10.4 Mental health assessment and support

10.4.1	Women should have their mental health needs assessed postpartum and those assessed as having mental health issues should be referred to appropriate services in the Trust, community and/or voluntary groups without delay.	1D

10.5 Contraception

10.5.1	Contraceptive needs should be discussed with all women, and ART may be changed to optimise a woman's contraception choice as long as the ART prescribed is fully active against the viral genotype.	1D

10.6 Cervical cytology

10.6.1	Cytology should be scheduled 3 months post-delivery as per the Guidelines for the NHS Cervical Screening Programme 2016.	1C

10.7 Testing of partner and/or older children

10.7.1	For the woman newly diagnosed with HIV in pregnancy, testing of her partner and/or other children should be completed.	1D

2.2 Auditable outcomes

1	Proportion of pregnant women newly diagnosed with HIV having a sexual health screen.
2	Proportion of newly diagnosed women, requiring cART for their own health, starting treatment within 2 weeks of diagnosis.
3	Proportion of women who have commenced ART by beginning of week 24 of pregnancy.
4	Proportion of women with a baseline HIV viral load ≥30,000 HIV RNA copies/mL plasma and who do not require treatment for themselves commencing temporary cART at the beginning of the second trimester (by beginning of 16 weeks' gestation).
5	Proportion of women presenting in labour/with SROM/requiring delivery without a documented HIV result having an urgent HIV test result documented and this reactive/positive result acted upon immediately with initiation of the interventions to prevent vertical transmission without waiting for further/formal serological confirmation.
6	Proportion of women with HBV/HIV co-infection who have LFTs performed 2 weeks after commencing cART to detect evidence of antiretroviral hepatotoxicity or IRIS.
7	Proportion of women with HCV/HIV co-infection who have LFTs performed 2 weeks after commencing cART to detect evidence of antiretroviral hepatotoxicity or IRIS.
8	Proportion of women who have invasive prenatal diagnostic testing performed before their HIV status is known.

9	Proportion of emergency CSs performed and their indication.
10	Proportion of infants <72 hours old, born to untreated women living with HIV, initiating three-drug therapy within 2 hours of delivery.
11	Proportion of routine neonatal PEP commenced within 4 hours of delivery.
12	Proportion of HIV infected infants reported back to delivering obstetric unit for review
13	Proportion of infants born to women living with HIV who have HIV antibody testing for seroreversion performed at age 22–24 months.
14	Proportion of infants reviewed postpartum by 6 weeks.
15	Proportion of mothers reviewed postpartum by 6 weeks.
16	Proportion with documented mental health assessment at booking, and at 4–6 weeks postpartum.

3. Introduction

A key goal of managing HIV in pregnancy and postpartum is to optimise a woman's own health. Furthermore, one of the major successes in the management of individuals living with HIV has been the prevention of vertical transmission of HIV. With the widespread implementation of routine antenatal screening for HIV, vertical transmission is now a rare occurrence in the UK. Despite few recent randomised controlled trials of the use of ART in pregnancy or obstetric intervention, practice continues to evolve. This is largely informed by observational data, theoretical considerations and expert opinion.

At the outset, the aim of the writing group was to make these guidelines as clinically relevant and as practical as possible. The writing group drew up a list of questions reflecting day-to-day practice and queries. It was acknowledged that the level of evidence for many of these topics was poor but recognised that there was a need to provide guidance. These guidelines have expanded on all areas relevant to the management of HIV in pregnancy and the postpartum period. The guidelines are intended to inform and aid healthcare workers in the management of pregnancy in the context of HIV. They are not intended to be prescriptive or restrictive and it is recognised that situations will arise where the optimum management may deviate from these recommendations and new data will emerge to better inform practice. We recognise that a small number of trans and non-binary people living with HIV will also experience pregnancy. We use the term 'woman' or 'women' in these guidelines for brevity, on the understanding that guidance also applies to trans and non-binary individuals.

Particular areas of focus have been psychosocial, infant feeding, neonatal and postnatal management. We have expanded, renamed and moved the section on the psychosocial care of women living with HIV during and after pregnancy. We have emphasised the need for antenatal HIV care to be delivered by an MDT, the precise composition of which will vary. We have also recommended that assessment of antenatal and postnatal depression be undertaken at booking, and 4–6 weeks postpartum and 3–4 months postpartum in accordance with NICE guidelines. We have updated infant feeding advice to include new data on breastfeeding and the emotional impact that not breastfeeding may have on a woman. We discuss the use of cabergoline in non-breastfeeding women. Length of infant PEP has been stratified according to risk of transmission being VERY LOW, LOW or HIGH according to maternal viral load and ART. PEP has been shortened to 14 days where risk of vertical transmission is VERY LOW. We have added a section on the postpartum management of women living with HIV.

An increasing number of women are aiming for and achieving a vaginal delivery but the rate of emergency CSs has increased. It is hoped that the recommendations contained within these guidelines will enable a further increase in the proportion of vaginal deliveries and a reduction in the number of emergency CSs. Linked to this is the proposed starting gestation for women temporarily taking combination antiretroviral therapy (cART) in pregnancy, which has been brought forward depending on baseline viral load. It is anticipated that this will result in a larger proportion of women achieving a viral load <50 HIV RNA copies/mL by 36 weeks' gestation, thereby allowing them to plan for a vaginal delivery.

Additional guidance has been provided with regard to conception on cART, the choice of specific drugs or drug classes and the management of women with HBV or HCV co-infection. For the first time these guidelines have addressed the issue of continuation of cART postpartum in women. The paediatric section provides further guidance on infant PEP, drug dosing and safety. There is a clear urgent need for neonatal preparations for a wider variety of antiretroviral drugs because the current options, particularly in the case of maternal viral resistance, are limited.

In key areas, the National Study of HIV in Pregnancy and Childhood (NSHPC) informs the management of HIV in pregnancy through comprehensive data collection, collation and analysis, and the need to interrogate the data continues as practice changes.

3.1 UK prevalence and epidemiology of HIV in pregnancy, antenatal screening and risk of transmission

Information about the management, epidemiology and outcome of HIV in pregnancy in the UK is available from

the National Study of HIV in Pregnancy and Childhood (NSHPC: www.ucl.ac.uk/nshpc). Other vital data sources are Public Health England's HIV surveillance systems (www.gov.uk/government/collections/hiv-surveillance-data-and-management) and the NHS infectious diseases in pregnancy screening (IDPS) programme (www.gov.uk/topic/population-screening-programmes/infectious-diseases-in-pregnancy).

Prevalence of HIV among women giving birth in the UK was monitored for over 20 years through an unlinked anonymous survey, based on residual neonatal dried blood spots, which provided an estimate of HIV prevalence in women giving birth regardless of whether they had been diagnosed [1]. By 2011, the last year for which data were published, the survey covered about 400,000 births in England, and prevalence overall was 2.2 per 1000 women giving birth, and highest in London at 3.5 per 1000. When the survey was discontinued in Scotland in 2008, prevalence was about 0.9 per 1000 women. Among women from sub-Saharan Africa giving birth, overall prevalence was relatively stable in the last 10 years of the survey at 2–3%; among UK-born women there was a gradual increase over the decade from 0.3 to 0.5 per 1000 [2].

National data on HIV in the general population show that around 20,000 women were living with diagnosed HIV in England in 2016, and an estimated 1300 with undiagnosed infection [3]. Between 2012 and 2016 the number of women diagnosed each year with HIV in the UK declined from around 1700 to 1200, and this was particularly marked among women from sub-Saharan Africa. The number of diagnosed pregnant women reported to the NSHPC also declined from a peak of over 1450 in 2010 to around 1100 in 2015, and a little lower in 2016; about three-quarters of women are from sub-Saharan Africa and around 15% were born in the UK or Ireland [4].

Major progress has been made in the UK, as elsewhere, in reducing the rate of vertical transmission of HIV. In 1993, when interventions were virtually non-existent, the vertical transmission rate among diagnosed women was 25.6% [5]. In the mid-1990s only about one-third of pregnant women living with HIV were diagnosed, and most of these women were aware of their status before they became pregnant, with very few being diagnosed antenatally. Once interventions to reduce the risk of vertical transmission were available it became clear that antenatal screening and early detection of maternal infection was vital; the universal offer and recommendation of antenatal HIV testing was introduced in England in 2000 and throughout the UK by 2002. National uptake rates improved year on year, and uptake has exceeded 97% since 2011 [6]. Antenatal screening guidance for laboratories and healthcare providers is regularly updated and available at www.gov.uk/government/collections/infectious-diseases-in-pregnancy-screening-clinical-guidance.

Between 2000 and 2006, with high antenatal detection rates and uptake of effective interventions, the overall transmission rate from diagnosed women was 1.2%, and less than 1% among women who had received at least 14 days of ART. Among more than 2000 women delivering on cART with an undetectable viral load, there were only three transmissions (transmission rate 0.1%) [7]. These very low transmission rates persist, reducing to an estimated 0.57% [8] in 2007–2011, and 0.27% in 2012–2014 [9]. In 2012–2014, 85% of deliveries were to women who already knew their HIV status before they became pregnant, and about 50% of women were having a second or subsequent baby since their HIV diagnosis. Almost all women received cART during pregnancy, while the proportion conceiving on cART has increased from 40% in 2007–2011 to 60% in 2012–2014. The proportion of vaginal deliveries also increased, from 37% to 46%, but emergency CS rates remain high, at around 20–25% of deliveries [4,9]. An increasing proportion of pregnancies are in women aged over 40, rising from 2% in 2000–2004 to 9% in 2010–2014 [10], and at the same time a growing cohort of pregnant women with perinatally acquired HIV is emerging [11].

3.2 HIV infection in children

The number of children (aged under 16) diagnosed with vertically acquired HIV infection in the UK increased from around 70 diagnoses a year in the early 1990s to a peak of 164 in 2003, and then declined to 74 in 2011 and 29 in 2015 [3].

During the last decade about two-thirds of children newly diagnosed in the UK were born abroad. However, despite the high uptake of antenatal screening and effective interventions, perinatal infections still occur in the UK. The number remained stable at about 30–40 a year between 2001 and 2007. However, as the total number of births to women living with HIV stabilised and then declined, and uptake and impact of screening and interventions improved, this number reduced substantially; it is now fewer than five per year [3,9].

An audit of the circumstances surrounding nearly 90 perinatal transmissions in England in 2002–2005 demonstrated that over two-thirds of these infants were born to women who had not been diagnosed prior to delivery [12]. About half of these undiagnosed women had declined antenatal testing. A smaller proportion had tested negative and had presumably seroconverted in pregnancy, or while still breastfeeding. The findings of a subsequent UK audit of perinatal transmissions between 2006 and 2013 were similar, although the number of transmissions (108 identified by the end of March 2014) had substantially reduced [13]. Both audits also revealed that a high proportion of these women faced multiple issues such as comorbidities, insecure accommodation, immigration concerns, intimate partner violence and other challenging social circumstances during and after pregnancy, and required multidisciplinary support.

Among children living with HIV with follow-up care in the UK and Ireland, the rate of AIDS and mortality combined declined from 13.3 cases per 100 person-years before 1997 to 2.5 per 100 person-years in 2003–2006 [14]. With improving survival, the median age of children in follow-up increased from 5 years in 1996 to 12 years in 2010, and over 800 young people had transferred to adult care by the end of 2015 [4].

3.3 Reporting and long-term follow-up

Aggregated data tables from the UK and Ireland of antiretroviral exposure and congenital malformations are regularly sent to the Antiretroviral Pregnancy Registry (APR).

Individual prospective reports should also be sent to the APR antenatally with postnatal follow-up (Antiretroviral Pregnancy Registry Research Park, 1011 Ashes Drive, Wilmington, NC 28405, USA; UK Tel: 0800 5913 1359; Fax: 0800 5812 1658; for forms visit: www.apregistry.com).

3.4 National Study of HIV in Pregnancy and Childhood (NSHPC)

NSHPC is the surveillance system for obstetric and paediatric HIV for the UK and Ireland, based at the UCL Great Ormond Street Institute of Child Health, London. Children living with HIV and children born to women living with HIV are reported through the British Paediatric Surveillance Unit of the Royal College of Paediatrics and Child Health, or in the case of some units with large caseloads direct to the NSHPC. Diagnosed pregnant women are reported prospectively through a parallel reporting scheme originally established under the auspices of the Royal College of Obstetricians and Gynaecologists. Longer-term data on infected children are subsequently collected through the Collaborative HIV Paediatric Study (CHIPS). It is the responsibility of clinicians caring for women living with HIV and their children to report cases prospectively to the NSHPC. For further information see the NSHPC website (see section 3.1) or the CHIPS website (www.chipscohort.ac.uk/), or email the NSHPC (nshpc@ucl.ac.uk).

3.5 References

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