DAYTON CHILDREN'S HOSPITAL

CLINICAL PRACTICE GUIDELINES

DISCLAIMER: This Clinical Practice Guideline (CPG) generally describes a recommended course of treatment for patients with the identified health needs. This CPG is not presented and should not be used as a substitute for the advice of a licensed independent practitioner, as individual patients may require different treatments from those specified, and guidelines cannot address the unique needs of each patient. Dayton Children's shall not be liable for direct, indirect, special, incidental or consequential damages related to the use of this CPG.
Tube Team Placement Flowchart

Order received for purpose and location of tube placement

Is this pt. in the NICU?

Y

Refer to NICU flowchart

N

Check placement as follows

Is this an initial placement?

Y

X-ray child to check for initial placement

N

Obtain X-ray results to confirm placement before use

** If the tube needs to be used emergently and x-ray would delay critical treatment or lifesaving care, the tube may be used at the discretion of the MD.

--always attempt to obtain aspirate prior to use.

--as soon as feasibly possible, obtain an x-ray.
A

Obtain order from practitioner that placement is verified and tube OK to use

For baseline, on new tube insertions, aspirate small amount of contents for color and character

B

Choose 2 of the following methods for checking placement:
- Color of aspirate
- Length of tube (from nose to distal end) and marking on tube
- PH
- X-ray

To check placement of existing tubes (suction, decompression, feeding) before intermittent feeds, medications and 1x per shift (every 8 hrs.)

Able to get aspirate?

N

Use additional strategies: use larger syringe (up to 60cc), reposition pt., instill 5-10ml of air, instill 1-2ml of bottled water

Y

Examine color/consistency of aspirate and do PH testing to establish baseline level

Mark tube with permanent black/blue marker where it exits the nose and if tube has cm markings document in NN the appropriate marking where the tube exits the nose/mouth

Measure length of tube from the nose/mouth to the distal end of the tube

Secure tube to cheek

Use cloth tape to document length from where it exits the nose to the distal end, and the date inserted. Attach to distal end of tube

Document the following in the NN: Type/size of tube, color of aspirate, PH, cm marking on tube, measurement from nose/mouth to distal end of tube

Proceed with feeding, document decisions, rationale if tube is to be used

If methods are not successful proceed with installation with 1-2cc of sterile water and observe patient

Choose 2 of the following methods for checking placement:
- Color of aspirate
- Length of tube (from nose to distal end) and marking on tube
- PH
- X-ray

Obtain order from practitioner that placement is verified and tube OK to use

For baseline, on new tube insertions, aspirate small amount of contents for color and character
NICU FLOWCHART

Is this a new/initial tube placement?

YES

To check placement of a newly placed tube

Choose 3 of 4 methods for checking placement:

- Color/character of aspirate
  - Stomach aspirate: clear, light yellow, light green, or formula
  - Duodenal aspirate: Bile stained
  - Lung aspirate: mucous or serosanguinous
- pH of aspirate
- Comparison of cm mark at nose/mouth to tape measurement mark for placement
- X-Ray

NOTE: if intent of tube placement is ND, X-ray verification must take place.

NO

To check placement of existing tubes (suction, decompression, feeding) before intermittent feeds, medications and 1x per shift (every 8 hours)

Choose 2 of the following methods for checking placement:

- Color/character of aspirate
  - Stomach aspirate: clear, light yellow, light green or formula
  - Duodenal aspirate: Bile stained
  - Lung aspirate: mucous or serosanguinous
- pH of aspirate
- Length of tube- from nose/mouth to distal end and marking on tube
  - Re-measure distance from nose-earlobe-xiphoid- ½ way to umbilicus on indwelling tubes every Tuesday.
- X-Ray (place NGT prior to an x-ray taken for another reason)

Able to get aspirate?
Use additional strategies:
- Use larger syringe (up to 60 ml)
- Reposition patient to side if possible
- Instill 1-5 ml air (to dislodge tube tip, not for auscultation)
- Advance/withdraw tube 1-2 cm as tube may be positioned high or low.
- Wait 5-15 minutes and attempt to obtain aspirate again.
- If still unable to obtain aspirate, document in record, consider re-passing tube.

At this time, a trial of instilling 1-2 ml bottled water can be attempted, while observing for symptoms of aspiration/misplacement:
- Apnea
- Bradycardia
- Coughing/gagging
- \( \downarrow \) \( \text{O}_2 \) saturation, cyanosis
- Labored respirations

Document tolerance in record, and notify LIP for possible need for X-Ray

Consider x-ray if:
- Tube depth is correct distance (nose-earlobe-xiphoid- \( \frac{1}{2} \) way to umbilicus) plus 2-5 cm (depending upon pt wt) to R/O transpyloric placement.
- Any signs of misplacement, e.g. apnea, bradycardia, color change, gag, cough, etc.
- Any reason to suspect misplacement.

If choice is made to use tube without X-ray verification and documentation of aspirate, RN must stay with infant during bolus feeding or for first 10 minutes of continuous feeding.

Examine color/character of aspirate and do \( \text{pH} \) testing to establish baseline level
*reference pH testing reference chart

Mark tube where it exits the mouth/nose and, if tube has cm marks, document in NN the appropriate marking where the tube exits the nose/mouth

Measure length of tube from nose to distal end of tube

Secure tube to cheek

Use cloth tape to document length from where tube exits the nose/mouth to the distal end, and the date inserted. Attach to distal end of tube

Document in the nurses notes:
- Type/size of tube
- Color of aspirate
- Measurement from the nose/mouth to distal end of tube
- \( \text{pH} \)
- \( \text{cm} \) marking on tube, where the tube exits the nose/mouth
- Document decisions and rationale, if no aspirate and x-ray is not obtained.
## PH TESTING REFERENCE CHART

<table>
<thead>
<tr>
<th>pH &gt; 6</th>
<th>pH &lt; 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tube length/cm mark remain at baseline</strong></td>
<td><strong>Tube length/cm mark remain at baseline</strong></td>
</tr>
<tr>
<td>Document in record, notify LIP and consider</td>
<td>If intent is NG placement, tube is OK to use</td>
</tr>
<tr>
<td>a. re-passing tube *, b. waiting 15 minutes and rechecking pH, c. and/or x-Ray to verify placement *</td>
<td>Re-secure tube at baseline mark and re-check aspirate</td>
</tr>
<tr>
<td><strong>Tube length/cm mark NOT at baseline</strong></td>
<td><strong>Tube length/cm mark NOT at baseline</strong></td>
</tr>
<tr>
<td>If pH re-check is still &gt; 6, document in the record, notify LIP, and consider</td>
<td>Re-secure tube at baseline mark and re-check aspirate --If intent is NG placement, and pH &lt;6, tube is OK to use</td>
</tr>
<tr>
<td>a. re-passing tube *, b. waiting 15 minutes and rechecking pH, c. and/or x-Ray to verify placement *</td>
<td></td>
</tr>
</tbody>
</table>

* Evaluate the following in deciding whether to re-pass tube or x-ray:

- Color of aspirate
  - Stomach aspirate: clear light yellow, light green, or formula
  - Duodenal aspirate: Bile stained
  - Lung aspirate: mucous or serosanguinous

- Feedings in progress (e.g. continuous)
- Antacid therapy
- Age of baby (if < 48 hrs, consider presence of alkaline amniotic fluid prior to 1st feed).

*If decision is made to use tube without x-ray, RN must stay with patient during bolus feed or for first 10 min. of continuous feed.