UK National Screening Committee

Evidence map: Parvovirus B19 Infection in Pregnancy

28 June 2019

Aim

1. To ask the UK National Screening Committee (UK NSC) whether or not, based on the evidence presented in this document, any further action is required to make a recommendation on screening for Parvovirus B19 infection in pregnancy.

Current recommendation

2. The 2014 review of screening for Parvovirus B19 infection in pregnancy concluded that systematic population screening is not recommended.

   This was because there was a lack of evidence in the key areas of the testing process, prevention of maternal acquisition of infection, prevention of transmission of infection to the fetus, and treatment of the affected fetus. The literature identified knowledge gaps and research needs; for example, on issues relating to the seroprevalence and the testing strategy. In addition, screening would identify many susceptible women and there are no viable prevention strategies. For those who acquire the infection, pregnancy outcomes are usually good. There are no interventions to prevent transmission to the fetus and treatment and management options for the small number of adversely affected fetuses are limited to intrauterine transfusion for non-immune hydrops. This is associated with treatment related harms.

Evidence Maps

1. This document discusses the findings of an evidence map. The evidence map focused on whether a vaccination for parvovirus B19 has been identified, and whether there have been studies on interventions in pregnancy to prevent transmission of parvovirus from the mother to the fetus or reduce its effects in the baby.

2. Evidence maps are rapid evidence products which aim to gauge the volume and type of evidence relating to a specific topic. This approach has been used for this topic to support decision making on whether evidence has emerged since the last UK NSC review which is

sufficient to justify commissioning a more sustained evidence summary on screening for susceptibility to parvovirus B19 infection in pregnancy.

3. The evidence map focused on whether a vaccination for parvovirus B19 has been identified, and whether there have been studies on interventions in pregnancy to prevent transmission of parvovirus from the mother to the fetus or reduce its effects on the baby.

4. This evidence map found:

    - no studies testing a potential vaccine for parvovirus B19 in humans; and
    - no studies on interventions to prevent the transmission of parvovirus to the fetus, or to reduce the effect of parvovirus on the baby

5. The findings of the evidence map suggest that the evidence base in key areas of the screening topic has not changed sufficiently to warrant the commissioning of an evidence summary at this time. On this basis, the UK NSC recommendation on screening for Parvovirus B19 infection in pregnancy should not be amended.

Consultation

6. A three month consultation ending on the 26 June 2019 was hosted on the UK NSC website. Direct emails were sent to 14 stakeholder organisations. **Annex A**

7. Three sets of comments were received from:

    - the British Infection Association
    - the Royal College of Obstetricians and Gynaecologists (RCOG)
    - British Maternal & Fetal Medicine Society

8. All responses supported the conclusion of the evidence map. (See **Annex B** for comments)

Recommendation

9. The committee is asked to approve the following recommendation:

    - an evidence summary on screening for susceptibility to Parvovirus B19 infection in pregnancy is not commissioned at the present time

- a systematic population screening programme for Parvovirus B19 infection in pregnancy is not recommended

Annex A

List of organisations contacted

1. British Infection Association
2. British Maternal & Fetal Medicine Society
3. Faculty of Public Health
4. Health Protection Agency
5. Jane Haysey (parent)
6. NHS Infectious diseases in pregnancy screening (IDPS) programme
7. PHE ANNB Screening Programmes
8. Public Health Wales
9. Royal College of General Practitioners
10. Royal College of Midwives
11. Royal College of Obstetricians and Gynaecologists
12. Royal College of Physicians
13. Royal College of Physicians and Surgeons of Glasgow
14. Royal College of Physicians of Edinburgh

UK National Screening Committee

Annex B

Name:	xxxx xxxx	**Email address:**	xxxx xxxx
Organisation (if appropriate):	xxxx xxxx		
Role:	xxxx xxxx		

Do you consent to your name being published on the UK NSC website alongside your response?

Yes ☐ **No** ☒

Section and / or page number	Text or issue to which comments relate	Comment *Please use a new row for each comment and add extra rows as required.*
	We support this evidence summary and the recommendations.	

Name:	xxxx xxxx	**Email address:**	xxxx xxxx
Organisation (if appropriate):	xxxx xxxx		
Role:	xxxx xxxx		

Do you consent to your name being published on the UK NSC website alongside your response?

Yes ☐ **No** ☐

Section and / or page number	**Text or issue to which comments relate**	**Comment** *Please use a new row for each comment and add extra rows as required.*
Page 7	Previous review on screening for susceptibility to parvovirus B19 infection in pregnancy	Most pregnancies where there has been Parvovirus exposure result in healthy babies. Currently there is no prevention strategy - no vaccine, no interventions to prevent transmission and it is difficult to avoid exposure. There are no published data of sufficient quality/evidence that addresses the questions posed.
Page 7	Previous review on screening for susceptibility to parvovirus B19 infection in pregnancy	Even if screening were implemented there is no intervention available for susceptible individuals. I would therefore agree that there are no new data available to commission an evidence summary.
General		I believe the document clearly represents the state of present evidence. What I believe is missing is the potential for research questions that could feed into an HTA/NIHR call for methodologies and development of interventions. Although human parvovirus B19 is rarely life threatening to adults

		(unless immunosuppressed) it has a significant effect on miscarriage / pregnancy loss during endemic periods (usually a three year cycle). An HTA call or working with the MRC for vaccine development may help research in this area. Otherwise, there will be no new evidence in three years' time.
General		This shows that no published literature to inform the NSC about the question raised. The flowchart shows exclusion of non-English publication and exclusions of conference abstracts. Otherwise the document is clear and unambiguous in the message.

Name:	xxxx xxxx	**Email address:**	xxxx xxxx
Organisation (if appropriate):	British Maternal & Fetal Medicine Society		
Role:	xxxx xxxx		

Do you consent to your name being published on the UK NSC website alongside your response?

Yes *BMFMS ☐ **No** ☐

Section and / or page number	**Text or issue to which comments relate**	**Comment** *Please use a new row for each comment and add extra rows as required.*
Page 11	conclusion	In light of the clear lack of available, relevant evidence, the BMFMS supports the NSC conclusions