Newborn Critical Care Center Clinical Guidelines

Assessment, Handling and Positioning For Infants < 28 Weeks Gestation

Assessment

- Assess infant's status and vital signs hourly via monitor and observation: use a "hands off" approach during these assessments
- Assess infant utilizing four handed cares at "touch times" every 6 hours
    - Skin checks every 3 hours on bubble CPAP
- Providers will attempt to examine infants at the 6 hour "touch times" at 0800 (primary providers) 1400, 2000 and 0200

Handling

- Use a developmentally supportive, two-person / four-handed approach whenever handling infant
- To provide a more developmentally supportive environment, our goal is to limit hands on care to "touch times" every 6 hours (understanding that infants on bubble CPAP require checking of pressure points every 3 hours)
- Keep noise to a minimum (i.e., address and silence alarms as quickly as possible, lower voices, conduct rounds and discussions away from the bedside, open trash bags outside the unit, avoid dragging furniture across the floor, etc.)
- Place an isolette cover over the incubator to minimize light exposure (may open a corner to visualize infant)
- When providing care, the infant's eyes should be covered to shield them from direct light
- Never place items on top of the incubator
- Appropriately warm all items that will touch the baby such as the stethoscope, diaper, hands, etc.
- Wash hands (preferred over alcohol cleansers) before/after touching the infant
    - If using alcohol cleanser, ensure hands are fully dry before placing in isolette
- Staff must wear gloves
- Defer initial bath until after the first 72 hours and clinically stable

Positioning

- Maintain plastic wrap/thermoregulation suit from the time of delivery until at least the subsequent "touch time"
- If infant's temperature remains stable (>36.4 degrees C) at the first "touch time", plastic wrap/thermoregulation suit may be removed
- If infant becomes hypothermic during the first 72 hours of life and there is difficulty increasing temperature back to a euthermic range, consider placing infant in plastic wrap/thermoregulation suit

- Nest all babies for at least the first 72 hours on a warm z-flo mattress
    - Head in midline (nose in line with umbilicus)
    - Rounded shoulders with hands at midline/mouth/chin
    - Legs tucked towards stomach
    - HOB elevated to 30 degrees
    - Utilize strapping as needed to offer boundaries and support flexion alignment
- For the first 72 hours, radiographs should be taken without removing the z-flo mattress
- After the first 72 hours the z-flo mattress should be removed for radiographs unless the provider determines the patient is too unstable to move.
- During the first 72 hours, reposition every 6 hours, remolding z-flo mattress to provide appropriate boundaries
- After the first 72 hours and when infant is stable enough to tolerate it, begin to alternate positioning every 3-4 hours between supine, side lying, and prone
    - Supine: utilize z-flo mattress in addition to strapping or dandle pal to support midline and flexed alignment
    - Side lying: utilize z-flo mattress in addition to strapping or dandle pal to support midline and flexed alignment
    - Prone: utilize prone pillow or molded z-flo mattress, shoulders should be rounded, knees should be tucked under hips

Positioning Reference Photos

Supine	Prone	Side lying
		

References:

1. Kochan, M., Leonardi, B., Firestine, A. et al. Elevated midline head positioning of extremely low birth weight infants: effects on cardiopulmonary function and the incidence of periventricular-intraventricular hemorrhage. *J Perinatol* 39, 54–62 (2019). https://doi.org/10.1038/s41372-018-0261-1

2. Kumar, P., Carroll, K.F., Prazad, P. et al. Elevated supine midline head position for prevention of intraventricular hemorrhage in VLBW and ELBW infants: a retrospective multicenter study. *J Perinatol* 41, 278–285 (2021). https://doi.org/10.1038/s41372-020-00809-6

Reviewed August 2025 – Cunningham PT / Soucie OT / Croop NNP / Trembath MD