

Antenatal Screening Tests - Full Clinical Guideline

Reference no.: OBS/03:16/H11

MATERNAL ANTENATAL SCREENING TESTS**Contents**

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1. Introduction

Antenatal screening aims is to enable parents to make informed choice concerning their pregnancy outcome, through the timely offer of screening. National standards have been set by the UK National Screening Committee (UK NSC) in an attempt to ensure a more coordinated approach to screening. Policy and standards are subject to review and development in the light of new evidence.

2. Purpose and Outcomes

The overall aim of this guideline is:

- To explain the antenatal screening tests offered routinely to women who book to have their baby at Royal Derby Hospital (RDH) or in the community setting within Derby Hospital Foundation NHS Trust (DHFT).
- To provide the processes for giving information to women and the offer of screening tests in accordance with the standards and recommendations outlined by the UK NSC and the National Institute for Clinical Excellence (NICE; 2008).
- To provide information that covers the processes for performing the antenatal screening tests and the subsequent management of these results within the appropriate timescales.

This guideline **does not outline** the specific pathways of care for each condition screened. This guideline will cross-reference to other screening guidelines where appropriate.

3. Abbreviations

AN	-	Antenatal
ANC	-	Antenatal Clinic
ANSC	-	Antenatal Screening Coordinator
ARC	-	Antenatal Results and Choices
BBV	-	Blood Borne Virus
CMW	-	Community Midwife
CRIS	-	Computer Radiology Information System
CAR	-	Congenital Anomalies Register
CLC	-	Consultant-Led Care
CVS	-	Chorionic Villus Sampling
DHFT	-	Derby Hospital NHS Foundation Trust
EDTA	-	Ethylene Diamine Tetra Acetic Acid: Whole blood sample bottle
EMSYCAR	-	East Midlands and South Yorkshire Congenital Anomalies Register
FASP	-	Fetal Anomaly Screening Programme
FISH	-	Fluorescent In-Situ Hybridisation
FOQ	-	Family Origin Questionnaire
FM	-	Fetal Medicine
FMNM	-	Fetal Medicine Neonatology Liaison Meeting
FBC	-	Full Blood Count
GAU	-	Gynaecology Assessment Unit
GBS	-	Group B Streptococcus
GP	-	General Practitioner
GUM	-	Gentio-Urinary Medicine
HHR	-	Hand-Held Records
Hb	-	Haemoglobin
HPA	-	Health Protection Agency
HIV	-	Human Immunodeficiency Virus
IDPS	-	Infectious Diseases in Pregnancy Screening
IT	-	Information Technology
KGH	-	Kettering General Hospital
LW	-	Labour Ward
MDT	-	Multidisciplinary Team
MMR	-	Measles, Mumps & Rubella
MS SC&T	-	Midwife Specialist Sickle Cell and Thalassaemia
MSU	-	Mid stream urine
MW	-	Midwife
MWLC	-	Midwife Led-Care
NICE	-	National Institute for Clinical Excellence
NSC	-	National Screening Committee
NT	-	Nuchal Translucency
OCRR	-	Ordering Communications and Results Reporting
PACS	-	Picture Archiving & Communication System
PND	-	Prenatal Diagnosis
PN	-	Postnatal
RDH	-	Royal Derby Hospital
SC&T	-	Sickle Cell and Thalassaemia
SPI	-	Special Instructions
SpMW	-	Specialist Midwife
UK NSC	-	UK National Screening Committee
USS	-	Ultrasound Scan
UTI	-	Urinary Tract Infection

4. Key Roles and Responsibilities

Key professionals at RDH involved in antenatal screening pathways:

- Antenatal Screening Specialist Midwife who is the nominated RDH AN Screening Co-ordinator (ANSC).
- Lead Consultant Obstetrician for Antenatal Screening, who is also the Chair of Antenatal and Newborn Screening Board.
- Specialist Midwife HIV (SpMW HIV)
- Consultant Obstetricians with Fetal Medicine Specialism
- Clinical Specialist Midwives in Fetal Medicine
- Lead Consultant Obstetrician for IDPS
- Consultant Haematologist
- Consultant Microbiologist
- Consultant Hepatologist and Clinical Nurse Specialists in Hepatology.
- GUM Consultant and Health Advisors
- Midwife Specialist Counsellor for Sickle cell and Thalassaemia (SpMW SC+T)
- Ultrasound sonographers
- Specialist Haematology laboratory Senior Biomedical Scientist
- Serology laboratory Senior Biomedical Scientist
- Community Midwives
- Specialist Midwife Substance and Alcohol Misuse (SpMW S&A Misuse)
- Antenatal Clinic Midwives

Responsibilities of key professionals above:

- All screening tests are **offered** at booking (ideally 8-10 weeks gestation) with the CMW or at the woman's first contact with maternity services if she presents later. This should be documented.
- The above **documentation** enables auditable evidence of the offer of and decision about screening, which is a mandatory requirement.
- The **processes for the offer of and performing of all antenatal screening tests** with in appropriate timescales at RDH are as recommended by UK NSC, NICE (2008) and in the individual programme specific standards.
- Women who **decline** a recommended screening test should be made aware that they can request the test at a later date if they choose to do so, and that these tests will be routinely offered again before they are 20 weeks and opportunistically as appropriate (e.g. on admission in labour or the early PN period), which should be clearly documented
- If **screening is declined**, CMW to document on booking referral form and in HHR. AN screening blood form is to be completed as declined and sent back to the lab, including the FOQ. AN Services to document on 'Screening investigation' screen in maternity IT system. If IDPS tests are declined the ANSC (all IDPS) and Sp HIV Midwife (HIV only) are to be informed. Women are advised to report any rash, flu-like illness or contact with rubella like rash / infection to GP, midwife or obstetrician (see Rubella in pregnancy Guideline (R1)). Women who decline SC&T screening should be informed that a low MCH, potentially indicating thalassaemia, may become evident through the FBC estimation and that the midwife would then make contact with them. The midwife should inform the woman of the result and offer further discussion.

- For women who present **unscreened in labour** (e.g. without AN care, un-booked, concealed pregnancy or who have declined AN screening in the current pregnancy) screening is offered, (as appropriate to gestation) on admission in labour or in the early postnatal period (if not appropriate on admission in labour). (see Concealed or Unbooked pregnancy guideline (C8))
- If the booking bloods screening tests are being undertaken **>24 weeks gestation**, laboratories must be informed of the late gestation. If the screening tests are **undertaken in labour** (or early PN period) pathology should be contacted (if during 9-5), or the on-call Consultant Microbiologist must be informed (if out of hours) and rapid urgent IDPS must be requested in-house at RDH. Women should not be discharged without results.
- It is the responsibility of the healthcare professional who orders any screening test to follow up the result. If results are missing the requester must check the pathology link on the computer (if available) or telephone the relevant laboratory / GP surgery.
- The **processing of and reporting** on screening tests, including referral and management, should occur in a timely manner as detailed in the UK NSC (2007) working standards and programme specific standards.
- Original **written result reports** from the specific laboratories are filed in the woman's HHR by CMWs at the next routine appointment and in the obstetric notes by AN services staff at the earliest opportunity.

5. Screening Information

- All women are given **pre-test information** on antenatal screening at the first contact with the healthcare professional (usually the CMW).
- CMWs are required to **document** on the booking referral form in the HHR that the booklet 'Screening Tests for You and Your Baby' (UK NSC 2014) has been given and that AN screening tests have been offered.
- **Resources boxes** to assist health professionals with AN screening are available in Antenatal Services, Labour Ward and Ward 314 (combined AN and PN ward).
- It is advisable to use an **appropriately trained interpreter** when spoken English is not the woman's first language, to enable the woman to understand the information given.

6. Antenatal Screening Tests Offered at RDH

UK NSC AN screening tests

- **Sickle Cell and Thalassaemia Screening** - Routine Thalassaemia screening at RDH & selective Sickle Cell screening based on the FOQ information
- **Infectious Diseases in Pregnancy Screening** -
Hepatitis B
 HIV Refer to guideline H9 (*Guideline for antepartum, intrapartum and postpartum management of pregnant women who are HIV positive*)
Syphilis
Rubella susceptibility (see Rubella in pregnancy Guideline (R1)).

- **Fetal Anomaly Screening Programme**

Early Pregnancy and Dating Ultrasound Refer to Early Pregnancy Scanning guideline (E3)

18+0 to 20+6 week fetal anomaly ultrasound.

Down's syndrome screening

Refer to guideline Antenatal Screening for Down's syndrome (D4).

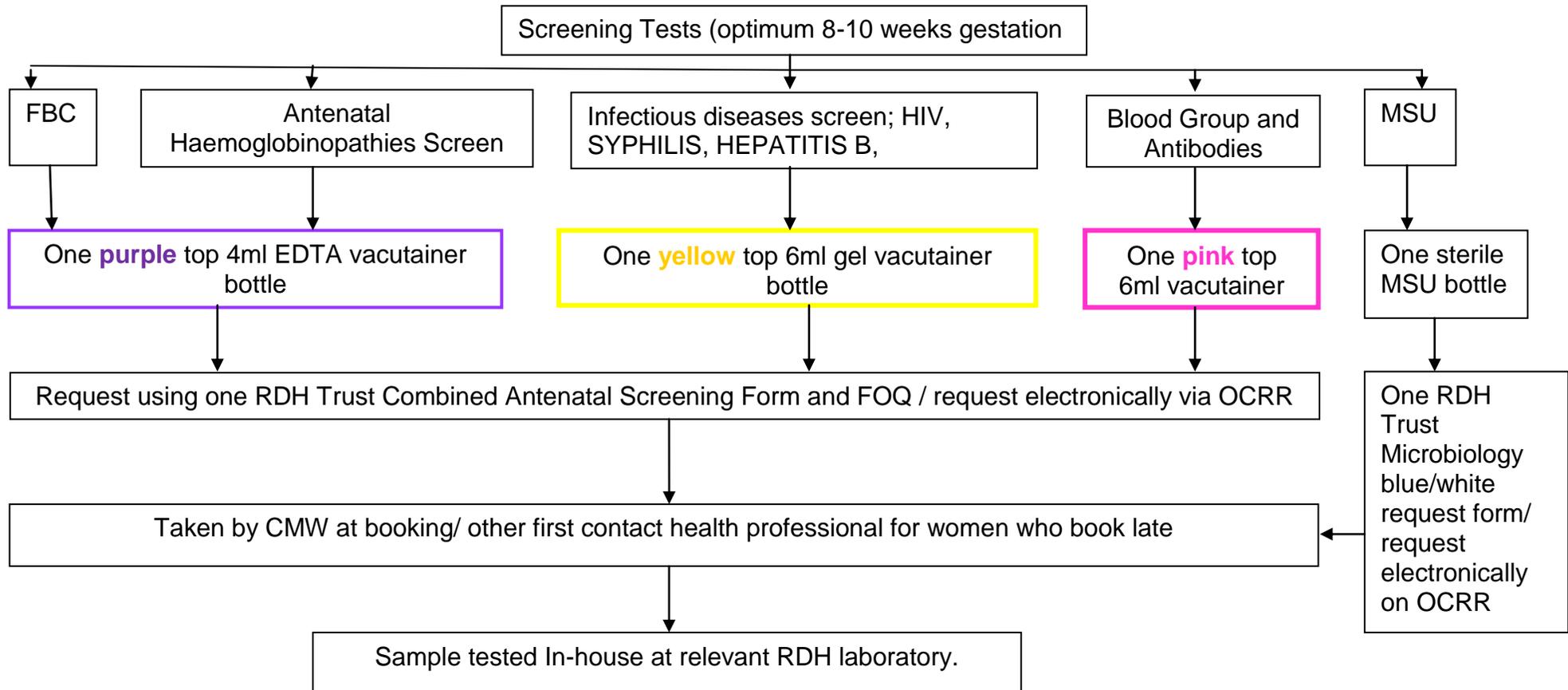
In addition to the recommended UK NSC antenatal screening tests, the following screening tests are also offered at RDH, routinely (unless stated otherwise)

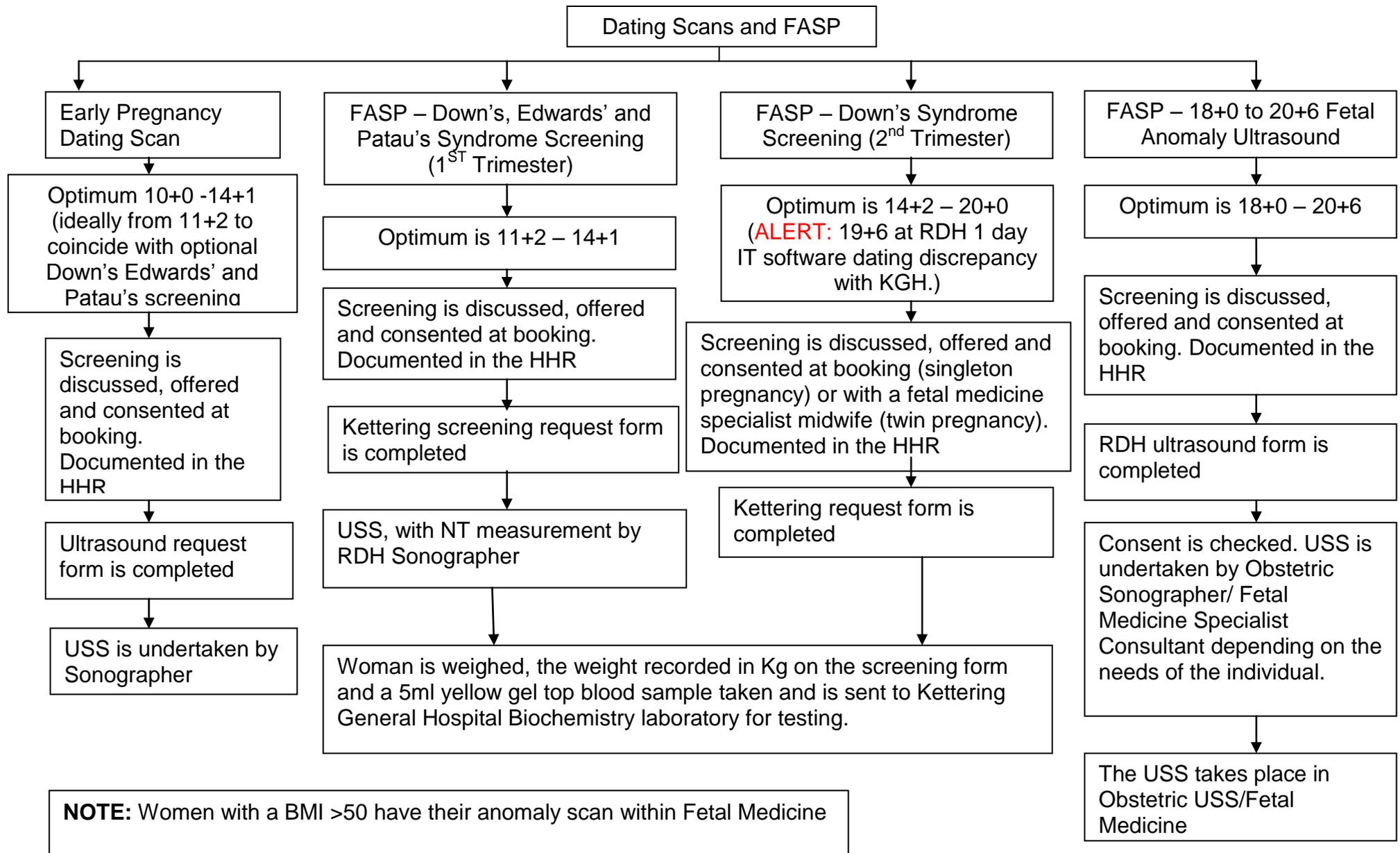
Other AN Screening Tests Offered at RDH

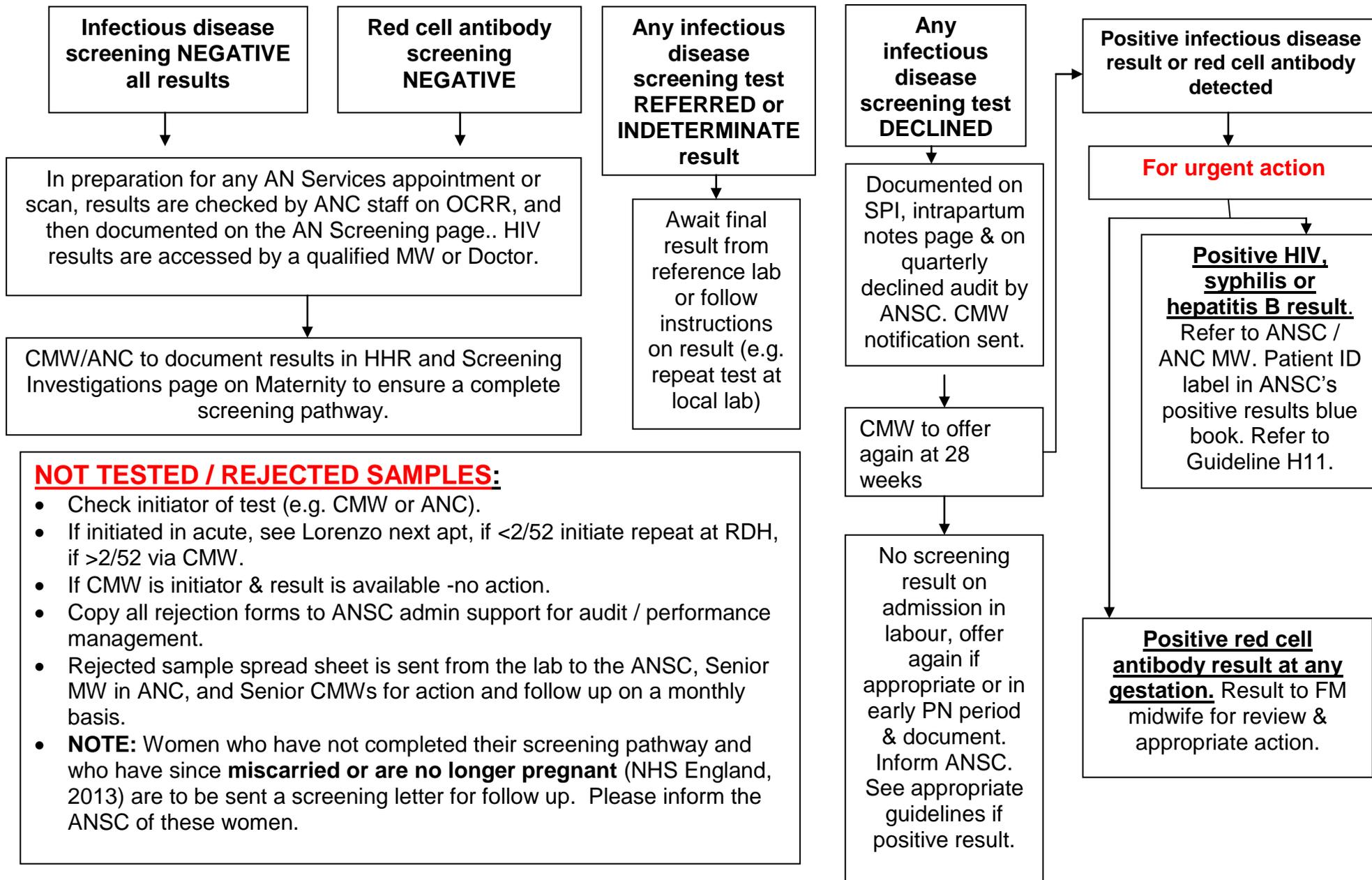
- **Blood grouping**
- **Red cell antibody screening**
- **Mid stream urine testing**
- **Full blood count**
Refer to guideline Antenatal Care Including Risk Assessments (A5)
- **Optional tests**

All women are informed about screening for Down's syndrome, and prompted to make a personal choice about whether or not they wish to opt for screening

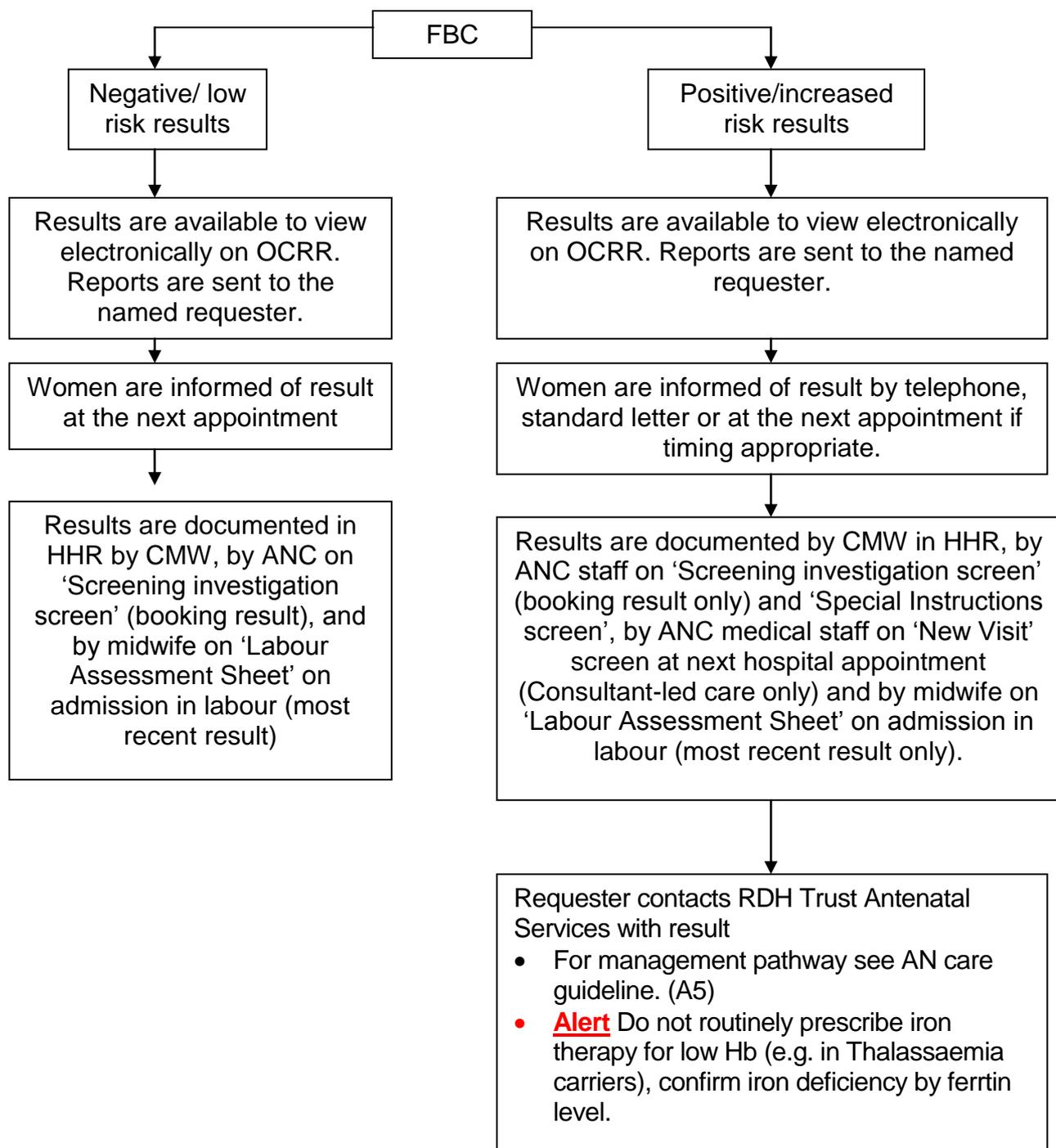
7. Processes for Performing AN Screening Tests



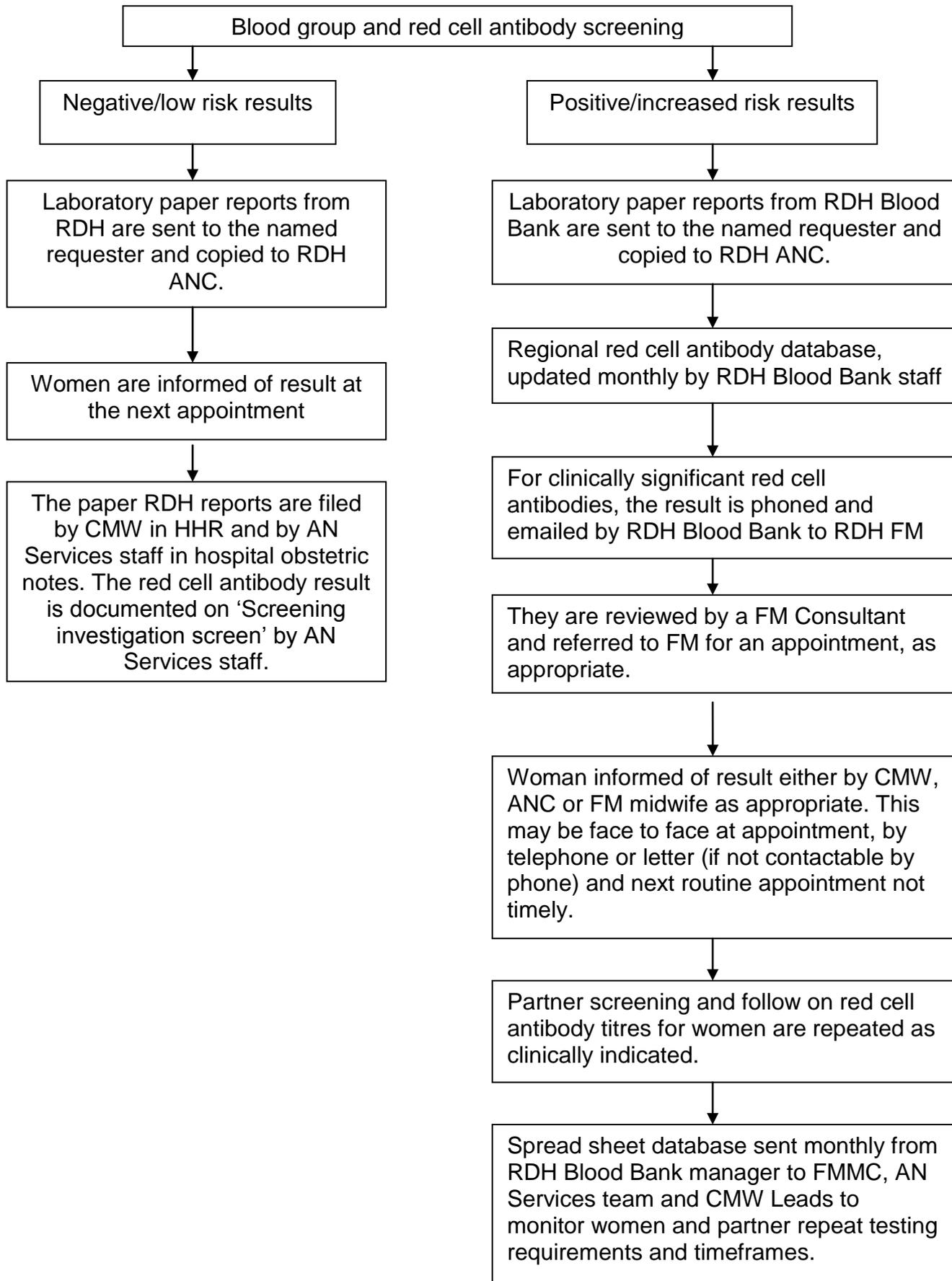
Processes for Performing AN Screening Tests

Administrative Processing of RDH Results.

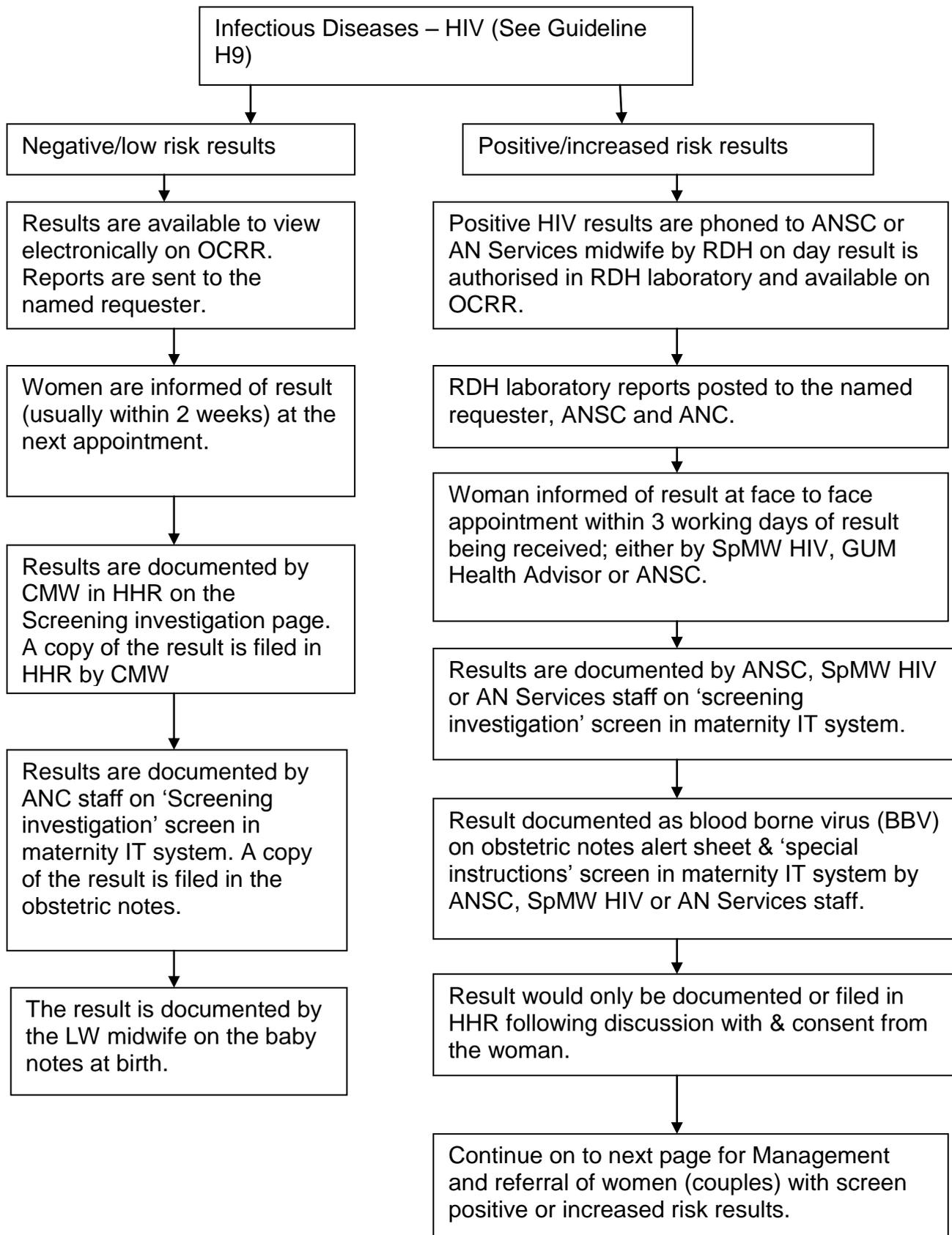
8. Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results



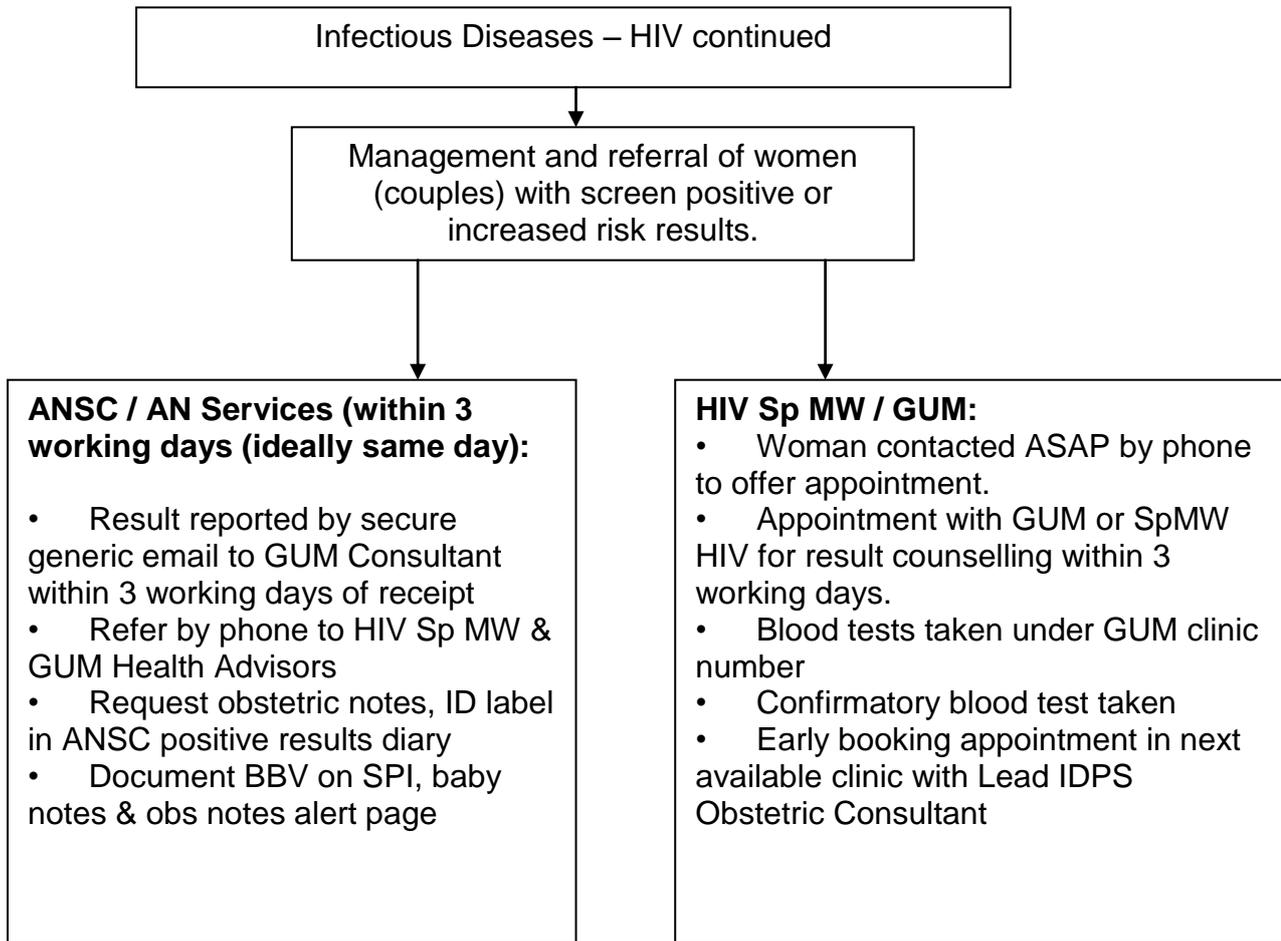
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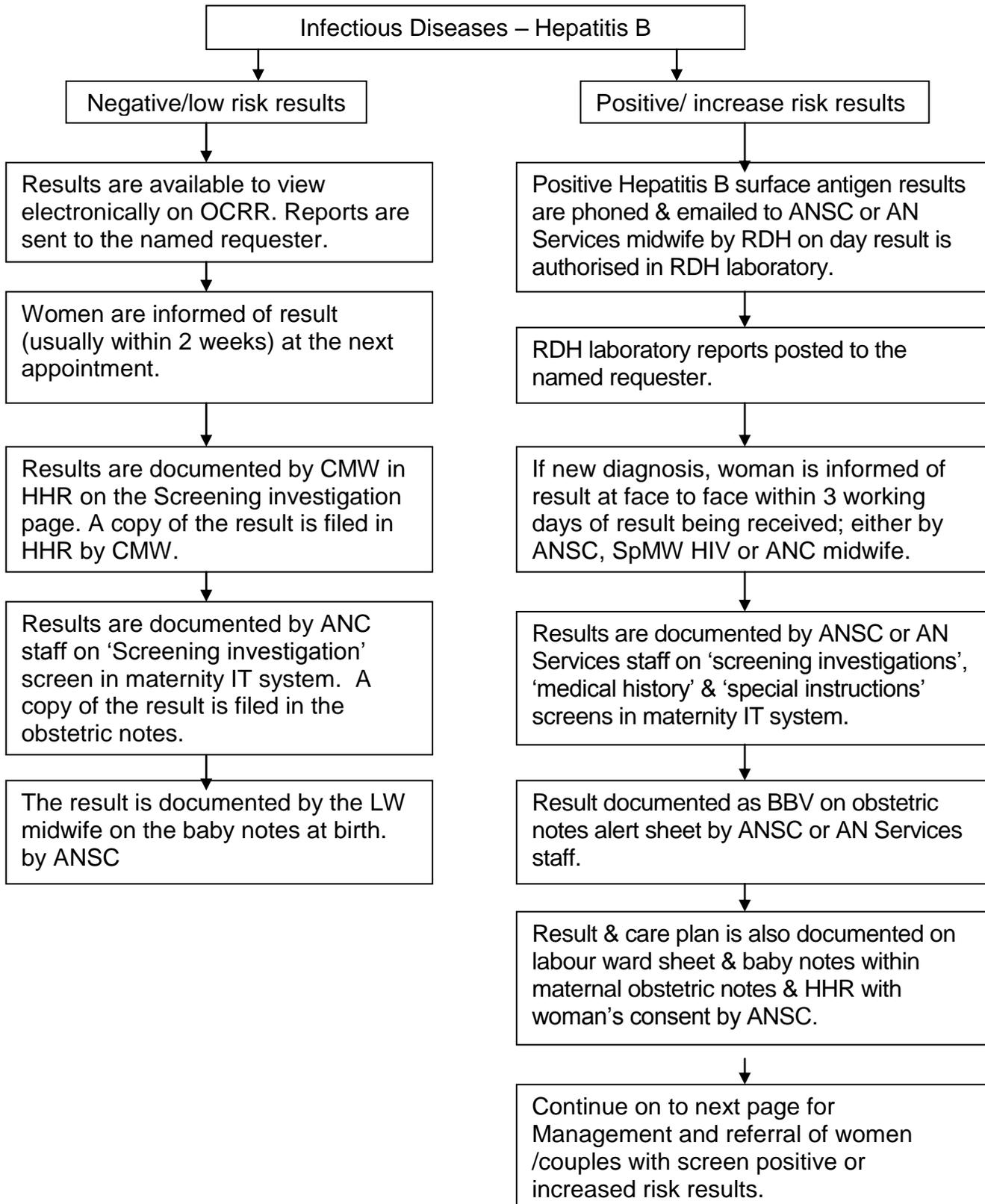
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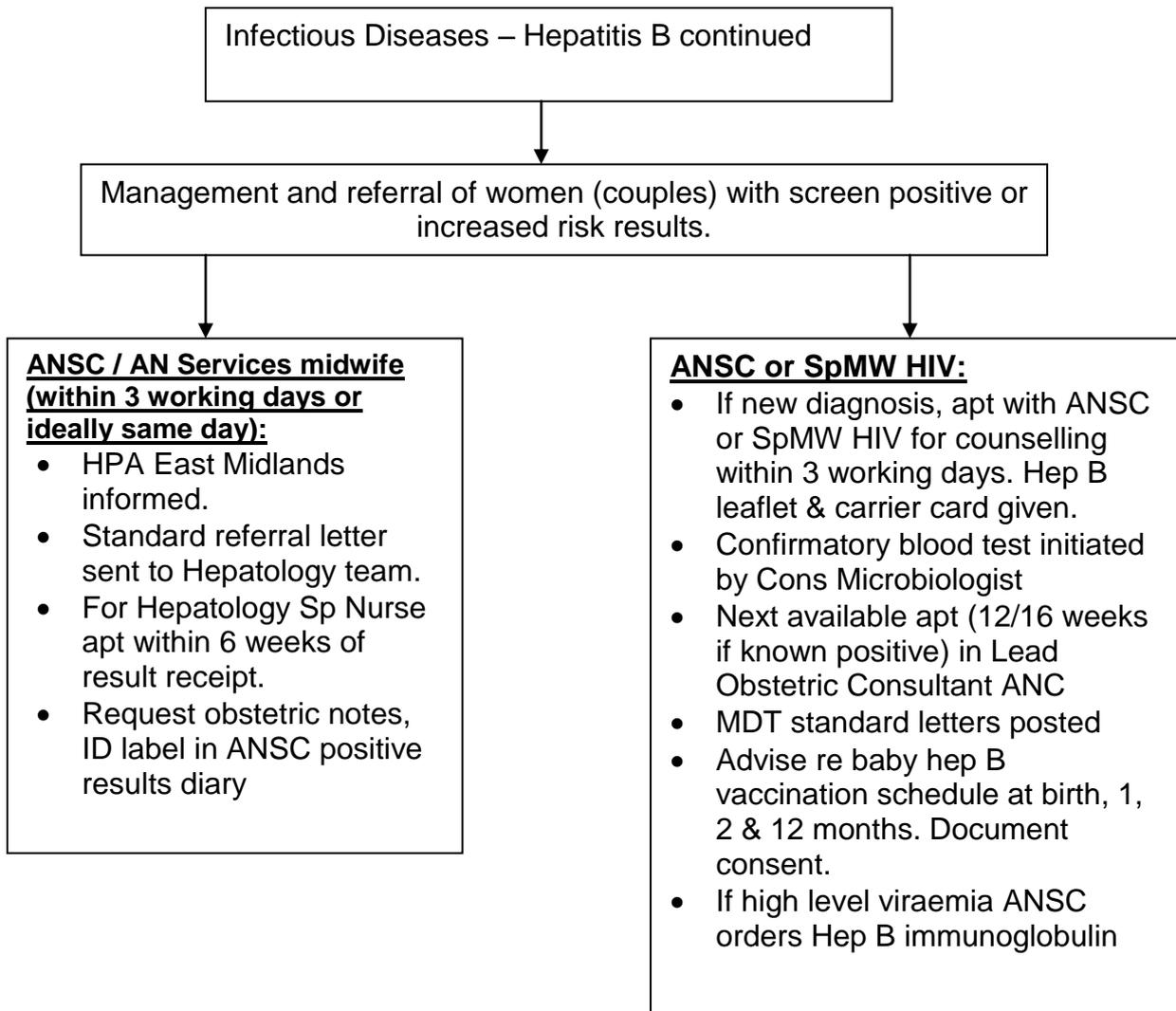
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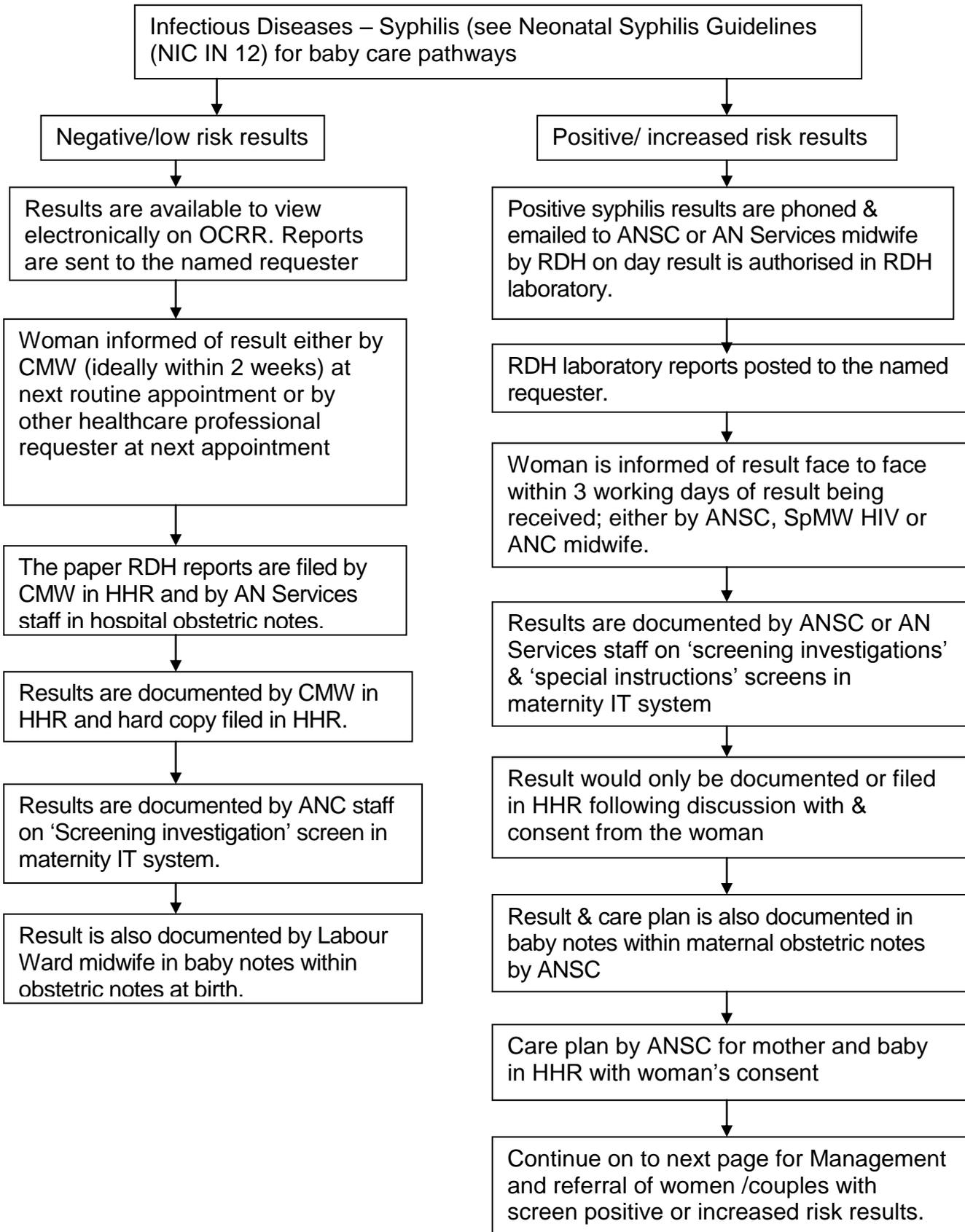
Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results



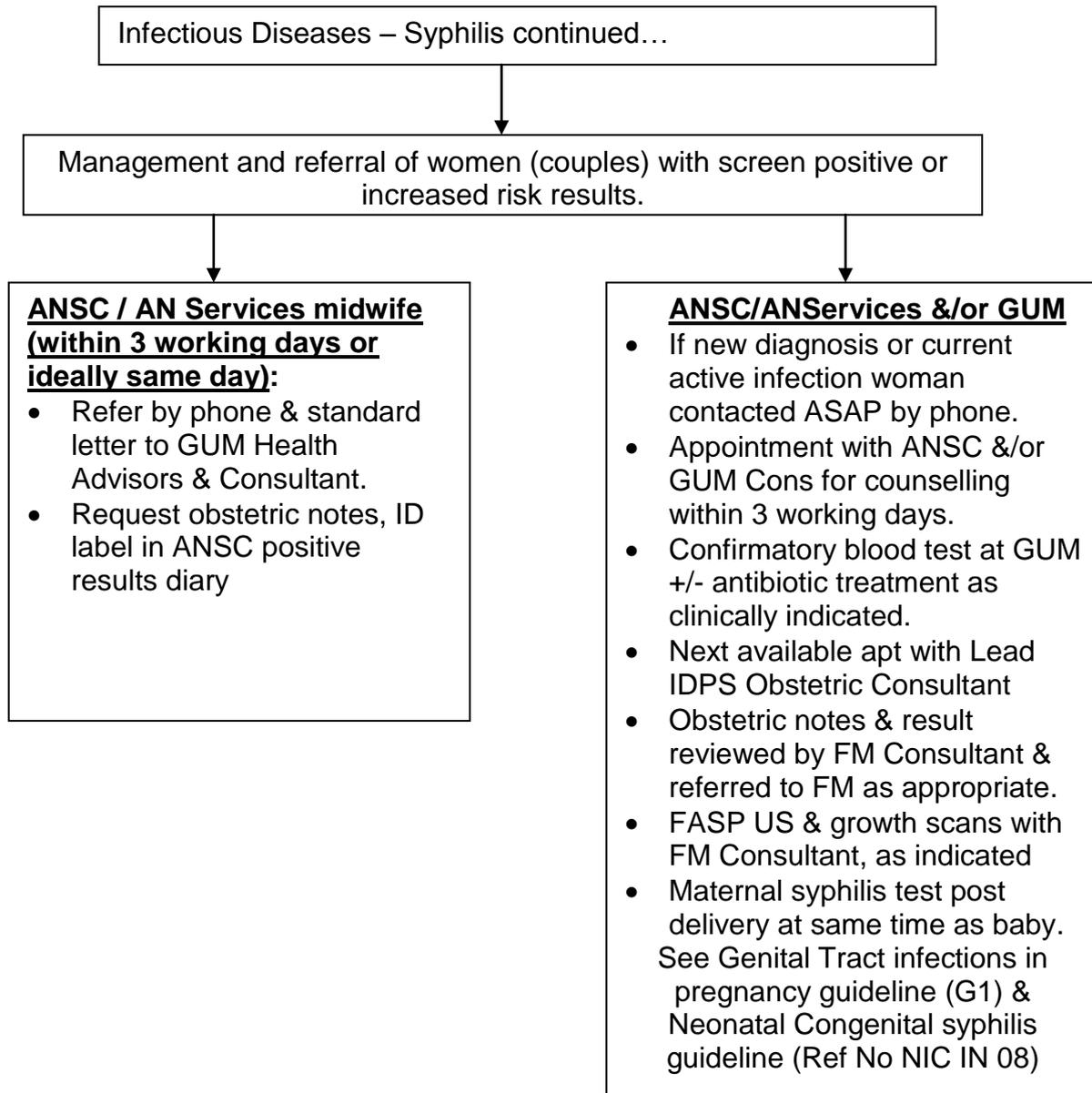
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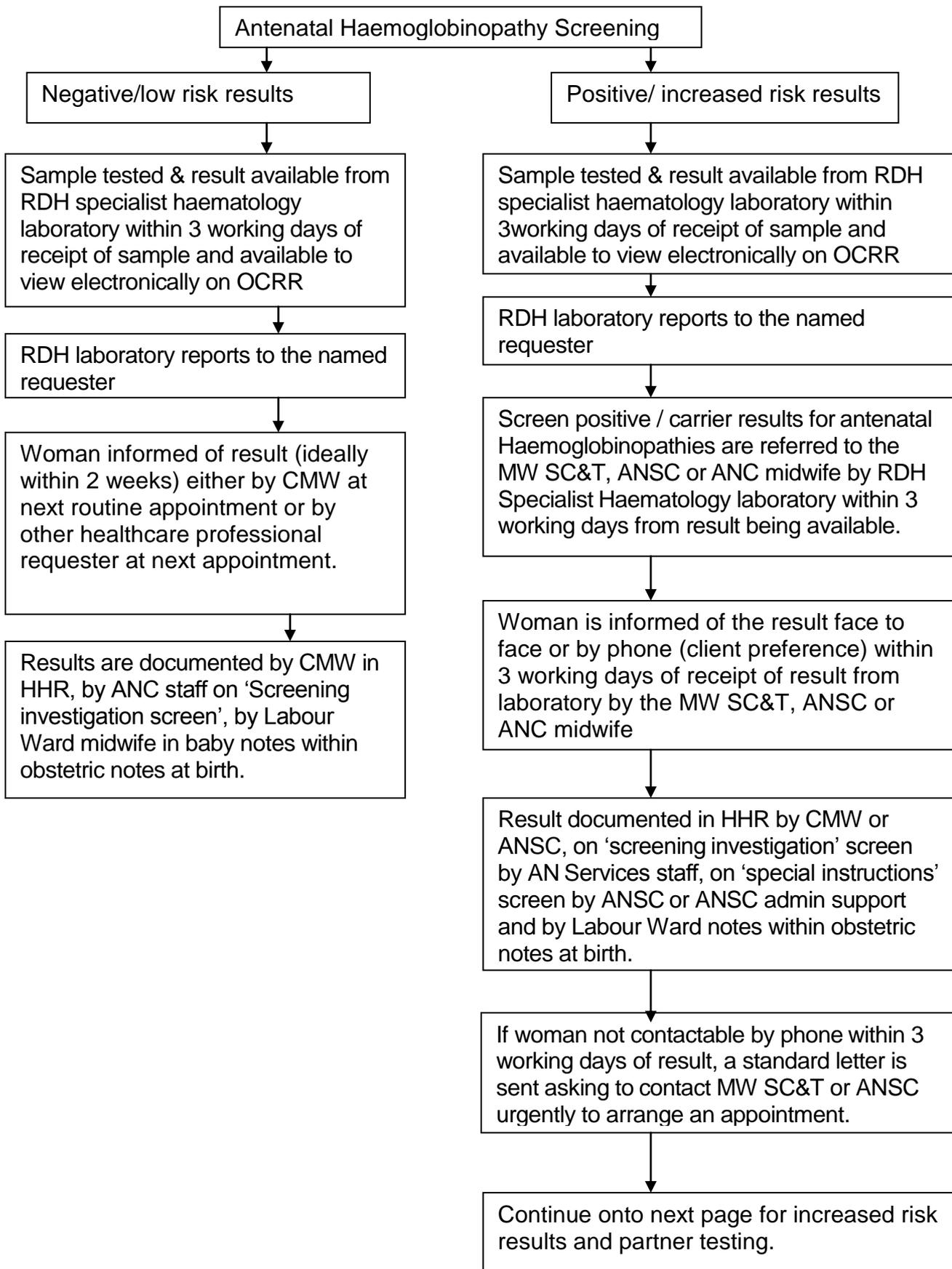
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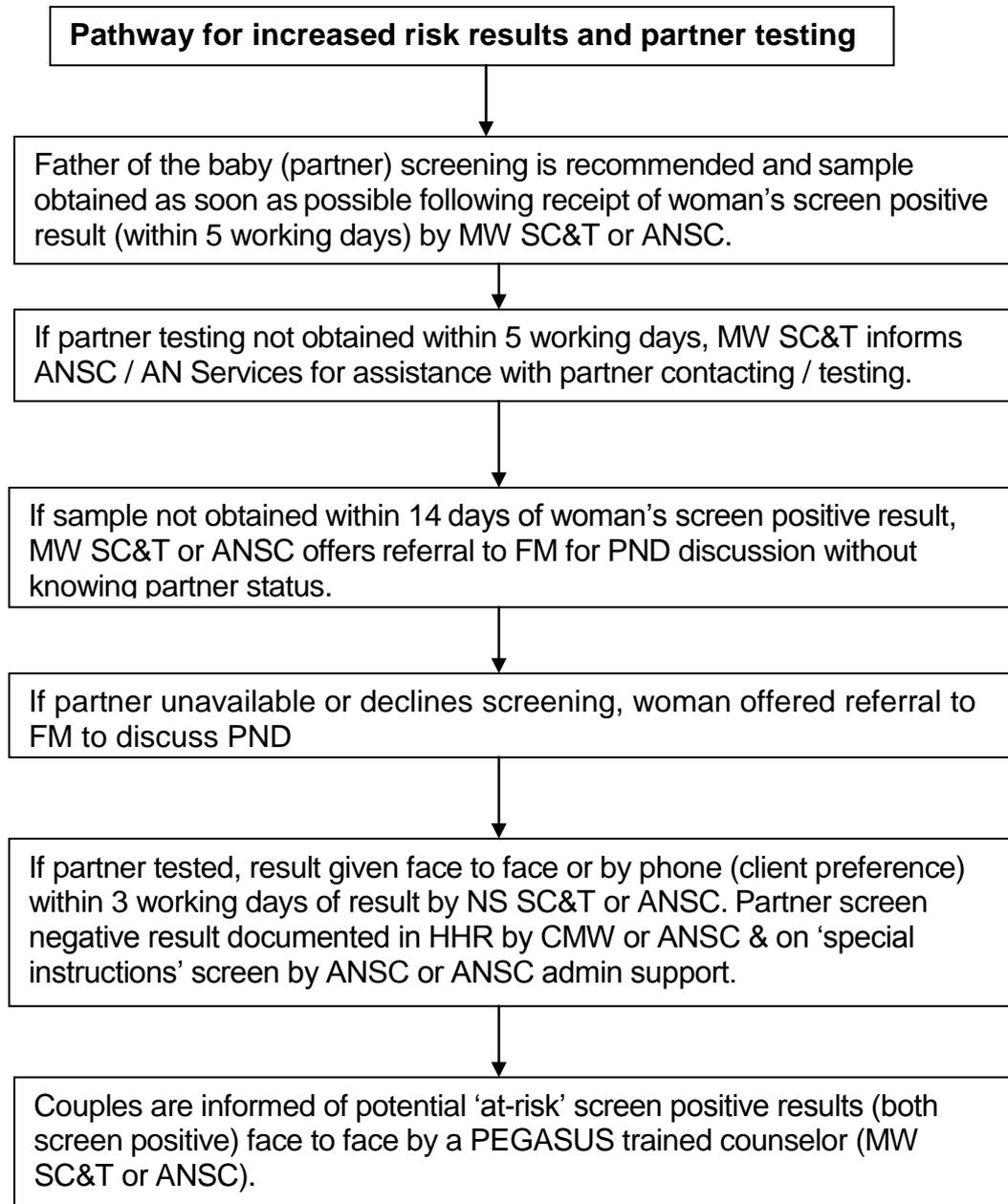
Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results



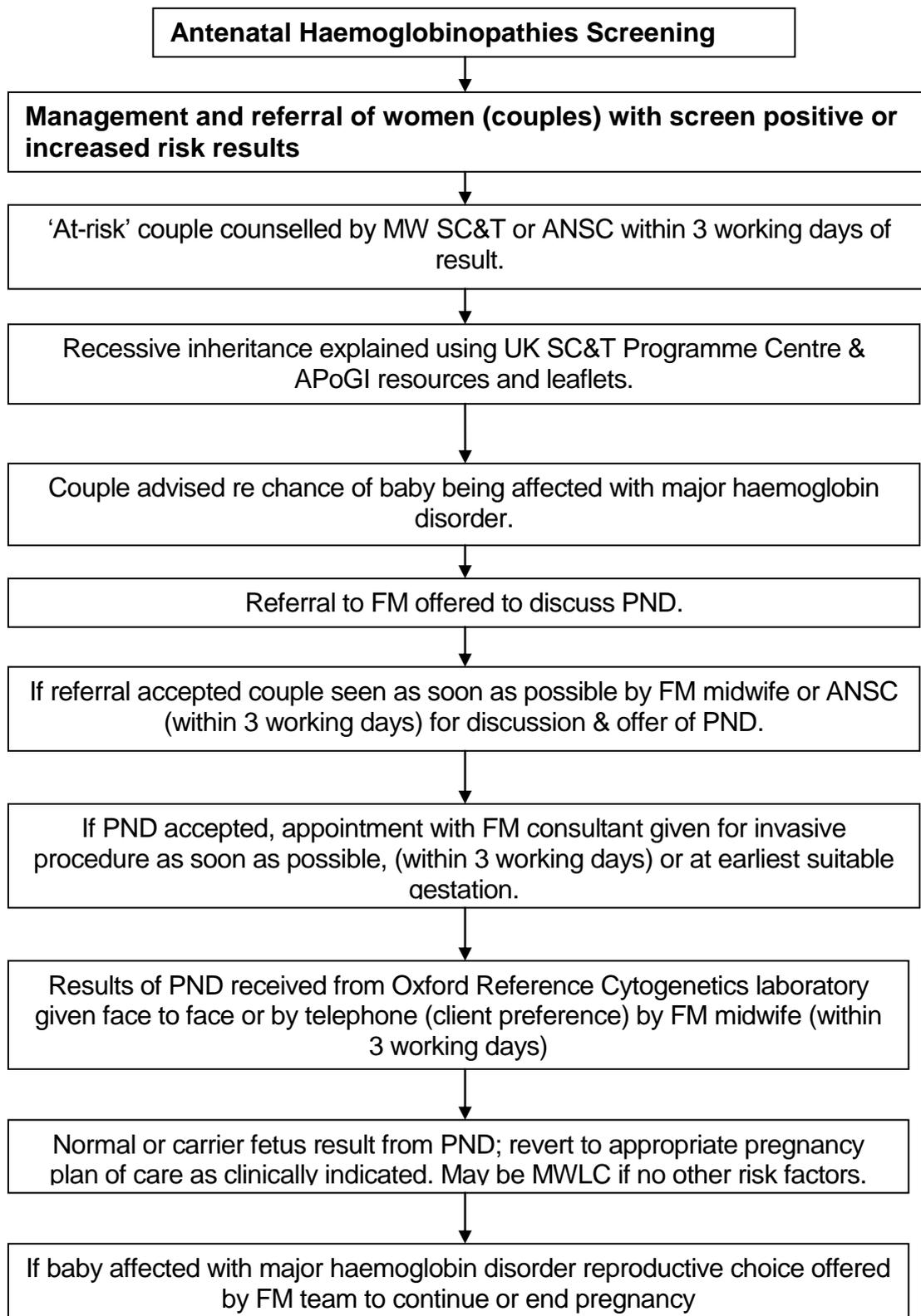
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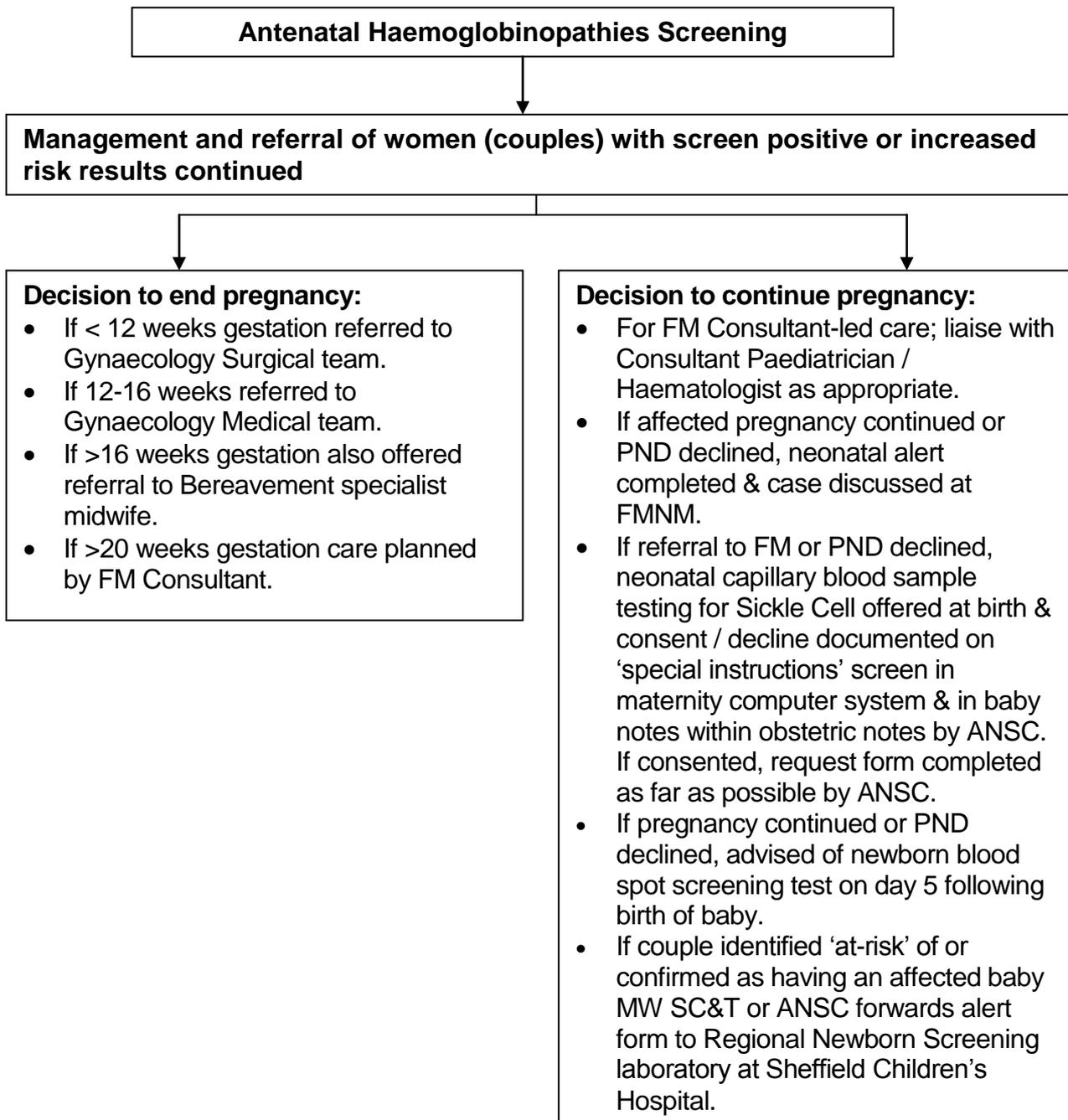
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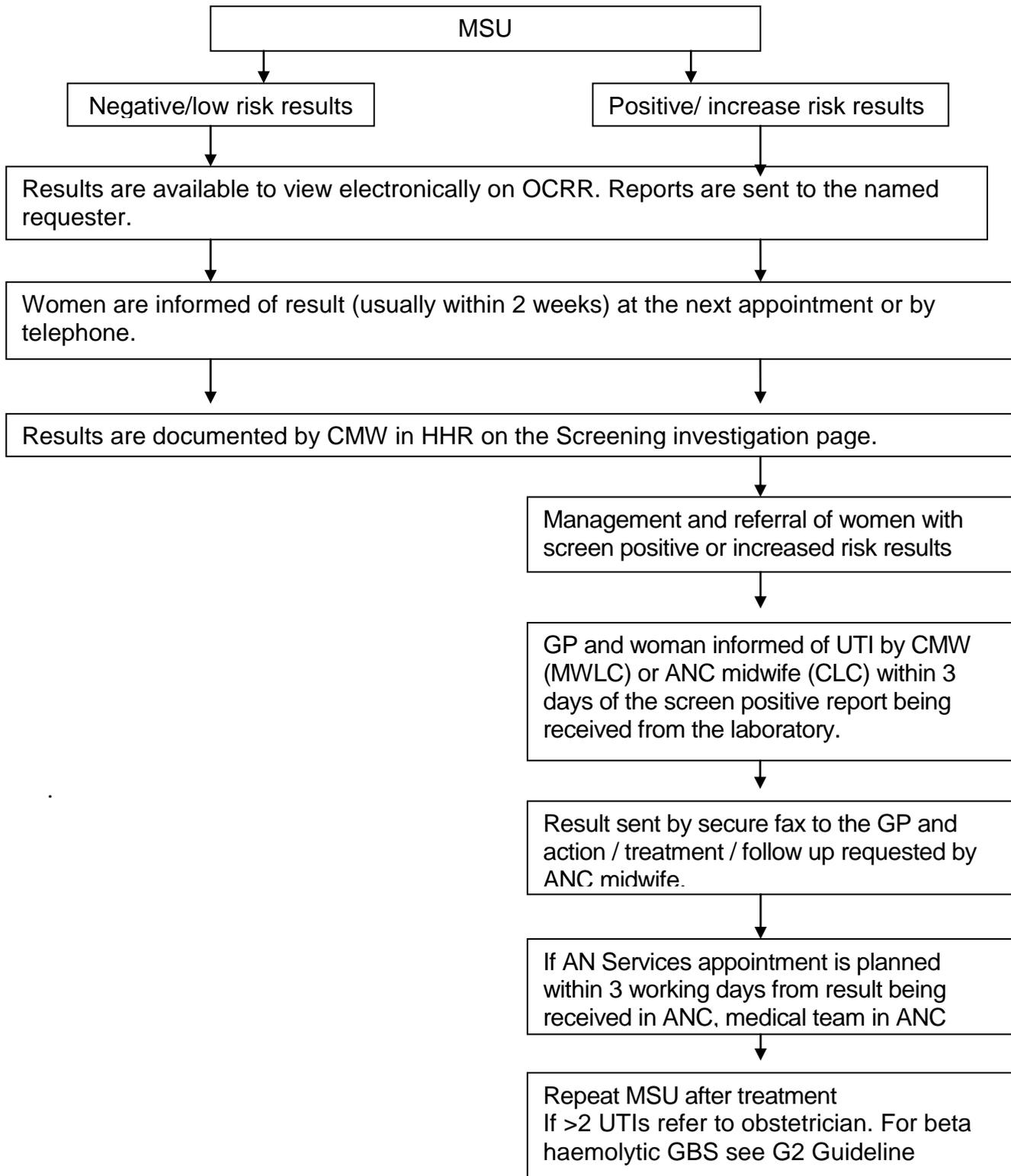
Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results



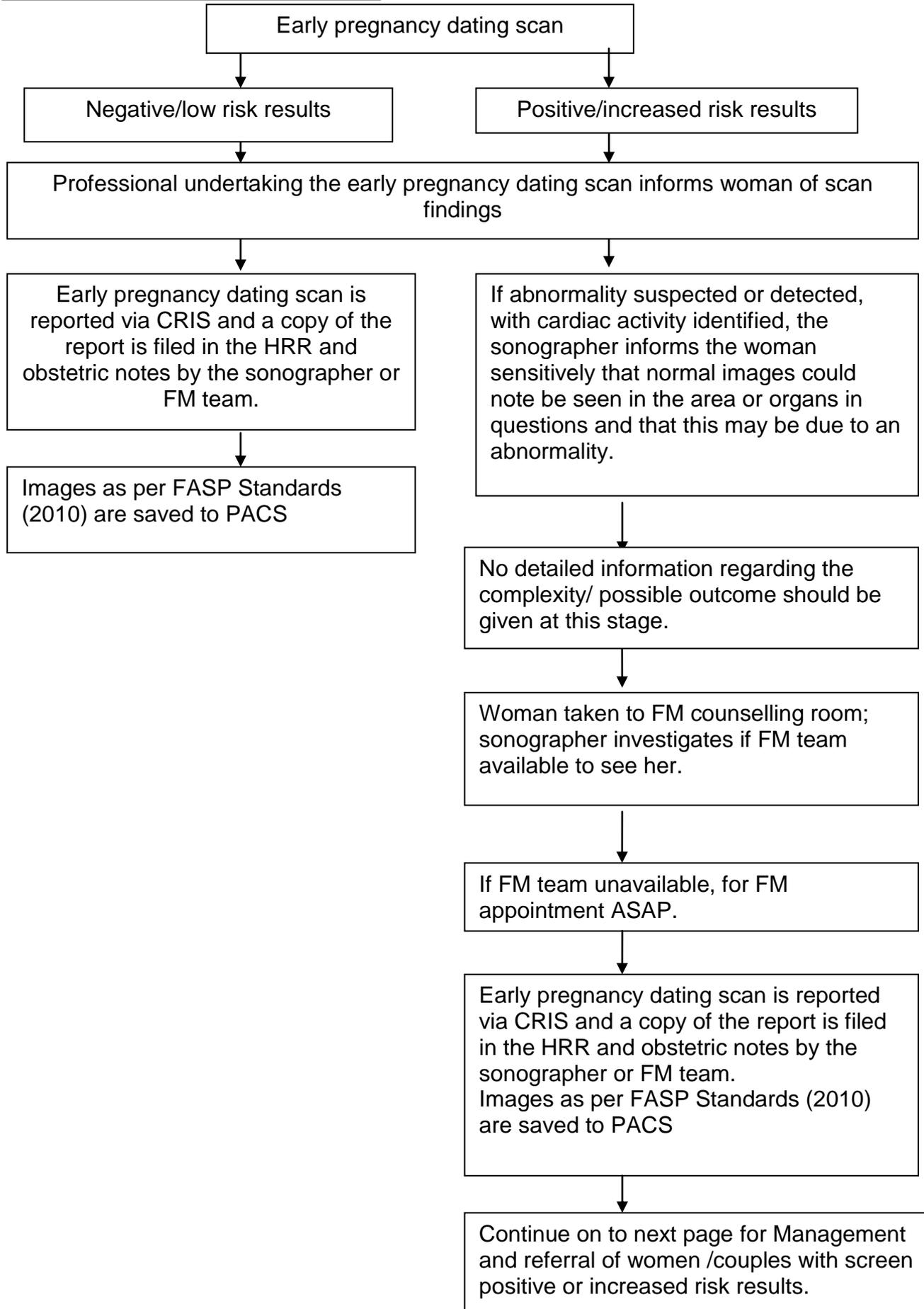
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Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results



Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results



Early Pregnancy Dating Scan - Management and Referral of Women / Couples with Screen Positive or Increased Risk Results.

No cardiac activity identified; referred by sonographer to GAU. If the woman wished to attend GAU immediately she is escorted there. If the woman does not wish to attend GAU she is given the contact details for GAU, and GAU will contact her for follow up.

Referred by sonographer to FM Consultant if an abnormality suspected or detected, where cardiac activity is identified.

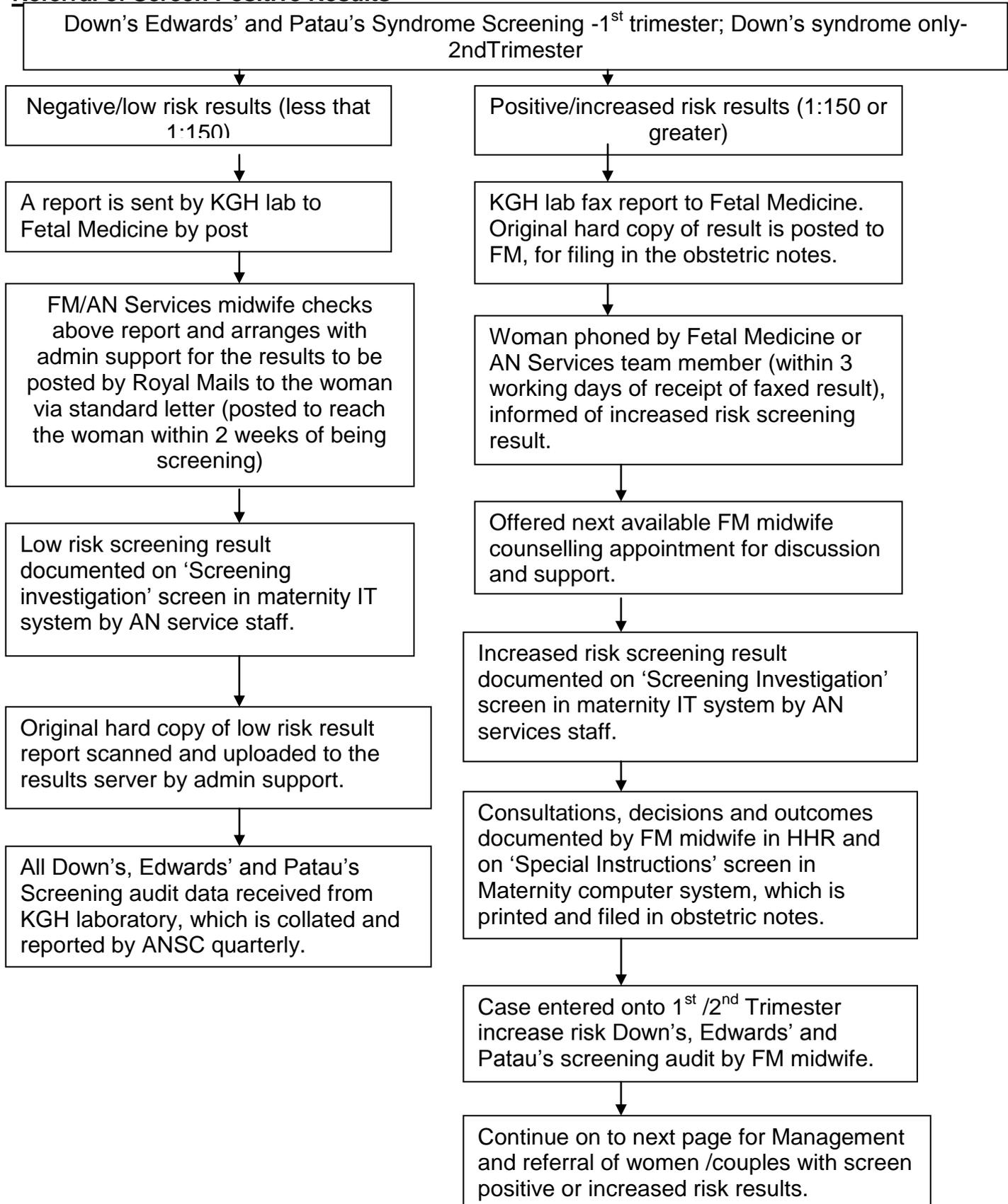
Seen by FM midwife (usually same day, within 3 working days) to discuss findings and refer to FM Consultant.

FM Consultant scan (within 3 working days) and woman informed of findings/diagnosis by FM Consultant. Any FASP auditable abnormality coded in CRIS comments box for data extraction.

Care planned as appropriate.

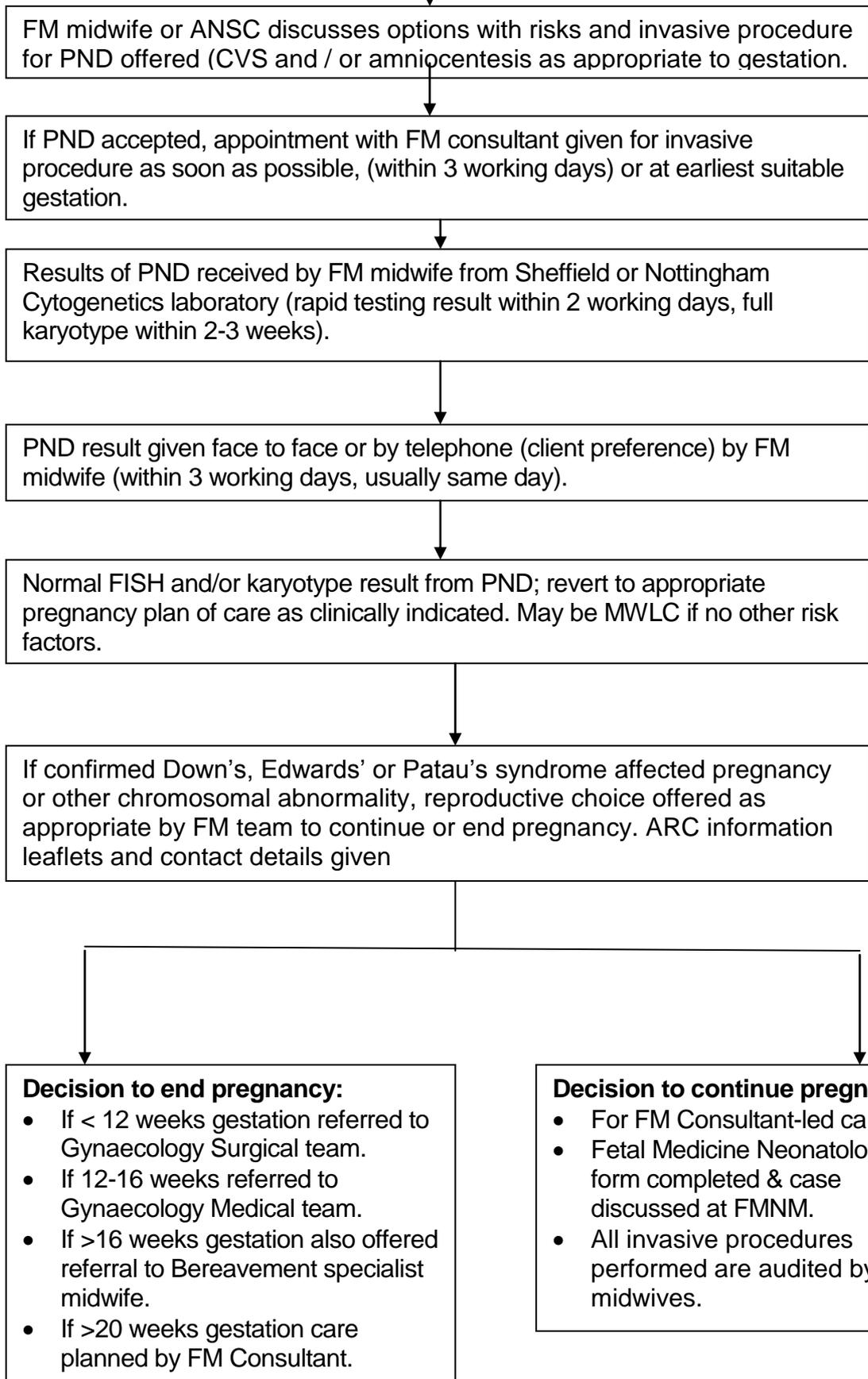
Case entered onto FM abnormality audit by FM midwife, which is collated and reported quarterly by ANSC.

Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results

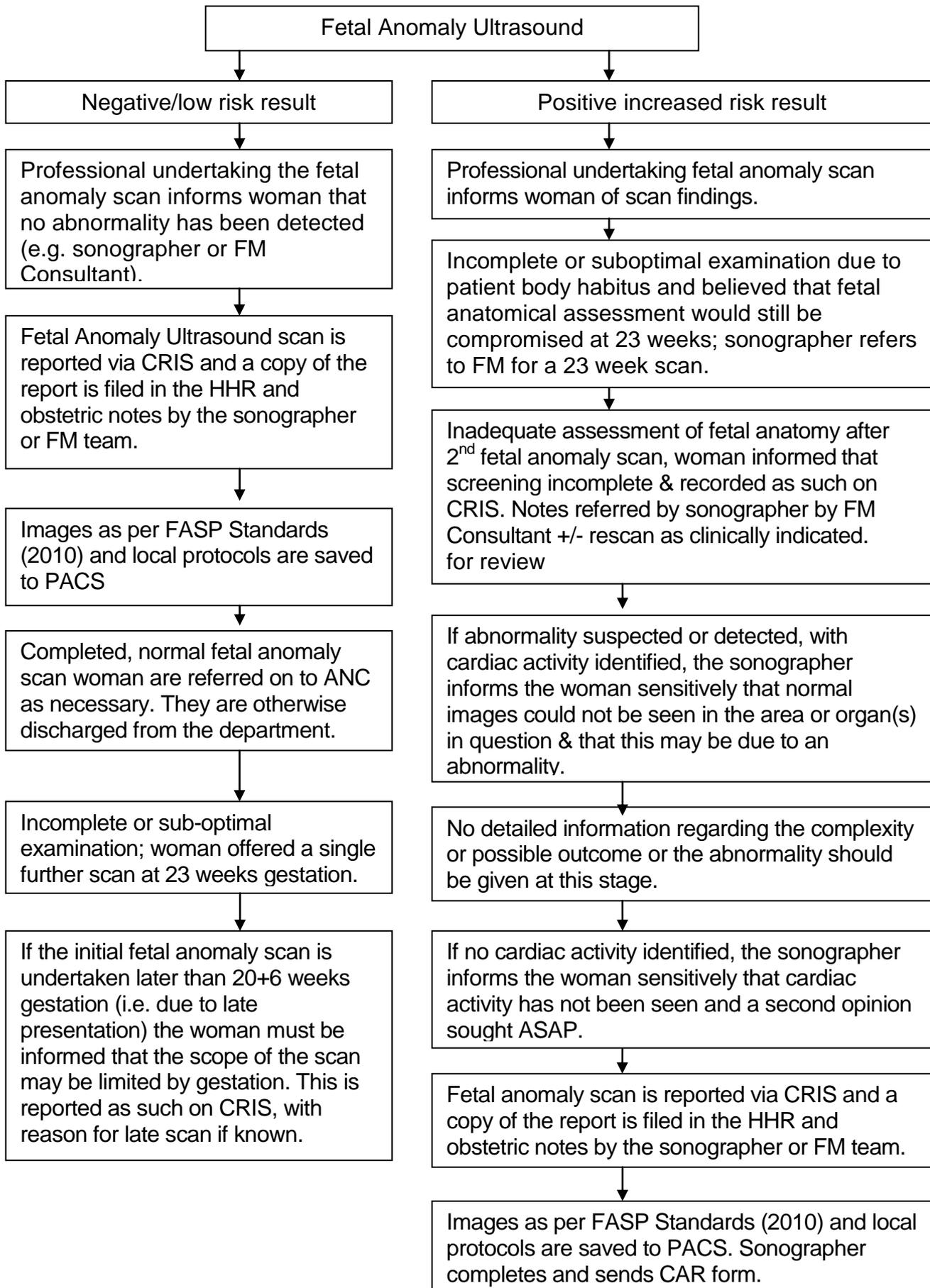


Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results

1st Trimester Down's, Edwards' and Patau's Screening and 2nd Trimester (Down's screening only) - Management and referral of women /couples with screen positive or increased risk results.

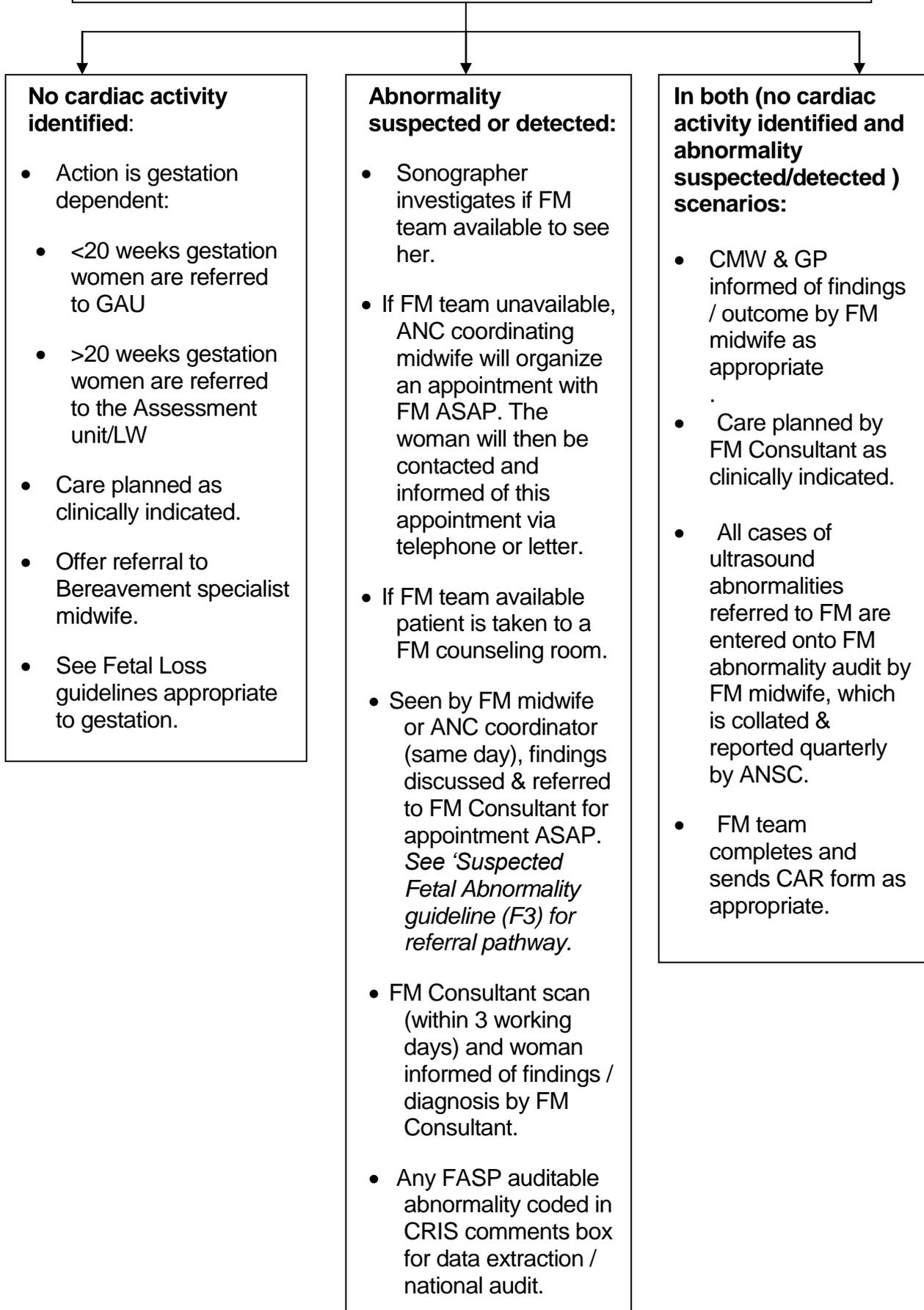


Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results



Processes for Review and Reporting of AN Screening Test Results, Management and Referral of Screen Positive Results

Fetal Anomaly Ultrasound- Management and referral of women /couples with screen positive or increased risk results.



9. Education and Training

- Education and training is achieved via e-learning sessions and workshops as appropriate to update staff on at least an annual basis.
- The medical staff and medical students they are organised by the FM team in conjunction with the Clinical Curriculum Administrator in Medical Education Management.
- All newly employed healthcare professionals involved in the screening process will be offered training and the opportunity to work with the specialist midwives in FM and ANSC.
- All education and training provided is evaluated and audited.

10. Audit and Monitoring of the AN Screening Programmes

- The Antenatal and Newborn Screening Board and FM Team are responsible for establishing links and enabling quality assurance at a local level in line with national standards. Any issues are escalated via Trust Governance, Divisional Management Team and the Maternity Risk Group as appropriate.
- Where appropriate (e.g. a suspected or detected abnormality) information is also sent for inclusion to the National Congenital Anomaly and Rare Disease Registrations Service (NCARDS). Notification forms should be completed and returned contemporaneously.
- The Trust NSC annual report and audit (pertaining to the previous fiscal year) is produced by the ANSC in conjunction with the members of the Antenatal and Newborn Screening Board (approved and signed off by the Head of Midwifery)

11. Monitoring Compliance and Effectiveness

Monitoring requirement	1% of all health records will be audited against compliance with this guideline and in addition those women with screen positive results.
Monitoring method	Retrospective case note review
Report prepared by	The results will be reviewed by the ANSC and the FM team who will implement and monitor action plans as necessary.
Monitoring report sent to:	Maternity Development Committee
Frequency of report	Biannually

Local audit and performance management

- Offer of AN screening tests and 'Screening tests for you and your baby' booklet (NSC, 2016) given is audited from the maternity IT system by Audit SpMW and Trust Information Analysts.
- IDPS tests uptake, screen positives and declines are audited by ANSC in conjunction with RDH lab.

- SC&T screening tests uptake, screen positives, declines, gestation screened are audited by Senior Biomedical Scientist in specialist haematology lab
- SC&T screen positives (women, partners & couples) and referral timeframes are audited by MW SC&T.
- Down's syndrome screening and Fetal Anomaly Screening Programme screen positives, timeframes and outcomes are audit by FM and data collated by ANSC.
- IDPS quarterly return to the HPA by ANSC.
- All AN screening programmes are audited by ANSC for the national Key Performance Indicators (UK NSC, 2011).
- Hepatitis B maternal & neonatal audit by ANSC
- IDPS, SC&T, FASP Down's AN screening programmes are performance managed at individual staff levels and reported quarterly to appropriate Matrons

12. Resources & useful websites

- NHS Screening www.screening.nhs.uk
- National Screening Committee www.nsc.nhs.uk/
- Fetal Anomaly Screening Programme www.fetalanomalyscreening.nhs.uk
- NSC Continuous Professional Development www.cpd.screening.nhs.uk
- Antenatal Results & Choices www.arc-uk.org
- Screening Timeline www.screening.nhs.uk/cpd.timeline.htm
- Educational Resource cards www.screening.nhs.uk/cpd/cards.htm
- Down's Syndrome Association www.downs-syndrome.org.uk
- UK NSC Antenatal and Newborn E-Module <http://cpd.screening.nhs.uk/elearning>

13. References

Department of Health: Antenatal Screening (2007) – Working Standards, National Down's Syndrome Screening programme for England, London: DH

NHS FASP (2010). 18+0-20+6 Weeks Fetal Anomaly Scan National Standards and Guidance for England. NHS FASP: Exeter.

NHS Sickle Cell and Thalassaemia Screening Programme (NHS SC&TSP) (2011) Standards for the Linked Antenatal and Newborn Programme. UK National Screening Committee

NICE (2008) Antenatal Care, Routine Care for the Healthy Pregnant Woman, March 2008, National Institute for Health and Clinical Excellence

UK NSC / DH (2011) Fetal Anomaly Screening Programme – Screening for Down's syndrome: UK NSC Policy recommendations 2011-2014: Model of Best Practice. Leeds: DH.

UK National Screening Committee Rubella Susceptibility Screening in Pregnancy Policy Position Statement 25 April 2012

UK NSC (2014) Screening for you and your baby. NHS Antenatal and Newborn Screening Programmes. NSC, Oxford

NHS England (2014) Public health functions to be exercised by NHS England service specification no 15. Infectious Diseases in Pregnancy, London: NHS England

UK NSC (2011). Key Performance Indicators for Screening. UK NSC <http://www.screening.nhs.uk/kpi>

Documentation Control

Reference Number: OBS/03:16/H11	Version: 5		Status: Final	
Version / Amendment	Version	Date	Author	Reason
	1	Jan 2008	High Risk Antenatal Screening Co-ordinators, Dr Hoque Consultant Microbiologist, Mr Chilaka Consultant Obstetrician, GUM Antenatal Health Advisor(s)	In line with Regional Screening Co-ordinators guidance
	2	Dec 2009	T. Doucas Specialist Midwife Antenatal Screening Co-ordinator, G. Taylor CNST Midwife	Interim guideline for CNST
	3	Nov 2011	T. Doucas Specialist Midwife Antenatal Screening Co-ordinator,	Reviewed for CNST and National Screening Standards
	4	March 2014	E. MacGregor Specialist Midwife Antenatal Screening Co-ordinator	Transition to in-house laboratory screening
	5	March 2016	E. MacGregor Specialist Midwife Antenatal Screening Co-ordinator	Amended in light of PHE recommendations re Rubella screening
Intended Recipients: All staff with responsibility for screening women antenatally				
Dissemination: Cascaded through lead midwives/medical staff / Published on Intranet (FLO), / NHSmail circulation list. / BU Newsletters				
To be read in conjunction with: Antenatal Care Including Risk assessments (A5) / Antenatal Screening for Down's Syndrome (D4) HIV-Management of Women who are HIV positive (H9) / Referral for Suspected Fetal Abnormalities (F3) / Haemoglobinopathies and Thalassaemia and Sickle cell screening (H4)				
Development/review of Guideline:		E. MacGregor Specialist Midwife Antenatal Screening Co-ordinator		
Consultation with:		Maternity staff		
Approved By:		17/03/16: Maternity Guidelines Group: Miss S Raouf – Chair 23/03/16 Maternity Development & Governance Committee/ACD- Dr Janet Ashworth Head of Midwifery / Divisional Nurse Director: Mrs J Haslam 23/03/16: Divisional Governance: Dr B Pearson - Chair		
Approval date CGG:		04/05/2016		
Implementation date:		10/05/2016		
Review Date:		March 2019		
Key Contact:		Lorraine Purcell		