

Title: Critical Congenital Heart Disease Pulse Oximetry Screening – Early Discharge Protocol

Purpose:

- To provide a guideline for the Newborn Screening Ontario (NSO) Critical Congenital Heart Disease (CCHD) Pulse Oximetry Screening for newborns who are discharged from hospital prior to 24 hours of age.

Scope or Principle:

This guideline offers direction to Health Care Providers (HCPs) providing care to newborns who are discharged home before 24 hours of age, prior to the recommended timing for the CCHD screen.

Background:

The purpose of CCHD screening is to identify those infants who may have CCHD but are currently asymptomatic. CCHD screening occurring at 24-48 hours of age can assist in the early identification of the condition prior to the baby becoming symptomatic and experiencing a deterioration in their condition. Babies who are screened prior to 24 hours of age demonstrate higher false positive CCHD screen rates.

Responsibility:

HCPs caring for newborns including but not limited to nurses and midwives, during the first days of life shall be familiar with the protocol.

Definitions/Acronyms:

- NSO = Newborn Screening Ontario
- CCHD = Critical Congenital Heart Disease
- HCP = Health Care Provider
- DBS card = Dried Blood Spot card

Related Documentation:

- Newborn Screening Ontario Critical Congenital Heart Disease Pulse Oximetry Screening Protocol
- Newborn Screening Ontario Critical Congenital Heart Disease Pulse Oximetry Screening – Community Screening Protocol (Non-Hospital Setting)

Protocol/Procedure:

1. Newborns that are discharged home from hospital prior to 24 hours of age are considered to be discharged early. They will not have a CCHD screen prior to discharge but will either
 - a. Have the screen performed by their midwife on an outpatient basis (in their home) during the recommended window of 24-48 hours of age.
 - b. Return to hospital or other care facility for a CCHD screen when the newborn is 24-48 hours of age (to be prearranged prior to discharge) It is the responsibility of the discharging hospital to ensure the CCHD screen is arranged.
2. Follow the NSO CCHD Pulse Oximetry Screening Protocol for screening guidelines.
3. For a completed screen, document the pulse oximetry values and the evaluated screen result in the infant's chart or medical record, as well as on the CCHD screen portion of the DBS card. Send the completed CCHD screen result page to NSO.



Special Considerations:

- For a CCHD screen occurring in a non-hospital environment, follow the *Newborn Screening Ontario Critical Congenital Heart Disease Pulse Oximetry Screening – Community Screening Protocol (Non-Hospital Setting)*

References:

- American Academy of Pediatrics, *Newborn Screening for CCHD, Answers and Resources for Primary Care Pediatricians*; (2016) retrieved from <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/PEHDIC/Pages/Newborn-Screening-for-CCHD.aspxCCS> document
- Center for Disease Control, *Screening for Critical Congenital Heart Defects*, (2016) retrieved from <http://www.cdc.gov/ncbddd/heartdefects/cchd-facts.html>
- Kemper AR, Mahle WT, Martin GR, et al. *Strategies For Implementing Screening For Critical Congenital Heart Disease*. Pediatrics. 2011;128(5):e1259-e1267. doi:10.1542/peds.2011-1317.
- Utah Public Health Department, *CCHD Toolkit*, (2016) retrieved from <http://www.health.utah.gov/cchd/>
- Wong KK, Fournier A, Fruitman DS, Graves L, Human DG, Narvey M, Russell JL, *CCS/CPCA Position Statement on Pulse Oximetry Screening in Newborns to Enhance Detection of Critical Congenital Heart Disease*, Canadian Journal of Cardiology (2016), doi: 10.1016/j.cjca.2016.10.006.

Reviewed by:

- CCHD Disease Specific Working Group (2016/09)
- CCHD Midwifery Task Force (2016/10)
- CCHD Hospital Advisory Group (2016/11)