Paternal/Donor blood typing in pregnancy

To ensure the appropriate management of a pregnancy, maternal blood group and antibody screen testing is recommended after the first prenatal visit and again at 24-28 weeks gestation. A fetus inherits antigens from both biological parents. Blood group incompatibilities with the fetus may stimulate a maternal immune response creating antibodies directed towards the corresponding antigen on fetal red blood cells. This can result in hemolytic disease of the fetus and newborn (HDFN).

There are two situations when paternal/donor blood type testing is recommended:

1. Rh(D) Negative pregnant person: The prevention of HDFN due to Rh(D) incompatibility requires the prophylactic administration of Rh immune globulin (WinRho®SDF) during pregnancy to Rh(D) negative individuals; however, if paternal/donor blood is tested and documented to be both Rh(D) and Weak D negative, WinRho®SDF can be safely omitted. *Weak D testing is not done routinely on Rh negative individuals* and as a result, laboratories **need to know when a paternal/donor blood type is being requested** to ensure that complete testing is performed. It is only when paternal/donor typing is determined to also be weak D negative that this person can safely be considered Rh negative.

2. Positive Maternal Antibody Screen for Antibodies Associated with HDFN: Paternal/donor testing for the associated antigen (Examples: Kell, D, C, c, E, e, etc.) can help determine the chance that a fetus/newborn will be affected by the maternal antibodies. See below with hints for completing a requisition for paternal/donor testing.

1. Rh(D) negative pregnant person

Paternal/donor testing to determine the need for WinRho®SDF:

Check off **ABO & Rh type (or blood type).**
Add comment: **Paternal testing. Partner Rh negative.**

2. Antibodies associated with hemolytic disease of fetus/newborn (HDFN)

Paternal/donor testing for associated antigen:

Check off **ABO & Rh type (or blood type).**
Add comment: **Paternal testing.**
Name of partner: _____ DOB:_____
has _____ antibodies.

NOTE! For paternal/donor testing *DO NOT check off "antibody screen"*. This is not required and creates unnecessary lab time and cost.

If you have any further questions, please contact the Rh Program of Nova Scotia at 902-470-6458.