

## Infectious disease screening in pregnancy

**Key points:**

- HIV screening
- Syphilis screening
- Hepatitis B screening

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## Abbreviations

ANNB	Antenatal and Newborn
BASHH	British Association for Sexual Health and HIV
CD4	Cluster of differentiation 4
CS	Congenital Syphilis
EPIC	Electronic, Process, Instrumentation and Control System
HBsAg	Hepatitis B surface antigen
HBV	Hepatitis B virus
HIV	Human immunodeficiency virus
IDPS	Infectious Diseases in Pregnancy
ISOSS	Integrated Screening Outcomes Surveillance Service
KPI	Key performance indicators
MDT	Multidisciplinary team
MMR	Measles, Mumps, and Rubella
NHSE	National Health Service England
NOP	Notification of pregnancy
NSC	National Screening Committee
PROM	Premature rupture of membranes
SIAF	Screening Incidents Assessment Form
SQAS	Screening Quality Assurance Service
SH	Sexual Health
SOP	Standard operating procedure
UKHSA	United Kingdom Health Security Agency
WHO	World Health Organisation

## Section A: Background and offer of screening

### 1. PURPOSE

- The UK National Screening Committee (NSC) has responsibility for setting screening policy. It recommends systemic population screening in pregnancy for HIV, Hepatitis B and Syphilis.
- Screening for infectious diseases is an integral aspect of antenatal care.
- Routine screening is offered to all pregnant women on the basis that early detection and treatment can reduce adverse perinatal outcomes. These guidelines incorporate generic infectious disease screening guidelines as well as disease specific sections.
- The purpose of this protocol is to ensure adherence to The National Screening Committees Standards of practice for infectious disease screening.

### 2. FUNCTION

#### 2.1 Aims

- To offer early screening and diagnosis as indicated to all pregnant women attending for antenatal care booked to deliver at Frimley Park or Wexham Park Hospital Maternity Units.
- To provide adequate high-quality information on the screening process to enable the woman and her partner to make an informed decision on whether to accept or decline the offer of screening.
- To ensure adequate support and counselling to all women with a confirmed diagnosis and ensure rapid referral is made to the appropriate multidisciplinary team.

#### 2.2 Routine offer of infectious diseases screening

- Mothers should be supported to download the digital 'Screening tests for you and your baby' information via the link.
- This is available in the following languages for women whose first language is not English: Arabic, Punjabi, Bengali, French, Latvian, Lithuanian, Polish, Portuguese, Romanian, Somali and Urdu, as well as an easy read version. These are available to download and print from the UK Screening Portal at the following link:  
<https://www.gov.uk/government/publications/screening-tests-for-you-and-your-baby>
- Arrangements must be made to use the trust interpreting service (including British Sign Language) if the mother does not understand English.
- The patient should complete the online pregnancy notification form (NOP) available on the Trust maternity website and the community midwifery team should ensure the women has an appropriate booking appointment arranged, ideally between 8-10weeks of pregnancy.
- At the booking appointment the midwife should discuss the nature and effects of the infectious diseases, what the tests involve, how the diseases are transmitted, the meaning of the results and the benefits of detection and early treatment. Midwives should refer to the National Screening Committee 'Screening tests for you and your baby' digital link and support women to save the link to the home screen of their mobile device.

- Allow mothers time to consider screening if they wish and provide contacts for further discussion.
- The midwife should document discussions and screening decisions on the EPIC patient record including when a woman consents or declines screening
- Inform the mother of how and when results will be available.
- Midwives should discuss and promote vaccinations for pertussis and influenza (during flu season) at the booking appointment and all subsequent antenatal contacts and advise women to check their MMR status with their GP post-delivery. Although, antenatal screening for Rubella is no longer offered, midwives should advise women to report any rash or rash-like illness to their midwife or GP as soon as possible to facilitate appropriate management of viral rash in pregnancy as per NHSE guidance. She should be advised to avoid any antenatal clinic setting or other pregnant women until she has been assessed. Further advice can be found below.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/674438/PHE\\_Pregnancy\\_2018\\_DL\\_16pp\\_leaflet\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674438/PHE_Pregnancy_2018_DL_16pp_leaflet_.pdf)

## 2.3 Screening declined

- If a woman declines any of the three infections the booking midwife should inform the screening team via email or EPIC staff message. Antenatal infectious disease screening order should be completed but decline selected for the specific infectious disease.
- The woman must be informed by the community midwife that the screening team will contact her. The screening team will provide further counselling and reoffer screening. The reoffer appointment will be arranged before 20 weeks gestation or within 2 weeks if booking after 20 weeks.
- The community midwife will enquire about the reasons for declining, to ensure the woman has received accurate information on which to base her decision.
- If a woman is known to have been previously screened positive and declines repeat testing for this reason, please inform the screening team to ensure referral to specialist services is completed within 5 days. An EPIC order should be completed indicating 'known positive' and screening of the other infectious diseases should be offered as per normal pathway. Women verbally reporting previous positive results should be re-offered screening to obtain confirmed results.
- When a woman declines, the community midwife must give further advice about avoiding infection.
- The community midwife is responsible for documenting decision to decline on the EPIC record.
- The community midwife must inform the woman that testing on request is available at any point during pregnancy, should the woman consider herself to be at risk.
- Requests for women booking late or transferring from another unit see section 2.4 and 2.5.
- At the 28-week antenatal consultation any professional reviewing the woman is responsible for initiating a reoffer of screening to women who have previously declined.
- The consent process must be managed as per the initial offer.

- Health professionals should offer repeat tests to any woman known to be at on-going risk of infection at any other points in pregnancy.
- Women may seek a second or subsequent test in pregnancy if they consider themselves at risk.

## 2.4 Late booking

- Tests for infectious diseases in pregnancy must be offered to all women booking late for antenatal care by the midwife undertaking the booking history / at the first point of contact with the woman.
- Samples must be taken as soon as possible, and within 2 weeks of accessing antenatal care. A request for prompt testing and the reason must be made clear on the laboratory request form. Screening should be performed by the laboratory without delay, either on the day of receipt or next working day if received out of hours and results reviewed as soon as they are available from the laboratory.
- Women with a confirmed screen positive result should be informed of their result and referred urgently to specialist services, requesting they be seen as soon as possible.

## 2.5 Unbooked in labour.

- The midwife caring for a woman presenting in labour unbooked or a woman who has recently delivered having had no prior care, is responsible for giving up to date information about the screening tests and recommending screening. Where consent is given, screening must be undertaken without delay. To expedite testing, the maternity service must liaise directly with the laboratory, usually by telephone, to request urgent screening and make sure the laboratory has the necessary clinical information to aid prompt analysis. Maternity services must not rely on writing 'urgent' or similar on the request form or flagging 'urgent' on an electronic request.
- All positive urgent screening results (confirmed and unconfirmed) must be communicated by the laboratory directly to the on-call obstetric team who will then consult with the paediatric team and relevant specialist service.
- Unconfirmed positive results are where HIV, hepatitis B or syphilis is detected in the blood in the initial screening test, but the laboratory is unable to perform the confirmation test immediately. In this situation there needs to be an urgent clinician to clinician conversation. This should be between the laboratory clinician and the on-call obstetrician and paediatrician. This is the only circumstance in which an unconfirmed result can be given verbally and acted upon.
- The reason results may be released provisionally is to enable therapy to be given to the baby, and to the woman if not yet delivered, to reduce the risk of vertical transmission before confirmatory tests are completed.
- If a woman is transferring in from another trust a complete set of booking bloods should be repeated including infectious disease screening and sickle cell and thalassaemia screening. If a repeat of screening is declined the midwife must document on the EPIC record and make every attempt to view results from the transferring trust. Copies of previous results should be uploaded to the EPIC media tab.
- If the offer of testing is not appropriate or is declined prior to delivery, then the midwife caring for the woman is responsible for ensuring tests are offered and performed if consent is given prior to discharge from maternity services and must

ensure that the consent process is managed as per the initial offer (the screening coordinator may be involved). This responsibility must be handed over by the delivering midwife to the midwife taking over care / receiving the woman on the post-natal ward if not completed by the delivering midwife following birth and the screening team must be informed.

- Every effort should be made to obtain urgent screening results before discharging the woman home. Where this is not possible a plan must be made for a named person to take responsibility for checking and communicating the results to the woman and to inform the screening team urgently in the event of a positive result.
- The screening team receive a weekly failsafe list from the laboratory which includes all positive and equivocal results. The list is reviewed by the screening team to ensure all have been appropriately actioned.

### 3. SCREENING RESULTS

- All results to be checked by community Midwife within 10 days of being taken. If there are any missing screening bloods or equivocal results reported a repeat of screening should be organised within 10 days.
- EPIC Booking bloods flow sheet to be completed and normal results released to the patients App.
- EPIC Booking blood flow sheet to be reviewed and completed at 16-week appointment. Although signing up to the My Frimley Health App is strongly encouraged at the booking appointment care should be taken to ensure all women are active on the app and have been informed of all screening results.
- The health care professional notifying the woman of her negative result should ensure women understand the result is negative at time of screening and offer sexual health advice and inform her that she can request screening at any stage in pregnancy if she considers herself to be high risk or changes her sexual partner.
- If result is abnormal, the screening midwife will inform the patient and update the EPIC record. Should this not be evident when making the 10 day checks the community midwife must contact the screening team to ensure they are aware of the result. The screening team is responsible for informing the patient of any positive results and ensuring appropriate ongoing care is arranged.
- All positive results are emailed by the consultant virologist to the generic screening email.
  - FPH site : [fph-tr.antenatalscreening@nhs.net](mailto:fph-tr.antenatalscreening@nhs.net)
  - WPH site : [fph-tr.antenatalandnewborn@nhs.net](mailto:fph-tr.antenatalandnewborn@nhs.net)
- The screening team will ensure that all women with a positive result are contacted and invited in to see the team within 5 days of being informed.
- All women with known positive infectious disease results can choose not to be rescreened but the screening team must be informed by the community midwife and will ensure the woman is seen within 5 days and that all relevant follow-on appointments are made with the multidisciplinary team.

### 3.3 Following a miscarriage.

- When the community midwife is made aware of a woman miscarrying, she must ensure all normal screening results have been released with care taken to ensure the patient is active on the 'My Frimley Health App'
- Positive or inconclusive screening results will be the responsibility of the screening team and repeat or onward multidisciplinary care will be arranged.

### 3.4 Delayed requests

- All repeat or outstanding requests must be repeated within 10 days of the lab informing the maternity service. If results are not found repeat screening should be re-offered and performed, with consent within the next ten working days, in line with national programme standards. It is therefore important that the community midwife check the result within 10 working days of taking booking samples.

### 3.5 Test results

- Any professional reviewing the woman at any point in her care pathway should check that infectious disease results are completed. A missing screening results should prompt a search and repeat should be reoffered.
- An incident report should be completed on RL if any error is subsequently identified. This would be investigated by the screening coordinator and reported to the NSC via a screening incidents assessment form (SIAF).



## Section B: Guidelines for specific infectious diseases - screening and management of positive results

### BASHH guidelines

#### 4. SYPHILIS

- The aim of screening for syphilis in pregnancy is to identify women with an infection and offer treatment, in order to reduce the risks of the baby developing congenital syphilis.
- Syphilis is a sexually transmitted infection, caused by the bacterium *Treponema pallidum*. Congenital syphilis is transmitted via the placenta; an untreated syphilis infection during pregnancy has a fetal loss rate of approx. 50%. Those babies that survive suffer considerable morbidity including: naso-facial hypoplasia, blindness, deafness and bone abnormalities. Changes in the epidemiology of syphilis in the UK could lead to selective screening missing a higher proportion of cases in the future. The National Screening Committee based on recent evidence therefore recommend the current practice of universal screening for syphilis is of benefit and should continue.
- The screening tests are over 99% accurate. All screen reactive results are sent for confirmatory testing.
- Syphilis is not common in the UK but is prevalent in Eastern Europe, Africa and Asia. Since 2009 approximately 1 in every 700 pregnant women each year has screened positive for syphilis. However, not all those who screen positive will have active infection.

##### 4.1 Syphilis screening guidance

- It is the responsibility of the community midwife at booking to ensure that screening for syphilis is recommended regardless of screening results in previous pregnancies.
- Explain how and when results will be given and that a positive or equivocal result will require urgent referral to the appropriate Sexual health clinic and follow up care discussions will also take place regarding contact tracing.
- Women reporting previous or known syphilis infection should still be offered screening and have the test repeated in pregnancy. All women with a positive syphilis screening result will be referred to the appropriate clinic by the screening team. Any previous treatment should be clearly documented in the antenatal booking history.
- There are three possible reasons for a screen positive result in pregnancy:
  - current syphilis infection
  - syphilis infection in the past which was successfully treated.
  - false positive or detection of another Treponemal infection (Bejel, Pinta, Yaws)

##### 4.2 Antenatal management of women with a positive syphilis result

- Women with screen positive results will be contacted by the screening team and an appointment offered within 5 days either with the screening team or the sexual health team. The screening team will use the ISOSS syphilis notification form to collect the complete patient history which will support referral and completion of the ISOSS online reporting. Data collection forms are available from <https://www.ucl.ac.uk/integrated-screening-outcomes-surveillance/integrated-screening-outcomes-surveillance-service-isoss>

- The antenatal screening team will ensure the woman is referred to the correct sexual health provider for their residential address and an appointment has been arranged. The BASHH Syphilis Birth plan will be partially completed by the screening team and be attached to the email referral. The Birth plan will be completed by the Sexual Health provider and returned to aid ongoing obstetric and paediatric care.
- Treponemal antibody tests cannot differentiate syphilis. All women who screen positive will need a comprehensive sexual health assessment and examination by the SH team. This is to determine the stage of infection and identify any health complications. Only those women with acute infection or inadequately treated previous infection will need treatment.
- Women with screen positive results are to be managed by the multidisciplinary team, i.e., close working relationships between maternity services, obstetrics, and specialist syphilis services, e.g., SH and paediatrics.
- Any woman with a primary or secondary syphilis as confirmed by Sexual health services and not treated before 26 weeks gestation should be referred to fetal medicine. Ultrasound findings of fetal hydrops or hepatosplenomegaly can be suggestive of a fetal syphilis infection. Most cases seen at Frimley Health are cases of latent syphilis so do not require fetal medicine review. If unclear, then SH should be contacted for advice.
- There should be an MDT plan of care in place for babies requiring assessment and treatment at birth. The diagnosis of congenital syphilis (CS) can be very difficult. Most infected neonates are asymptomatic at birth and passive transfer of maternal IgG across the placenta may cause reactive neonatal syphilis serology, even in the absence of CS.
- The BASHH Birth plan will be completed by the Sexual Health provider with clear instructions for the neonatal team to follow. The screening team will schedule a fetal medicine virtual MDT which will allow them to create a fetal chart and document the post-natal plan on the pending babies record. A copy of the birth plan will be uploaded to the media tab on the pending baby record. All babies born to mothers with positive treponemal serology requiring treatment need clinical evaluation and syphilis serology tests as described on the Birth plan. (Appendix 5)
- All positive syphilis cases will be reported to the Infectious Diseases in Pregnancy Screening (IDPS) Integrated Screening Outcomes Surveillance Service ([ISOSS](https://www.idps.org.uk/)) by the screening team.

**Further information**

British Association of Sexual Health and HIV (BASHH) UK National Guidelines on the Management of Syphilis 2015

[https://www.bashh.org/resources/25/syphilis\\_2015/](https://www.bashh.org/resources/25/syphilis_2015/)

## 5. HIV SCREENING

### **MUST BE READ IN CONJUNCTION WITH THE [HIV IN PREGNANCY](#) GUIDELINE**

Testing is offered routinely to all pregnant women. Some women are at higher risk than others, including:

- Previous blood transfusions and/or poor instrument sterilisation (e.g., dental) whilst in another country.
- Unprotected sex with an infected person or having a bisexual partner, using IV drugs or needle sharing.

The benefit of testing is the ability to treat the woman and unborn child with medication and plan appropriate management of delivery. The use of antiretroviral drugs can reduce the risk of mother to child transmission of HIV from 25% to around 1%.

A positive result is uploaded to the EPIC record and available to be reviewed by all health professionals directly involved in her care, e.g., obstetricians, midwives, HIV specialist and GP.

Alternatively, sexual health clinics offer confidential HIV screening. The screening teams will have the details of all local clinics.

The woman will need to be aware that the antenatal screening result will be shared with relevant professionals.

The woman has a right to decline the test.

The outlook for HIV is improving all the time with many people living full lives with appropriate treatment and management. HIV can now be seen as a long-term infection, rather than one which was invariably fatal.

Women should be asked if they have any particular concerns about HIV infection and be given the opportunity to explore them. This is supported by offering additional literature, helpline numbers (see below) and by allowing time to decide whether to have the test.

Inform women that they will be contacted within 10 working days if any of her routine bloods are abnormal; otherwise, she will be informed of her results at her next antenatal appointment. The screening team will contact all women with a positive HIV result within 5 days of the lab informing the team.

#### **Useful web sites:**

National AIDS Trust: [www.nat.org.uk](http://www.nat.org.uk)

National Sexual Health Helpline: 0300 123 7123 .

<https://www.nhs.uk/live-well/sexual-health/where-can-i-get-sexual-health-advice-now/>

## 5.1 Breastfeeding

It is well established that HIV can be transmitted from mother to child by breastfeeding and complete avoidance removes the risk altogether. In most high-income countries, it is advised that women living with HIV should exclusively formula feed from birth regardless of Anti-Retroviral Therapy and infant PEP (post exposure prophylaxis).

If a mother chooses to breastfeed then she should be given the opportunity to discuss this with the breastfeeding team and/or a paediatrician. It is vital she is well informed, and a post-natal surveillance plan is in place to monitor the possible exposure of the virus to the baby.

The screening team will liaise with sexual health provider and the paediatricians to ensure a PN plan is in place.

Where a woman chooses to breastfeed against recommended advice she and the baby should be monitored regularly by the MDT for maternal adherence to ART. The paediatric and sexual health team will be responsible for monitoring this.

- Mother and infant should be reviewed monthly in clinic for HIV RNA viral load testing during, and for 2 months after stopping Breast feeding.
- Maternal cART (rather than infant pre-exposure prophylaxis) is advised to minimise HIV transmission and safeguard mothers' health.
- Infant HIV antibody testing for sero-reversion should be checked at age 18–24 months.
- Breast Feeding for as short a time as possible, exclusively for the first 6 months, and cease if:
  - signs of breast infection/mastitis
  - mother or infant has gastrointestinal symptoms
  - blip in maternal viral load

BHIVA feeding guidelines <http://www.bhiva.org/pregnancy-guidelines>

## 5.2 Antenatal management of women with a positive HIV result

- The antenatal screening coordinator will normally be the first person to be informed of a positive result by nhs.net email from the virology consultant and will liaise with the obstetrician, the patient and the Sexual Health provider.
- The GP/consultant should liaise with the SH consultant and/or screening team before planning to contact the woman as strategies on 'breaking the news' may be discussed or a plan may already be in place.
- The woman should be alone when informed as she may need to discuss whether and how to inform others. The screening team may use the ISOSS HIV pregnancy notification form to gather a comprehensive history which will aid the sexual health team and support completion of the ISOSS online notification process.  
[https://www.ucl.ac.uk/integrated-screening-outcomes-surveillance/sites/integrated\\_screening\\_outcomes\\_surveillance/files/isoss\\_hiv\\_maternity\\_notification\\_0721.pdf](https://www.ucl.ac.uk/integrated-screening-outcomes-surveillance/sites/integrated_screening_outcomes_surveillance/files/isoss_hiv_maternity_notification_0721.pdf)
- The SH clinic can support her, take over her medical management and arrange contact tracing.
- Patients should be aware that all blood results are available to be viewed on the

patient's maternity electronic record by all health professionals involved in their care which includes obstetricians, midwives, HIV specialist and GP.

- All positive HIV cases will be reported to the Infectious Diseases in Pregnancy Screening (IDPS) Integrated Screening Outcomes Surveillance Service ([ISOSS](#)) by the screening team

### 5.3 Action by the sexual health clinic

- Colleagues in the sexual health clinic will support the woman and offer support as necessary, including relevant voluntary support groups.
- Initial medical assessment will include a viral load test and a CD4 count to assess the immune system. This may be taken by the screening team or specialist HIV nurse at the initial consultation and results communicated to the sexual health service or taken at the SH clinic and reported back to the screening team.
- HIV treatment will be prescribed and monitored by the sexual health consultant according to latest best practice.
- The sexual health consultant will communicate directly to the screening team and send the recommended regime to the screening team.
- The sexual health clinic will arrange confidential contact tracing.

### 5.4 Action by obstetric department

- An obstetric consultant, with interest in infectious diseases /maternal medicine who liaises closely with SH consultant and the screening team should lead the care in pregnancy.
- The woman will be advised not to breast-feed. It is essential that women are well informed and if they choose to breastfeed the paediatric team must develop a post-natal surveillance plan to monitor the possible viral exposure to the baby.  
[https://www.ucl.ac.uk/integrated-screening-outcomes-surveillance/sites/integrated\\_screening\\_outcomes\\_surveillance/files/peters\\_chiva\\_breastfeeding\\_2020\\_1.pdf](https://www.ucl.ac.uk/integrated-screening-outcomes-surveillance/sites/integrated_screening_outcomes_surveillance/files/peters_chiva_breastfeeding_2020_1.pdf)
- The consultant obstetrician will discuss mode of delivery depending on the CD4 count and viral load and liaise with the SH and paediatric team.
- All HIV positive women will follow the virtual MDT process. This process will be completed by the screening team. A maternal MDT EPIC template can be used to document maternal care and the screening team will create a pending baby record and a fetal chart to document a post-natal paediatric plan as agreed following discussion with SH and the paediatric team .
- Screening team spreadsheet will be updated to track all points of care and that blood tests have been taken and results have been received.

### 5.5 Further information

Transmission can occur during pregnancy, during birth and/or through breast feeding. The risk of transmission is increased by:

- Higher viral load
- More advanced disease and lower CD4 count in mother.
- PROM
- Prematurity
- Low birth weight
- Events risking fetal exposure to maternal blood, e.g., fetal scalp electrodes

British HIV Association (BHIVA) guidelines for the management of HIV in pregnancy and postpartum 2018 (2020 third interim update)

<https://www.bhiva.org/pregnancy-guidelines>

Children's HIV Association (CHIVA) guidelines on mother-to-child transmission

<https://www.chiva.org.uk/guidelines/>

## 6. HEPATITIS B SCREENING

It is essential to obtain verbal consent for testing and this must be documented in the woman's EPIC record. Cases of Hepatitis B virus (HBV) have been reported from all over the world. Some people become chronically infected with this virus. WHO estimates currently there are at least 296 million people infected world-wide. It is most common in tropical Africa, the Middle and Far East, South-East Asia, South America and the Caribbean.

Hepatitis B is a virus which can cause serious liver disease. It may be carried by people without any symptoms. The National Screening Committee recommends that all pregnant women are offered antenatal screening for Hepatitis B. The virus can be passed from mother to infant during pregnancy or at the time of birth. Babies are most likely to become infected during the perinatal period. They are at high risk of:

- becoming chronically infected
- being infectious to others
- developing liver disease, cirrhosis and hepatocellular carcinoma

The mode of delivery and breastfeeding does not affect mother to child transmission if the baby receives appropriate management and completes the vaccination schedule.

**N.B: Transmission from mother to baby at birth can be prevented in about 90-95% of cases by appropriate immunisation.**

### 6.1 Risk groups

- People from parts of the world where infection is common.
- People who have had exposure to an infected person through blood or sex, this includes:
  - people who inject drugs or share needles, syringes and other types of drug equipment. Transfusions with infected blood or blood products (especially in countries where screening may be inadequate)
  - Unprotected sex with an infected person
  - In the home - sharing razors, toothbrushes and/or contact with cuts/abrasions from an infected person.
  - Exposure to an infected person's blood through needle stick or other sharp instruments
- Children born to mothers with a chronic infection or who have had an acute infection during pregnancy.

### 6.2 Clinical picture

Some people develop symptoms of acute hepatitis B six weeks to six months after being exposed to the virus. Most people, however, have no symptoms at all or have mild flu-like symptoms.

Most patients (90-95%) recover fully without any complications. However, small



proportions of adults (5-10%) do not clear the virus and become chronically infected; they are called carriers. Babies infected at birth are much more likely to become chronically infected (up to 90%) if they do not complete the vaccination.

Approximately 1:4 people who have been carriers of the virus for years develop chronic liver disease later in life. However, many people who carry the virus will not experience any problems as a result of the infection.

### 6.3 Hepatitis B markers

Hepatitis B surface antigen (HBsAg) is the screening test, and its presence denotes that the person is carrying the virus and is infectious to others.

HbsAg positive people are then tested for the e antigen which indicates how infectious they are:

- HBe antigen positive and HBe antibody positive = high infectivity
- HBe antigen negative and HBe antibody positive = low infectivity
- (If HBe antigen is negative and HBe antibody is also negative the woman is still highly infectious).

Advice on Hepatitis B markers can always be obtained from the consultant virologists based at Ashford and St Peters 01932 723729 or via email [virology.asph@nhs.net](mailto:virology.asph@nhs.net)

### 6.4 Antenatal management of women with a positive Hepatitis B result

Hepatitis B Vaccine is a stock item available in the fridge on Labour Ward.

Immunoglobulin, if indicated, will have been ordered by the screening team and issued by UKHSA Colindale as a named item and should be stored in the fridge with the vaccine. Immunoglobulin is package in a specific box sent from UKHSA. It is essential that the delivery Midwife follows all instructions included in the box and obtains a single blood spot from the baby at birth as directed.

Immunoglobulin request form

<https://assets.publishing.service.gov.uk/media/6439617d22ef3b000f66f226/UKHSA-12535-HepB-request-form-2023.pdf>

### Emergency stock

In an emergency scenario, like the case of an unbooked mum in labour, contact UK Health Security Agency (UKHSA) Colindale directly. They can arrange via Movianto a five-hour delivery of Hep B immunoglobulin. This would be delivered via Movianto by courier.

### EMERGENCY HBIG ISSUE

**During office hours:** call **0330 1281020 option 2** and email request to:

[phe.hepatitisbbabies@nhs.net](mailto:phe.hepatitisbbabies@nhs.net)

**Out of hours:** call **020 8327 7471** and speak to the duty doctor.

Emergency HBIG will be sent to the location specified by the requester.

## **7. TRAINING AND EDUCATION**

All health professionals involved in antenatal care have a professional responsibility to maintain their knowledge.

Staff will attend an ANNB screening update during their annual mandatory training days and are encouraged to complete the NSC e-learning Antenatal and Newborn Screening module which can be accessed via the eLearning for health care platform [www.e-lfh.org.uk](http://www.e-lfh.org.uk). This module is available to be repeated annually and is regularly updated to reflect programme changes. Infectious diseases in pregnancy (IDPS) e-learning module is also available.

All newly qualified midwives are expected to complete the NSC e-learning Antenatal and Newborn Screening module as part of the preceptorship competencies.

Module completion will be monitored by the practice development team.

## **8. AUDITABLE STANDARDS**

All pregnant women will be offered screening for infectious diseases at booking. The action required from a positive result will be stated on the laboratory result and the screening team will ensure appropriate multi-disciplinary care is instigated. The date of test taken, result, patient informed, and action taken will be documented on the patient's electronic maternity record.

## **9. DATA COLLECTION**

The screening teams are responsible for coordinating the collation of all national KPI data. This includes the quarterly coverage data and the annual standards data.

## **10. COMMUNICATION**

If there are communication issues (e.g., English as a second language, learning difficulties, blindness/partial sightedness, deafness), staff will take appropriate measures to ensure the patient (and her partner, if appropriate) understand the actions and rationale behind them.

Trust interpreter guidance should be considered.

## **11. INCIDENT INVESTIGATIONS**

All identified IDPS screening incidents will be reported on the Trust incident reporting system and advice sort from the appropriate NHS England screening & immunisation team /Screening Quality Assurance Service SQAS. National guidance will be used to investigate and manage screening safety incidents.

## **12. GOVERNANCE**

The Frimley Health Antenatal & Newborn Screening board (cross site) meet quarterly and provide a multi professional review of all screening programmes.

This forum reports to the cross site Obstetrics & gynecology information governance meeting.



## REFERENCES

Antenatal and Newborn Screening programmes:

- NHS Infectious diseases in Pregnancy Screening Standards, last updated 2023  
<https://www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-programme-standards>
- NHS Infectious diseases in Pregnancy Screening Programme Laboratory Handbook  
<https://www.gov.uk/government/publications/infectious-diseases-in-pregnancy-screening-programme-laboratory-handbook>

## APPENDIX 1: ANTENATAL INFECTIOUS DISEASE SCREENING – HEPATITIS B POSITIVE SOP

- All women offered screening at Booking for HIV, Hepatitis B & Syphilis.
- Ensure all women download digital link for national screening test for you and your baby information.
- All requests made using Epic order request Antenatal serology (HIV, Hepatitis B, Syphilis)
- If screening declined use Epic order Antenatal serology decline request and select which infectious disease is being declined. Inform screening team if women decline.

### **Positive Result**

- Consultant virologist will email screening generic email FPH site: [fph-tr.antenatalscreening@nhs.net](mailto:fph-tr.antenatalscreening@nhs.net)  
WPH site: [fph-tr.AntenatalandNewBorn@nhs.net](mailto:fph-tr.AntenatalandNewBorn@nhs.net)

**Known positives.** Community Midwife can self-refer any women directly to the screening team but as a failsafe it is always advised to offer a rescreen.

### **Community Midwife action.**

- to review results within 10 working days
- Epic flow sheets updated by 16-week CMW appt.
- Positive results will be actioned by the Screening team but if this is not clearly documented on the EPIC record when making the 10 day check the CMW must contact screening to ensure they are aware of the result.

FPH site : [fph-tr.antenatalscreening@nhs.net](mailto:fph-tr.antenatalscreening@nhs.net)

WPH site: [fph-tr.AntenatalandNewBorn@nhs.net](mailto:fph-tr.AntenatalandNewBorn@nhs.net)

### **Screening team action: Hepatitis B positive:**

1. Review patients booking history to establish known or new diagnosis and add to Hep B screening spreadsheet.
2. Contact woman via EPIC message or phone, appointment must be within 5 days of the result being reported to the screening team. Document on spreadsheet the date of appointment to support completion of national data annual reporting audit.
3. At the first appointment complete the first **Notification of Hep B positive** SMART text proforma and provide IDS Hepatitis B leaflet protecting your baby against hepatitis B. <https://www.gov.uk/government/publications/hepatitis-b-explaining-the-screening-result>. Send further confirmatory hepatology bloods by ordering 'maternity hepatitis B positive' blood panel on EPIC.
4. Screening team to place Hepatology appt order and email hepatology admin team and specialist Hepatitis Nurses to alert them to a new order. Include relevant clinical information to ensure MDT scheduled within required time frame.
5. Place obstetric consultant order for appointment. FPH site: maternal medicine consultant. WPH site: Miss Barot < 24 weeks gestation.
6. High Risk women as confirmed by the comment on the Hepatitis B screening laboratory result and /or the Hepatology team to be highlighted on spreadsheet. Screening Team are responsible for ordering immunoglobulin. Immunoglobulin storage box will be sent directly to the screening team for delivery to the screening office. Screening team will then liaise with pharmacy to bring the immunoglobulin product and box together. Screening team will then place the box in the Labour ward fridge.
7. WPH site will place **Hepatitis B positive proforma** in LW folder (appendix 1)
8. EPIC record, AN problem list will be updated with 'antenatal screening finding' 'this creates a fetal problem alert banner to appear on the EPIC record.
9. Screening team will create fetal chart /pending baby and document fetal MDT note with clear PN plan.
10. Screening team will monitor attendance at MDT and review documentation to ensure no change in clinical advice re vaccination +/-Hbig. Proforma 2 SMART Text **Notification of Hep positive status documentation after hepatology team review** will be completed at this stage.
11. Screening team to schedule or attend obstetric 34-week appointment to answer any further questions and stress the importance of completing the full vaccination schedule. SMART text **34 week follow up proforma** to be completed.
12. ISOSS submission. Completion of 3 SMART text Hepatitis B proformas will ensure all relevant information is available to complete ISOSS.

- Condition specific patient information <https://www.gov.uk/government/publications/hepatitis-b-explaining-the-screening-result>
- Trust interpreting. Absolute Interpreting & Translation Ltd. [enquiries@absolute-interpreting.co.uk](mailto:enquiries@absolute-interpreting.co.uk)

## APPENDIX 2: ANTENATAL INFECTIOUS DISEASE SCREENING – SYPHILIS POSITIVE SOP

- All women offered screening at Booking for HIV, Hepatitis B & Syphilis.
- Ensure all women download digital link for national screening test for you and your baby information.
- All requests made using Epic order request Antenatal serology (HIV , Hepatitis B , Syphilis )
- If screening declined use Epic order Antenatal serology decline request and select which infectious disease is being declined. Inform screening team if women decline.

### **Positive Result**

- Consultant virologist will email screening generic email  
FPH site: [fph-tr.antenatalscreening@nhs.net](mailto:fph-tr.antenatalscreening@nhs.net)  
WPH site: [fph-tr.AntenatalandNewBorn@nhs.net](mailto:fph-tr.AntenatalandNewBorn@nhs.net)

### **Community Midwife action.**

- to review results within 10 working days
- Epic flow sheets updated by 16-week CMW appt.
- Positive results will be actioned by the Screening team but if this is not clearly documented on the EPIC record when making the 10 day check the CMW must contact screening to ensure they are aware of the result.

FPH site :

[fph-tr.antenatalscreening@nhs.net](mailto:fph-tr.antenatalscreening@nhs.net)

WPH site:

[fph-tr.AntenatalandNewBorn@nhs.net](mailto:fph-tr.AntenatalandNewBorn@nhs.net)

## Screening Team

### **Syphilis positive**

- Review patients booking history to establish known or new diagnosis and add to screening spreadsheet.
- Contact woman via EPIC message or phone, appointment must be within 5 days of the result being reported to the screening team. All women will be referred to their local sexual health provider. SH will support maternity with confirmatory bloods, review of patient history and ensure appropriate treatment has been completed or scheduled. Document on screening spreadsheet the date of appointment to support completion of national data annual reporting audit.
- Complete ISOSS Syphilis Notification form with woman either face to face or over phone if declines face to face. Upload completed notification to EPIC record,
- Send Syphilis Birth Plan with email referral to SH clinic. This should be returned by the SH provider with the documented advice for the paediatric team to follow.
- Arrange an obstetric appointment. FPH site maternal medicine consultant. WPH site Miss Barot at <24 weeks
- Schedule virtual MDT appointment for EDD month and create EPIC fetal chart. Once Syphilis Birth plan has been completed and returned from SH clinic upload onto 'pending baby' media and update Screening / High Risk spreadsheet.
- Notify paediatric team. FPH site, letter to Dr Jaiswal. WPH site monthly MDT with Dr Yannoulis

### **MDT contacts**

- Dr Angela Yannoulis [angela.yannoulis@nhs.net](mailto:angela.yannoulis@nhs.net) Consultant Paediatric lead for infectious diseases WPH site.
- GARDEN CLINIC [gardenclinicadmin@berkshire.nhs.uk](mailto:gardenclinicadmin@berkshire.nhs.uk)
- HAMPSHIRE sexual health services SLOENT NHS Trust [hateam.northhants@solent.nhs.uk](mailto:hateam.northhants@solent.nhs.uk)

- Condition specific patient information <https://www.gov.uk/government/publications/syphilis-explaining-the-screening-result>
- Trust interpreting. Absolute Interpreting & Translation Ltd. [enquiries@absolute-interpreting.co.uk](mailto:enquiries@absolute-interpreting.co.uk)

### APPENDIX 3: ANTENATAL INFECTIOUS DISEASE SCREENING – HIV POSITIVE SOP

- All women offered screening at Booking for HIV, Hepatitis B & Syphilis.
- Ensure all women download digital link for national screening test for you and your baby information.
- All requests made using Epic order request Antenatal serology (HIV , Hepatitis B , Syphilis )
- If screening declined use Epic order Antenatal serology decline request and select which infectious disease is being declined. Inform screening team if women decline.

#### **Positive Result**

- Consultant virologist will email screening generic email  
FPH site: [fph-tr.antenatalscreening@nhs.net](mailto:fph-tr.antenatalscreening@nhs.net)  
WPH site: [fph-tr.AntenatalandNewBorn@nhs.net](mailto:fph-tr.AntenatalandNewBorn@nhs.net)

Community Midwife can self-refer any women who is known HIV positive directly to the screening team

#### **Community Midwife action.**

- to review results within 10 working days
- Epic flow sheets updated by 16-week CMW appt.
- Positive results will be actioned by the Screening team but if this is not clearly documented on the EPIC record when making the 10 day check the CMW must contact screening to ensure they are aware of the result.

FPH site : [fph-tr.antenatalscreening@nhs.net](mailto:fph-tr.antenatalscreening@nhs.net)

WPH site: [fph-tr.AntenatalandNewBorn@nhs.net](mailto:fph-tr.AntenatalandNewBorn@nhs.net)

#### **HIV To be read in conjunction with Cross HIV Guideline**

- Women's details added to spreadsheet \ screening spreadsheets PASSWORD PROTECTED
- Check EPIC booking information to establish if known or new diagnosis?
- Known HIV positive – WPH site contact Serology nurse specialist who will liaise with SH clinic and support clinical care. Screening team can contact Garden clinic directly if required i.e during periods of AL etc.
- New diagnosis – FPH site invite women in to inform of result and have SH appointment scheduled within next 2 days. WPH site contact Serology nurse and invite woman to WPH Antenatal clinic for joint counselling / referral to SH clinic.
- Complete ISOSS Notification form with woman either face to face or over phone if declines face to face. Upload completed form to EPIC media tab.
- Order obstetric appointment FPH site with maternal medicine consultant. WPH with Miss Barot <24 weeks
- Notify paediatric team of antenatal HIV patient . FPH site. EPIC letter to Dr Jaiswal. WPH site Email Dr Yannoulis (Paediatrician) [angela.yannoulis@nhs.net](mailto:angela.yannoulis@nhs.net) to notify of HIV pregnancy.
- Upload all email correspondence and birth plans from SH on to EPIC media tab
- Schedule virtual MDT appointment for EDD month and create EPIC fetal chart. Document HIV birth plan on 'pending baby ' chart and update Screening / High Risk spreadsheet.

#### **WPH MDT TEAM**

- Specialist Serology Nurse Wexham Park 03006151133
- WPH site . Dr Angela Yannoulis [angela.yannoulis@nhs.net](mailto:angela.yannoulis@nhs.net) Consultant Paediatric lead for infectious disease
- GARDEN CLINIC (Berkshire sexual health clinic ) [gardenclinicadmin@berkshire.nhs.uk](mailto:gardenclinicadmin@berkshire.nhs.uk)

#### **FPH MDT Team**

- Maternal medicine obstetric consultants
- Dr Jaiswal. Paediatric consultant
- Hampshire sexual health team [hateam.northhants@solent.nhs.uk](mailto:hateam.northhants@solent.nhs.uk)

- Condition specific patient information <https://www.gov.uk/government/publications/hiv-explaining-the-screening-result>
- Trust interpreting. Absolute Interpreting & Translation Ltd. [enquiries@absolute-interpreting.co.uk](mailto:enquiries@absolute-interpreting.co.uk)

## APPENDIX 4: SEXUAL HEALTH CLINIC CONTACT DETAILS

### NORTH HAMPSHIRE TEAM

Generic email

Aldershot [hateam.northhants@solent.nhs.uk](mailto:hateam.northhants@solent.nhs.uk)

Sexual health advisors telephone contact details available from the Frimley Park screening team

### SEXUAL HEALTH CONSULTANTS for North Hants

Dr Prem Vyas

[prem.vyas@solent.nhs.uk](mailto:prem.vyas@solent.nhs.uk)

Dr leela Sanmani

[leela.sanmani@solent.nhs.uk](mailto:leela.sanmani@solent.nhs.uk)

Dr Neelam Radja

[neelam.radja@solent.nhs.uk](mailto:neelam.radja@solent.nhs.uk)

### BERKSHIRE SEXUAL HEALTH Service

GARDEN CLINIC SLOUGH [gardinclinicadmin@nhs.uk](mailto:gardinclinicadmin@nhs.uk)

Joseph Pakia [joseph.pakia@berkshire.nhs.uk](mailto:joseph.pakia@berkshire.nhs.uk)

## Appendix 5: Syphilis Birth Plan

Syphilis Birth Plan (October 2016) SP Higgins, P McMaster, M Kingston

### SYPHILIS BIRTH PLAN

To Midwife / Obstetric Team

No need to contact on-call paediatric team from syphilis viewpoint ..... ☐      Contact on-call paediatric team when baby is delivered ..... ☐      Send placenta for histology and PCR if treatment indicated for infant ..... ☐

Mother's name ..... Mother's DOB .....

Mother's address .....

Mother's hospital number ..... Mother's GUM number .....

Mother's consent to record GU number in hospital records: ..... ☐      Mother's phone numbers: Mobile ..... Landline .....

Estimated date of delivery .....

### MATERNAL SYPHILIS DIAGNOSIS:

Adequately treated before this pregnancy ..... ☐      Early latent ..... ☐      Late latent ..... ☐

Other examples:  
 ..... primary ☐  
 ..... secondary ☐  
 ..... inadequately treated/treatment not documented ☐  
 ..... possibility of re-infection from untreated partner ☐  
 ..... unbooked ☐

### GUM ADVICE TO PAEDIATRICIANS

Infant requires no physical examination above routine. No syphilis serology ..... ☐      **OR**      Assess infant clinically: if no physical signs of syphilis check 'initial blood tests' (see page 2) ..... ☐      **OR**      Treat infant at birth after clinical assessment, 'initial blood tests' and 'further tests' (see page 2) ..... ☐

**Please discuss all infant blood test results with GUM & Paediatric infectious diseases team.**

Out of hours, contact the GUM or infectious diseases registrar on call via switchboard

Signed ..... (GUM Consultant) ..... Date .....

**COPIES** (of pages 1–4 only) **TO CONTACTS:** Matron, Delivery Suite; ..... Neonatal consultant, GP gets copy of page 1 only ..... Paediatric ID Consultant ..... Obstetric Consultant, Screening Midwife

**FULL VERSION CONTROL RECORD**

<b>Version:</b>	4.0
<b>Guidelines Lead(s):</b>	Kathy Franks, Antenatal and newborn screening lead midwife
<b>Contributor(s):</b>	
<b>Lead Director / Chief of Service:</b>	Anne Deans, Chief of Service for Obstetrics and Gynaecology
<b>Library check completed:</b>	Sent 27.03.2024
<b>Ratified at:</b>	Cross site obstetrics clinical governance meeting 21 <sup>st</sup> May 2024
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<b>Review Date:</b>	May 2027
<b>Pharmaceutical dosing advice and formulary compliance checked by:</b>	Sent to R. Ahmed and C. Mukoko 27.03.2024
<b>Key words:</b>	HIV Screening, syphilis screening, hepatitis screening

This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date.

This guideline is for use in Frimley Health Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

**Version History**

<b>Version</b>	<b>Date</b>	<b>Guideline Lead(s)</b>	<b>Status</b>	<b>Comment</b>
1.0	March 2017	Katharine Franks	Final	Cross site version
2.0	Dec 2017	Katharine Franks	Final	Updated
3.0	Dec 2020	Katharine Franks	Final	Updated and approved at OGCGC
3.1	Sept 2022	<del>Katharine Franks</del>	Draft	<del>Review post Epic EPR go-live</del>
4.0	May 2024	Katharine Franks Antenatal and newborn screening lead midwife	Final	Approved at cross site obstetrics clinical governance meeting 21.05.24

**Related Documents**

None