This information and process map is a real world example provided by Harrogate and District NHS Foundation Trust for the NICE diagnostic guidance adoption support resource for High-throughput non-invasive prenatal testing for fetal RHD genotype. It was not produced, commissioned or sanctioned by NICE.

Fetal Rh Status test

What

A Fetal Rh status test is now available by testing maternal blood for cell free fetal DNA (cffDNA).

Why

Approximately 38% of Rh-ve women receive anti-D unnecessarily because the fetus is also Rh-ve

RhD-ve women will be offered the Fetal status test and given the patient information booklet 'Mothers blood test to check her unborn baby's blood group'. The sample will be taken at the 16/40 check. It **MUST** contain the EDD by scan or it will not be accepted.

See the process map in the antibody guidelines for details

How?

Results will be available in 14 days.

If fetus is RhD-ve then no anti-D is required throughout the pregnancy but maternal and cord bloods will be taken at delivery.

If the fetus is RhD+ve then anti-D will be required as current

process.

Results

In twins etc, a RhD+ve result will only show that at least 1 of the babies is RhD+ve. A RhD-ve result will show that <u>all</u> the babies are RhD-ve.

Consent

If the woman decides to have anti-D despite a RhD-ve result - document in her records and inform transfusion.

If she does not consent to anti-D despite a RhD+ve result - ensure she is aware of the potential risks and document her decision in her records.

Always inform transfusion in these cases.

Risks?

There is a 0.1% chance that the result will show RhD-ve fetus when it is actually RhD+ve. This equates to approx. 1 in 1000, however, of that 1 in 1000, only 1% will develop immune anti D.

Anti D will be offered at delivery if the baby is found to be RhD+ve.

There is a 2% chance that the test will show RhD+ve fetus when it is actually RhD-ve. This means the mum will have had anti D unnecessarily which will be much lower than our current rate of 38%.

If the woman has another pregnancy the fetal RhD status could be mistakenly attributed from a previous pregnancy in the documentation. It is essential that the EDD is documented on every occasion related to the result for that pregnancy tested.