

**Pulse Oximetry Screening for Critical Congenital Heart Disease in the Nordic Countries – Implementation progress, update of current practice and a proposal for uniform guidelines**

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**Introduction:** Pulse oximetry screening of newborn infants has been shown to increase the early detection rate of critical congenital heart disease and to minimize the risk of circulatory collapse before surgery. In spite of this, few countries yet have a national recommendation to screen. This study provides an update of the implementation of pulse oximetry screening in the Nordic countries and proposes standardized guidelines across the Nordic countries.

**Methods:** A questionnaire containing 28 items exploring pulse oximetry screening, clinical examination routines and availability of echocardiography was distributed to all delivery units (n =149) in the Nordic countries in June 2013.

**Results:** The results describe the situation in September 2013. In Finland pulse oximetry screening had been implemented in 97% of all delivery units, in Sweden in 91% and in Norway in 90%. In Denmark 8% of delivery units were screening while no unit was screening in Iceland. Pre- and postductal screening was consistently used in Sweden and in 34% of delivery units in Finland. Postductal screening alone was used in 72% of units in Norway and in 55% in Finland. Screening was performed before 24 hours of age in 76% of the screening units in Sweden, 97% in Finland and 88% in Norway. Four Nordic countries lacked national guidelines for pulse oximetry screening, while Norway endorsed universal screening and guidelines in June 2013. As a result of the questionnaire a consensus was reached to propose uniform Nordic guidelines using pre- and postductal screening before 24 hours of age.

**Conclusion:** In Finland, Norway and Sweden the implementation of pulse oximetry screening is currently the highest in the world and coverage will be close to 100% before the end of 2013. Uniform guidelines across the Nordic countries will promote future collaboration and enable accurate comparisons.