

## **Regional Implementation of Newborn Screening for Critical Congenital Heart Disease Screening in Abu Dhabi**

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Congenital heart disease (CHD) is the most common birth defect and affects approximately 8 out of every 1,000 infants born each year. Despite antenatal screening and at least one examination before discharge infants with critical CHD (CCHD) are routinely not detected before discharge from the newborn nursery. Newborn screening for CCHD using pulse oximetry is widely endorsed however until recent efforts, CCHD screening programs had only been implemented at the individual hospital level. The purpose of this paper is to describe the implementation of CCHD screening across the entire Emirate of Abu Dhabi.

The Health Authority-Abu Dhabi (HAAD), in collaboration with Children's National Medical Center (Children's National), successfully implemented CCHD screening at the emirate level using a "train-the-trainer," two-tiered approach, starting with two pilot hospitals then rolling the program out to all birthing facilities. In the first year, CCHD screening was added as a mandatory test to the HAAD Newborn Screening Standard, has been implemented in most birthing facilities, and occurs for the majority of infants (86 %) in Abu Dhabi. This led to the identification of ten newborns with CCHD.

Based on the successful identification and mitigation of barriers to implementation, the approach may be adapted for similar programs in other populations.