



NCCU CLINICAL GUIDELINES
SECTION: 4

THERMOREGULATION

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Transition from an incubator to an open cot (grading out of an incubator)
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Neonatology Clinical Guidelines
King Edward Memorial/Princess Margaret Hospitals
Perth Western Australia

**TRANSITION FROM AN INCUBATOR TO AN OPEN COT
(GRADING OUT OF AN INCUBATOR)**

Successful transition from a thermally regulated environment to an open cot can occur if the following criteria are met:

- Regained birthweight and weight gain is following a normal curve on the growth chart (average 15 – 30 grams per day for a healthy preterm infant)
- Weight is not less than 1200gms
- Tolerating enteral feeds. (Intermittent or Continuous feeds)
- No apnoea and bradycardias requiring stimulation
- Incubator air temperature has been consistently 32⁰C or less over a minimum of 24hour

KEY POINTS

- The thermal challenging should take place on a daily basis. Once the infants per axilla temperature has remain stable in the target range and in a stable incubator temperature the incubator temperature maybe reduced 0.5⁰C each 4-8 hours until the temperature is 29⁰C During this stage the infant is clothed in hat, top and booties. A singlet may be added to cover the infants back if in a particularly drafty zone in the nursery .
- The process of transition from an incubator to an open cot should begin as soon as the infant has met the above criteria. The infant's temperature will increase once he/she has been dressed because of the insulation effect of clothing. It is important that the infant remains dressed. The **hat should** be left on.
- The infant's weight is monitored according to unit policy or medical orders following the transition from incubator to open cot. Energy demands for thermal control take precedence over demands for growth, potentially leading to poor weight gain.
- During the thermal challenge the incubator should **NOT** be turned off and the portholes should **NOT** be left open. It is not possible to control the decrease in incubator temperature in these circumstances, causing undue thermal stress for the infant. Also, having the port holes open is a safety issue.
- Infants nursed in incubators for reasons other than thermal management (such as phototherapy, observation or isolation) can be lifted out of the incubator into an open cot without following these guidelines.

- **BATHING:** should not occur until the per axilla temperature has been maintained after transition for at least 48hrs and the weight is at least 1500gms.

EQUIPMENT

- Perspex cot
- Thin mattress
- Sheet
- 1 -2 blankets
- Clothing – hat and booties, singlet, top and cardigan.

PROCEDURE

1. A portable skin probe **may** be attached to the skin on the outer flank or under the axilla to allow non-touch monitoring of skin temperature. This should correlate closely to the skin temperature.
2. If temperature probe not correlating 0.5 deg with per axilla temperature resite probe .
3. The incubator temperature should be reduced 0.5⁰C whilst maintaining the per axilla temperature in the target range at intervals of 4-8 hours until 29⁰C.
4. Once the incubator temperature is 29⁰C the infant should then be dressed ,wrapped in cuddly and blankets then placed in a perspex cot away from drafts.
5. The temperature may continue to be monitored with a portable temperature probe. Per axilla temperature needs to continue to be monitored with handling 3 or 4th hourly .
6. Adding or removing of blankets or clothing may be required once the transition has taken place in order to maintain the per axilla temperature in the target range the temperature probe may be removed within the next 8 hours if the per axilla temperature is maintained within the above parameters.

FAILING TRANSITION

- If the infants per axilla temperature fails to be maintained in the target range during any of the above steps the procedure should be discontinued.
- Other signs of unsuccessful transition include vomiting, apnoea and bradycardia and weight loss after transition has occurred.
- If any of the above signs occur the infant should be unwrapped and undressed and then returned to an incubator or overhead warmer in order to regain a per axilla temperature within the required parameters.
- The incubator temperature should be set at that last tolerated by the infant before transition commenced.