

## TITLE

**ENVIRONMENTAL LIGHTING CONTROL****SCOPE**

Provincial: Neonatal Intensive Care Units

## DOCUMENT #

HCS-203-02

## APPROVAL AUTHORITY

Vice President, Research, Innovation &amp; Analytics

## INITIAL EFFECTIVE DATE

April 24, 2017

## SPONSOR

Newborn Standing Committee, Maternal Newborn Child &amp; Youth Strategic Clinical Network (MNCY SCN)

## REVISION EFFECTIVE DATE

Not applicable

## PARENT DOCUMENT TITLE, TYPE AND NUMBER

Not applicable

## SCHEDULED REVIEW DATE

April 24, 2020

**NOTE:** The first appearance of terms in bold in the body of this document (except titles) are defined terms – please refer to the Definitions section.

If you have any questions or comments regarding the information in this document, please contact the Policy & Forms Department at [policy@ahs.ca](mailto:policy@ahs.ca). The Policy & Forms website is the official source of current approved policies, procedures, directives, standards, protocols and guidelines.

**OBJECTIVES**

- To facilitate consistent, appropriate, overall and cycled environmental lighting for infants in Alberta Health Services (AHS) Neonatal Intensive Care Units (NICU).
- To promote commitment to appropriate environmental lighting among **health care providers, parent(s), families** and visitors of infants in NICU.

**APPLICABILITY**

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staffs, Students, Volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary), working in Neonatal Intensive Care Units (NICU).

**ELEMENTS****1. Bedside Lighting Considerations**

- 1.1 Where possible, bedside lighting shall be a balance of dimmed ambient lighting, natural lighting and brighter task lighting.
- 1.2 Whenever possible, indirect lighting sources shall be used when available.
- 1.3 When awake, the infant should have adequate light to see, with interesting visual items for focus. The ideal visual focal point is the face of the parent(s).

- 1.4 When indirect light sources are not available, incubator tops and cribs shall be covered to protect the infant from the light while allowing the infant to be visible to parents and caregivers at all times.
- 1.5 A direct light shall not shine into an infant's eyes except for an eye examination.
  - a) Eye examinations for infants less than 32 weeks corrected gestational age shall be deferred until the infant reaches 32 weeks corrected gestational age, unless medically necessary.
- 1.6 Eyes shall be shielded for a period of 12 hours following dilation for an eye examination.

## 2. Procedure Lighting Considerations

- 2.1 The eyes of an infant shall be shielded when procedure lighting is used.
- 2.2 Procedure lighting should not increase the lighting for adjacent infants.
- 2.3 During phototherapy, an infant's eyes shall be protected with eye patches at all times.
- 2.4 Critically ill infants and those receiving phototherapy may require adjustments to lighting recommendations.

## 3. Diurnal Light Cycle

- 3.1 Diurnal cycling light should be implemented when an infant is greater than or equal to 32 weeks corrected gestational age and has stable vital signs and oxygen requirements.
- 3.2 From 07:00 to 21:00, subdued lighting should be provided (200-225 lux [refer to Appendix A: *Levels of Environmental Light and Associated Conditions*]).
- 3.3 From 21:00 to 07:00, a dark environment should be provided (5-10 lux). In addition:
  - a) overhead lights should be dimmed;
  - b) task lighting for staff should not reach an infant's eyes; and
  - c) a darkening device should cover the top of the incubator.
- 3.4 For stable infants, tasks and procedures other than feeds and diaper changes should not occur during the darkened hours.

**DEFINITIONS**

**Family(-ies)** means one or more individuals identified by the patient as an important support, and who the patient wishes to be included in any encounters with the health care system, including, but not limited to, family members, legal guardians, friends and informal caregivers.

**Health care provider** means any person who provides goods or services to a patient, inclusive of health care professionals, staff, students, volunteers and other persons acting on behalf or in conjunction with Alberta Health Services.

**Parent** means the adult guardian of a child, with the legal authority to make decisions on behalf of the minor, in accordance with the *Family Law Act* (Alberta).

**REFERENCES**

- Appendix A: *Levels of Environmental Light and Associated Conditions*

**VERSION HISTORY**

Date	Action Taken
<a href="#">Click here to enter a date</a>	Optional: Choose an item
<a href="#">Click here to enter a date</a>	Optional: Choose an item

## APPENDIX A

## Levels of Environmental Light and Associated Conditions

Illuminance (Lux)	Condition
0.27	Full moon on a clear night
10	Twilight
50	Family living room
100	Very dark overcast day
200	Dark storm clouds
320 – 500	Office lighting
10 000 – 25 000	Full daylight (not direct sun)
32 000 – 130 000	Direct sunlight