Royal Cornwall Hospitals
NHS Trust

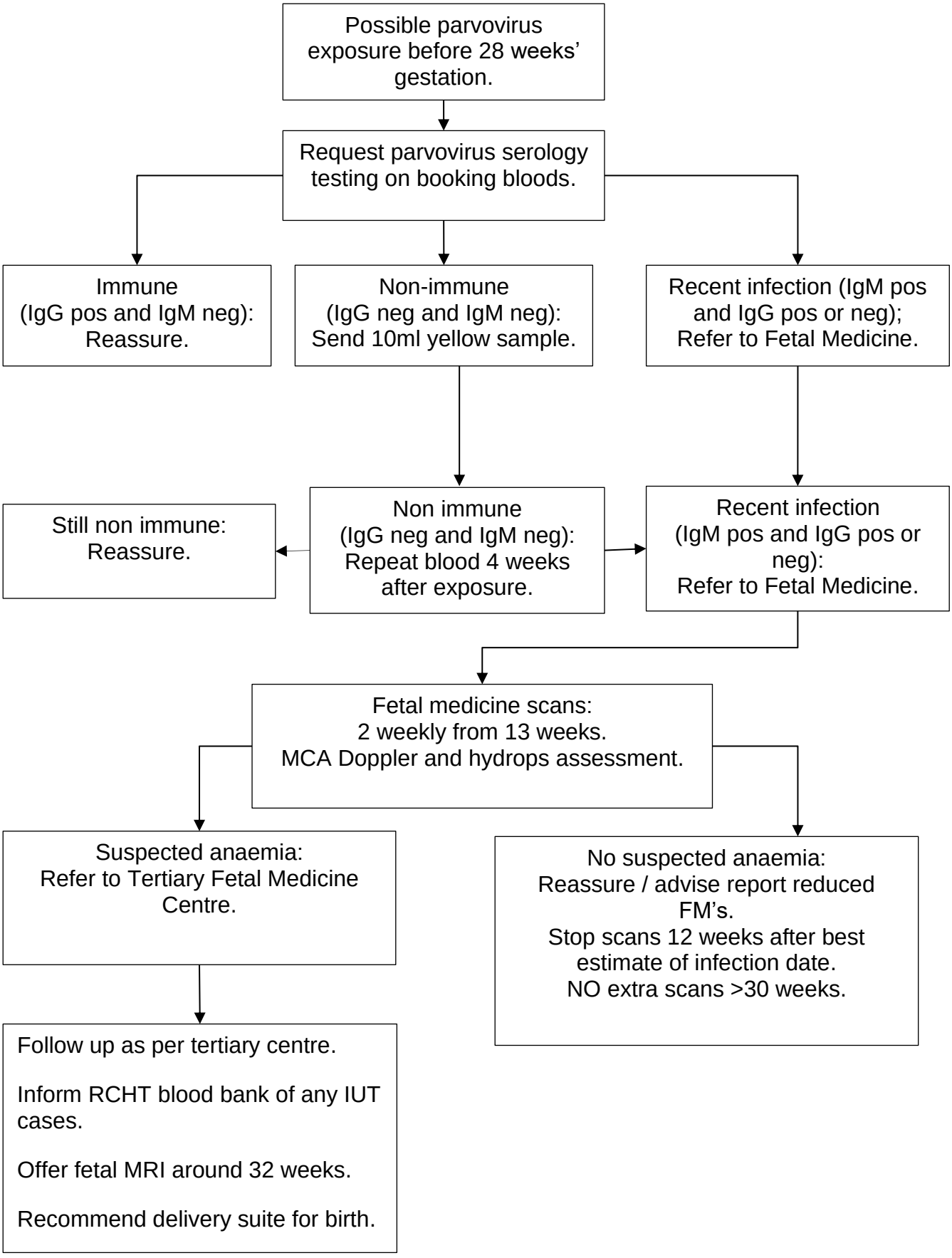
Parvovirus B19 Infection Management in Pregnancy Clinical Guideline

V3.1

October 2024

Summary

Flow Chart for the Management of Parvovirus in Pregnancy



1. Aim/Purpose of this Guideline

1.1. This guideline is to help healthcare professionals in both primary and secondary care in the management of a pregnant woman who may have been exposed to parvovirus infection.

1.2. This guideline makes recommendations for women and people who are pregnant. For simplicity of language the guideline uses the term women throughout, but this should be taken to also include people who do not identify as women but who are pregnant, in labour and in the postnatal period. When discussing with a person who does not identify as a woman, please ask them their preferred pronouns and then ensure this is clearly documented in their notes to inform all health care professionals.

1.3. This version supersedes any previous versions of this document.

Data Protection Act 2018 (UK General Data Protection Regulation – GDPR) Legislation.

The Trust has a duty under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team.

Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

2. The Guidance

Parvovirus B19 infection (‘Slapped Cheek’ Syndrome or Fifth Disease) is common, especially in children aged 6-10 years old but can occur at any age. 60% of the UK adult population in the UK have serological evidence of past infection and this confers lifelong immunity except in rare cases. Transmission of the virus is via respiratory secretions with an incubation period between 13 and 20 days. The most infectious period is just before the rash occurs and may be associated with headache and vague gastrointestinal symptoms. The individual is no longer infectious when the rash appears. Up to 70% of infected pregnant women will be asymptomatic.

Fetal Parvovirus infection has been associated with aplastic anaemia and myocarditis that may present with hydrops fetalis and death, usually within the first 20 weeks of pregnancy although it has rarely been reported at later gestations. The risk of hydrops is 3% with a mortality of 50%. This can be reduced to 18% with fetal intrauterine transfusion. Fetal infection is not associated with congenital anomaly.

2.1 Management of Women Presenting with a Rash or Contact with a Rash in Pregnancy

2.1.1. Obtain a history, including type, time and duration of contact and the gestational age of the pregnancy at the time of contact.

2.1.2. If the exposure is after 28 weeks' gestation, reassure the woman that the risk to the fetus is negligible (and very rare after 20 weeks). No testing is required.

2.1.3. If the exposure is before 28 weeks' gestation, offer screening for Parvovirus B19.

2.1.4. Ring microbiology (01872 254900) to request parvovirus serology testing of the booking blood. If that result shows that the woman is non-immune (or if no booking blood is available for testing), a 10ml yellow bottle-topped sample should be obtained for repeat serology testing.

2.1.5. Serology:

2.1.5.1. IgG positive IgM negative: Immune. Not at risk of maternal or fetal infection.

2.1.5.2. IgG negative and IgM negative: Non-immune. No evidence of recent infection. Repeat test four weeks after exposure.

2.1.5.3. IgM positive (with IgG positive or negative) (NEW 2020): Recent infection. Refer to Fetal Medicine and counsel the woman regarding the appointment schedule. Reassure her that severe fetal consequences are rare, and that effective treatment is available in most cases.

2.1.6. Until the results are available the woman should aim to minimise contact with other pregnant women and situations where she may acquire infection i.e. playgroups, contact with people with rashes. However, the risk of acquiring infection is higher through home contacts than at high-risk places of work so it is not recommended to routinely remove women susceptible to infection from high-risk occupations in the first 20 weeks of pregnancy.

2.1.7. If the woman has a rash, consider other causes such as rubella or measles and discuss urgently with microbiology.

2.2 Fetal Medicine Management

2.2.1. Two weekly scanning for 12 weeks from estimated date of infection:

- Evidence of fetal hydrops.
- Fetal movements.
- Middle cerebral artery Doppler maximum velocity.

2.2.2. First scan at 13weeks (no opportunity for fetal transfusion before then).

2.2.3. Cease scanning at 30 weeks (even if less than 12 weeks from infection). The risk of fetal harm is negligible.

2.2.4. Advise the woman to report reduced fetal movements between scans (possible hydrops).

2.2.5. If fetal anaemia is suspected, the Fetal Medicine Consultant will discuss the case with the tertiary Fetal Medicine Centre, St Michael's Hospital, Bristol.

2.2.6. If an intrauterine transfusion (IUT) is performed in Bristol, the RCHT blood bank should be informed via bloodtransfusion.fax@nhs.net. Please ensure that they have the patient details, approximate or confirmed estimated date of delivery (EDD) and that an IUT has taken place, as any postnatal transfusions for the baby would need to be with irradiated units, which need to be ordered in.

2.2.7. The tertiary unit will advise on follow up schedule following any IUT, including monitoring of MCA PSV and fetal growth

2.2.8. Periods of anaemia may have detrimental effects on fetal brain development, even in the case of successful IUT. In these cases, the offer of fetal brain MRI at 32 weeks should be discussed with parents, +/- follow up under paediatrics

2.2.9. Fetuses that have recovered from Parvovirus, even in cases involving IUT, do not need any specific advice around mode of delivery, however labour and delivery on delivery suite with CTG is recommended.

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Schedule of appointments Referrals as per guidance
Lead	Audit
Tool	• Has the correct schedule of assessments been undertaken in the Fetal Medicine Unit. • Are any pregnancy losses associated with parvovirus infection. • Excel spread sheet for data analysis collated from patient notes.
Frequency	• All cases of parvovirus infection will be reviewed on the viewpoint database and audited every 3 years. • All cases of parvovirus infection implicated in fetal loss will be identified at the monthly Perinatal Mortality Review.

Information Category	Detail of process and methodology for monitoring compliance
Reporting arrangements	• A formal report of results will be received at the audit forum and reviewed at a Patient Safety Meeting if problems are highlighted. • Parvovirus losses will be discussed and recorded by the Bereavement team at the Perinatal Mortality Meeting.
Acting on recommendations and Lead(s)	• Any deficiencies identified will be discussed at the maternity Patient Safety and clinical audit forum and an action plan developed. • Action leads will be identified and a time frame for the action to be completed by. • The action plan will be monitored by the Patient Safety Midwife and clinical audit forum until all actions complete.
Change in practice and lessons to be shared	• Required changes to practice will be identified and actioned within a time frame agreed on the action plan. • A lead member of the forum will be identified to take each change forward where appropriate. • The results of the audits will be distributed to all staff through the Patient Safety newsletter/audit forum as per the action plan.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Parvovirus B19 Infection Management in Pregnancy Clinical Guideline V3.1
This document replaces (exact title of previous version):	Parvovirus B19 Infection Management in Pregnancy Clinical Guideline V3.0
Date Issued/Approved:	October 2024
Date Valid From:	October 2024
Date Valid To:	April 2026
Directorate/Department responsible (author/owner):	Rob harper, Obstetric Consultant
Contact details:	01872 25 2685
Brief summary of contents:	This guideline is to help healthcare professionals in both primary and secondary carer in the management of a pregnant woman who may have been exposed to parvovirus infection.
Suggested Keywords:	Pregnant woman women parvovirus infection
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	Maternity Guidelines
Manager confirming approval processes:	Caroline Chappell
Name of Governance Lead confirming consultation and ratification:	Tamara Thrilby
Links to key external standards:	None required
Related Documents:	None required

Information Category	Detailed Information
Training Need Identified?	No
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical / Midwifery and Obstetrics

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
17 November 2017	V1.0	Initial Issue	Rob Holmes Consultant Obstetrician
April 2020	V2.0	Full review with minor word changes only	Rob Holmes Consultant Obstetrician
February 2023	V3.0	Full review with minor changes to flow chart only	Karen Watkins Consultant Obstetrician
October 2024	V3.1	Updates to gestational ages for referrals	Rob Harper Consultant Obstetrician

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy/policy/proposal/service function to be assessed:	Parvovirus B19 Infection Management in Pregnancy Clinical Guideline V3.1
Directorate and service area:	Obstetrics and Gynaecology
Is this a new or existing Policy?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Rob Harper, Obstetric Consultant
Contact details:	01872 25 2685

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	To give guidance to midwives and obstetricians in the management of potential and confirmed parvovirus infection in pregnancy.
2. Policy Objectives	To ensure that all women at risk of having a fetus affected by parvovirus infection are correctly managed throughout their pregnancy.
3. Policy Intended Outcomes	To ensure that women who are infected by the parvovirus infection receive optimum care as per the guideline.
4. How will you measure each outcome?	Compliance monitoring.
5. Who is intended to benefit from the policy?	Obstetric women.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/visitors: No • Local groups/system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** Maternity Guidelines Meeting
6c. What was the outcome of the consultation?	Agreed
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff or patient surveys:** No

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Robert Harper, Obstetric Consultant.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis