IWK Health Centre

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To all District Laboratory Managers:

RE: Maternal Anti-M: IWK Change in Laboratory Approach

The IWK Heath Centre Blood Bank, with the support of the Rh program of Nova Scotia, has recently changed the practice for pregnant patients with an anti-M antibody. This change in practice is based on a recently published review[i].

- Antibody screening every four (4) weeks is being recommended for anti-M antibodies. This is the current practice for clinically significant antibodies.
- If the strength of the antibody is high enough on the initial specimen (ie 2+ with a homozygous cell), an additional specimen is requested so that treatment and testing can be performed.
- Specialized plasma treatment with dithiothreitol (DTT) is being used to determine the nature of the antibody (i.e. IgG verse IgM).
- If an IgG component is present, hemolytic disease of the fetus and newborn (HDFN) as well as suppression of red cell production can be seen. The clinical team may then decide to monitor the fetus with doppler ultrasound.
- Cord DAT and cord M antigen typing are also being performed as delayed anemia with reticulocytopenia may occur in the neonatal period.

If a referral for specialized plasma treatment with DTT is made to the IWK Health Centre, a minimum of two (2) 7ml EDTA samples are required to perform the testing.

Regards,

Chantale Pambrun, MD, FRCPC
Head, Division of Hematopathology
IWK, Children's & Women's Health Centre

cc: Becky Attenborough, Reproductive Care Program

[i] Hiroyasu Yasuda at al., **Hemolytic Disease of the Fetus and Newborn with Late-Onset Anemia due to Anti-M: A Case Report and Review of the Japanese Literature**. Transfusion Medicine Reviews. January 2014. Vol. 28(1).pages 1-6.