

## Mass Newborn Screening in Singapore—Position and Projections

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### Abstract

**Introduction:** This paper describes the development, current position and projected development of mass newborn screening in Singapore. **Methods:** A search was conducted through the Medline and through the abstract books of conferences for papers on mass newborn screening in Singapore. This was complemented with the author's own records of the outcome of screening newborns at the National University Hospital. **Results:** Cord blood screening for glucose-6-phosphate dehydrogenase (G6PD) deficiency began in 1965; through patient isolation, prompt treatment of jaundice and parent education, kernicterus has been eliminated. Pilot screening for congenital hypothyroidism began in 1981 and has become nationwide since 1990. Screening rates are almost 100% and with early treatment, mental retardation has been eliminated in those affected. However, academic difficulties are present in about a third of patients. Screening for hearing impairment now covers 80% of newborns. The incidence of significant impairment is 1 in 1000 births and interventions have been in place before a year of age. Two strategies – measuring automated auditory brainstem responses (AABR) and otoacoustic emissions supplemented with AABR—are being evaluated. **Conclusions:** The programme requires refining of screening strategies, creation of a central registry of cases, provision of educational support and expansion to include screening with tandem mass spectrometry for multiple inborn errors of metabolism.

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**Key words:** Automated auditory brainstem response, Congenital hypothyroidism, G6PD deficiency, Hearing impairment, Otoacoustic emission, Thyroid stimulating hormone

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