UK National Screening Committee (UK NSC)

Screening for thrombophilia in all ages

Date: 5 March 2021

Contents

Aim

1. To ask the UK National Screening Committee (UK NSC) to make a recommendation, based on the evidence presented in this document, whether or not further work should be pursued and whether or not the Committee recommendation on antenatal or newborn screening for thrombophilia or screening for thrombophilia in the general adult population should remain the same.

Current Recommendation

2. The UK NSC currently does not recommend antenatal or newborn screening for thrombophilia or systematic screening for thrombophilia in the general adult population. The Committee based these recommendations on the evidence provided by the 2016 review on universal antenatal screening for thrombophilia carried out by Bazian Ltd and the 2016 review on screening for thrombophilia in neonates and adults carried out by Solutions for Public Health. This was because:

3. No studies have assessed strategies of universal thrombophilia screening for all pregnant women, either compared with no screening or with current practice of selective testing based on risk factors

4. No comparative studies have assessed thromboprophylaxis in screen-detected women, or in women without additional risk factors who would be representative of all screen-detected women

5. There was not enough evidence to evaluate screening for thrombophilia in newborn babies or adults

Evidence Map

6. The aim of the 2021 evidence map was to gauge the type and volume of evidence published since 2016 on the accuracy of screening tests in the general pregnant population, in neonates and the general adult population. It also looked at effectiveness and safety of thromboprophylaxis for preventing venous thromboembolism and adverse pregnancy outcomes in screen-detected women and for preventing adverse outcomes in screen-detected neonates and adults

7. The 2021 evidence map search did not identify any studies exploring the above issues. Therefore, a more sustained review of the evidence on thrombophilia in 2021 is unlikely to impact on current recommendations on screening for thrombophilia antenatally, in neonates or in the general adult population. Overall, **Criteria 4 and 9 not met**

8. Based on this evidence map, the volume and type of evidence related to screening for thrombophilia is currently insufficient to justify an update review at this stage and so should be re-considered in 3-years' time.

9. Refer to table A below for criteria

Consultation

10. A three month consultation from 16 October 2020 to 15 January 2021 was hosted on the UK NSC website. Direct emails were sent to 12 stakeholders. (Annex A)

11. Comments were received only from the Royal College of Paediatrics and Child Health (see Annex B for comments):

12. The College agrees with the conclusions of the evidence map that there is not enough evidence to justify further work on these questions. The College also noted that Sickle-Cell screening on newborn bloodspot could be considered as a form of thrombophilia screening because these children are at higher risk of thrombotic stroke. Also, that they asked if the UK NSC should recommend research or specific guidance on targeted screening of neonetes with a family history of the condition. The Committee noted their suggestions, but targeted screening is out of its remit.

Recommendation

13. The Committee is asked to approve the following recommendation:

A systematic population screening for thrombophilia in all ages is not recommended in the UK.

Criteria (only include criteria included in the review)	Met/Not Met
Section 1 - Criteria for appraising the viability, effectiveness and appropriateness of a screening programme	
The Test	
There should be a simple, safe, precise and validated screening test. (N S C criterion 4)	Not Met
The Intervention	
There should be an effective intervention for patients identified through screening, with evidence that intervention at a pre-symptomatic phase leads to better outcomes for the screened individual compared with usual care. Evidence relating to wider benefits of screening, for example those relating to family members, should be taken into account where available. However, where there is no prospect of benefit for the individual screened then the screening programme shouldn't be further considered. (N S C criterion 9)	Not met

Annex A

List of organisations and individuals contacted

1. The British Society for Haematology
2. Dr Roopen Arya
3. Faculty of Public Health
4. PHE adult screening programmes
5. PHE ANNB Screening Programmes
6. Royal College of General Practitioners
7. Royal College of Obstetricians and Gynaecologists
8. Royal College of Pathologists
9. Royal College of Physicians
10. Royal College of Physicians and Surgeons of Glasgow

11. Royal College of Physicians of Edinburgh
12. The Royal College of Paediatrics and Child Health

Annex B

Name:	Comments received on behalf of Dr Ranveer Sanghera and Dr Tim Smith	**Email address:**	xxxx xxxx
Organisation (if appropriate):	Royal College of Paediatrics and Child Health		
Role:			
Do you consent to your name being published on the UK NSC website alongside your response? **Yes**			

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 5	Neonates	Should Sickle-Cell screening on newborn bloodspot not be considered as a form of thrombophilia screening. That is, it identifies a disease with a much-increased risk of thrombotic stroke compared to general population (requiring surveillance from childhood onwards).

		The reviewer does not wish to confuse two national screening programmes.
Page 11	Question 3	The reviewer agrees that there is insufficient evidence to determine the accuracy of universal screening tests. It is felt that more information is needed and more research studies for neonates need to be done.
Page 12	Question 4	The reviewer agrees that there is insufficient evidence to determine the effectiveness of thromboprophylaxis in screen-detected neonates. It is felt that more information is needed and more research studies for neonates need to be done.
General point	neonates	The neonatal period is the most common time for a stroke to occur, should the screening committee not consider whether they should recommend research into targeted screening (as affected neonates/children can have an already affected relative), or specific guidance on secondary screening (i.e. investigation of affected individuals. The reviewer appreciates the latter is clinical guidance rather than screening guidance.

		The reviewer notes the complete paucity of evidence (0 articles) since the last review. Hence, should there not be advice to research into the children of patients with thrombophilia?