MATERNITY

GUIDELINE:

RHEUS NEGATIVE WOMEN AND THEIR BABIES
– POSTNATAL (PN) BLOOD SAMPLES

SCOPE:
All midwives and nurses working in the maternity unit

AUTHOR:
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PURPOSE:
To ensure that cord and maternal blood is correctly taken from mothers and babies at birth where indicated.

DEFINITIONS:
Rhesus (Rh) factor
An antigen which may be present or absent on the red cells causing the blood group to be termed rhesus positive or rhesus negative.
If an Rh negative woman is pregnant with an Rh positive fetus, her body will produce antibodies against the fetus's blood, causing a disease known as Rh disease. Sensitization to the disease occurs when the woman’s blood is exposed to the fetus’s blood.

Rh immune globulin (RhoGAM/Anti D)
A vaccine that must be given to a woman after a termination, miscarriage, or prenatal tests in order to prevent sensitization to Rh disease.

GUIDELINE:
All rhesus negative women are to be given the opportunity to read the leaflet ‘your guide to blood transfusion: Anti-D’.

POSTPARTUM
Postpartum administration of Anti-D immune globulin significantly reduces the risk of maternal alloimmunization. In 2000 Cochrane review of randomized trials comparing postpartum Anti-D prophylaxis with no treatment/placebo, treatment within 72 hours dramatically lowered the incident of Rh(D) alloimmunization in a subsequent pregnancy: relative risk 0.12 95% CI 0.07-0.23 (44).
Cord and maternal bloods should only be taken (with informed consent) from:

- Babies of Rh negative mothers and the woman. The blood group MUST be checked against a laboratory result form and NOT taken from the obstetric history front sheet.
- Mothers with positive antibody screening antenatally that require further investigation.
- If requested by the LMC (ascertain the reason).
- If there are no antenatal bloods available so mother’s blood group is unknown take cord bloods, once maternal blood group established cord blood can be used or discarded.

Cord Blood:

- Ensure that informed consent has been obtained from the mother. This should have been obtained by the LMC and documented in the MCIS.
- **Using a vacutainer ideally (preferably not a syringe as putting a syringe into a vacutainer blood bottle can alter the results),** blood should be drawn as soon as convenient from the umbilical cord; i.e. prior to the delivery of the placenta, or as soon as possible after the placenta has birthed, or if in theatre this should be done as soon as possible after the delivery of placenta, please make sure that obstetrician is aware that woman is rhesus negative so they can double clamp the cord.
- **One purple topped tube** is sufficient for this.

The blood tube MUST NOT be labelled with the mothers details – it should have baby’s label - please double check this. The following information should be given (extension 8215 or 0 at night) to register the baby and obtain an NHI for the blood request form and sample:

- Surname
- Mothers NHI
- Date of birth
- Time of birth
- LMC
- Sex
- Weight

If left too late to collect from the placenta (i.e. 1 hr following birth and clotting has occurred) false low haemoglobin low platelet results may occur necessitating a further blood test to the baby.

Staff will need to document on the laboratory forms that the test required is for a coombs test, the mother’s blood group is to be documented on the laboratory form.

If cord blood is **not** obtained, a heel prick blood collection to collect a specimen should be taken and sent to labs to be processed. This can be taken by a midwife, NNU nurse or pediatrician.
Maternal Blood

- Is to be taken as soon as practicable following the birth – within 1-2 hours post delivery
- Only 1x purple topped tube of blood is required. The specimen bottle must be labelled correctly and blood form filled in correctly, asking for CBC and Kleihauer, please detail in information box that mother had delivered and is rhesus negative.

Currently the baby and maternal blood needs to be requested on separate forms. Each specimen bottle should be labelled correctly and placed in a bag with the correct form. One bag may be placed inside the other bag so that they are kept together.

Do not delay sending the cord blood if maternal blood cannot be taken shortly after birth.

Bloods can be left in the fridge overnight in the laboratory for testing the next day, by calling an orderly to take to the laboratory. They must not be kept in the maternity unit fridge. Results will be available the following working day or within 72 hours at weekends and bank holidays. The laboratory will inform the delivery unit, via I-health, of the recommended number of vials of anti-D, if any, to be given.

Most women have an FMH of < 6ml at delivery (90%). FOR THESE WOMEN 625 IU of Anti-D is sufficient to protect the mother from making Anti-D red cell antibodies (sensitization). If a Kleihauer shows an fmh of > 6mls laboratory would consult with NZ Blood Service.

The mother must be given the opportunity of reading the information leaflet and discussing any concerns with her LMC or core midwife. Informed consent must be obtained and the consent form for use of blood products must be completed. The batch code of the anti-D must be recorded in the mother’s records on the blood products form.

If the mother declines anti-D, please see Appendix 1 for information on how to proceed.

ASSOCIATED DOCUMENTS:
- Hauora Tairawhiti Laboratory manual November 2006
- Anti – D immunoglobulin: Your guide to blood transfusion. The New Zealand Blood Service NZBL102 11/06

REFERENCES:
- Gale Encyclopedia of Medicine. Copyright 2008 The Gale Group, Inc. All rights reserved.
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Appendix 1: Use of Anti-D during pregnancy and the postpartum period in N.Z.
NZBS interim guidelines. June 2007

Appendix 2: Consent for use of blood products. NZBS National108F008a01

Appendix 3: Blood products – important information for patients. NZBS National 111/00502