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The Importance of Skin Safe Pulse Oximetry Devices in Neonatal Care

Pulse oximetry is the estimation of the amount of oxygen in a baby's blood. Low levels of oxygen in the blood can be a sign of a critical congenital heart defect.¹

Pulse Oximetry for Newborns

Pulse oximetry is particularly important for newborns because during the first few minutes of life, oxygen saturation, SpO2 (saturation by pulse oximetry) should increase from intrapartum levels of 30-40% to 85-90% by three minutes after birth except in special circumstances—for example, cyanotic congenital heart disease.² SpO2 should increase to



Facts



Congenital heart diseases are the leading cause of death from birth defects.³



Congenital heart defects are the most common type of birth defect in the United States, affecting approximately 1% of newborns.⁴



Furthermore, **about** 25% of babies born with a heart defect **have a critical** congenital heart defect.⁵



A study of state-mandated critical congenital heart defect screening using pulse oximetry reported a more than 33% reduction in infant deaths from critical congenital heart defects. **Critical congenital heart defect screening nationwide is projected to save at least 120 babies each year.**⁶

Skin-Safe Adhesives

When conducting pulse oximetry screening on infants in the delivery room, a sensor is affixed around the hand or foot. There are many skin-safe adhesive options that allow the sensor to be placed closer to the body, securely, potentially allowing for a more accurate reading.



It is important to choose a low-trauma adhesive, such as a silicone gel or a low-trauma acrylic that can be affixed directly to fragile neonatal skin and repositioned or removed as needed without causing harm or leaving residue. Scapa Healthcare has the skin-contact adhesive and product development expertise to collaborate with pulse oximetry device OEMs to create adhesive-based fixation devices for neonatal care.

SOURCES:

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- 2. "A survey of delivery room resuscitation practices in the United States," Leone TA, Rich W, Finer NN, Pediatrics, February 2006; Volume 117(2), pages 164-175
- 3. "Incidence and mortality trend of congenital heart disease at the global, regional, and national level, 1990–2017," Weiliang Wu, MD, Jinxian He, MD, Xiaobo Shao, MD, Medicine, Jun 5, 2020
- . "Children with Heart Conditions and Their Special Health Care Needs United States, 2016," Chen M, Riehle-Colarusso T, Yeung LF, Smith C, Farr SL., Morbidity and Mortality Weekly Report, September 28, 2018
- 5. "Temporal trends in survival for infants with critical congenital heart defects," Oster M, Lee K, Honein M, Colarusso T, Shin M, Correa A, Pediatrics, May 1, 2013; Volume 131, Issue 5, pages 1502-1508.
- 6. "Association of US State Implementation of Newborn Screening Policies for Critical Congenital Heart Disease With Early Infant Cardiac Deaths," Abouk, R., Grosse, S.D., Ailes, E.C., Oster, M.E., JAMA, Dec 5, 2017; Volume 318(21), pages 2111–2118

Learn more about Scapa Healthcare's neonatal care solutions, <u>click here</u>.



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