# POST OPERATIVE CARE OF THE NEONATE

## INTRODUCTION

Often infants in newborn care require surgery. Optimising the care post procedure will assist in a timely recovery of the infant.

**AIM:**

To provide appropriate care to the infant post surgery.

**EQUIPMENT**

Appropriate bed - Open Care or Crib checked and warmed
Other equipment as needed.

**PROCEDURE**

1. Medical and nursing staff to receive handover on infant from anaesthetic team. If patient is ventilated adjust ventilator settings to match current settings (Rationale 1).

2. Review post operative orders from surgeon (Rationale 2).

3. Prepare patient for transfer to open care bed or incubator. Secure the assistance of a nurse to maintain the infant’s airway, lines, monitoring cables and the infant (Rationale 3).

4. Disconnect patient from transport ventilator and transfer patient to bed or crib. Connect patient to bedside ventilator immediately (Rationale 4).

5. Assess ventilation:
   - Observe infant for chest rise and auscultate for breath sounds.
   - Check ETT is securely taped at correct position (Rationale 5).

### NOTE:

If ETT is inserted in theatre - chest x-ray is required to confirm position after return to NCC.
6. If arterial line inserted in theatre attach to monitoring and calibrate. Record BP hourly. Arterial Line infusion set is to be changed after return from OT.

7. Evaluate surgical infant:
   a) Perform baseline observations (Rationale 7a):
      • axilla temperature,
      • heart rate,
      • blood pressure,
      • respiratory rate,
      • oxygen saturations
      • capillary refill.
      • Blood glucose level and blood gas if requiring respiratory support
      • Set monitor alarm limits appropriately.
   
   b) Observe infant’s (Rationale 7b)
      • respiratory effort,
      • colour,
      • fontanelle,
      • skin integrity,
      • oedema
      • level of activity.
   
   c) Record hourly for the first 4 hours (Rationale 7c)
      • Temp, HR, BP, RR and SaO₂. Hourly urine output may be necessary in some patients.
      • Then record 4th hourly for 12 hours axilla temp, HR, BP, RR, SaO₂ and urine output.
      • Routine patient observation thereafter if the above obs have been normal.

8. Attach inline suction to ETT. Suction PRN (Rationale 8)

9. Attach skin temperature probe to infant (Rationale 9).

10. Insert IGT, if not insitu. Leave on free drainage until commencement of feeds (Rationale 10).

11. Take post operative bloods (Rationale 11):
    a) A blood gas (if ventilated)
    b) A blood sugar level (BSL). Notify doctor if formal blood sugar is <2.6 mmol.

12. Check the following:
    a) Correct fluids are running at an adequate rate and record hourly (Rationale 12a).
    b) Monitor fluid administration site hourly for signs of (Rationale 12b):
       • swelling,
       • redness
       • localised tissue extravasation

13. Monitor urine output (Rationale 13):
    a) if catheter insitu -
       • record output hourly for first 4 hours or as directed by the NICU team,
       • then 4 hourly until catheter removed.
    
    b) If no catheter insitu -
       • weigh nappy after each change
       • Record urine output in mL/kg/hour in fluid balance chart.
       • Notify doctor if urine output is <1mL/kg/hr or >5mL/kg/hr
14. If chest drain insitu:
   - monitor output hourly.

15. Calculate balance of intake and output every 12 hours or as directed by the NICU team (Rationale 15).

16. Ensure adequate pain relief is prescribed and administered. Start pain score monitoring hourly and prior to any intervention (Rationale 16).

17. Check medication chart and anaesthetic charts for drug administration eg. antibiotics. Administer if not given (Rationale 17).

18. Assess surgical site and drains. Monitor site for
   - redness
   - and/or swelling.
   - Intact dressing remains intact
   - bloodloss or ooze. Mark dressing to assess progress.
   - Follow post op orders for care of the surgical dressing.

19. Remove excess betadine from the skin once the infant is stabilised after the transfer (Rationale 18).

20. Inform parents (Rationale 19):
   - of infant’s return to ward.
   - explain the infant’s current care
   - Medical staff to update parents daily about infant’s progress

21. Provide nonpharmacological interventions for pain (Rationale 20).
    Ensure:
    - environment is quiet with dim lighting
    - support the infant’s position with adequate boundaries
    - provide and exercise minimal handling principles during the care of the infant

22. Notify ward clerk of infant’s return from theatre.

23. Document infants return to ward and current condition in progress notes. Document all observations, fluid losses, fluid maintanence and pain scores on flow chart (Rationale 21).

<table>
<thead>
<tr>
<th>RATIONALES</th>
<th>RATIONALE</th>
<th>REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rationale 1</td>
<td>To gain an understanding of procedure, physiological changes, fluid loss, level of sedation during theatre.</td>
<td></td>
</tr>
<tr>
<td>Rationale 2</td>
<td>To establish the appropriate post-op care.</td>
<td></td>
</tr>
<tr>
<td>Rationale 3</td>
<td>To provide patient safety during transfer from transport bed to NICU bed</td>
<td></td>
</tr>
<tr>
<td>Rationale 4</td>
<td>To reduce time patient is without mechanical ventilation.</td>
<td></td>
</tr>
<tr>
<td>Rationale 5</td>
<td>To check for accidental extubation. To check that the ETT is in the trachea. ETT: adequate chest rise, bilateral air sounds, audible mechanical ventilation. To ensure accuracy of monitoring.</td>
<td></td>
</tr>
<tr>
<td>Rationale 7a</td>
<td>Vital signs are indicators of metabolic rate and stress. Initial observations can be used as a baseline reference for deterioration.</td>
<td></td>
</tr>
<tr>
<td>Rationale 7b</td>
<td>To provide a baseline reference of the infant clinically.</td>
<td></td>
</tr>
<tr>
<td>Rationale 7c</td>
<td>To monitor stability and deviation from normal.</td>
<td></td>
</tr>
<tr>
<td>Rationale 8</td>
<td>To maintain patency of airway.</td>
<td></td>
</tr>
<tr>
<td>Rationale 9</td>
<td>To monitor temperature stability as sedation can impair thermoregulation.</td>
<td></td>
</tr>
<tr>
<td>Rationale 10</td>
<td>To decompress stomach</td>
<td></td>
</tr>
<tr>
<td>Rationale 11</td>
<td>To assess ventilation settings and metabolic status through acid base balance</td>
<td></td>
</tr>
</tbody>
</table>
### References


