

# Investigate Physicians' Awareness about Newborn Pulse Oximetry Screening for Early Detection of Congenital Heart Disease

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## Abstract

**Background:** Congenital heart diseases (CHDs) are the most common type of birth defect. Success in the early detection of critical congenital heart diseases (CCHD) using pulse oximetry technology depends to a large extent on physicians' awareness of neonatal clinical examinations. The aim of this study was to investigate physicians' awareness of newborn pulse oximetry screening for early detection of CCHD in Isfahan.

**Methods:** A total of 65 physicians participating in the meeting at the continuing education programs at Isfahan University of Medical Sciences were enrolled in this descriptive-analytical, cross sectional study in 2019-2020. Data were collected by a questionnaire, developed by the researchers, whose validity and reliability were confirmed. Data analysis was conducted in SPSS software version 25.

**Finding:** In general, physicians that participated to this study were pediatricians (78.5%). The most physicians (49.2%) had a moderate level of awareness of neonatal screening at birth by pulse oximetry. The results of linear regression analysis showed that only the doctors' workplace (Hospital or office) was significantly associated with their awareness of neonatal screening at birth by pulse oximetry. ( $P = 0.01$ ,  $\beta = -0.31$ ). In total, 7% of the variations in physicians' awareness about neonatal screening at birth by pulse oximetry were predicted by this variable.

**Conclusion:** Physicians particularly pediatricians, as the first line of health care providers to the newborns at birth, need more knowledge about the neonatal pulse oximetry screening, for early detection and referral neonatal with congenital heart disease.

**Keywords:** Awareness, Early Diagnosis, Oximetry, Heart Defects, Congenital