

PHOTOTHERAPY TREATMENT AT HOME

This LOP is developed to guide safe clinical practice at The Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this Local Operations Procedure (LOP).

1. AIM

- To use phototherapy mat and machine (BiliSoft®) appropriately and safely at home

2. PATIENT

- Neonate who is currently under care of RHW Midwifery Support Program (MSP)/Midwifery Group Practice (MGP)

3. STAFF

- Medical and midwifery staff

4. EQUIPMENT

- Phototherapy mat and LED phototherapy system (BiliSoft®)
- Disposable covers for phototherapy mat and LED phototherapy system (BiliSoft®)
- Transcutaneous bilirubinometer

5. CLINICAL PRACTICE

- Assess the neonate's jaundice level initially with transcutaneous bilirubin (TcB)
- Educate the parents about neonatal jaundice and rationale for testing
- Document TcB result on the Neonatal Jaundice Treatment Thresholds graph.
- Perform serum bilirubin (SBR) testing as indicated. Collect 0.8 mL via a heel prick blood sample into yellow top funnel tube. If performed at home, protect from light and deliver blood sample to hospital laboratory within 3 hours and mark as 'urgent'
- Obtain result (generally available within the hour) and plot on Neonatal Jaundice Treatment Thresholds graph. Discuss with the paediatric team if result indicates neonate requires phototherapy, and confirm if appropriate for treatment at home or not. The home visiting midwife is to organise phototherapy at home
- Educate the parents about phototherapy treatment
- Educate and demonstrate to parents the appropriate use of the BiliSoft® system
- Educate and demonstrate to parents the appropriate use of neonatal eye protection, as recommended by the BiliSoft® manufacturers
- Advise whilst using BiliSoft®:
 - Monitor temperature hourly for the first 3 hours and then 3-6 hourly thereafter and record on Infant Feeding Chart
 - Ensure 3–4 hourly neonatal feeds
- Provide parents with information leaflets:
 - "Jaundice in newborn babies" (www.schn.health.nsw.gov.au/parents-and-carers/fact-sheets/jaundice-in-newborn-babies)
 - "Caring for your baby with jaundice having phototherapy at home" (Appendix 1)
 - Infant Feeding Chart
- Offer parents the opportunity to discuss jaundice and phototherapy with paediatric team
- Provide contact details and encourage parents to ring midwife or hospital if they have any concerns about neonate or phototherapy treatment
- Review condition and repeat the SBR daily. TcB is not appropriate after phototherapy has commenced
- Discuss each result with paediatric team regarding ongoing management
- Discuss management with parents
- Document the treatment in Personal Health Record book (Blue Book)
- Collect the BiliSoft® system after treatment is complete

Approved by Quality & Patient Care Committee
21 June 2018

PHOTOTHERAPY TREATMENT AT HOME cont'd

6. DOCUMENTATION

- Neonatal Jaundice Treatment Thresholds graph
- Personal Health Record book (Blue Book)
- Medical record

7. EDUCATIONAL NOTES

- Jaundice is one of the most common conditions requiring medical attention in neonates
- Approximately 60% of term and 85% of preterm babies develop jaundice, which typically becomes clinically apparent on day 3, peaks on day 5 to 7 and resolves by day 14
- While the cause of jaundice in most cases is physiological, which is usually benign, co-existing pathological causes need to be identified because they often have serious consequences if left untreated

8. RELATED POLICIES/PROCEDURES/CLINICAL PRACTICE LOP

- NSW Health GL2016-027 Neonatal - Jaundice Identification and Management in Neonates \geq 32 Weeks Gestation
- Neonatal Jaundice –Transcutaneous Bilirubin (TcB) measurement (*only available to view on RHW website under Neonatal Services Division Clinical Resources/Guidelines*)
- Heel Prick (*only available to view on RHW website on Neonatal Services Division Clinical Resources/Guidelines*)
- Neonatal observations outside Newborn Care Centre

9. RISK RATING

- Low

10. NATIONAL STANDARD

- CC – Comprehensive Care

11. REFERENCES

- 1 Young P, Korgenski K, Buchi K. Early readmission of newborns in a large health care system. Pediatrics 2013;131: e1538-44.
- 2 Lain S, Roberts C, Bowen J, Nassar N. Early discharge of infants and risk of readmission for jaundice. Pediatrics 2015; 135:314-21.

REVISION & APPROVAL HISTORY

Reviewed and endorsed Maternity Services LOPs 19/6/18
Approved Quality & Patient Safety Committee 19/5/11
Endorsed Obstetric Clinical Guidelines group April 2011

FOR REVIEW : JUNE 2023

APPENDIX 1

Caring for your baby with jaundice having phototherapy at home

FEEDING YOUR BABY

Babies with jaundice may be sleepy and not wake for feeds, or may be sleepy when feeding. However, it is important that your baby feeds frequently to obtain plenty of fluid which helps reduce jaundice.

Feed your baby at least every 3 hours and at least 7-8 times over a 24-hour period

If your baby is NOT waking for feeds:

- Place your baby skin-to-skin chest-to-chest with you
- Express a few drops of milk to encourage your baby to latch onto your breast
- Express breastmilk and feed to your baby with a cup or bottle – your midwife will teach you how to express breastmilk if you are not sure how to do this
- Contact your midwife (MGP) or a midwife on the postnatal ward (via the hospital switchboard 02 93826111) if you have ongoing concerns about your baby not feeding

CHECKING YOUR BABY'S TEMPERATURE

Take your baby's temperature each feed. A normal temperature for a baby is 36.5-37.4°C. Write down your baby's temperature, as well as feeds, wet nappies and poos on the INFANT FEEDING CHART

If the temperature $\leq 36.4^{\circ}\text{C}$:

- Place your baby skin-to-skin chest-to-chest with you and encourage your baby to feed
- Ensure the room is warm enough and free from drafts. Your baby may need an extra blanket

If the temperature $\geq 37.5^{\circ}\text{C}$:

- Place your baby skin-to-skin chest-to-chest with you and encourage your baby to feed
- Remove some of your baby's clothes or blankets
- Ensure the room is cool enough when the weather is hot
- If the temperature remains $\geq 37.5^{\circ}\text{C}$ after an hour, contact your midwife (MGP) or a midwife on the postnatal ward (via the hospital switchboard 02 93826111)

SUN SAFETY

Phototherapy is the safest treatment for a baby who is jaundiced and needs treatment. Exposing a baby to direct sunlight can place a baby at risk of sunburn, therefore **exposing your baby to sunlight is NOT recommended**

GETTING HELP

If for any reason you are concerned about your baby, contact your midwife (MGP) or a midwife on the postnatal ward (via the hospital switchboard 02 93826111)

HOW TO USE PHOTOTHERAPY MAT (BiliSoft®)

The BiliSoft® LED Phototherapy System provides light therapy for the treatment of indirect hyperbilirubinemia, commonly known as neonatal jaundice, in a hospital or home setting.



1. Gently insert the BiliSoft® fiberoptic pad into a BiliSoft® Pad Cover. The illuminated side should face up and should be against the padded side of the cover.



2. Place the baby (with nappy on) on the padded, i.e. thickest side of the BiliSoft® cover. Adjust the straps as needed.
IMPORTANT: Be sure the maximum area of illumination is in contact with the baby's skin



3. Swaddle the baby as needed. Place eye cover over the baby's eyes. The baby, along with the light pad, may be covered or wrapped in a thin blanket. It is possible to hold and feed the baby while continuing treatment. The baby will continue to receive effective phototherapy treatment as long as the covered, light-emitting section of the pad remains in direct contact with the skin.



4. Turn the BiliSoft® box on



5. Insert the fiber optic cable in the box

IMPORTANT: For hygienic purposes, never place a baby directly on the bare fiber optic light pad. The light pad must be covered with the BiliSoft® Pad Cover as described above. BiliSoft® Pad Covers are for single-patient use only. The BiliSoft® Pad Cover must be changed between babies and whenever it is soiled.

CAUTIONS

To prevent damage to the fiber optic light pad, fiber optic cable protective covering, and optical fibres, observe these guidelines. Failure to do so could decrease light intensity at the light pad:

- Do not allow the fiber optic cable or light pad to rub on sharp or abrasive surfaces. The protective coverings and optical fibres may be damaged.
- Do not scratch, touch or soil the fiber optic lenses at the end of the fiber optic cable
- Do not lay or hang the fiber optic cable where it could be crushed. This could damage the cable's outer protective cover and the optical fibres
- Do not bend the fiber optic light pad or cable at a sharp angle
- Do not place anything on the fiber optic cable

If the fiber optic cable or light pad is ripped, punctured or otherwise damaged, it must be taken out of service and replaced.

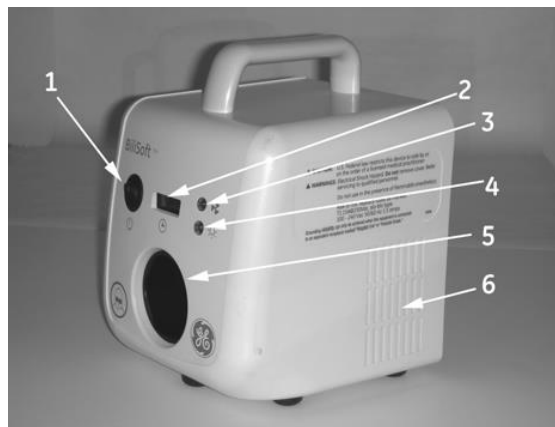
WARNING:

The light box is not waterproof. Locate the unit where it will not be exposed to liquids. Liquids that enter the unit can damage it and create an electric shock hazard.

WARNING:

Never place the light box inside the baby compartment of an incubator, warmer or bassinet as these conditions expose the baby to possible injury.

CONTROLS AND INDICATORS



1. Standby Switch – Turns the unit on/off. The green light on the switch indicates that the standby switch is turned on and the unit is powered.

2. Hour Meter – The non-resettable hour meter runs whenever the fiberoptic light pad is illuminated.
Note: The hour meter is provided to track LED life and is not intended to be used to measure therapy durations.

3. Unit Overheated Indicator – When the red indicator light is on, the unit has overheated. Please turn unit off and contact your midwife or the hospital.

4. LED Module Failure Indicator - When the red indicator light flashes, at least one of the three LED pairs has failed. Please contact your midwife or the hospital.

5. Fiberoptic Light Pad Assembly Port – Where the fiberoptic light pad connects to the main unit. An LED shutoff switch inside the port automatically shuts off the LED module when the fiberoptic light pad is disconnected

6. Air Vents – For proper cooling, it is important to keep the air vents clear of obstruction