



Sacred Heart  
UNIVERSITY

Sacred Heart University  
**DigitalCommons@SHU**

---

Academic Festival

---

Apr 21st, 1:00 PM - 3:00 PM

## Resource Guide for Nurses: Patient Teaching on Newborn Jaundice (Hyperbilirubinemia)

Sarah Purcell  
purcells17@mail.sacredheart.edu

Follow this and additional works at: <http://digitalcommons.sacredheart.edu/acadfest>

---

Purcell, Sarah, "Resource Guide for Nurses: Patient Teaching on Newborn Jaundice (Hyperbilirubinemia)" (2017). *Academic Festival*. 95.  
<http://digitalcommons.sacredheart.edu/acadfest/2017/all/95>

This Poster is brought to you for free and open access by DigitalCommons@SHU. It has been accepted for inclusion in Academic Festival by an authorized administrator of DigitalCommons@SHU. For more information, please contact [ferribyp@sacredheart.edu](mailto:ferribyp@sacredheart.edu).

# Resource Guide for Nurses: Patient Teaching on Newborn Jaundice (Hyperbilirubinemia)

Sarah Purcell

Dr. Eileen Yost, PhD, MSN, RNC, CNE

Sacred Heart University

College of Nursing

Thomas More Honors Program



## Background:

- Newborn jaundice (hyperbilirubinemia) is an excessive level of accumulated bilirubin in the blood (American Liver Foundation, 2015).
- Evidence of newborn jaundice is the appearance of a yellowish coloration of the skin and sclera, appears cephalad to caudal, and regresses in the reverse order (National Association of Neonatal Nurses, Board of Directors, 2010).
- Newborn jaundice affects up to 84% of term newborns and is the most common cause of hospital readmission in the neonatal period (Muchowski, 2014).
- Proposed risk reduction strategies include pre-discharge bilirubin measurement with standing orders, allowing nurses to order total serum bilirubin (TSB) levels or Transcutaneous Bilirubin (TcB) levels for newborns (Kaplan et al. 2011)
- The causes of newborn jaundice include an ABO or Rh factor incompatibility between mother and baby, premature liver functioning, an infant of a diabetic mother, and improper latch of newborn to breast during breastfeeding (Lowdermilk & Perry, 2016).

## Goal:

- The purpose of this capstone project was to create a teaching tool for the maternity nurses to use as a way to provide consistent and accurate education, while supporting patient-friendly care to newborn parents regarding about hyperbilirubinemia.

## Implementation of Project:

- Teaching tool created as a resource guide for nurses to better inform new parents of newborns facing newborn jaundice (hyperbilirubinemia).
- Discusses general understanding of newborn jaundice (hyperbilirubinemia), causes, risk factors, measurement, and treatment

~ QUICK FACTS ~



### Resource Guide for Nurses: Patient Teaching on Newborn Jaundice (Hyperbilirubinemia)

- **What is Newborn Jaundice (Hyperbilirubinemia)?**
  - Excessive level of accumulated bilirubin in the blood
  - Characterized by yellowish discoloration of skin, sclera, nails, and other organs
  - May be found in up to 80% of newborns
- **Causes of Newborn Jaundice (Hyperbilirubinemia)**
  - Increased production of bilirubin and/or decreased bilirubin excretion
- **Major Risk Factors**
  - ABO Incompatibility and Rh factor
  - Premature liver function
  - Dehydration due to lack of adequate nutrition
- **How is Newborn Jaundice (Hyperbilirubinemia) measured?**
  - Drager Jaundice Meter – transcutaneous bilirubinometry tool
  - Bilirubin risk nomogram – risk for developing hyperbilirubinemia
- **Treatment for Newborn Jaundice (Hyperbilirubinemia)**
  - Phototherapy
  - Supplementation with formula
  - Ensure proper feeding techniques when breastfeeding
- **Long term complications of Newborn Jaundice (Hyperbilirubinemia)**
  - Kernicterus (two-phase chronic form of brain damage)

## Family-Centered Care:

- Family-centered care is a culture of collaboration and information sharing in which the health care team, patients, and families participate in health care delivery and decision making (Hockenberry & Wilson, 2015).
- Family-centered care is associated with many positive outcomes (Hockenberry & Wilson, 2015).
- Family-centered care is based on core concepts that include information sharing, respect and honoring differences, partnership and collaboration, negotiation, and care in the context of the family's and patient's community (Hockenberry & Wilson, 2015).
- Parents are the primary caregiver of the newborn.
- The family is the child's primary source of strength and support (Hockenberry & Wilson, 2015).
- Numerous studies have documented the fact that informed patients are more likely to comply with medical treatment plans, more likely to find innovative ways to cope with illness, and less likely to experience complications (Bastable, 2017).

## Evaluation:

- Resource guide booklets left on the unit for nurses to use as consistent reference/teaching for patients

## Conclusion:

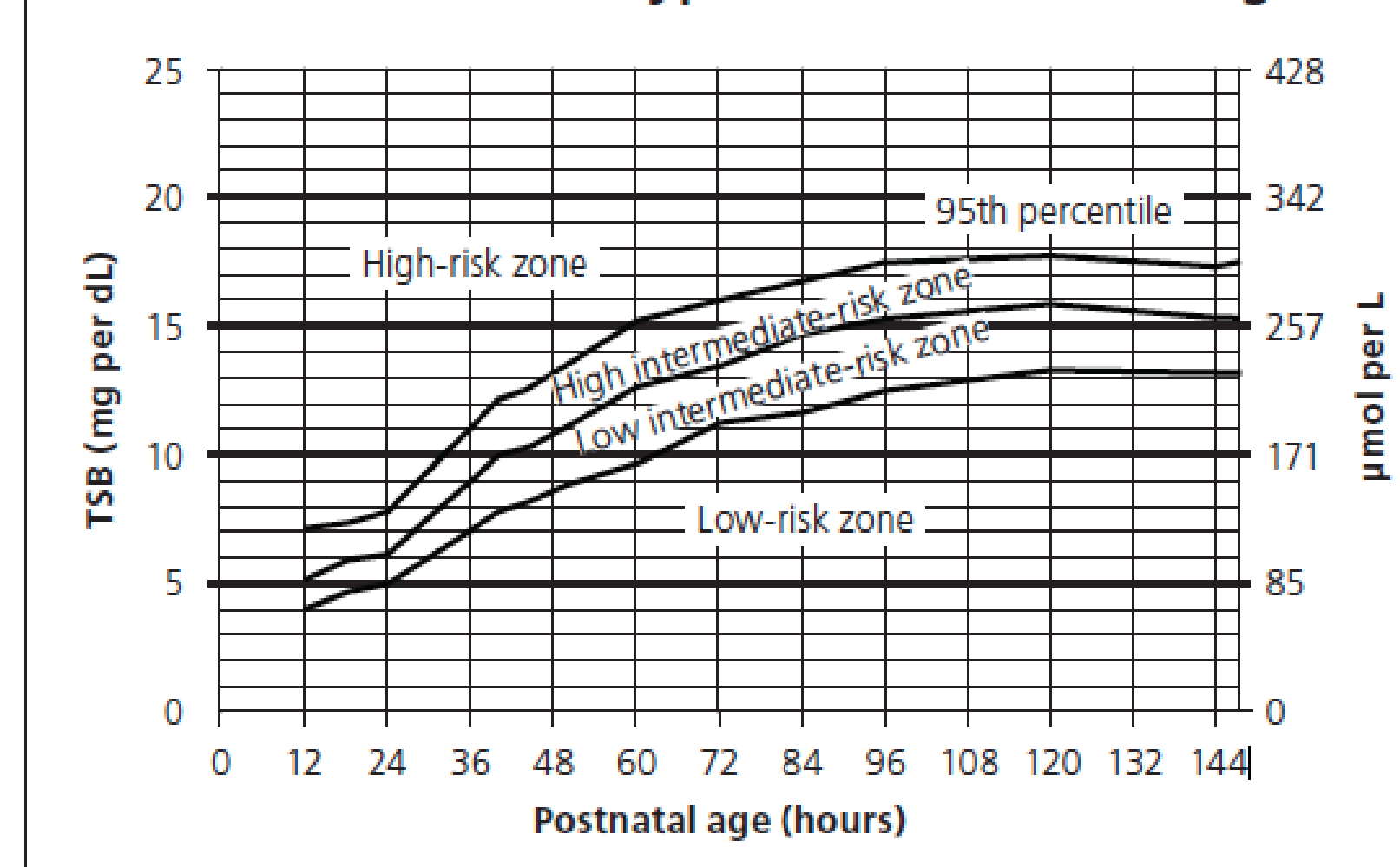
- Better understanding leads to better outcomes.
- Through a more consistent resource guide available to nurses, it is proposed that there will be an increase in effective, and consistent, patient teaching to properly address the newborn disease.
- Awareness of the newborn disease to new parents is critical in ensuring good outcomes for the family.
- Regardless the experience level, having a resource guide to refer to is important in good patient care.

## References available as a handout

## Nursing Role/Responsibilities:

- Teaching is an important aspect of the nurse's professional role (Bastable, 2017).
- The teaching role is a unique part of a nursing's professional domain (Bastable, 2017).
- The purpose of patient education is to increase the competence and confidence of clients for self-management (Bastable, 2017).
- The single most important action of nurses as teachers is to prepare patients for self-care, including that of their newborn child (Bastable, 2017)

Risk Assessment for Hyperbilirubinemia Using TSB



High-risk: repeat in 4-8 hours  
High intermediate-risk: repeat in 8-12 hours  
Low intermediate-risk: repeat within 48 hours  
Low-risk: follow up at age 3-5 days  
(Bhutani & Johnson, 2009)

## References

- American Liver Foundation. (2015). *Newborn Jaundice*. Retrieved from <http://www.liverfoundation.org/abouttheliver/info/newbornjaundice/>
- Bastable, S. B. (2017). *Essentials of patient education*. Burlington, MA: Jones & Bartlett Learning.
- Bhutani, V.K., & Johnson, L. (2009). A proposal to prevent severe neonatal hyperbilirubinemia and kernicterus. *Journal of Perinatology*, 29, S61-S67.
- Hockenberry, M. J., & Wilson, D. (2015). *Wong's nursing care of infants and children* (10<sup>th</sup> ed.). St. Louis, MO: Elsevier.
- Kaplan, M., Wong, R.J., Sibley, E., & Stevenson, D.K. (2011). Neonatal jaundice and liver disease. In R.J. Martin, A.A. Fanaroff, & M.C. Walsh (Eds.) *Fanaroff and Martin's neonatal-perinatal medicine diseases of the fetus and infant* (9<sup>th</sup> ed., pp. 1443-1496). St. Louis: Elsevier
- Lowdermilk, D. L., Perry, S. E., Cashion, K., Alden, K. R., & Olshansky, E. F. (2016). *Maternity & women's health care* (11th ed.). St. Louis, MO: Elsevier.
- Muchowski, K. (2014). Evaluation and treatment of neonatal hyperbilirubinemia. *American Family Physician*, 89, 873-878. Retrieved from <http://www.aafp.org/afp/2014/0601/p873.pdf>
- National Association of Neonatal Nurses, Board of Directors (2010). Prevention of acute bilirubin encephalopathy and kernicterus in the newborns: Position statement #3049. *Advances in Neonatal Care*, 11(5 Suppl.): S3-S9.