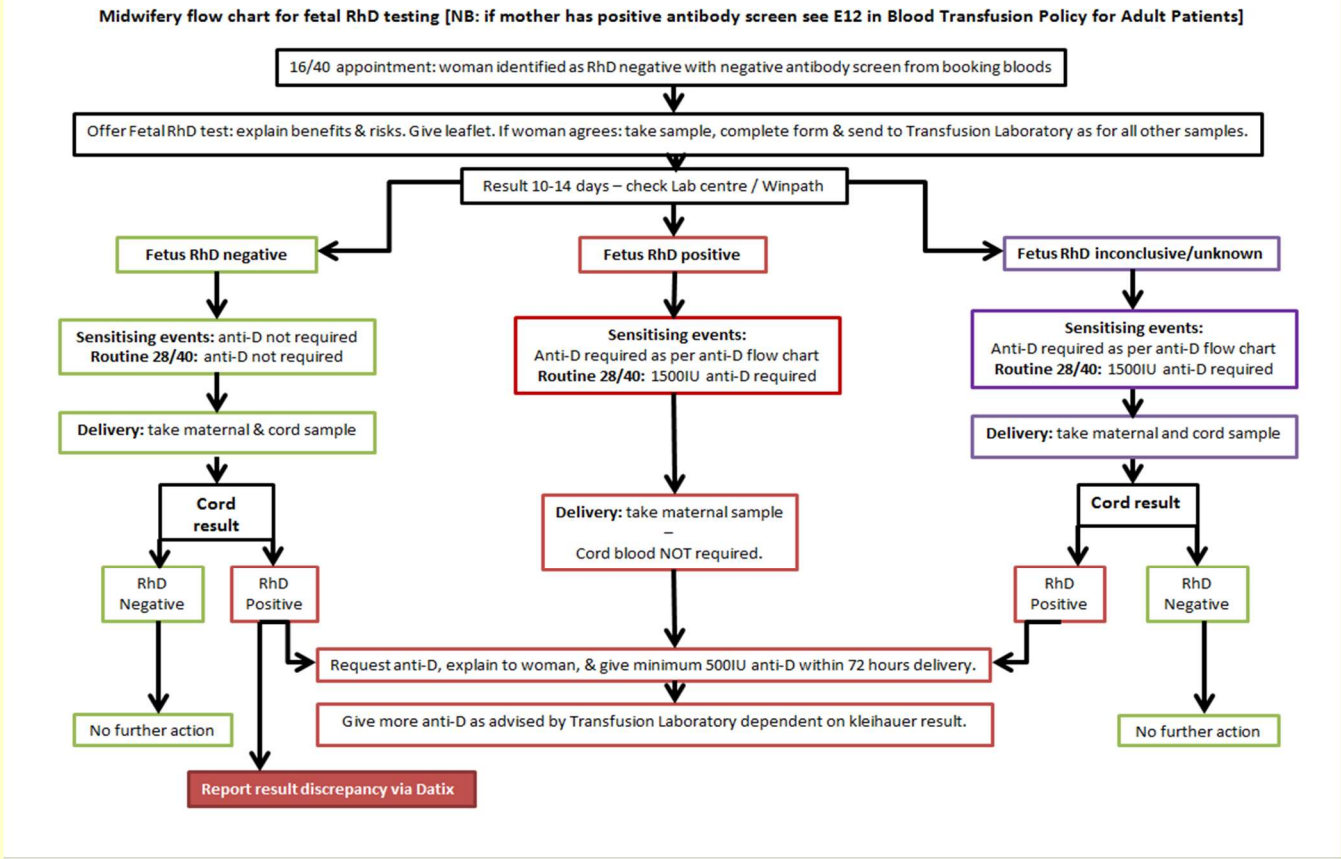
ANTI-D PROPHILAXIS, FETAL RH D TESTING&MANAGEMENT OF MATERNAL ANTIBODIES

Key Points



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Abbreviations

cffDNA	Cell free fetal DNA
Anti-D	Prophylactic anti-D
FMH	Fetal Maternal Haemorrhage
HDNF	Haemolytic disease of the new born or fetus

1.0 INTRODUCTION

This guideline covers fetal RhD testing, anti-D prophylaxis for prevention of haemolytic disease of the fetus & newborn, & management of maternal antibodies. Prevention of haemolytic disease of the fetus & newborn is primarily through non-invasive pre-natal testing of RhD negative pregnant women's blood, to detect cell free fetal DNA which determines whether the fetus is RhD negative or RhD positive.
A regime of prophylactic anti-D is then given if the fetus is RhD positive or RhD inconclusive/unknown. Management of pregnant women with D & other red cell antibodies is essential to ensure the best outcome for both baby & mother

When an RhD negative woman becomes pregnant, there is a 60% chance that the fetus will be RhD positive. If any RhD positive fetal blood goes into the maternal circulation (feto-maternal haemorrhage – FMH) there is a risk that the woman will create D antibodies (immune anti-D) against the RhD positive fetal blood.
There are many events that may cause fetal blood to go across the placenta into the maternal circulation (see Appendix 1 and 2). The first pregnancy where this occurs does not generally cause any problems for that fetus; however in future pregnancies, if the fetus is RhD positive, the maternal D antibodies will attack the fetal red cells which can lead to fetal anaemia, jaundice & even death.

Prophylactic anti-D can prevent the creation of maternal D antibodies (sensitisation) which then prevents haemolytic disease of the fetus/new-born. However Anti-D prophylaxis only works in women who have not already been sensitised to the D antigen.

NB BSH guidance states at least 500IU of anti-D should be given; the anti-D product currently used at all BSPS sites is 1500IU so this will be supplied instead and the entire 1500IU dose should be given.

2.0 CELL FREE FETAL DNA TESTING

NICE recommends use of *cell free fetal DNA* testing from 11+2/40 to predict the RhD status of the fetus and to guide anti-D prophylactic management

This test is >99.9% accurate at predicting RhD negative status, so there is <0.1% risk of a false negative. To mitigate against this risk, cord grouping at delivery is recommended for baby's predicted to be RhD negative. As delivery is the primary sensitising event this reduces the risk significantly. If the cord/baby result is RhD positive the woman will be offered anti-D. Soothill et al (2015) estimates there would be 13 extra sensitisations per 100,000 women if cord typing is not done; if cord typing is done he estimates there will only be 3 extra sensitisations per 100,000 women (the previous regime where all RhD negative women were given anti-D resulted in 281 sensitisations per annum).

There is a 2% chance that a baby predicted to be RhD positive will be RhD negative. This does not pose any greater risk than the previous regime where all women with an RhD negative fetus had anti-D during pregnancy.

Benefits for women with RhD positive fetus; the woman will know that she requires anti-D for routine prophylaxis at 28-30/40, for any sensitising events, & she will have anti-D as soon as possible after delivery, eliminating the wait for cord testing.

Benefits for women with RhD negative fetus; the woman will not receive unnecessary anti-D.

Inconclusive results

- There will be a small number of women whose result is inconclusive
- These women will be treated as if the fetus was RhD positive during pregnancy
- At birth they will require a cord sample to conclusively determine the RhD status, & will need further anti-D if the baby is RhD positive

Detection of weak RhD positive maternal blood groups by Fetal D testing

There is the possibility that fetal D testing will detect that the mother is 'weak D positive'. In these cases the woman will not need anti-D.

Future in-house maternal groups may still result as RhD negative (as the laboratory analysers are not as sensitive as NHSBT analysers) but the laboratory BT Manager should correct these results along with a comment that NHSBT testing has confirmed the patient is RhD positive.

3.0 ANTENATAL APPOINTMENTS AND TESTING

3.1 Booking appointment

All women will require a blood group & antibody screen to determine RhD status (6mL pink top EDTA) which must be sent to the blood transfusion laboratory.

A request form must be completed using Surrey Safe Care.

3.2 Antenatal visit: (usually 16/40)

If the woman is RhD negative, & has a negative antibody screen to RhD, the midwife should

- Explain the implications of RhD type & the cffDNA test
- Supply the woman with the NHSBT patient information leaflet 'Mother's blood test to check her unborn baby's blood group'.
- If the woman wishes to have the cffDNA test complete the request and take a single 6mL EDTA and send to the laboratory, who will refer the test to NHSBT
- If the woman does not wish to have the test, follow the 'Fetal RhD result inconclusive / unknown' pathway.

If the woman has a Positive antibody screen to any antibody see also *section* 9 and 10

3.2.1 Cell Free Fetal DNA results

- The result will usually be available within 14 days
- The Transfusion Laboratory will copy the result (from NHSBT Sp-ICE database) onto the Laboratory Information Management System (LIMS); this will be checked & verified by another member of staff
- The result will read
    - 'The fetus with an EDD of xx/xx/xx is predicted to be RhD negative / positive / inconclusive'

Multiple births: a positive result means that at least one of the babies is RhD positive, a negative result means that all of the babies are RhD negative. Follow the 'Midwifery flowchart for fetal RhD testing'.

4.0 ANTI-D MANAGEMENT

4.1 Sensitising events:

These are events that have the potential to cause a feto-maternal haemorrhage (FMH) which can lead to sensitisation; see Appendix 1

- Establish the details of the sensitising event including when it occurred, & whether there was any obvious cause, especially for vaginal bleeding
- If the women are present, ensure samples are taken and sent to the laboratory to confirm the blood group and confirm sensitisation has not already occurred. If the women is not present this should be done prior to administration of the prophylactic anti-D

  Samples required:
  - 1 pink EDTA specimen for blood group & antibody screen
  - For pregnancies >20 weeks gestation a Kleihauer will be performed to ascertain the size of bleed and calculate any additional anti-D required.

- Ensure anti-D is prescribed by Medical staff following a sensitising event (outside of midwifery exemptions) as follows:

4.1.1 Sensitising events that occur before cffDNA test result

If any RhD negative woman has a sensitising event before the result of the cffDNA test is known, the woman should be treated as if the fetus was RhD positive.

Women with fetus predicted RhD negative

These women will not require any anti-D during pregnancy.

Women with fetus predicted RhD positive

These women will require both:

- Routine antenatal anti-D prophylaxis: 1500IU anti-D between 28-30/40
- Sensitising event prophylaxis

Women with inconclusive / unknown result

These women will require both:

- Routine antenatal anti-D prophylaxis: 1500IU anti-D between 28-30/40
- Sensitising event prophylaxis

4.2 Routine antenatal anti-D prophylaxis:

- Anti-D 1500IU should be given between 28 – 30 weeks
- Anti-D 1500IU must be given regardless of when, or if, any sensitising doses of anti-D have been given
- Request the anti-D as soon as possible, using EPR or ICE, including the date of the appointment at which the anti-D will be required and where the anti-D should be delivered to.
- Use of the NHS number is preferred
- No sample is required with this request
- For late or missed doses of anti-D refer to section 8 and report to the Transfusion Practitioner who must report them to SHOT.

4.2.1 Women transferring in mid-pregnancy & late bookers

- The woman should be assessed according to standard booking procedure, including routine booking bloods.
- The cffDNA test will be offered up 26/40 to allow for results & anti-D ordering for RAADP

- If already known to be RhD negative, it must be clearly established & documented whether she has received any doses of anti-D
- If she has received 500IU anti-D at 28/40 weeks elsewhere, a second dose of a minimum of 500IU should be given at 34/40
- If she is already greater than 28/40 gestation, has not received any prophylaxis & no antibodies to RhD have been detected, she should be recalled as soon as possible for her routine dose of 1500IU anti-D.

4.3 Administration Process

- Before administering anti-D, the midwife must review the woman's blood group & antibody results, & the fetal RhD result
- 1 pink EDTA specimen for blood group & antibody screen (irrelevant of gestation) must be taken & sent with the request form to the Transfusion laboratory before giving anti-D This is to confirm the blood group and ensure sensitisation has not already taken place
- For pregnancies >20 weeks gestation a Kleihauer will be performed to ascertain the size of bleed and calculate any additional anti-D required.
  Requests don't need to be processed prior to issue of anti-D
- Remove anti-D from storage
- Check patient's identity & confirm against the compatibility label on the box containing the anti-D
- Check that the patient's blood type is the same in her hand-held notes & on the blood transfusion tag. The woman must be Rh-D negative & the Fetal RhD result must be RhD positive or inconclusive/unknown.
- If the patient has a positive antibody screen please see *section 10*.
- Do not administer anti-D if there is any discrepancy with patient demographics or the product.
- Administer one dose of anti-D (one vial of 1500IU) into the deltoid muscle. Women who have a bleeding disorder should receive the anti-D via the subcutaneous route.
- The woman should wait for at least 20 minutes after administration before leaving the clinic/surgery to detect cases of allergy/anaphylaxis
- Return fully completed compatibility tag to the Transfusion Laboratory.

5.0 POSTNATAL MANAGEMENT

Delivery is a sensitising event; see Appendix 2

Delivery of baby predicted to be RhD negative

There is < 0.1% risk of a false negative; to detect false negatives a cord sample must be taken at delivery & tested. A maternal sample is also required.

- If the cord/baby result is RhD negative no further action is required.
- If the cord/baby result is RhD positive the woman will be offered anti-D. The result discrepancy will need to be carefully explained to the woman & an incident form completed. Please involve the Transfusion Practitioner.

Delivery of baby predicted to be RhD positive

There is a 2% chance that a baby predicted to be RhD positive will be RhD negative. This does not pose any greater risk than the previous regime where all women with an RhD negative fetus had anti-D during pregnancy; therefore, a cord sample is **not** required.
A maternal sample is required and will be tested for group and Kleihauer to establish whether further anti-D is required

These women can have anti-D requested & given without delay (within 72 hours of delivery). Check the Kleihauer result & administer any further anti-D as advised.

Delivery of baby with inconclusive / unknown result
A cord sample is required to determine the baby RhD result. A maternal sample is also required.

- If the cord/baby result is RhD negative no further action is required.
- If the cord/baby result is RhD positive the woman will be offered at least 500IU anti-D (within 72 hours of delivery). Check the Kleihauer result & administer any further anti-D as advised.

6.0 MANAGEMENT OF A LARGE FMH WHERE BABY IS RHD POSITIVE

Anti-D should be given immediately; for all sensitizing events after 20 weeks gestation including delivery a Kleihauer test is required on maternal blood to determine the size of the FMH & determine whether more anti-D is required.

If the Kleihauer result indicates additional anti-D is required:

- The additional dose of anti-D will be calculated by Transfusion Laboratory
- If a large dose is required intravenous anti-D may be suggested on the advice of clinical Hematologist; this may be a different preparation to the IM anti-D usually supplied.
- Follow up maternal samples will be required at 48 hours if given IV, & 72 hours if given IM; this will be tested to assess the clearance of fetal cells
- More anti-D, & therefore more follow up Kleihauer requests, may be necessary if fetal cells remain (BSH 2014). A clinical decision may need to be made in determining the dose & frequency of more injection dependent upon the volume of residual fetal cells detected.
- The clinical service must ensure patients return for these follow-up services.

7.0 WOMEN WHO DECLINE ANTI-D

A woman may choose to decline anti-D; this decision must be respected by the obstetrician /midwife. However, the healthcare professional must clearly document in the woman's hand held notes her reasons for declining. The healthcare professional must be fully satisfied that the woman understands the implications of this decision. The Transfusion Laboratory must be informed so they can record this in the LIMS.

8.0 MANAGEMENT OF MISSED OR LATE ANTI-D

Late anti-D is classified as being given more than 72 hours after a sensitising event, or for the routine antenatal dose it was given outside of the 28-30/40 time frame. These events have to be reported both at Trust level using the incident reporting scheme, & by the TP team to the Serious Hazard of Transfusion (SHOT) scheme.

Ante-natal Patients
Routine dose:
if the dose has not been given by 30/40 gestation it should be given as soon as possible.

Sensitising doses:
If it is detected that a woman required anti-D but did not have it within 72 hours, it should still be given within 14 days from the sensitising event. The midwife must make every effort to contact the patient & arrange to administer the anti-D as soon as possible. The midwife must document in the patients hand held antenatal notes the reason for the late/missed administration of anti-D. The patient may need extra information/support (contact the Transfusion Practitioner team if needed).

Post-natal Patients
If a patient with an RhD positive baby is not given anti-D within 72 hours of delivery, the dose must still be given as soon as possible, up to 14 days after delivery.

Follow Up
Patients should be informed that they did not receive the correct anti-D prophylaxis (for whatever reason i.e. could be due to patients non-compliance or failure of internal processes).

Patients who have missed a dose antenatally (whether routine or for a sensitising event), had a subsequent G+S which is negative, & from then on have had correct prophylaxis do not require follow up.

Most patients will have a positive antibody screen as they will have had anti-D at some point. Follow up tests of group and save are advised 6 months post delivery (by which point any prophylactic anti-D will nolonger be in the system) to establish whether sensitisation has occurred. If sensitisation has occurred this should be reported as a trust incident and to the TP team who will complete a report for SHOT

The TP team will advise the clinical teams and then detail the follow up required in the management section of the incident reporting system.

9.0 MANAGEMENT OF WOMEN WHO HAVE A POSITIVE ANTIBODY SCREEN

Positive antibody screen showing D antibodies:
Women may present with existing D antibodies at booking or develop them during pregnancy. If a woman develops D antibodies after they have had a negative cffDNA result, this could indicate that the result was a false negative.

9.1 D antibodies detected BEFORE cffDNA:
If a woman has a positive antibody screen showing D antibodies before cffDNA screening:

- The woman has either had anti-D immunisation recently in this pregnancy OR the woman has developed antibodies to the D antigen (has been sensitised)
- When the Transfusion Laboratory detects D antibodies, they will add a comment to the report stating
    - "Anti-D detected. If anti-D has been given within the preceding six weeks no further sample is needed: please inform Transfusion Laboratory. If no anti-D has been given, or prophylactic anti D was administered >6 weeks before testing, please take additional samples (2 x 6mL EDTA). Discuss with Transfusion Laboratory the dose(s) & date(s) of any anti-D administered'
- If they have not had anti-D discuss the situation with Transfusion Laboratory regarding repeat samples & the cffDNA test.
- Anti-D should be given as required (routine or sensitising) whilst investigating whether the antibodies are passive (from injected anti-D) or immune (patient has sensitised).
- If the woman is confirmed as having developed immune anti-D she should be referred to a Consultant Obstetrician. No further doses of prophylactic anti-D should be administered. The fetus may be tested for RhD status to inform further management.
- The Transfusion Practitioner is available for advice/support.

9.2 D antibodies detected AFTER cffDNA screening:
If a woman has a Positive antibody screen showing D antibodies AFTER cffDNA screening:

- This could indicate that the result was a false negative

- Investigate whether the woman has had anti-D, at another site or in error, prior to this result
- Liaise with the Transfusion Practitioner; this will need to be incident reported & will require further investigation & follow up of the woman & baby
- If the fetus is predicted to be RhD negative monitoring of titres should continue in case the cffDNA result is a false negative.

10. TRANSFUSION IMPLICATIONS FOR ALL ANTIBODIES

Red cell antibodies have implications for the woman & for the fetus/new born.

Implications for the fetus/new born

Anti-D, -c, and antibodies within the Kell system are the antibodies most likely to cause significant fetal disease. Therefore, pregnant women with these antibodies should be followed up at monthly intervals until 28 weeks of gestation and at two weekly intervals thereafter to term.

Pregnant women with antibodies, other than anti-D, -c and Kell should be retested (titrated and further antibodies excluded) once in the third trimester, normally at 28 weeks; the results at this time will determine the frequency of follow-up testing required thereafter.

Implications for the woman with red cell antibodies

It may take much longer to get blood for women with Anti-e, Jka, Jkb, M, S, s, Fya & Fyb antibodies. Specific blood may need to be pre-ordered from NHS Blood & Transplant at either Oxford or Tooting. It is therefore essential to inform the Transfusion laboratory, & to send an urgent crossmatch for a minimum of 2 red cells (rather than a G&S), in advance of delivery to allow time to order red cell units in case they are required.

Management

Lab responsibilities:

If the laboratory identify an antibody, they will send the sample off for confirmation to NHSBT and send a report to this effect via EPR/ICE. This result will alert the midwife that antibodies are present

The lab will notify the screening midwives via generic email boxes or telephone of any **urgent results only as follows**:

High Titre levels

Big increase in titre/quantification levels

Any women with clinically significant antibodies identified after 28 weeks gestation.

Laboratory reports will be sent to the requester with full details of the antibody status and instructions on when subsequent tests need to be taken.

Results are also available on SpICE. Log ins and training available from the laboratory

Antenatal responsibilities:

Antenatal teams must take responsibility for checking all booking and subsequent blood tests. The laboratory will only email or phone results that are urgent as above

Ensure the women is under the care of a Consultant Obstetrician, they may also need referral to a specialist unit.

If the women are expected to require a transfusion, samples and a crossmatch should be requested as soon as the women presents in labour.

It may be necessary to have blood available for the baby at delivery if there is known fetal anaemia. The blood must be irradiated if intrauterine transfusions have taken place. Any neonatal blood requirements must be communicated in advance to the Transfusion laboratory. See BSPS Blood Transfusion Policy for Neonates & Paediatric Patients.

Samples on mum and baby should be sent post-delivery as per laboratory instruction.

Appendix 1

Potentially sensitising events during pregnancy flowchart

For RhD negative women with an RhD positive fetus OR fetal RhD status unknown
- Who do not have immune anti-D (negative antibody screen to D)
- Regardless of whether they have had any previous doses of anti-D

Indications – regardless of gestation	
Ectopic pregnancy Molar pregnancy Termination – Surgical management only Surgical management of pregnancy / Evacuation retained products of conception Chorionic villus sampling Cordocentesis Amniocentesis External cephalic version in-utero intervention Fall / abdominal trauma Intra Uterine Death (at both diagnosis & delivery*)	1. Take sample for Group & Screen 2. Request 1500IU anti-D using ICE or anti-D request form 3. Confirm product / dose / expiry & patient ID pre-administration 4. Administer anti-D within 72 hours of presentation (give regardless of whether has had routine prophylaxis). 5. If gestation greater than 20/40 request a kleihauer to estimate feto-maternal haemorrhage. Do not wait for the Kleihauer result before giving at least 500IU of anti-D. A negative Kleihauer means no further anti-D is required. 6. Check kleihauer result & administer any further anti-D as advised by Transfusion Laboratory
PV bleeding less than 12/40 gestation	
Heavy bleeding & pain	• Follow steps 1 - 4 above
Spontaneous complete miscarriage without surgical management OR minor, painless bleeding with viable pregnancy	Anti-D not required
PV bleeding indications after 12/40 gestation	
Any PV bleeding or Miscarriage	• 12 - 20/40: Follow steps 1 - 4 above • > 20/40: Follow steps 1 - 6 above

Continuous PV bleeding: Where it is clinically judged to be the same sensitising event with no features suggestive of a new presentation or a significant change in the pattern or severity of bleeding, such as the presence of abdominal pain.

< 12/40	Follow steps 1 - 4 above if bleeding is heavy or repeated, or where there is associated abdominal pain, particularly if these events occur as gestation approaches 12/40.
12 – 20/40	Follow steps 1 - 4 above at 6 weekly intervals for duration of bleeding
> 20/40	Follow steps 1 - 4 at 6 weekly intervals **&** Follow steps 5 - 6 at 2 weekly intervals for duration of bleeding.

NOTES

Where 1500IU of anti-D is unavailable give at least 500IU following a SE and give 3 x 500IU for RAADP

Appendix 2 Post-natal

All RhD negative women at delivery including IUD/stillbirth	
Fetal RhD result **RhD positive**	1. Take a maternal sample for transfusion (G&S & Kleihauer) 2. Request at least 500IU[1] anti-D using ICE / request form 3. Confirm product / dose / expiry & patient ID pre-administration 4. Administer anti-D within 72 hours of delivery (give regardless of any other anti-D prophylaxis). For patients with IUD/stillbirth give 1500IU anti-D within 72 hours of presentation & another 1500IU anti-D within 72 hours of delivery. 5. If gestation greater than 20/40 request a Kleihauer[2] to estimate feto-maternal haemorrhage. Do not wait for the Kleihauer result before giving at least 1500IU of anti-D. A negative Kleihauer <u>means no further anti-D</u> is required. 6. Check kleihauer result[3] & administer any further anti-D as advised by Transfusion Laboratory
Fetal RhD result **RhD negative, inconclusive or unknown**	• Take a maternal sample for transfusion (G&S & Kleihauer) • Take cord sample[4] to confirm baby's RhD status • Follow section i & ii below once result is confirmed • If no cord sample either obtain specimen from baby or follow 2-6 above
	i) Baby result RhD positive follow steps 2-6 above Incident report any false negatives (fetus predicted RhD negative but is actually RhD positive) under 'Blood Transfusion' category
	ii) Baby result RhD negative: no further action

NOTES	
1	Where 1500IU of anti-D is unavailable give at least 500IU following a SE and give 3 x 500IU for RAADP
2	Where intraoperative cell salvage (ICS) is used during caesarean section on RhD negative women, <u>*& that blood is reinfused,*</u> 1500IU anti-D must be given if the baby is RhD positive. Informing Transfusion Laboratory of the use of ICS & the need for 1500IU anti-D is essential. A Kleihauer should be taken between 30-45 minutes after reinfusion to determine whether further anti-D is required.
3	If a Kleihauer is not available it is recommended that 1500IU units is given
4	See also management of a large FMH section 6
5	Take cord blood for group (pink EDTA), hand label at bedside, according to local policy.
NB	If the woman decides to leave hospital post delivery, before the laboratory results are available: • The onus is on the midwife to ensure that anti-D is given within 72 hours of delivery; either the woman will need to return to hospital to be given it or the community midwife must give it • If the woman requests to be given anti-D before she leaves, it may be given prior to confirmation of the baby's blood group. The midwife must ensure, & clearly document, that the woman is aware that it might not be required & she is willing to accept a blood product under these circumstances. • **Anti-D may be given in the woman's home as long as the midwife carries an anaphylaxis kit with them & also stays with the woman for at least 20 minutes following administration.**

Appendix 3: Information on prophylactic anti-D

Anti-D is a blood product & as such all aspects of sampling, request, administration & traceability are as outlined in the Blood Transfusion Policy for Adult Patients.

Anti-D is produced from plasma collected from donors across a number of sites in the USA, all of which comply with US Food & Drug Administration standards. The production process includes steps to minimize the risk of viral contamination.

Safety

The CSL Behring Rhophylac patient information leaflet currently states that:

'When medicines are made from human blood or plasma, certain measures are put in place to prevent infections being passed on to patients. These include:

- Careful selection of blood and plasma donors to make sure those at risk of carrying infections are excluded,
- The testing of each donation and pools of plasma for signs of virus/infections,
- The inclusion of steps in the processing of the blood or plasma that can inactivate or remove viruses.

Despite these measures, when medicines prepared from human blood or plasma are administered, the possibility of passing on infection cannot be totally excluded. This also applies to any unknown or emerging viruses or other types of infections.

The measures taken are considered effective for enveloped viruses such as human immunodeficiency virus (HIV, the AIDS virus), hepatitis B virus and hepatitis C virus.

The measures taken may be of limited value against non-enveloped viruses such as hepatitis A virus and parvovirus B19.

Immunoglobulins have not been associated with hepatitis A or parvovirus B19 infections, possibly because the antibodies against these infections, which are contained in the product, are protective.'

https://www.medicines.org.uk/emc/product/6791/pil

Storage

Anti-D is usually kept in a refrigerator at 2-8ºC until ready for use, but it has been confirmed by CSL Behring[1] that Rhophylac is stable at room temperature for up to four days if stored at 8-25^{0}C. It is the responsibility of the GP surgery or ward to ensure that the anti-D is correctly stored as soon as it is received. The drug fridge should be correctly maintained & monitored as appropriate for a drug fridge. In the event that an alternative product is supplied please check the product insert for storage times.

Contingency plan for management of Anti-D stock crises

Supplier stock crises have necessitated the creation of a contingency plan in case of failure of stock. In the event of a failure of stock the Transfusion Laboratory will supply an alternative. The Head of Midwifery will be consulted & advised of the option that will be used & will be responsible for ensuring staff are aware of this change. The TP team will support the midwifery department with this temporary change in practice.

Full version control record

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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 Ashford and St. Peter's 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 Control Sheet

Version	Date	Guideline Lead(s)	Status	Comment
1.0	03/2023	Kim East, Lead Transfusion Practitioner	Final	New guideline for BSPS network.

Related Documents

Document Type	Document Name
Policy	Adult Blood Transfusion Policy