

**Western
Sussex
Hospitals
NHS
Foundation
Trust**

**Pat Schan
Specialist Midwife
On behalf of the
WSHFT
Fetal Genotype
Project
Working group**



WSHFT

Inspected and rated

Outstanding ★



- Worthing Hospital & St Richards Chichester
- 5,600 deliveries split evenly between sites
- 2 Haematology labs
- 2 systems
- 2 ANCs

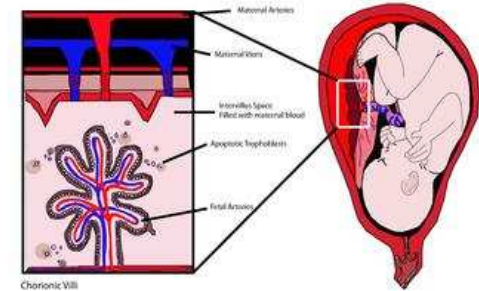


Western Sussex Hospitals **NHS**
NHS Foundation Trust

Cell free fetal D group DNA screening

Non-invasive prenatal testing for fetal RHD genotype

cffDNA



- cffDNA originates from the trophoblasts making up the placenta
- It is estimated that 2-6% of the DNA in the maternal blood is fetal in origin
- The fetal DNA is fragmented and makes its way into the maternal bloodstream
- Studies have shown that cffDNA can be observed as early as 4 weeks gestation
- cffDNA diminishes quickly after the birth of the baby, so that it is no longer detectable in the maternal blood approximately 2 hours after birth
- cffDNA is significantly smaller than the maternal DNA in the bloodstream,

cffDNA in Rh neg women

- Around **15%** of women in a Caucasian population are D negative, of which around **40%** will have D negative babies (no benefit from anti-D)
- Cost-effective option to guide antenatal prophylaxis with anti-D immunoglobulin
- Help reduce unnecessary use of a blood product in pregnant women
- Conserve supplies by only using anti-D immunoglobulin for those who need it

Objective

Avoid unnecessary
anti D in those with
RhD neg fetus

Timeline



- ❖ 20/6/17 – Obstetric haematology meeting, Oxford
- ❖ 14/7/16 – Feedback meeting -enthusiasm from transfusion labs and ANC staff
- ❖ 23/08/16 Working party was proposed
- ❖ 7/11/16 – first meeting
- ❖ Nice guidance (DG25) published Nov 2016
- ❖ Further meetings in Jan, April, June – for pathway & guideline development
- ❖ JOGG May
- Go live **1st July 2017**

Working party



ANC Worthing

Claire Harris ANC manager
Jane Milner Deputy ANC manager
Belinda Lumsden
Ami Milner Admin

ANC SRH

Sarah Griffin ANC Manager
Carol Stupple
Janice Barber
Debbie Harris
Katie Addison Admin



Blood and Transplant

Haematology

Malcolm Robinson Chief BMS
Ruth O'Donnell CNS
Zoe Sammut BMS
Carol Stenning BMS
Trevor Deetlefs BMS

Support

Gail Addison Senior midwifery
Manager
Pat Schan Specialist Midwife
Sophia Stone Consultant
Obstetrician
Santosh Narat Consultant
Haematologist

Cohort identification

Currently

- ❖ Community Midwives identify Rh neg at 16 weeks and make Anti D appt

***** **Not Robust – No Failsafe** *****

Proposal

- ❖ Labs to identify cohort from booking bloods and inform ANC

Challenges

- ❖ 2 lab systems
- ❖ 2 different forms – one site unable to identify as antenatal samples

Workstreams

- Both labs were able to identify cohort
- Audited – 100% correctly identified
- Sent to each ANC weekly by email
- Separate Databases created
- By product was also identification of atypical Red cell antibodies
- Also rejected samples

Workstreams cont

- Decision made early on for this to be ANC lead rather than CMW
- Existing Anti D clinic session to be used
- ANC M/W's also felt a good opportunity to manage Red cell AB women differently by inviting in for chat , bloods and plan
- Discussed joint clinic with Haematology CNS

Workstreams cont

- ❖ Guideline
- ❖ Pathway for mothers of rh pos babies to ensure they have Anti d
- ❖ Letters for pos and neg
- ❖ National leaflet changed to trust logo & ANC rather than CMW
- ❖ Stickers for maternal notes
- ❖ Use one blood form
- ❖ Discuss failsafe with MIS information analyst
- ❖ CMW still check RH–ve women have been contacted and have a plan

Fetal D Group DNA Screening and Routine Anti-D Prophylaxis (RAADP) for Non-Sensitised RhD Negative Women Guideline

Summary statement: How does the document support patient care?	By providing evidence based guidance for staff with regard to Fetal testing for D group, and Anti D administration; both prophylactically and following a sensitising event
Staff/stakeholders involved in development:	Leads for Maternity (Obstetric and Midwifery), Blood Transfusion Leads, Joint Obstetric Guidelines Group
Division:	Women and Child Health

Department:	WESTERN SUSSEX HOSPITALS NHS TRUST WORTHING TRANSFUSION LABORATORY Ex. 5875 - CPA Registered			Lab U Phleb.
Responsible Person:	--- Addressograph Label ---			
Author:	Surname			
For use by:	Forename			
Purpose:	Hospital / NHS No.	D.O.B.	Sex	WASH
This document is:	Maiden/Previous Name			
Key related documents:	Address	URGENT <input checked="" type="checkbox"/>		
Approved by:	"ANC Bloods" include Group, Rh (D) & AA Screen - NOT CBC			
Approval date:	ANC Bloods	Please tick if first visit i.e. - New Booking <input checked="" type="checkbox"/>	Addressograph labels MUST NOT be used on ANC Blood Specimens	
	Kleihauer Test	(For Foetal Cells)	We are unable to accept any sample or specimen with incomplete details	
	Anti D Required	Number of Weeks Pregnant	BLACK INK ONLY	
	Reason for Anti D/Additional Requests/Comments			
	/services / pathology			
Ratified by Board of Directors/ Committee of the Board of Directors	Not Applicable-Divisional Ratification only required			
Ratification Date:	Not Applicable-Divisional Ratification only required			
Expiry Date:				
Review date:				
If you require this document in another format such as Braille, large print, audio or an please contact the Trusts Communications Team				
Reference Number:	CG1195			
Qpulse Reference (Pathology)	CP-BTR-ANTID			

Place labelled specimen in bag, remove protective strip, fold flap onto bag and seal firmly.

Request for cell free fetal DNA (cffDNA) Screen Blood and Transplant RhD Fetal Genotyping Service



This form is only to be used for RhD negative pregnant women.
Please **DO NOT USE** this form for samples from women who have anti-D antibodies. For those cases, please speak to the Fetal Maternal Unit first (a different form and sample volume are required).
At least three points of matching identification must be used on form and sample tubes

Mother's Details:

NHS No. _____ or* Hospital No. _____
*(If NHS No. is not known). Please ensure that the numbers are the same on this form and the sample tube i.e. NHS No. on both form and sample and/or Hospital No. on both form and sample

Surname _____
First name _____
Address _____

DOB _____ EDD from scan* _____
*If scan has not been done, then one should be arranged before taking sample

Please provide 6ml EDTA blood sample from the mother (room at room temperature)

Date of sample taken _____ Name of person taking sample _____

Hospital and Requester Details:

Full Hospital Trust Name _____ Hospital NHS Code* _____
*COS code (Formerly NACS code)

Midwife code _____ Practice code _____

Sender's name and address _____ For Hospital Laboratory use _____

Telephone: _____

Mother's blood test for her unborn baby

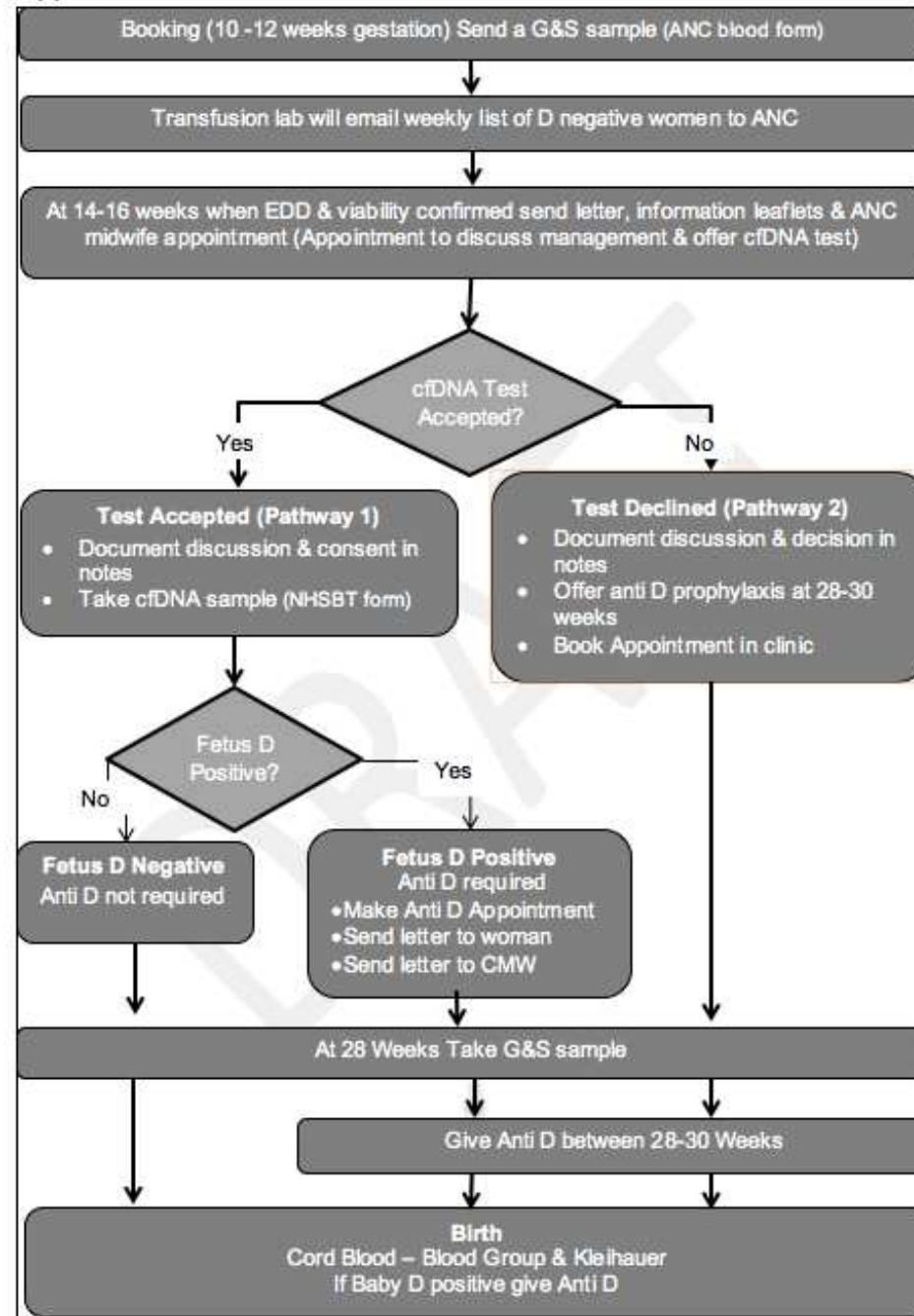


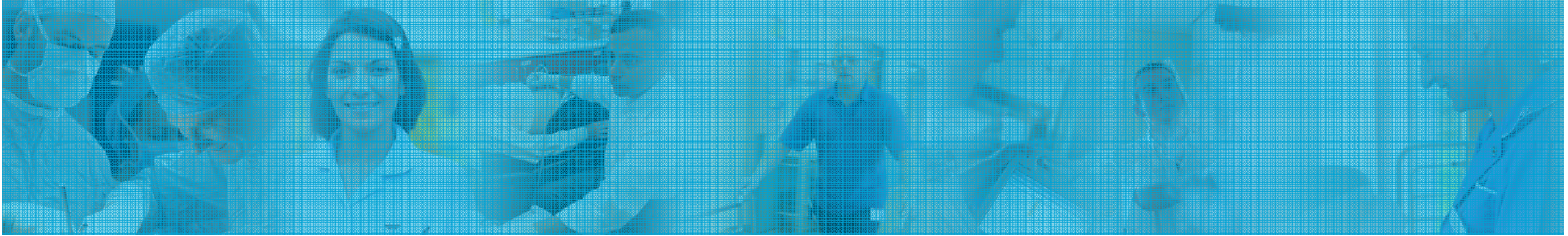
cffDNA screening/ test accepted by mother



Unborn baby screened as Rh negative

Appendix 1 Process Flow Chart





Western Sussex Hospitals NHS Foundation Trust

Thank you

Questions to the
working party please !!!