

# Booking Bloods and Urine Screening Maternity Guideline

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## 1. Introduction and Who Guideline applies to

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This guideline is intended for the use of all health professionals involved in the care of all pregnant women and people in both Primary and Secondary care settings. It covers the information to be given to pregnant women and people about the bloods and the urine tests which are offered at booking excluding those for screening for Down's syndrome. The guidance aims to ensure that pregnant women and people understand the implications and consequences of agreeing to these tests and the further assessment and management they may be offered.

### Background:

The booking bloods and urine tests that are offered are as follows:

- Blood Grouping, Rhesus factor and antibody detection
- Infectious diseases screening including HIV, Hepatitis B and Syphilis.
- Sickle cell and Thalassaemia
- Full blood count
- MSU

## Related documents:


1. [Hepatitis B Screening in Pregnancy UHL Obstetric Guideline.pdf](#) Trust ref: C63/2011
2. [Syphilis in Pregnancy UHL Obstetric Guideline.pdf](#) Trust ref: C6/2024
3. [HIV Screening and Management in Pregnancy UHL Obstetric Guideline.pdf](#) Trust ref: C63/2004
4. [Downs Patau and Edwards Syndrome Screening UHL Obstetric Guideline.pdf](#) Trust ref: C6/2001
5. [Sickle Cell and Thalassaemia \(Haemoglobinopathy\) Screening in Pregnancy UHL Obstetric Guideline.pdf](#) Trust ref: C58/2006
6. [Anti D Immunoglobulin UHL Obstetric Guideline.pdf](#) Trust ref: C12/2013

## 2. Guideline Standards and Procedures

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### 2.1 What screening and tests are offered?

All pregnant women and people booking with University Hospitals of Leicester NHS Trust are offered blood grouping and antibody testing, Infectious disease screening, screening for Sickle Cell and Thalassaemia, full blood count and midstream specimen of urine testing at the first booking visit

- At the first contact with the Community Midwife (booking appointment) verbal information about the tests that are available is given. This is to ensure understanding of the implications of these tests to enable informed choice.
- The tests for you and your baby information should be given. This QR code can be used. 
- The offer, consent and sample taken for each test should be documented in the Maternity health records.
- Where the pregnant woman or person has declined a screening test please refer to the relevant screening test guideline.
- Where a pregnant woman or person has declined other booking bloods such as full blood count and blood group and rhesus factor they should be referred to a consultant clinic for further discussion. Pregnant women and people may be signposted straight to clinical psychology if they report a severe needle phobia.
- The Community Midwife remains the point of contact should there be any further queries or concerns.
- For pregnant women or people presenting unscreened/unbooked in labour – please refer to appendix 1.
- Interpreting services should be used where appropriate, reference can be made to the [Interpreting and Translation UHL Policy.pdf \(sharepoint.com\)](#) Trust ref B30/2015

## 2.2 Management of samples

All blood tests submitted to the laboratory must fit the required criteria for testing.

### UHL samples:

- The dedicated UHL Antenatal request form for blood group, antibodies and infectious diseases screening must be fully completed.
- Use 7.5ml EDTA bottle for blood grouping and 4.9ml gel bottle for infectious diseases screening. Both bottles should be full and dispatched to the Lab immediately.
- If NHS number is available this must be used on both the form and the sample bottles.
- If NHS number is not available the reason for this must be documented on the form. The first line of address used on the form and sample bottles and Lab informed of NHS number in retrospect when available.
- Information such as known antibody or anti-D prophylaxis must be included on the form.
- DO NOT use addressograph labels on the sample bottles.
- Rejected samples must be repeated within 10 working days of the Lab informing maternity services that a repeat sample is required.
  - A monthly list is also created by the Lab and sent to the screening co-ordinator to highlight which repeat samples have not been received by the Lab.
  - The screening co-ordinator checks this list for people who have miscarried or given birth and plans care accordingly.
  - Community team leaders are informed of pregnant women and people still requiring repeat samples and a repeat sample is arranged with the pregnant woman or person.
  - Pregnant women and people who remain on the list for longer than a month are highlighted in red/amber for teams to be aware that the repeat sample is urgent and incident forms are completed by the Lab and sent to the Senior Midwife for Community services.

### Haemoglobinopathies:

- Leicestershire Antenatal Family origin request form to be submitted with all samples unless using electronic requesting through ICE system.
- Purple bottle to be submitted with the top copy of the form. Bottom copy of the form should be retained in the maternity notes.
- FBC must always be submitted with a haemoglobinopathy screening sample.

**Refer to Sickle cell and Thalassaemia screening in pregnancy guideline for further details.**

The antenatal and Newborn screening team provide quarterly cohort matched data for the KPI's and to failsafe the Haemoglobinopathy and Infectious diseases screening programmes. This process is outlined in appendix 2.

### 2.3 Screen negative results

- Screen negative results are sent from the laboratory to the requestor.
- These results are given to the pregnant woman or person at the first appointment after booking.
- These results are documented in the Maternity health records.
- If the pregnant woman or person requires further or more detailed discussion about the result they are referred to the Antenatal Core Midwives or the Specialist Midwives/Nurse depending on the test.

### 2.4 Actions if result is not available

Appropriate action should be taken if a result is not available

- If the health professional identifies that the result is not available at the follow up appointment they contact the laboratory to check their records.
- If there is no result available the test should be repeated and a further appointment made for the pregnant woman or person to receive their result.

### 2.5 Detection of a red cell antibody

Detection of a red cell antibody should be managed appropriately.

- A newly detected or rising antibody result is telephoned to the Antenatal Core Midwives
- The result is confirmed by fax and hard copy.
- The Antenatal Core Midwife documents the result in the Hospital notes on receipt of the fax. Relevant antibodies requiring consultant referral include;
  - D,
  - c,
  - K
  - Any other red cell antibody as requested by an Obstetrician or Haematologist.
- An appropriate appointment for a consultant led clinic is identified.
- The Antenatal Core Midwives inform the pregnant woman or person of their abnormal result by telephone and they are informed of the appointment for them to attend the consultant led clinic.
- A contact number for further enquiries is given.

- Any red cell antibodies that do not require further treatment antenatally, should have the pre-printed intrapartum care plan for red cell antibodies completed and filed in the Hospital notes with the relevant “alert” sticker highlighting the potential risk for cross matching.

## 2.6 Rhesus and blood group status

At the booking appointment all pregnant women and people will be offered a blood test for blood group and rhesus status. This blood sample will also have an antibody screen performed. At this appointment the community midwife will discuss with the pregnant woman or person that should their blood test indicate that they are rhesus negative they will be contacted by the hospital midwives to discuss this result and offer the NIPT test to identify the rhesus status of the fetus.

- The laboratory will inform the antenatal midwives on the shared nhs.net of which people are rhesus negative at booking.
- The antenatal midwives will contact the rhesus negative women and people to discuss the option of standard care or NIPT to identify the rhesus status of the baby.
- Pregnant women and people who opt to have NIPT will be advised that this can only be done after 11 weeks 2 days gestation and will only be done once the dating scan has been performed. A request form will be completed by the antenatal midwives.
- The blood should be taken at the booking scan visit where the pregnant woman or person is at least 11 weeks 2 days. If the bloods are not done it should be taken at the anomaly scan unless the pregnant woman or person attends before this.
- Once the bloods have been taken details of the pregnant woman or person need to be kept in a register or diary to ensure the results are returned and so the results can be recorded in the maternity notes. The community midwife should also follow up the blood results at the 15 week visit to ensure the sample was received and processed correctly

**Refer to the anti-D in pregnancy guideline for further details**

## 2.7 Abnormal full blood count and urine tests

Abnormal full blood count test and urine test results are sent by the UHL laboratory to the requestor.

- Abnormal full blood count and urine results are managed on an individualised basis depending on the result and the history. The Midwife should inform the pregnant woman or person of this result.
- The Midwife is responsible for ensuring referral and treatment takes place.
- The GP should be the first point of referral for treatment of anaemia or urinary tract infection.

## 2.8 Positive results from infectious diseases screening

- For positive infectious diseases screening refer to the relevant UHL guideline.

### 3. Education and Training

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- Antenatal and newborn (ANNB) screening training is provided as part of induction training for midwives, obstetricians and midwifery care assistants.
- ANNB screening training is provided on annual mandatory training for midwives and children's nurses.

### 4. Monitoring Compliance

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What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
ANNB screening	Key Performance Indicators	Screening co-ordinator	Yearly	National screening committee programme centre

- Quarterly ANNB screening programmes boards chaired by NHS England, alongside PHE QA teams monitor the annual and quarterly data returns from UHL.

### 5. Supporting References

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None

### 6. Keywords:

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Downs Syndrome, Patau's syndrome, Edwards syndrome, screening, Trisomies, booking bloods, blood group and rhesus factor, infectious diseases screening, full blood count, MSU

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**The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs. As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.**

#### EDI Statement

We are fully committed to being an inclusive employer and oppose all forms of unlawful or unfair discrimination, bullying, harassment and victimisation.

It is our legal and moral duty to provide equity in employment and service delivery to all and to prevent and act upon any forms of discrimination to all people of protected characteristic: Age, Disability (physical, mental and long-term health conditions), Sex, Gender reassignment, Marriage and Civil Partnership, Sexual orientation, Pregnancy and Maternity, Race (including nationality, ethnicity and colour), Religion or Belief, and beyond.

We are also committed to the principles in respect of social deprivation and health inequalities.

Our aim is to create an environment where all staff are able to contribute, develop and progress based on their ability, competence and performance. We recognise that some staff may require specific initiatives and/or assistance to progress and develop within the organisation.

We are also committed to delivering services that ensure our patients are cared for, comfortable and as far as possible meet their individual needs.

<b>CONTACT AND REVIEW DETAILS</b>			
<b>Guideline Lead (Name and Title)</b> H Ulyett - Antenatal and Newborn Screening Coordinator		<b>Executive Lead</b> Chief Nurse	
<b>Details of Changes made during review:</b>			
<b>Date</b>	<b>Issue Number</b>	<b>Reviewed By</b>	<b>Description Of Changes (If Any)</b>
July 2018	<b>2</b>	L Payne - Matron H Ulyett - Antenatal and Newborn Screening Coordinator L Matthews - Clinical Risk and Quality Standards Midwife	Removal of Rubella screening from the antenatal infectious diseases screening programme Change of screening lab details Change of process for women who decline booking bloods
August 2021	<b>3</b>	H Ulyett - Antenatal and Newborn Screening Coordinator M. Bodley – Antenatal services manager F. Cox - Matron	Added reference to Rhesus blood screening and NIPT pathway Added Referral process for Cross Border Women booking at the University Hospitals of Leicester
August 2024	<b>4</b>		Format update

**Appendix 1 – Checklist for pregnant women and people unscreened/unbooked in labour.**

**CHECKLIST FOR UNBOOKED PREGNANT WOMEN AND PEOPLE PRESENTING IN LABOUR OR AT ADVANCED GESTATION.**



- Obtain obstetric/medical history, assess risk factors and document a plan of care.
- Appropriately qualified doctor to perform portable ultrasound scan to assess placental localisation and presentation and biometry if possible.
- Consider use of continuous Fetal monitoring in labour.
- Postnatally–
  - Commence NEWTT2 chart for baby observations due to the high mortality rate in this group of neonates.
  - All babies born to “unbooked” pregnant women and people should have a paediatric check prior to discharge.
  - Consider any safeguarding concerns.
- **All Blood tests to be offered and taken as follows:**

<b>Blood test required</b>	<b>Sample bottle</b>	<b>Form</b>	<b>Sign &amp; date when sample taken</b>	<b>Sign and date result received</b>
<b>FBC</b>	Red EDTA 4.9ml	UHL Combined haematology/pathology		
<b>Group &amp; Save</b>	Blue EDTA 7.5ml	UHL Blood transfusion		
<b>HIV point of care test</b>	Point of care test kit on delivery suite	Document in notes if this was offered but declined by patient		
<b>Virology –URGENT request for HIV, Hep B, Syphilis</b>	White/black label	UHL virology		
<b>Haemoglobinopathy screening</b>	Purple bottle	Dedicated UHL antenatal family origin questionnaire form – can be accessed on ICE		

**PLEASE NOTE - ALL BLOOD RESULTS SHOULD BE DOCUMENTED WITHIN 24 HOURS OF THE SAMPLE BEING TAKEN or a clear plan made to follow up results.**



## Appendix 2 – Cohort matching process for Haemoglobinopathy and Infectious Diseases screening in pregnancy.

### Cohort matching process for Haemoglobinopathy and Infectious Diseases screening in pregnancy.

Maternity services are required to ensure that all women are offered screening for IDPS and Haemoglobinopathies in pregnancy. A weekly list of bookings is generated and outcomes chased for all women who booked 5 weeks prior to that date to allow for most women to have received a conclusive result. These lists are then amalgamated and provide the data for the quarterly KPI's.

The booking cohort is rigorously checked for accuracy by the screening team in order to complete the failsafe process for Down's syndrome screening. This provides accurate data on booking gestation, miscarriages/TOP's and women who move away prior to screening.

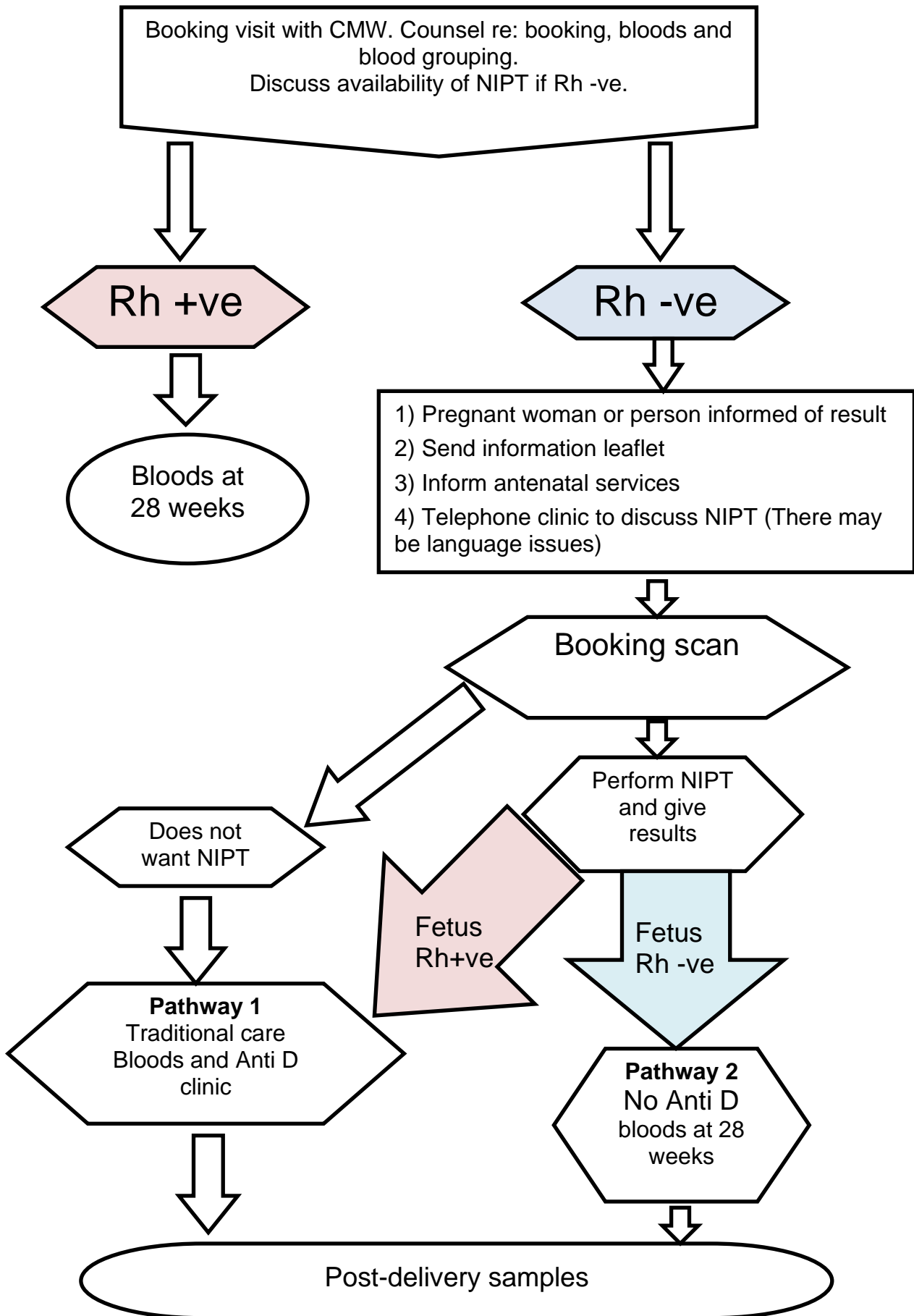
The "booking cohort" is sent to the relevant screening laboratory and a data analyst matches the women with the sample received and tested in the Lab. Any "missing" samples are reported back to the screening team.

### Management of "missing samples"

The data is checked for accuracy and each woman reviewed on an individual basis to see if they have moved away, miscarried/TOP'd or given birth.

- Any women who are still pregnant without having screening are referred back to their named Midwife to arrange screening.
- Women who have miscarried/TOP'd and do not have a conclusive result for screening are sent a letter informing them of this and offering repeat screening.
- The notes of any woman who have given birth are investigated and if it is found that screening in pregnancy has been missed the woman would be offered screening in the postnatal period.

### Appendix 3: NIPT pathway



## Appendix 4: Referral process for cross boarder bookings

Antenatal and Newborn Screening Coordinator  
 Name Helen Ulyett  
 E-mail [helen.ulyett@uhl-tr.nhs.uk](mailto:helen.ulyett@uhl-tr.nhs.uk) Helen.ulyett@nhs.net  
 Telephone 0116 2584860 07966 558 281

### Referral process for Cross Border Pregnant Women and People booking at the University Hospitals of Leicester

Referral to Community Midwife via GP, Self, Healthcare Professional

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Booking</b></p>	<p>Local Community Midwife (CMW) to identify where the pregnant woman or person would like their care by 10 weeks gestation                  Local CMW telephones the UHL Community Midwifery Office on 0116 258 4834 and arranges for UHL CMW to organise a telephone booking appointment. They then complete an electronic booking on E3. UHL CMW completes blood forms in full and the pregnant woman or person attends the booking hospital for the blood tests</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Screening/Booking Bloods</b></p>	<p>UHL CMW should complete the forms and ask the pregnant woman or person to attend the maternity phlebotomy service in antenatal clinic at the hospital of booking.                  UHL CMW should request copy of results to be sent to the GP practice where the named midwife can review the results and communicate them to the pregnant woman or person. Booking hospital details must be documented on the request forms. Positive results from screening will be communicated to the relevant department at UHL and the pregnant woman or person invited in to discuss their results. If the bloods were taken by UHL CMW and pregnant woman or person is booked outside of the county the booking hospital will be contacted with the results</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Dating Scan NT/Quad</b></p>	<p>The dating scan appointment will be arranged by the hospital once the booking is received and the appointment posted to the patient                  Combined bloods will be taken in ANC after the NT scan                  If the pregnant woman or person requires a QUAD test and is within the screening window at the dating scan, these bloods will also be taken after the scan. If they are too early they will be advised to arrange to their CMW for this. The local CMW should liaise with the UHL CMW who performed the telephone booking as to how to best facilitate the taking of the QUAD test - contactable via UHL Community Midwife Office.                  The anomaly scan will be made after the dating/NT scan before leaving the hospital.                  The CMW is responsible for checking these bloods are back and actioned appropriately. For high chance results the UHL Fetal Medicine midwives will receive and action these but the CMW should check that this has happened.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Referral to Consultant care</b></p>	<p>If the pregnant woman or person requires Consultant care - this will be determined by UHL ANC midwives on receipt of the electronic booking information. The CMW does not need to make any additional contact to arrange this. The Hospital Clinic coordinators will make and post this appointment. The community midwife should check that the pregnant woman or person has received any Consultant appointments during their routine antenatal care appointments.                  If the pregnant woman or person becomes consultant led during their pregnancy, the CMW should contact the ANC at the booking hospital.</p>

Generic E-mail: [uho-tr.annbscreening@nhs.net](mailto:uho-tr.annbscreening@nhs.net)  
 ANC contact details: LRI 0116 258 6403 /6471 LG H 0116 2584822  
 USS contact details: as above  
 UHL Community midwifery office : [uho-tr.CommunityMidwifeOffice@nhs.net](mailto:uho-tr.CommunityMidwifeOffice@nhs.net)