

# Setting up a cFFDNA screening service

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Transfusion Laboratory Manager



#### **Objectives**

Aim is to avoid unnecessary anti-D in those with RhD neg fetus

identify RhD negative women at booking

inform patient, community midwife and GP of result and offer testing

check the fetal RhD status from maternal blood sample



## Coordinated by blood transfusion laboratory

- A number of decisions:
  - How to identify the relevant patients
  - How to ensure the midwives know which patients are eligible for the test
  - Handling the samples on receipt
  - Handling the results
  - Availability of results to the clinical teams



### Identifying RhD negative women

- Laboratory IT system (telepath) to identify RhD neg
- Check against EDD to ensure a booking sample



#### Communication

Ensuring the midwives know who is eligible for the test

Dear  Your blood group has been identified as Rhesus D negative (RhD neg). If your baby is RhD positive, there is a small chance that you form antibodies that may cause anaemia in your baby. We are able to prevent this with anti-D injections given at 28 weets and after delivery.  At the moment all RhD negative. We are now able to identify the RhD type of the baby from your blood baby is also RhO negative. We are now able to identify the RhD type of the baby from your bloods anapie.  If you would like to take this apportunity to find out the RhD type of your baby, please take this letter and form to your midwife or GF (not an option if this is out of Oxford County) or to the phiebdomist at the John Racdiffe Women's Hospital (svallable to all) or when you attend, your 20 week scan at the John Racdiffe Vours sincerely  Oxford Provord  Oxford Provord  Oxford Consultant is semantified to Consultant is semantified to Consultant is semantified.  Dr. Brench Kelly  Consultant Medicine and Obstetric Haematology	Department of Laboratory Haematology John Raddiffe Hospital Headington Oxford 0x3 90U Switchboard 0300 304 7777	Oxford University Hospitals NHS Foundation Trust
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Request for cell free fetal DNA (cffDNA) Screen RhD Fetal Genotyping Service	Blood and Transplant
This form is only to be used for RhD negative DO NOT USE this form for samples antibodies. For those cases, please speak (a different form and sample volume are a	from women who have anti-D to the Fetal Maternal Unit first
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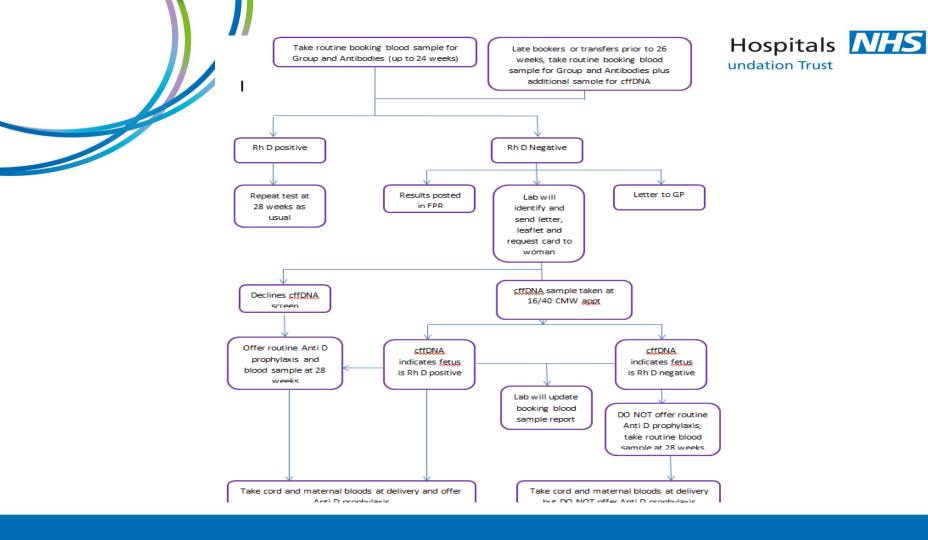
#### Samples

- Sample handling
  - Receipt of the sample is entered into the lab IT system
  - Samples dispatched to NHSBT on routine transport



#### Results

- We only get electronic copies of the reports from spICE
- Results manually entered into the lab IT system (and double checked)
- This sends the results to the GP systems and to the hospitals' EPR





#### Coordination of service

- Employed some clerical help with the administration (15 hours a week)
- The funding for this was from the predicted savings in prophylactic anti-D
- Some BMS time checking the results but this is not significant





#### Education

INFORMATION DOCUMENT INF1259/1

CffDNA RHD screening User Guide

NIS
Blood and Transplant

- Community Midwives
- Trust midwives
- Obstetricians
- GPs





User Guide 2015



#### Figures to date

- 1<sup>st</sup> Feb- 31<sup>st</sup> August
  - 806 letters to patients inviting them to have the test
  - 439 samples received
  - 151 patients are predicted to be carrying a RH D neg baby ( 37.4 %)
  - 17 inconclusive results
  - 36 labelling issues
  - 1 mum who requested anti-D despite carrying a RhD neg fetus



#### Post delivery

- We are still undertaking a cord group on delivery
- We've had 148 deliveries of babies who were part of the service
- 1 midwife didn't bother to send a cord sample
- All others for which there was a predictive Rh status have been correct



#### Problems?

- Problems have been small!
- Sample labelling issues when taken at GPs by phlebotomists
- Midwives sending 1 EDTA instead of 2 ( we used 4.5ml specimen tubes)
- GPs wanting to decide who was having the test



#### **Conclusions**

- Successful programme
- Not difficult to establish involving the screening coordinator is a good thing!
- Avoids unnecessary anti-D (routine anti-D and anti-D after sensitising events)
- Avoids unnecessary investigations clinical and Kleihauers
- Improves patient safety



### Questions

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