Unanswered Q&A from Webinar Screening & Management of Hyperbilirubinemia: Key Updates from the CPS Position Statement and Updated AOM CPG

Is there a recommendation on using Bilitool.org vs Hyperbili.com?

Hyperbili.com is recommended – Hyperbili.com is based on the 2025 CPS position statement, whereas Bilitool.org is based on the 2022 American Academy of Pediatrics guideline. There are a few differences between the two, including some risk factors and follow-up guidance using the delta-TSB. However, a key reason to use Hyperbili.com is that it uses µmol/L, which is the standard unit used across Canada and aligns with Canadian guidelines, whereas Bilitool.org uses mg/dL.

I am wondering, is there a plan to get the hyperbili tool into an app form that can be used offline? In rural settings internet access can be unreliable.

Thank you for sharing this. We are not aware of a plan for an app-based version; however, you may wish to direct this question to hyperbili@outlook.com.

In the meantime, if you anticipate barriers with internet access, it may be helpful to carry paper-based copies of the individual graphs. The CPS provides a link to printable versions, which include the phototherapy and blood exchange transfusion thresholds for each gestational age group.

I didn't notice a follow up algorithm for after discharge from phototherapy. When would a TSB be repeated?

A repeat TSB for rebound hyperbilirubinemia can be performed ≥ 12 to 24 hours after stopping phototherapy. Measuring the TSB no sooner than this timeframe will detect rebound hyperbilirubinemia if it occurs.

If you are looking for more guidance on midwifery management of phototherapy, the AOM's updated Clinical Pathway Manual for Midwifery Hyperbilirubinemia Screening and Management of Phototherapy may be a helpful resource.

What is included in "suspected or diagnosed hemolytic conditions" besides a rapid rate of rise?

Hemolysis may be suspected in the case of early-onset jaundice (jaundice in the first 24 hours of life), a rapidly rising TSB (≥ 5 µmol/L/h within the first 24 hours post-birth or ≥ 3.5 µmol/L/h beyond 24 hours post-birth), or severe hyperbilirubinemia (TSB > 425 µmol/L or need for BET). Hemolysis may also be part of the differential diagnosis when bilirubin levels do not respond to phototherapy.

Diagnosis is supported by additional investigations – such as hemoglobin level, peripheral blood smear and reticulocyte count, among others.

Where can we get good education on what normal Hb and reticulocyte counts are for newborns vs when is low and we should suspect hemolysis?

Similar to the direct-antiglobulin test (DAT), these tests should be reserved for newborns with clinical concern, such as early-onset jaundice, a rapidly rising TSB, or severe hyperbilirubinemia, and may also be part of the differential diagnosis when bilirubin levels continue to rise despite adequate phototherapy.

Lab values vary by gestational age at birth and postnatal age, and are best interpreted in the context of the infant's overall clinical picture; reference ranges may also differ between community and/or hospital laboratories.

If hemolysis is suspected, pediatric consultation is recommended to support ordering and interpretation of these additional tests, as well as management considerations.

G6PD diagnosis. How?

G6PD testing should be considered for any infant with significant or severe hyperbilirubinemia who does not respond to treatment or presents without identifiable risk factors. If G6PD deficiency is suspected – particularly in the context of hyperbilirubinemia – prompt testing is important, as bilirubin levels can rise quickly and affected infants require treatment at lower thresholds.

Newborns can be tested for G6PD deficiency with a blood test. G6PD is not included in the Newborn Screening Ontario panel, and midwives in Ontario are not able to order this test under the Laboratory and Specimen Collection Centre Licensing Act. If G6PD deficiency is suspected, pediatric consultation is required to support timely testing and management.

I am wondering if you can speak more towards follow up and assessment of prolonged jaundice >14 days. What testing do you recommend in order to give a diagnosis of breastmilk jaundice?

Breastmilk jaundice is a clinical diagnosis, based on the overall clinical picture, and in some cases may be a diagnosis of exclusion.

Recall that breastmilk jaundice is a benign condition in which infants who are primarily fed with human milk experience elevated bilirubin levels, despite being otherwise healthy. Affected infants typically feed well, gain weight appropriately, have frequent urine output and yellow stools, and do not require treatment for hyperbilirubinemia or supplementation with formula.

In an otherwise well, human milk–fed infant with visual jaundice beyond 14 days of life, midwives may consider ordering a TSB, including the conjugated fraction, to determine whether further investigation is needed.

Prolonged jaundice is defined as clinically significant jaundice where TSB levels are within 35 µmol/L of the phototherapy threshold and persist for more than 14 days post-birth. Prolonged jaundice may result from pathologic causes associated with elevated unconjugated bilirubin levels (e.g., hemolytic diseases, infection, congenital hypothyroidism).

However, it can also occur in the presence of elevated conjugated bilirubin levels from underlying cholestatic liver diseases (e.g., biliary atresia).

If midwives suspect a pathologic cause of hyperbilirubinemia, further investigation, which may include physician consultation, is required to determine the underlying condition.

When parents decline universal bilirubin screening, what approach would you recommend for follow-up and ongoing assessment? I'm concerned about the unreliability of visual monitoring alone.

At times, families may choose to decline universal bilirubin screening following an informed choice discussion, opting for a "wait-and-see" approach – with a willingness to accept bilirubin testing if visible jaundice develops or if there are any signs or symptoms of concern. In these situations, it is important to document the discussion, the information shared, any recommendations you made, and the family's decision.

Families should be supported with education about jaundice and important risk factors – the AOM client handout What is jaundice? may be a helpful resource to share with families. This should include discussing hyperbilirubinemia risk factors (if present), and how visible jaundice, poor feeding, dehydration, and weight loss can increase an infant's risk.

While visual assessment alone is not a reliable method to identify significant hyperbilirubinemia, it remains an important component of midwives' overall clinical assessment. The CPG provides guidance on how to visually assess jaundice across skin tones. If visible jaundice develops, obtaining a bilirubin measurement is recommended and the midwife should revisit and document the family's choice.

It may also be helpful to distinguish declining universal bilirubin screening in an otherwise healthy infant with no risk factors, from declining bilirubin testing in the presence of clinical concern. In situations where families decline bilirubin testing despite visible jaundice, the presence of risk factors, or symptoms concerning for hyperbilirubinemia, midwives are encouraged to seek urgent support from AOM On Call, a team of midwifery quality and risk management specialists, who can help provide individualized recommendations based on your duty of care to both the birthing parent and the newborn. This team will provide risk management considerations based on the specific circumstances of your case.