

EXAMINATION OF THE NEWBORN

Supporting information

This guideline has been prepared with reference to the following:

NICE. Postnatal care up to 8 weeks after birth. 2015. London.NICE

<http://www.nice.org.uk/guidance/cg37>

Should routine examination be carried out at 24-48 hours of age by paediatricians/nurse practitioners?

No randomised trials have addressed the question of whether the routine neonatal examination is useful and necessary (Hall, 1999). Less than 30% of congenital heart defects or hip abnormalities are detected during the examination, although it is regarded as a core component of child health surveillance and expected by parents (Wolke, 2002).

Although the need for a first examination in the first 48 hours is generally accepted, there is disagreement over whether a second is necessary.

The Maternity Services Advisory Committee recommended a routine neonatal discharge examination in 1985, although the joint Working Party on Child Health Surveillance recommended only a repeat examination of hip stability on discharge or within 10 days after birth (Cartlidge, 1992).

An audit of second (discharge) examinations, performed on 97.3% of 1795 newborn infants, was done on the day of discharge in 1428 infants (79.6%) (Moss, 1991). Because of early discharge, 38.5% of babies were examined on or before day 2, the median time of the discharge examination being 4 days of age. This second examination revealed previously undiscovered problems in 63 infants (3.6%). Only 7 of these, however, were considered to be important or significant (0.5%). The study concluded that full second examinations could not be justified, but that a test for hip stability should be performed.

A randomised controlled trial (Glazener, 1999) allocated 4835 newborns to receive one screening examination and 4877 to receive two. Despite more suspected abnormalities being identified in the two examination group (9.9 vs 8.3 diagnoses per 100 babies), there was no significant difference in the number needing active management (12 (0.2%) vs 15 (0.3%)).

A postal questionnaire sent to all maternity units in England, and having an 86% response rate (Hayes, 2003) revealed that routine neonatal examination was usually (83%) carried out by senior house officers. Although 44% of units had at least one midwife qualified to carry out the examination, only 2% of babies nationally were examined by a midwife. Initial examinations were carried out between 6-48 hours of age and 12% of units carried out a second examination prior to discharge.

A randomised trial of 826 mother and baby pairs (Wolke, 2002) found that more mothers were satisfied by neonatal examinations carried out by midwives than by SHOs (OR 0.54, 95% CI 0.39-0.75, $p < 0.001$), largely because midwives were more likely to discuss general healthcare issues and were able to provide continuity of care.

A prospective study in 527 infants (Lee, 2001) compared the ability of SHOs in detecting abnormalities compared to advanced neonatal nurse practitioners (ANNPs). ANNPs displayed greater sensitivity than SHOs at detecting hip abnormalities (96% vs 74%; $p < 0.05$) and eye abnormalities (100% vs 33%; $p < 0.05$). There were no significant differences between the two groups in terms of positive predictive values or effectiveness in detecting cardiac abnormalities.

A prospective study in 14,572 infants (Patton, 2006) concluded that effectiveness of the clinical examination in detection of congenital heart disease was more dependent on experience and the existence of a clear, structured, referral pathway than on staff having a medical vs a nursing background.

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<http://www.bmj.com/content/318/7184/627>

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<http://www.bmj.com/content/318/7184/619>

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Evidence Level: II

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