowledgements

All NSHPC respondents
Public Health England
Contributors to the Collaborative HIV Paediatric Study (CHIPS) at the MRC Clinical Trials Unit and the clinical centres

Current team
Surveillance Lead: Claire Thorne
Surveillance Manager: Helen Peters
Surveillance Coordinator: Kate Francis
Surveillance Assistants: Laurette Bukasa, Rebecca Sconza
PhD Student: Virginia Rasi

Current funding
Public Health England
NHS Infectious Diseases in Pregnancy Screening Programme

Any views expressed in NSHPC publications / presentations are those of the authors or presenters and not necessarily those of the funders.

Visit the National Surveillance of HIV in Pregnancy and Childhood (NSHPC) website at www.ucl.ac.uk/nshpc.