



PULSE OXIMETRY SCREENING FOR NEWBORN BABIES

June 2019

EXECUTIVE SUMMARY

- Pulse oximetry screening is a proven way of identifying life-threatening heart defects in newborn babies. The test itself is safe, painless and simple.
- However, the UK National Screening Committee has launched a public consultation on its decision **not to offer** pulse oximetry screening to all UK newborn babies.
- We believe that routine pulse oximetry screening would be hugely beneficial and we would therefore encourage people to respond to the consultation by 9 August 2019.

Introduction

Pulse oximetry screening is a safe, painless and simple test that has been shown, in [research studies involving almost half a million babies](#), to identify consistently babies with life-threatening heart defects (critical congenital heart defects or CCHD) before they become seriously unwell.

The UK's National Screening Committee has been considering routine pulse oximetry screening for critical heart defects in newborn babies for a number of years. Recently, the National Screening Committee launched a [public consultation](#) on its decision not to offer pulse oximetry screening to all UK newborn babies.

The National Screening Committee summarised its decision as follows: '...there is currently insufficient evidence to suggest that there is a greater benefit to babies with the inclusion of pulse oximetry than that afforded by the current screening programme alone. It is also noted that there are harms associated with screening and the further investigations following a positive screening result.'

What is pulse oximetry screening?

Pulse oximetry screening is a simple test performed on babies before discharge from hospital. It takes less than five minutes and is completely harmless and painless.

The test is carried out using a pulse oximeter, a special machine that is used routinely throughout the world to measure the amount of oxygen in the blood. A small probe is wrapped around the baby's hand and foot and connected to a small, handheld machine that measures the baby's oxygen levels by shining a light through the skin.

[Research at the University of Birmingham](#) and by others has shown that by measuring blood oxygen levels in newborn babies, it is possible to identify the small number of babies who have an unidentified critical heart defect; these babies usually appear healthy at birth but often have lower oxygen levels.

The pulse oximetry test identifies babies with lower oxygen levels so we can check these babies very carefully to identify a possible heart defect before the baby becomes unwell.

In the USA, where pulse oximetry screening is routine for all babies, a large study has clearly shown that **death from critical heart defects was reduced by one third in babies offered the screening** compared with those who were not offered it.

Currently less than half of the babies born in the UK are offered this test and over half will not. Whether or not a baby has the test depends on the hospital of birth. If the National Screening Committee were to recommend this test then all babies born in the UK would be screened.

A postcode lottery

Whether a baby receives this test or not depends on where they are born. In a recent [UK survey](#) of hospitals that were not performing pulse oximetry screening, almost two-thirds are considering its introduction. Many are waiting for the National Screening Committee's decision before starting.

The charity Tiny Tickers recently introduced [Tommy's campaign](#), which aims to provide pulse oximetry machines for those hospitals who would like to start pulse oximetry screening; machines have currently been provided in 35 hospitals.

Other children's heart charities, including the Children's Heart Federation and Little Hearts Matter, have also been running campaigns advocating pulse oximetry screening.

A number of countries, including the USA and several European countries, have already recommended pulse oximetry screening. Professor Ewer led a [large influential group of European doctors](#) who strongly advocated routine pulse oximetry screening across Europe.

What happens to those who are currently screened?



Conclusions and recommendations

We disagree with the National Screening Committee's decision not to offer pulse oximetry screening to all UK newborn babies. As noted above, there is a compelling body of research involving almost half a million babies that routine screening consistently identifies those with life-threatening conditions before they become seriously unwell.

We are therefore asking people to respond to the National Screening Committee's consultation by 9 August 2019.

Find out more

- More information about pulse oximetry screening is available on our online [information page](#).
- The consultation is now [available online](#).

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