

Screening for Critical Congenital Heart Disease(CCHD)

Christopher A. Kus, MD, MPH
Associate Medical Director
Division of Family Health
New York State Department of Health

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Overview

- ▶ ***Critical Congenital Heart Disease (CCHD)***
 - CHDs with severe and life-threatening symptoms requiring intervention within the first year of life
- ▶ ***Critical Congenital Cyanotic Heart Disease (CCCHD)***
 - CCHDs that present with hypoxemia in most or all cases
- ▶ ***CHD affects***
 - 7 to 9 of every 1,000 live births in the US
 - Approximately 25% have CCHD

CCCHD Case Definition

- ▶ A critical congenital heart defect requiring surgery or catheter intervention in the first year of life that presents with hypoxemia in most or all cases:
 - Hypoplastic left heart syndrome (HLHS)
 - Pulmonary atresia, intact septum
 - Tetralogy of Fallot (TOF)
 - Total anomalous pulmonary venous return (TAPVR)
 - Transposition of the great arteries (TGA)
 - Tricuspid atresia
 - Truncus arteriosus

Timeline

- ▶ **October 15, 2010** – Secretary’s Advisory Committee for Heritable Disorders in Newborns and Children (SACHDNC) recommends the addition of CCCHD to the Committee’s Recommended Uniform Screening Panel (RUSP)
- ▶ **September 21, 2011** – Secretary Kathleen Sebelius adopts the SACHDNC recommendation to add CCHD to the RUSP
- ▶ **November 2011** – *Strategies for Implementing Screening for Critical Congenital Heart Disease* published in *Pediatrics*

Pulse Oximetry

- ❑ Evidence review – **CCHD screening method**
- ❑ Simple, non-invasive, bedside test
- ❑ Estimates percentage of hemoglobin in the blood that is saturated with oxygen
- ❑ Routinely used to monitor infants



Strategies for Implementing Screening for Critical Congenital Heart Disease

- ▶ Renamed the target conditions Critical Care Heart Disease (CCHD)
- ▶ Screening to focus initially on screening in the well-infant nursery & intermediate care nurseries
- ▶ Not to focus on out-of-hospital births
- ▶ Proposed pulse oximetry monitoring protocol based on results for right hand and either foot

CCHD Screening represents Point-of-Care newborn newborn screening

- ❖ **Point-of care testing** refers to those tests administered outside of a laboratory but close to the site of direct delivery of medical care for a patient.
- ❖ Different from bloodspot screening which involves a central laboratory.

Role of Public Health Agencies in Point-of-Care Newborn Screening

- ▶ Inform the public about a new screened condition
- ▶ Facilitate standardized implementation of screening
- ▶ Participate in quality assurance
- ▶ Developing systems for diagnostic confirmation, follow-up, and data collection
- ▶ Evaluate the degree to which newborn screening is effective