POLICY

The physician orders intra-abdominal (bladder) pressure monitoring for indirect intra-abdominal pressure (IAP) measurement.

Applicability: Intra-abdominal pressure monitoring occurs in the Neonatal Intensive Care Unit.

Intra-abdominal pressure parameters:
- Normal: 0 - 5 millimetres of mercury (mmHg)
- Minimal elevation: 6 - 10 mmHg (closely monitor)
- Mild to moderate intra-abdominal hypertension: 11 - 15 mmHg
- Moderate to severe intra-abdominal hypertension: 16 - 20 mmHg
- Abdominal compartment syndrome: greater than (>) 20 mmHg

PROCEDURE

Gather Equipment
1. Pressure transducer kit
2. Pressure cable
3. Pressure module for HP monitor
4. 4-way Stopcock
5. Silastic urinary straight catheter
6. Urinary Drainage Set (Buretrol)
7. Sodium Chloride (NS) 0.9% 10 millilitre (mL) syringe, 2
8. SmartSite

Registered Nurse (RN) (maintain sterile technique)

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Note</th>
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<tbody>
<tr>
<td>1. Attach SmartSite to the end of the pressure transducer</td>
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<td>2. Remove high-pressure tubing from pressure transducer</td>
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<td>3. Attach 4-way stopcock to pressure transducer</td>
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<td>4. Re-attach high-pressure tubing to other end of stopcock</td>
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<td>5. Attach first NS 10 mL syringe to SmartSite and flush new pressure transducer set-up</td>
<td>Check all components of pressure transducer are primed</td>
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<td>6. Attach urinary drainage set to side port of stopcock</td>
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<td>7. Remove air vent from catheter set and discard</td>
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<td>8. Attach second NS 10 mL syringe to stopcock port on transducer</td>
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<tr>
<td>9. Attach urinary catheter to high pressure tubing</td>
<td>Refer to Urinary Catheterization policy</td>
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**Procedure** | **Note**
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**Calibration of transducer:**  
10. Turn stopcock off to infant and open to air  
11. Remove syringe from port during zeroing  
12. Zero transducer  
13. Turn stopcock open to infant and off to air  
14. Reconnect syringe  

**Intra-abdominal pressure monitoring:**  
15. Turn 4-way stopcock off to urinary drainage set  
16. Instill 2-3 mL of NS into urinary catheter  
17. Turn stopcock off to 10 mL syringe  

### Procedure Notes
- **Check infant is supine and flat with pressure monitor at mid-axillary line at the iliac crest**
- **IAP may increase with elevation of the head or prone position**
- **Zero transducer on monitor**
- **Prevents NS from draining into urinary bag**
- **May need to instill up to 5 mL for first pressure monitoring**
- **Prevent further infusion of fluid**
- **Pressure reading can only be obtained while stopcock and fluid are in this position**
- **Pressure wave will look like a series of steps that coincide with respirations**
- **Wave may be dampened**
- **Pressure reading will be invalid once stopcock is opened to urinary drainage**
- **Do not record pressure reading until next instillation**

**Post Procedure** | **Note**
--- | ---
21. Record IAP every hour  
   - Subtract NS instilled from urinary output in drainage set  

### Post Procedure Notes
- **Increased IAP may impair intestinal blood flow**

**DOCUMENTATION**

Nursing Flowsheet
REFERENCES


