Clinical Practice Guideline	**Anti-RH (D) Immunoglobulin Antenatal and Post Natal Administration**
Peninsula Care Goal	**Safe**

Target Audience
This guideline is applicable to all Medical and Nursing staff.

Performed by:-

- Registered Midwife.
- Registered Nurse.
- Student midwife – Registered Nurse.
- Bachelor of Midwifery Student midwife - under direct supervision of midwife.

Purpose
Rh (D) negative women are at risk of alloimmunisation resulting in the development of Anti-D antibodies. These are able to cross the placenta causing haemolysis to such an extent that the fetus/ newborn is at risk of serious morbidity and mortality. The administration of passive Anti-D at times of actual and potential feto-maternal haemorrhage (FMH) and routine prophylaxis has been shown to reduce the rate of alloimmunisation.

Guidelines have been established for the recommended use of Anti-D in pregnancy and postpartum, these recommendations are endorsed by RANZCOG, Australian Red Cross Blood Services, National Health and Medical Research Council, and Australasian/New Zealand Blood Transfusions Guidelines.

All Rhesus negative mothers who do not have Anti-D antibodies present in their serum should receive Anti-D Immunoglobulin within 72 hours following:

- Birth of a live infant who is Rh positive
- Stillbirth
- Termination of pregnancy
- Miscarriage, treatment of ectopic pregnancy.
- At other times, following potentially sensitising events (see below)

To facilitate the efficient and appropriate administration of Anti-D Antibody, to Rh (D) negative pregnant women.

Antenatal indications

- Human Anti-D antibody is only available after relevant clinical data has been obtained and an appropriate requisition form has been completed.
- Human Anti-D Antibody is issued by Frankston Hospital Blood Bank on an individual basis after request by Doctor.
- Rh (D) negative women who have not actively formed their own Anti-D (unless NIPT at 11+0 weeks for fetal RHD has predicted that they are not carrying an Rh D positive fetus) should be offered Anti-D:
- First trimester indications - CSL 250 IU (50mcg)
    - Chorionic Villus Sampling
    - Miscarriage
    - Termination of pregnancy (either medical after 10 weeks gestation or surgical)
    - Ectopic pregnancy

- Molar pregnancy

There is insufficient evidence to suggest that a threatened miscarriage before 12 weeks gestation necessitates Anti-D. However, where the bleeding is repeated, heavy or associated with abdominal pain or significant pelvic trauma, immunoprophylaxis may be administered to women with no preformed Anti-D antibodies.

- Second and third trimester indications - CSL 625 IU (125mcg)
  - Obstetric haemorrhage;
  - Amniocentesis or other invasive fetal intervention;
  - External cephalic version of a breech presentation, whether successful or not
  - Abdominal trauma
  - Any other suspected intra-uterine bleeding or sensitising event
  - Termination of pregnancy

- Maternal blood should be taken to confirm the blood group and antibody status prior to Anti-D being given.
- Women who have received prophylactic Anti-D in their current pregnancy may continue to have the presence of Anti-D antibodies detected in their blood.
- Any antibody detected requires a consultation with the obstetric team.
- A maternal Kleihauer blood test should be performed at the time of presentation when a materno-fetal haemorrhage is suspected (significant trauma, antepartum haemorrhage, suspected abruption, ersistent reduced fetal movements. Further doses of Anti-D may be issued if necessary (100IU of Human Anti-D antibody covers 1ml fetal red cells, for example RhD immunoglobulin 625 IU is sufficient to protect against a fetomaternal haemorrhage of 6.0mL of fetal red cells/12mL whole fetal blood).

Routine antenatal prophylaxis for Rh (D) negative women

At 28 Weeks

- Rh status must be confirmed prior to arranging antibodiy screening and Anti-D administration
- Requisition form to be completed
- Antibody screen should be ordered by Medical Officer or Midwife
- For women having care with their GP or VMO, Anti D will be provided by the hospital to the consumer who will return to GP/Consultant office for administration
- For women having care in the antenatal clinic, Anti-D will be supplied to the clinic and administered by the midwife
- Result of antibody screen must be received and read by the doctor or midwife confirming antibody status before immunisation is given
- **Any red cell antibody identified with initial bloods or at 28 weeks antibody screen should have an obstetric review arranged as soon as convenient. This positivity is not limited to Anti-D.**

34-36 Weeks (see diagram page 5)

- Requisition form to be completed
- No antibody screen required
- For women having care with their GP or VMO, Anti D will be provided by the hospital to the consumer who will return to GP/Consultant office for administration
- For women having care in the antenatal clinic, Anti-D will be supplied to the clinic and administered by the midwife

Post Natal

- Ensure maternal blood is collected for antibodies and Kleihauer after the birth
- Ensure cord blood is taken from the baby at the time of the birth to confirm the baby's blood group and the Direct Antigen Test (DAT, also known as Coombs test)
- The collection and labelling of the blood tubes and forms is a common source of error. It is essential the guidelines outlined in the CPG: Cord Blood Collection Rh Neg Mother are followed carefully.

- The following information must be hand-written on the cord blood sample tube
    - Surname of the mother
    - Baby of Mother's UR number
    - Baby's UR (if available)
    - Date & time of birth
    - Baby's gender
    - Signed by the staff member drawing the cord blood or scout nurse who witnessed the collection during caesarean section

- The request slip must include:
    - Surname of the mother
    - Baby of (Mothers UR number) and Baby's UR Number
    - Date and time of birth
    - Baby's gender
    - Medical officer's signature
    - Signed by the staff member drawing the cord blood

- Operating Suite staff are responsible for taking cord blood samples in the case of LSCS.
- All results should be documented on the clinical pathway.
- If the baby's blood is Rh positive, DAT (Coombs test) negative, and maternal antibodies are negative then the procedure is as follows:

    - Phone medical officer (Obstetric HMO if baby on the post-naal ward, Paedaitric HMO if baby admitted to the nursery)) with results and request an order for Rh D Immunoglobulin 625 I.U. It is recommended that the same consumer form be used throughout.
    - Dorevitch Pathology, Frankston Hospital will issue one ampoule of Rh D Immunoglobulin.
    - Midwifery or nursing staff will arrange (via the PSA) the collection of the ampoule from Pathology Blood Bank Fridge.

- Two members of midwifery or nursing staff must check the Rh D Immunoglobulin before it is given to the consumer.
- After administration the following must be recorded:
  - Baby's blood group and result of DAT (Coombs test) on the Clinical Pathway.
  - Result of maternal antibody test on the Clinical Pathway.
  - Rh D Immunoglobulin: Time and Date given on requisition form MR/ and signature.
- Enter information on the maternal PowerChart (Clover).
- If the Kleihauer test indicates a large feto-maternal haemorrhage, a further dose of Rh D Immunoglobulin may be indicated. This is to be recorded in the blood bank, on PowerChart and on the clinical pathway.

Register

- A register of Anti-D administered must be kept for traceability purposes.
- A copy of this register should be faxed to Frankston Pathology monthly.

PROBLEMS / QUESTIONS:

If any problems arise, contact the Frankston Hospital Blood Bank

- Phone: 9784 7535.
- Fax: 9781 2884.

INDICATIONS AND CONTRAINDICATIONS

- See diagram on page 7.

CLINICAL CONSIDERATIONS

- Human Anti-D Antibody is stored in a monitored fridge in Frankston Hospital Blood Bank.
- Whenever a pregnant woman who is Rh negative is having her blood group & Rh antibodies checked, the request slip must state:
  - The gestation of the pregnancy.
  - If she has Anti-D during the pregnancy & when.
  - If she is to be given prophylactic Anti-D.
  - It is recommended that the same order form be used throughout the gestation.
  - A register of recipients of Anti-D/WinRho must be maintained for traceability purposes.
  - A copy of this register should be faxed to Frankston Blood Bank monthly.

ADMINISTRATION

- Informed consent must be obtained before administering the Anti D and documented on the consent and administration form for Anti-D immunoglobulin
- Anti-D is an intramuscular injection that must be administered in accordance with the Nursing Clinical Practice Guideline – Injections
- 2 accredited members of staff must check the Anti-D

- Anti–D is frequently administered in the outpatient setting, it is important to ask the patient to state their name, address, and UR number to ensure the correct identification of the patient. Where Anti-D is administered as an inpatient staff must ask the patient to state their name and date of birth, check this against the patient's wristband along with the patients UR number, there must be no discrepancies between the identification details on the prescription, the verbal check, and the wristband, if there are discrepancies these must be rectified prior to the administration of the Anti-D immunoglobulin.

COMPLICATIONS

- If a woman refuses Anti-D as preventive treatment because of religious or personal reasons a refusal must be signed on the Anti-D immunoglobulin consumer consent, order & administration form MR/553120.

Key Aligned Documents

- Cord Blood Collection Rh Neg Mother
- Hand Hygiene and Aseptic Technique
- Medical Treatment Decisions & Consent
- Patient Identification & Procedure Matching
- Traceability of Transfused Blood and Blood Products

References

NHMRC (2003). Guidelines on the prophylactic use of Rh D immunoglobulin (Anti-D) in obstetrics. http://www7.health.gov.au/nhmrc/publications/synopses/wh33.htm

Royal Australian and New Zealand College of Obstetricians and Gynaecologists July 2019. Guidelines for the use of Rh(D) Immunoglobulin (Anti-D) in obstetrics

National Blood Authority. 2021 Prophylactic use of Rh D immunoglobulin in pregnancy care.

Evaluation

Effectiveness of this guideline will be monitored and evaluated through:

- VHIMS incident reporting
- Blood Management Committee
- Audits will be conducted on a yearly basis in conjunction with Blood Bank

Document management	Position
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Approved by:	Blood Management Committee
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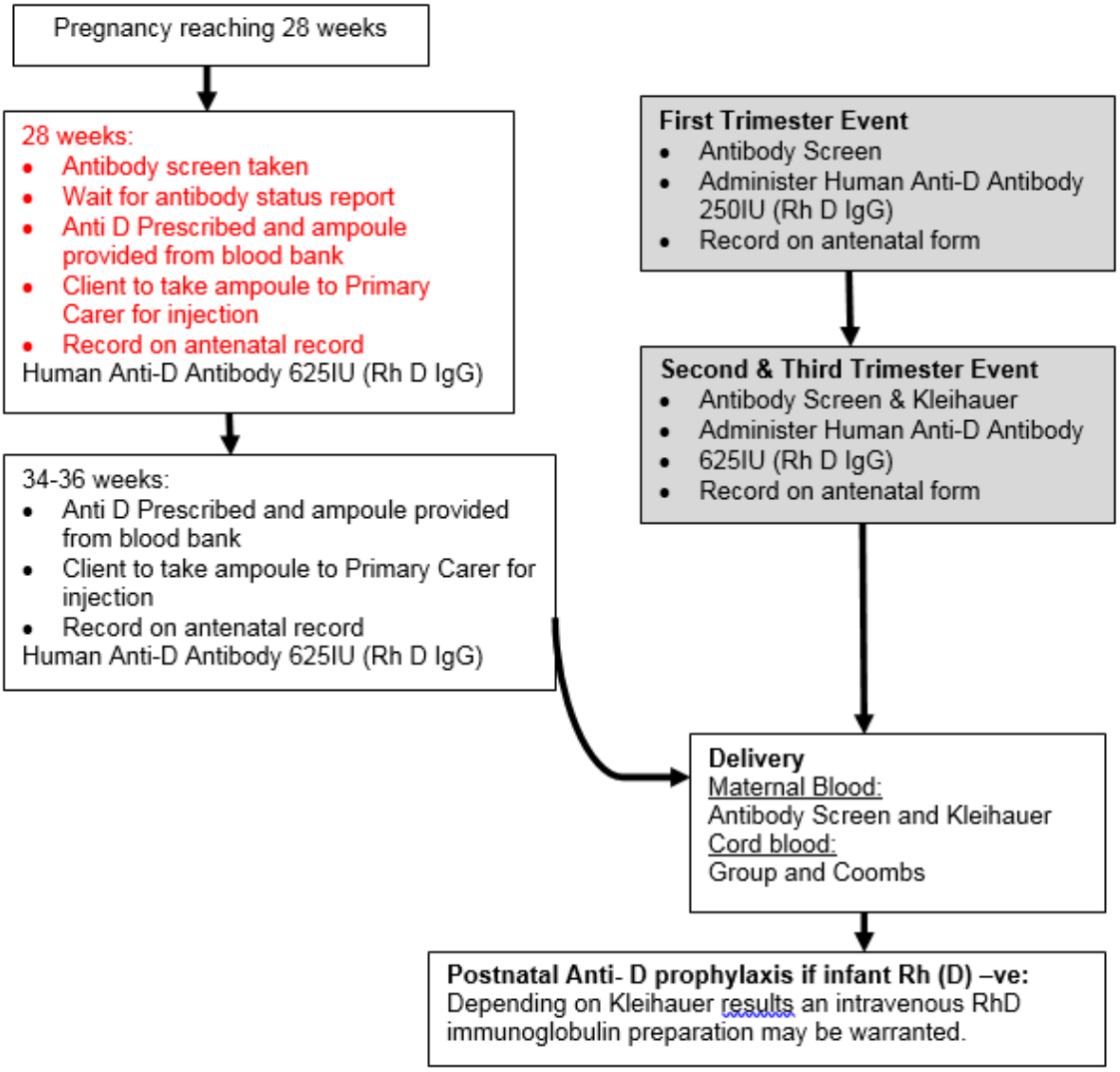

NOTE: Everyone has the right to decide whether or not to accept treatment. Before giving consent, it is important for mothers to understand why they are being offered treatment and to understand its risks & benefits to them and their baby. We strongly recommend that Rh(D) negative mothers have the preventive injection and so protect their next baby from the risk of severe anaemia, brain damage or death caused by Haemolytic Disease of the Newborn. If mother refuses because of religious or personal reasons, the consequences of refusal must be fully discussed and understood by the consumer.
A Refusal of anti (D) must be signed on the Anti-d immunoglobulin consumer consent, order & administration form MR/553120.