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Extended Research Article

Clinical and cost-effectiveness of detailed anomaly ultrasound screening in the first trimester: a mixed-methods study

Jehan N Karim,[1] Helen Campbell,[1] Pranav Pandya,[2] Edward C F Wilson,[3] Zarko Alfirevic,[4] Trish Chudleigh,[5] Elizabeth Duff,[6] Jane Fisher,[7] Hilary Goodman,[8] Lisa Hinton,[1] Christos Ioannou,[9] Edmund Juszczak,[10] Louise Linsell,[1] Heather L Longworth,[4] Kypros H Nicolaides,[11] Anne Rhodes,[12] Gordon Smith,[13] Basky Thilaganathan,[14] Jim Thornton,[10] Gillian Yaz,[15] Oliver Rivero-Arias,[1] and Aris T Papageorghiou[1*]

[1]University of Oxford, Oxford, UK
[2]University College London Hospitals NHS Foundation Trust, London, UK
[3]Exeter University, Exeter, UK
[4]Liverpool Women's NHS Foundation Trust, Liverpool, UK
[5]Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK
[6]National Childbirth Trust, Cambridge, UK
[7]Antenatal Results and Choices, London, UK
[8]Hampshire Hospital NHS Foundation Trust, Hampshire, UK
[9]Oxford University Hospitals NHS Trust, Oxford, UK
[10]University of Nottingham, Nottingham, UK
[11]King's College Hospital, London, UK
[12]Tiny Tickers, London, UK
[13]University of Cambridge, Cambridge, UK
[14]St George's University Hospitals NHS Foundation Trust, London, UK
[15]SHINE, Peterborough, UK

[*]Corresponding author aris.papageorghiou@wrh.ox.ac.uk

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Plain language summary

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Plain language summary

In the National Health Service, all women are offered two ultrasound scans during pregnancy: at 11–14 weeks, which confirms the baby is alive, takes measurements, and checks if there is more than one baby; and at 18–20 weeks, which checks whether the baby is developing as expected. Unfortunately, in about 2–3% of pregnancies, a serious physical condition (anomaly) is found at this second scan.

With improvements in scanning equipment, almost half of these anomalies can now be picked up on the early scan. This has advantages for parents: extra time for testing, to speak to specialists or to prepare for the baby's birth. For parents deciding on termination, having this done earlier can be safer. But there may be disadvantages: early scanning could suggest the baby has a condition which further testing shows not to be the case. This could cause worry and further unnecessary tests. Our research looks at whether earlier scanning would be the right approach, and if so, how this should be done. We conducted several studies to answer this question.

First, we reviewed the experiences of hospitals who already offer this early scan. This identified which serious physical conditions can be found, and that the number of parents given a false alarm is relatively low.

Second, we surveyed every National Health Service trust in England. Approximately 75% already perform an early anatomy scan, but with a lot of variation of what options are available to women.

Next, we asked 172 doctors, midwives and sonographers to work together to plan how early scanning could be introduced. They recommended that every woman be scanned between 12 and 14 weeks, to look for one of eight major physical conditions.

We then surveyed over a thousand parents to hear what they think. Over 90% felt that this earlier scan would be beneficial.

Finally, we built a computer model to help us calculate the costs of this earlier scan. This suggested early screening would lead to fewer live births of babies with anomalies. It showed that an early scan would be associated with a small increase in healthcare costs, but also in positive health outcomes for each woman. The additional maternal benefits were considered worth the additional healthcare costs. We identified that there is already sufficient evidence to support this new policy of screening, and that it would not be a good use of money to carry out further research in this area.

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This article

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