UK National Screening Committee

Screening to prevent stillbirth

28 June 2019

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 screening to prevent stillbirth meets the UK NSC criteria for a systematic population screening programme.

Current recommendation

2. The UK NSC has not previously considered screening for the prevention of stillbirth and there is currently no screening programme to prevent stillbirth in low-risk singleton pregnancies in the UK.

Evidence Summary

3. In 2015, the Department of Health announced a new national goal of "halving the rate of stillbirths, neonatal and maternal deaths in England by 2030, with a 20% reduction by 2020". As part of the attempt to reduce stillbirth in the UK, the UK NSC was asked to consider the evidence in this area.

4. The evidence review was undertaken by Costello Medical in accordance to the UK NSC evidence review process https://www.gov.uk/government/publications/uk-nsc-evidence-review-process/uk-nsc-evidence-review-process.

5. This evidence review addresses questions relating to:

    I. The effectiveness of tests to predict the risk of stillbirth.
    II. The appropriate monitoring regime for pregnancies that have been identified by screening to be at risk of stillbirth.
    III. The effectiveness of interventions to prevent stillbirth in women identified as high risk through screening that is not elective birth.
    IV. The effectiveness of elective caesarean section (CS) or induction of labour to prevent stillbirth in pregnancies at risk.

6. Based on the synthesis of evidence against the UK NSC criteria, screening of pregnant women to prevent stillbirths due to placental dysfunction is not recommended. This recommendation is made for the following reasons:

    I. Ultrasound and / or biochemistry based screening tests, a large volume of evidence was identified for this question. However, no tests were found to be appropriate for use in a screening programme aimed at identifying pregnancies at risk of pre-term or term stillbirth due to placental dysfunction in clinical practice. **Criterion 4 is not met.**

    II. Only 3 studies were found that assessed monitoring regimes for pregnancies at high risk of stillbirth. The investigated monitoring strategies were electronic fetal heart rate monitoring (CTG), Doppler flow velocimetry, fetal movement counting and maternal serum AFP. Stillbirth was a considerably rare event, which increased the uncertainty around the outcome. The limited evidence base for management strategies to prevent pre-term or term stillbirths does not allow for any conclusions to be drawn on the effectiveness of monitoring regimes in reducing the risk of stillbirth. **Criterion 7 is not met.**

    III. Six studies (in 7 articles) reported on possible interventions for high-risk pregnancies. Even among pregnancies at risk, stillbirth was a considerably rare event, which increased the uncertainty around the outcome. Based on the evidence found by this review, it is not possible to ascertain the effectiveness of interventions to prevent pre-term or term stillbirths or stillbirth overall. Without further studies, no intervention can be recommended as effective or preferable to elective birth.

    This review also found only 3 studies that reported on the risk of stillbirth upon induction of labour compared with expectant management. However, only one study reported stillbirths. From this study it appears that induction of labour may be beneficial for preventing pre-term but not term stillbirths. However, the poor quality of that study precludes drawing any definite conclusions. Due to the poor quality and targeted scope of the evidence considered in this review, the effectiveness and safety of induced delivery for the prevention of pre-term or term stillbirth in screen-detected high-risk pregnancies cannot currently be ascertained. **Criteria 9 and 10 are not met**.

Consultation

7. A three-month consultation was hosted on the UK NSC website. Direct emails were sent to 17 stakeholder organisations. **Annex A**

8. Only 4 sets of comments were received following the public consultation. All supported the conclusions of the evidence summary. One of the comments suggested that some papers had been missed and one suggested some minor changes to the document.

   Response

   These suggestions were considered by the reviewer and alterations were made to the evidence review document where appropriate. Where studies were published within the timeframe of the literature search the reviewer and advisers were asked to consider them for inclusion. One of the papers suggested met the inclusion criteria and it was included in the review. Papers published after the review search dates were not included in the review (See Annex B for full comment).

Recommendation

9. The Committee is asked to approve the following recommendation:
   A population screening programme to prevent stillbirth is not recommended in the UK

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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	
4. There should be a simple, safe, precise and validated screening test.	**Not Met**
7. There should be an agreed policy on the further diagnostic investigation of individuals with a positive test result and on the choices available to those individuals.	**Not Met**
The Intervention	
9. 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.	**Not Met**
10. There should be agreed evidence based policies covering which individuals should be offered interventions and the appropriate intervention to be offered.	**Not Met**

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Annex A

List of organisations contacted:

1. Association for Improvements in the Maternity Services Remove
2. The Birth Trauma Association
3. BLISS
4. British Association of Perinatal Medicine
5. British Maternal & Fetal Medicine Society
6. Faculty of Public Health
7. Group B Strep Support
8. National Childbirth Trust
9. PHE ANNB Screening Programmes
10. Royal College of General Practitioners
11. Royal College of Midwives
12. Royal College of Obstetricians and Gynaecologists
13. Royal College of Physicians
14. Royal College of Physicians and Surgeons of Glasgow
15. Royal College of Physicians of Edinburgh
16. SANDS
17. Society and College of Radiographers

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Annex A — Consultation comments

Name:	Jim Thornton	**Email address:**	xxxx xxxx
Organisation (if appropriate):	University of nottingham		
Role:	**Prof OBGYN**		

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

Yes ☐x **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.*
P 8 para 3. line 1	You identified three studies evaluating timed delivery to prevent stillbirth namely refs 15-17 15. Boers K, Vijgen S, Bijlenga D, et al. Induction versus expectant monitoring for intrauterine growth restriction at term: randomised equivalence trial (DIGITAT). BMJ (clinical research ed.). Volume 341, 2010:c7087. 16. Rabinovich A, Tsemach T, Novack L, et al. Late preterm and early term: when to induce a growth restricted fetus? A population-based study. Journal of Maternal-Fetal and Neonatal Medicine 2018;31:926-932.	But you omitted the GRIT study. Two references should be cited. The GRIT Study Group (2003) A randomised trial of timed delivery for the compromised preterm fetus: short term outcomes and Bayesian interpretation. BJOG 110: 27-32 The GRIT Study Group (2004) Infant wellbeing at 2 years of age in the Growth Restriction Intervention trial (GRIT): a multicentred randomised controlled trial. Lancet 364:513-519. GRIT was a trial of immediate v delayed delivery. Immediate delivery had a dramatic effect on reducing stillbirth 2 v 9 favouring immediate delivery.

	17. Walker K, Bugg G, Macpherson M, et al. Randomized Trial of Labor Induction in Women 35 Years of Age or Older. New England journal of medicine. Volume 374, 2016:813-822.	However neonatal deaths 23 v 12 favouring delay, show that this intervention cannot be recommended.
P 48	Tveit fetal movement counting is mentioned.	So far as I can see the various trials in the Cochrane review of fetal movement counting are not mentioned. Nor is the recent AFFIRM trial mentioned. These two references provide strong evidence that formal count to 10 charts do not prevent stillbirth and that fetal movement awareness and intervention campaigns do not reduced perinatal death overall. Mangesi L, Hofmeyr GJ, Smith V, Smyth RM. Fetal movement counting for assessment of fetal wellbeing. The Cochrane database of systematic reviews. 2015 Oct 15(10):CD004909. Norman JE, Heazell AEP, Rodriguez A, Weir CJ, Stock SJE, Calderwood CJ, et al. Awareness of fetal movements and care package to reduce fetal mortality (AFFIRM): a stepped wedge, cluster-randomised trial. Lancet. 2018 Nov 3;392(10158):1629-38.
General comment		I agree that a screening programme to prevent still birth is not justified at the present time for the reasons listed in the report. Nice work

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Name:	Nigel Thomson	**Email address:**	xxxx xxxx
Organisation (if appropriate):	Society and College of Radiographers		
Role:	Professional Officer		

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.*
General		We have had no further evidence to add to NSC review. We note that there is existing guidance from the RCOG and NHS England relating to monitoring fetal growth and reducing the incidence of stillbirth. Version 2 of NHS England's 'Saving Babies' Lives' has recently been published (March 2019). https://www.england.nhs.uk/wp-content/uploads/2019/03/saving-babies-lives-care-bundle-version-two-final-version-4.pdf There has been an increased demand for fetal growth scans over recent years and ultrasound departments have in many cases had difficulties meeting this demand. Health Education England are working with a wide range of stakeholders to review the sonography career framework and increase the numbers of sonographers available.

From: xxxx xxxx
Sent: 17 May 2019 15:03
To: EVIDENCE, Screening (PUBLIC HEALTH ENGLAND) <screening.evidence@nhs.net>
Cc: xxxx xxxx >; xxxx xxxx >; xxxx xxxx >
Subject: **Reminder** FW: Screening to prevent stillbirth consultation

On behalf of xxxx xxxx***,*** xxxx xxxx

Good afternoon,

Thank you for the opportunity to comment on the UK National Screening Committee's consultation document and my apologies for the delay in responding to you.

I can confirm that following a local consultation process in conjunction with the General Manager for Midwifery, Head of Midwifery and the wider team the feedback received from staff was that this was a more medical focussed document which included a great deal of detail around antenatal scan measurements, which non clinicians would not be able to comment on. The clinicians did however refer to the current initiatives in place including GAP and raising awareness of fetal movements and felt that despite these still birth was not preventable in every case.

I hope this information is helpful.

Kind regards

xxxx xxxx
xxxx xxxx
xxxx xxxx
xxxx xxxx
xxxx xxxx
xxxx xxxx
xxxx xxxx

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Only comments are regards the use of UK and England interchangeably in the introduction.
In summary it appears that with regards to placental function screening there is no evidence to support any of the reviewed interventions?

Kind regards

xxxx xxxx xxxx xxxx
xxxx xxxx | xxxx xxxx (xxxx xxxx | xxxx xxxx | xxxx xxxx | xxxx xxxx | xxxx xxxx