

UK National Screening Committee - Written evidence (PRT0004)

1. The UK National Screening Committee (UK NSC) welcomes the appointment of The House of Lords Preterm Birth Committee and the Government's ambition to reduce the preterm birth rate to 6% of live births by 2025. The UK NSC recognises the impact of preterm birth on babies, mothers and families and has extensively considered this in its work.
2. The UK NSC advises ministers and the NHS in the 4 UK countries about all aspects of screening and supports implementation of screening programmes.
3. Screening is the process of identifying apparently healthy people who may have an increased chance of a disease or condition. In this case the aim of a screening programme would be to identify women whose babies are at risk of preterm birth so that they are offered care to reduce the risk and poor health outcomes that preterm birth sometimes causes.
4. While screening sounds like an obvious thing to do there are important reasons why offering tests to large numbers of well women should be carefully considered before accepting such proposals:
 - i. No test is perfect. Some women will have a false positive result, causing anxiety and leading to interventions they do not need. Others will receive a false negative result and will not be offered an intervention but will go on to have a preterm birth anyway. They and their midwife might be so reassured that they do not seek or receive care when there is a problem picked up through careful antenatal care.
 - ii. Pregnancy is a normal part of life and should be a happy time. Offering tests and treatment to large numbers of women will,

of necessity, pull them into a system that looks for medical problems.

- iii. Screening programmes are big and expensive. They require large numbers of staff and large amounts of money. It is very important to make sure screening makes the best use of precious resources. Otherwise, there is a risk that midwives, antenatal beds and care would be diverted from women who have established difficulties with their pregnancies and definitely need the care.
- iv. Preterm birth (PTB) is more likely in women who are from deprived backgrounds, have other established risk factors (such as smoking, high blood pressure, previous PTB, mental illness and many others). They are also more likely to come from ethnic minority communities or be among those who engage late, reluctantly or not at all with antenatal care. Screening programmes for PTB, or individual causes of it, could divert resources to healthy women and away from the antenatal care which is especially important for this group of women.
- v. A screening programme that is not carefully considered and evidence-based might therefore well do more harm than good to the very women and families who need and can benefit from it the most.

The prediction of preterm birth, including through screening and the use of new technologies

5. Preterm birth, defined as birth occurring before 37+0 weeks' gestation, is the single largest cause of morbidity and mortality in neonates in the UK. Several problems during pregnancy are associated with an increased risk of indicated or spontaneous preterm birth. Some of these are pre-existing conditions, for

example, high blood pressure, pre-pregnancy diabetes, systemic lupus erythematosus and maternal underweight or obesity. Short inter pregnancy interval and a family history of preterm birth can also be indicators of a higher risk of spontaneous preterm birth. However, some other pathologies are pregnancy dependent, such as pre-eclampsia or gestational diabetes mellitus.

Preterm birth can also occur in apparently low-risk pregnancies which go on to be affected by different complications, such as infection, bleeding, uterine over distention and cervical weakness. Preterm birth itself is not the negative event that has to be prevented. However, it is associated with complications for the newborn, including increased risk of respiratory distress syndrome, intraventricular haemorrhage, retinopathy of prematurity and neonatal mortality, with risk of neurodevelopmental disability in the longer term. The risk of complications and mortality increases with decreasing gestational age at birth. The effects of preterm birth, including the need for the baby to spend time in special or intensive neonatal care, have considerable impacts on parents and families. These effects may be wide ranging, including emotional and psychological effects such as depression, anxiety and an impact on bonding, and also effects upon the family dynamic, interpersonal relationships, work commitments and finances.

6. The UK NSC has examined the evidence relating to preterm birth, in particular to see if there are tests that might be offered to women with normal pregnancies. See [UK NSC recommendation on preterm birth](#).
7. It is critical to note that the UK NSC examined the evidence about offering these tests to women without risk factors. Women with risk factors should be picked up early by routine antenatal care as per good practice described in relevant NICE and Royal College of Obstetricians and Gynaecologists (RCOG) clinical guidance.

8. The UK NSC evidence review process identified 2 possible tests. One involved measuring the length of the cervix and the other assessed fetal fibronectin levels (fFN).
9. As with the previous UK NSC evidence review and the 2009 HTA, the evidence indicated that fFN testing and cervical length measurement are not useful at predicting preterm birth in asymptomatic low-risk women. The studies showed that these are not very good tests for screening all pregnant women. This is because they found that fewer than half of women who had a high-risk result went on to have preterm birth. At the same time, the tests picked up other women who went on to have a normal, full-term birth.
10. The UK NSC updated its evidence review to see if there are effective treatments for PTB. There was some evidence that a hormone tablet (progesterone) inserted into the vagina may reduce the risk of preterm birth in women found to have a short cervix on ultrasound. But the NHS needs more research to better understand which women might benefit more from this treatment. The review found that placing a stitch in the cervix was not helpful in preventing preterm birth. It was not clear whether inserting a device called a pessary into the vagina, to support the cervix, might help some women. We need more research to be sure of this.

Research priorities to prevent preterm birth and improve care for babies and mothers, with a focus on developing evidence-based practice

11. The UK NSC is committed to recommending screening to improving neonatal and maternal outcomes where evidence suggests it would do more good than harm. It has reviewed the evidence for more than 65 conditions that affect women and babies during pregnancy or immediately after birth. The recommendations and related [NHS screening programmes](#) are responsible for ensuring that every year

more than 1,000 babies get timely identification and care for life-threatening illnesses.

12. More than 633,000 pregnant women each year are screened for HIV, hepatitis, syphilis, sickle cell and thalassaemia. [The vertical transmission rate for HIV in England has been below 0.4% since 2012, reducing from 2.86% in 2000 and 2001.](#) NHS England, the Integrated Screening Outcomes Surveillance Service (ISOSS) and the UK Health Security Agency (UKHSA) are investigating reports of vertical transmission of hepatitis B virus from April 2021. [It is thought that approximately 3 infants per year born acquire persistent infection despite receiving HBIG and vaccination.](#)
13. The UK NSC is aware of, and in regular contact, with investigators researching screening for pre-eclampsia, Group B streptococcus (GBS) and preterm pre-eclampsia ([screen and treat clinical trial](#)) to ensure that the results affect screening policy as soon as possible.
14. The committee is working with the NHS in England to develop research quality evidence and to evaluate the feasibility of screening newborn babies for severe combined immunodeficiency (SCID) and spinal muscular atrophy (SMA).
15. The UK NSC is working very closely with the [Generation Study](#) to ensure that its work complements the newborn blood spot screening programme.

UK NSC annual call for topics and support for research

16. The committee welcomes new suggestions for new screening programmes or alterations to existing programmes. Any individual or organisation can submit a topic to the UK NSC through its [annual call process](#). The next annual call will run from 1 July 2024 to 30 September 2024.

17. In the last year, the UK NSC has established a [research and methodology group](#) which welcomes submissions from researchers to discuss screening research proposals to help ensure the research is relevant to screening policy. The aim is to support research to be translated into services as simply and swiftly as possible.
18. In conclusion, the UK NSC has not found any good tests that would help in the identification and prevention of preterm birth as part of a national screening programme. It has reviewed specific conditions that may relate to preterm birth and in some cases these conditions are now part of the existing antenatal and newborn screening programmes. The UK NSC keeps these issues under review and welcomes recommendations for new screening programmes, but cautions that these should be evidence based and should bear in mind the issues set out in paragraph 4 above.

15 March 2024