



# Home NG Feeding Educational Module

2025

# Learning Objectives

This module will review the current state of gastrostomy tube placement and the transition to nasogastric tubes (NGT) being placed prior to discharge.

## Objectives:

- Review current state of feeding premature infants with feeding difficulties
- Introduce criteria for NGT placement for discharge home
- Review required discharge education for NGT

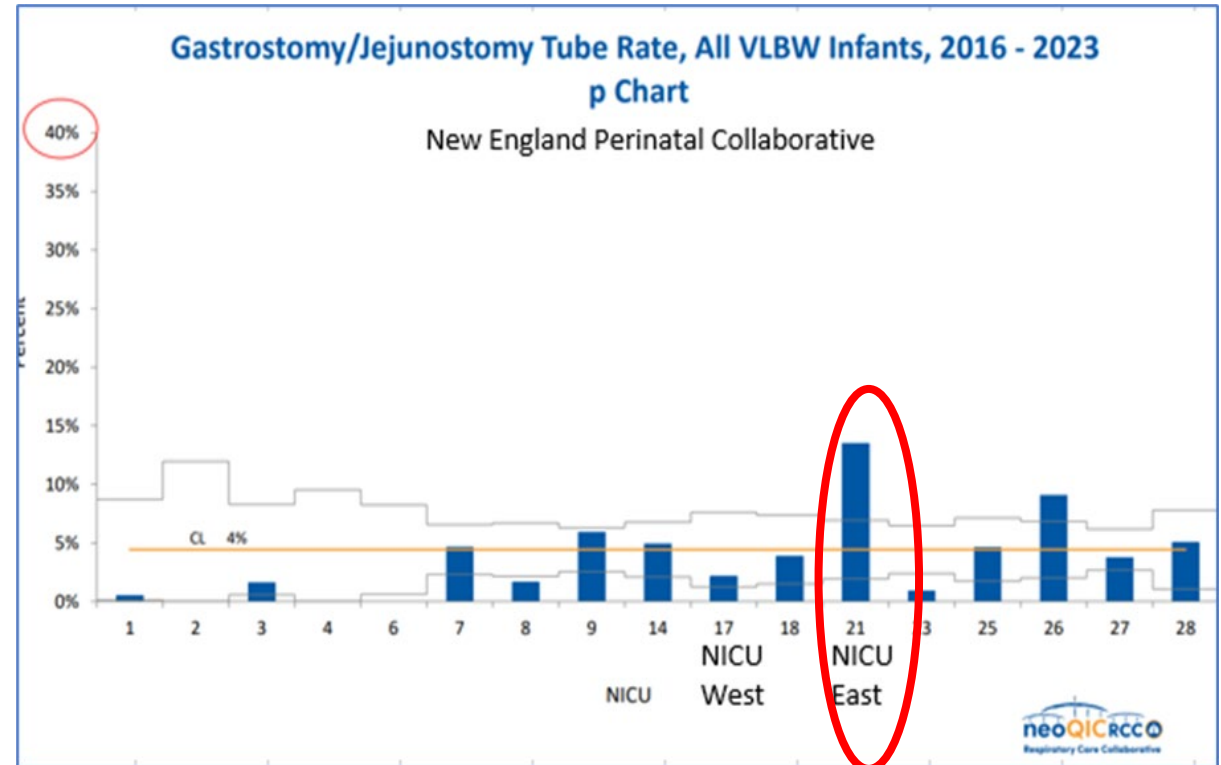


# Background: Infant Gastrostomy Tube Rates

Hartford NICU gastrostomy tube placement rate is higher than regional peers

## Factors Contributing to Extended Hospital Stays for Former Preterm Infants

- **Feeding Challenges:** Inability to feed fully by mouth
- **Variability in Practices:** Differences in approaches across hospital subspecialties
- **Outpatient Support Issues:**
  - Inadequate regional support for infants requiring partial NG tube feedings
  - Frequent NG tube replacements after discharge
  - Limited supplies and follow-up with subspecialists
- **National Best Practices:** Other NICUs have developed more effective systems for home NG tube feeding post-discharge





# Opportunity for Improvement in Care for Infants with Delayed Oral Feeding Skills

- **Current Challenge:** Infants with slow progression to full oral feeding
- **Opportunity:** Standardize and improve care by discharging select infants with NG tubes for home use
- **Goal:** Enhance continuity of care and support home feeding management



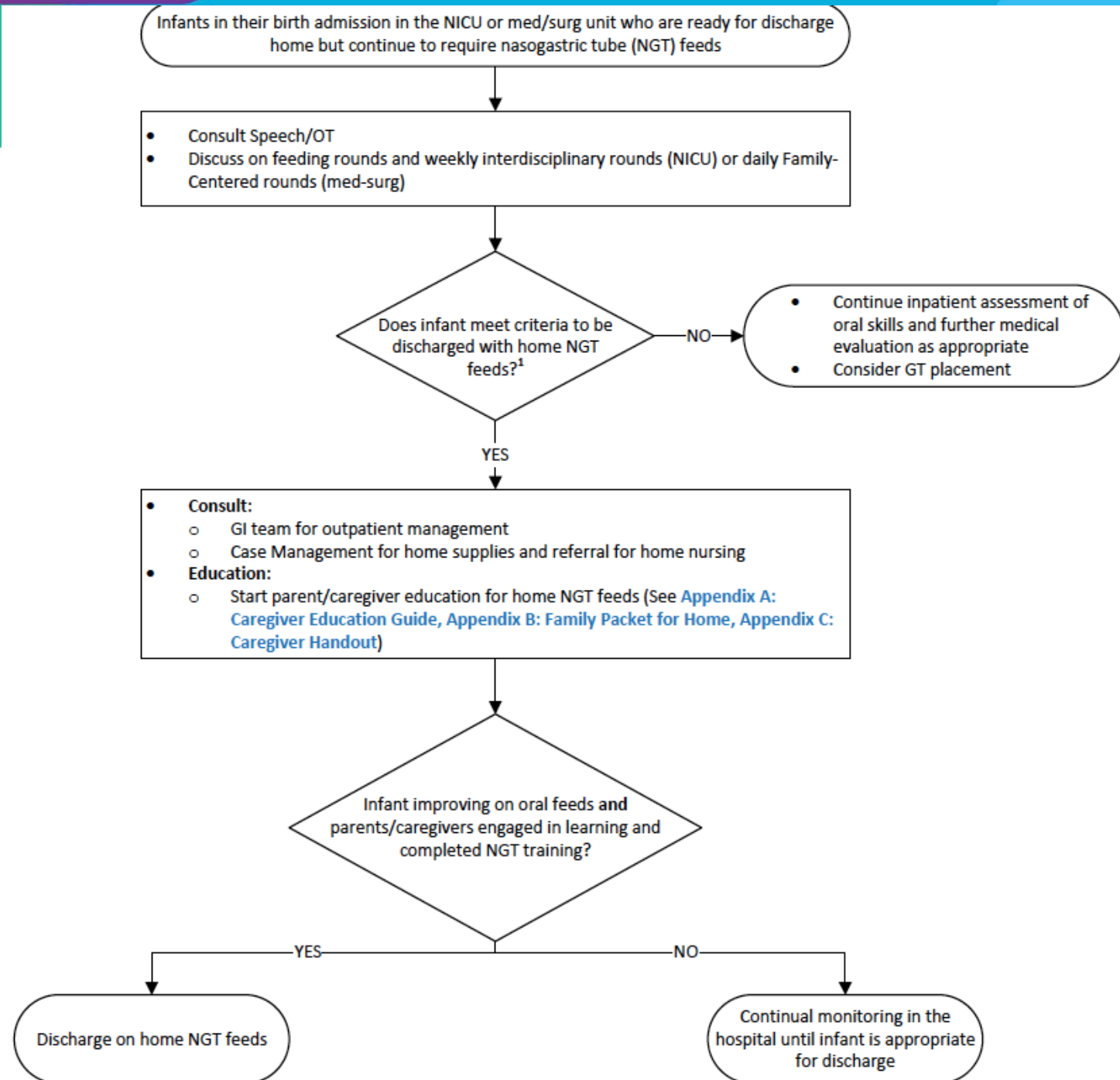
# Criteria for Discharging Neonates with NG Tube for Home Feeding

Criteria	Details
<b>Gestational Age &amp; Weight</b>	At least 40 weeks PMA and weight > 2 kg within their birth admission
<b>Oral Feeding Progress</b>	Making progress in oral feeding as determined by medical provider & SLP team
<b>Time to Full PO Feeds</b>	6 months
<b>Feeding Volume</b>	or per clinical judgement (overnight for replacement)
<b>Special Circumstances for Lower Volume</b>	<ul style="list-style-type: none"> <li>- Palliative care patients</li> <li>- Cardiac patients needing surgery</li> <li>- Infants with volume restrictions</li> <li>- Infants with aspiration (micro or silent) per modified barium swallow</li> </ul>
<b>Other Discharge Criteria</b>	Meets apnea/bradycardia/desaturation, temperature regulation, and other relevant criteria
<b>Parental Readiness</b>	Parents demonstrate willingness and ability with reasonable expectations for NG tube duration

**Must meet all inclusion criteria**

# NGT Algorithm

Pathway can be found on the Internet with additional resources.



# Exclusion Criteria for Discharging Neonates with NG Tube for Home Feeding

Criteria	Details
<b>Airway Compromise Concerns</b>	Significant tachypnea, desaturations, or other airway issues during oral feeds despite appropriate interventions (positioning, nipple type, feeding volume caps, etc.)
<b>Supplemental Oxygen Requirement</b>	Requiring supplemental oxygen at home
<b>Continuous Feeding Needs</b>	Needing 24-hour continuous feeds
<b>Family Engagement</b>	Family not engaged in learning or demonstrating ability to manage NG tube feeding at home

# Steps for Discharge Planning: NG Tube Feeding at Home

Step	Details
<b>GI Team Consult</b>	Initiate transition from inpatient to outpatient nutrition care. More details on following slide
<b>SLP Setup for Outpatient</b>	Setup with Speech-Language Pathology (SLP) for outpatient care
<b>Clearance from Teams</b>	Involved sub-specialists
<b>Supply Del</b>	Staff; used to teach
<b>VNA Sched</b>	(VNA) visit, if
<b>Parent Training</b>	Complete parent training (at least two caregivers)
<b>Parent Education</b>	Educate parents on risks/benefits of NG tube vs G tube for home feeding
<b>Social Work Consult</b>	Complete social work consultation as needed
<b>Sign-Out to Pediatrician</b>	Sign-out to pediatrician completed and appointment scheduled

**Be sure to verify that all  
steps have been completed  
before discharge of a  
patient!**



# Transition from Inpatient to Outpatient Care for NGT Feeding



Background	GI Team manages outpatient care, including feeding plan adjustments and NGT management (replacement, troubleshooting, etc.)
Discharge Planning	<p>GI Consult <b><u>must</u></b> be completed prior to discharge</p> <ul style="list-style-type: none"><li>- <b>Dedicated Clinic:</b> Developing a clinic for NG/G tube patients, with resources (RN, RD, GI provider)</li><li>- <b>Patient-Specific Plan:</b> Instructions on handling a dislodged NG tube</li><li>- <b>Individualized Plan:</b> Varies based on geography, available resources, transportation, and medical needs</li></ul>
Outpatient Appointment Schedule	<ul style="list-style-type: none"><li>- <u>First Month:</u> Up to weekly appointments, based on child's needs</li><li>- <u>Next 2 Months:</u> Up to twice monthly appointments</li><li>- <u>Ongoing:</u> Monthly appointments until NGT is no longer needed or frequency is reduced</li></ul>
Post-Discharge Care Considerations	<ul style="list-style-type: none"><li>- GI Follow-Up: Continuous care to address feeding issues and NGT management</li><li>- Flexible Scheduling: Adjust based on child's condition and progress</li></ul>

# Metrics for Discharge and Follow-Up Outcomes



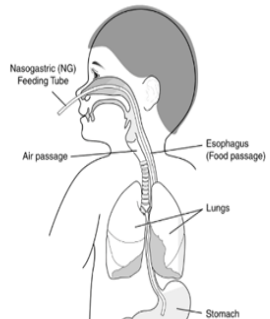
- Percentage of patients with pathway order set
- Percentage of patients with G-tube placed prior to discharge
- Percentage of patients with G-tube placed within 3 months and within 6 months of discharge
- Percentage of patients discharged home on NG tube feeds
- Percentage of patients with GI consult prior to discharge
- Percentage of patients with GI follow-up clinic appointment within 2 weeks of discharge
- Percentage of patients with VNA established prior to discharge
- Percentage of patients with failure to thrive diagnosis by 3 months post discharge and by 6 months post discharge
- ED visits within 3 months and within 6 months of discharge (all cause)
- Readmissions within 3 months and within 6 months of discharge (all cause)
- ALOS
- Number of patients discharged home on G-tube and NG tube stratified by unit

# Resources Shared with Families for Education

## FEEDING TUBES

Learning how to care for a child with a feeding tube takes time, education, and practice. Your child's nurse will discuss the topics in this book with you, and you will practice the skills many times throughout your stay. This will ensure that you are comfortable and confident with all aspects of care.


There are many types of feeding tubes. A nasogastric tube is a thin, flexible, soft tube that is passed through your child's nose, down the back of the throat, through the swallowing tube (esophagus), and into the stomach. It is taped under the nose to stay in place. A nasogastric tube is sometimes called an NG or a feeding tube.



Educational Packet



Educational PowerPoint



Connecticut Children's NICU  
282 Washington Street  
Hartford, CT 06106

(Patient Identification)

Integrated Care Plan - Discharge Home with Nasogastric Tube

Tentative date of discharge _____	NGT packet given to parents: _____	Parents instructed to sign up for CPR class. CPR completed: _____
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**DISCHARGE CRITERIA**

- Infant is at or greater than 40 weeks PMA and at least 2 kg, y/n \_\_\_\_\_
- Anticipate full PO intake within 6 months of discharge, y/n \_\_\_\_\_
- Able to take at least 100ml/kg/day PO, y/n \_\_\_\_\_  
If no to any of above, discuss case with Dr. Pyle/Prasad/Giloto/McDemott  
GI consult completed, y/n Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**INFANT CARE**

- Parents demonstrate the ability to provide basic infant hygiene and safety. \_\_\_\_\_
- Parents verbalize developmental needs of the infant. \_\_\_\_\_
- Parents verbalize indications of when to call the doctor. \_\_\_\_\_
- Parents schedule extended staytime for teaching. \_\_\_\_\_
- Parents complete the Discharge Check-Off Sheet. \_\_\_\_\_

**INFANT SAFETY**

- Parents are able to demonstrate ability to check placement of tube. \_\_\_\_\_
- Parents can successfully troubleshoot equipment issues. \_\_\_\_\_
- Parents can draw up correct feeding volume \_\_\_\_\_
- Parents secure NGT properly \_\_\_\_\_
- Parents can utilize pump properly \_\_\_\_\_
- Parents know who to contact if NGT comes out \_\_\_\_\_

**EQUIPMENT NEEDS**

- Enteralife® Infinity Enteral Feeding Pump \_\_\_\_\_
- Formula bags to use with the pump \_\_\_\_\_
- Prescription for formula (check with DME company) \_\_\_\_\_
- NG Tubing \_\_\_\_\_
- Tape/Ducterm/Tegaderm (check with nurses/DME company) \_\_\_\_\_
- pH strips \_\_\_\_\_
- Syringes \_\_\_\_\_
- IV pole for pump (if needed) \_\_\_\_\_

**DISCHARGE NEEDS**

- GI follow-up scheduled \_\_\_\_\_
- Speech follow-up scheduled \_\_\_\_\_
- Visiting Nurse scheduled \_\_\_\_\_
- Equipment ordered \_\_\_\_\_
- Resources obtained for non-business hour needs \_\_\_\_\_
- Equipment teaching completed \_\_\_\_\_
- Birth to Three referral \_\_\_\_\_
- NGT discharge checklist completed \_\_\_\_\_
- KidsHealth videos completed \_\_\_\_\_

**PEDIATRICIAN**

- Parents instructed to identify a pediatrician. \_\_\_\_\_
- Pediatrician's name: \_\_\_\_\_
- Pediatrician in agreement with home tube feeding POC \_\_\_\_\_
- First pediatrician appointment scheduled for: \_\_\_\_\_

**NUTRITION**

- Discharge feeding plan is determined and initiated. \_\_\_\_\_
- Caregivers given instructions on preparing milk safely. \_\_\_\_\_
- Arrangements made for special formula. \_\_\_\_\_
- Recipe for formula provided and reviewed with parents. \_\_\_\_\_
- WIC papers completed as needed. \_\_\_\_\_
- Lactation Consultant consultation. \_\_\_\_\_
- Developmental feeding consultation. \_\_\_\_\_
- Speech consultation. \_\_\_\_\_

**SOCIAL WORK**

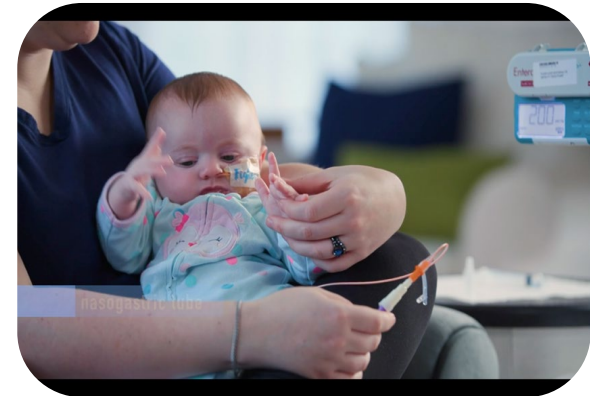
- Contact made with family per Social Work/department practice. \_\_\_\_\_

**CASE MANAGER**

- Assigned case manager is \_\_\_\_\_
- Case manager contacts family \_\_\_\_\_
- Case manager talks with family about home care agency and equipment needs \_\_\_\_\_

\*Please sign/date here if patient is transferred to another facility prior to completion of NGT/IGT teaching: \_\_\_\_\_

Integrated Care Plan for Discharge



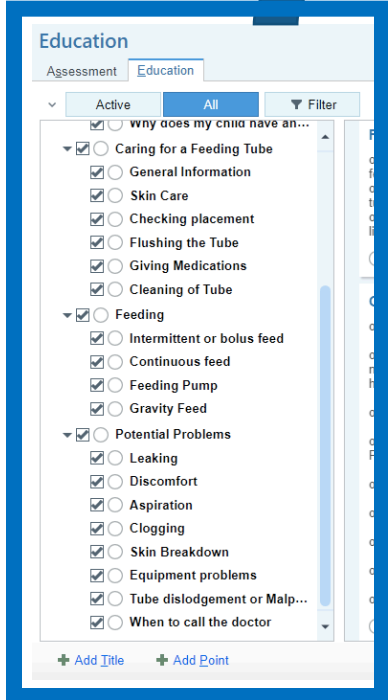
## Kids Health Videos On Get-Well Network

- Getting an NG Tube
- Handling problems with your child's NG tube
- Using your child's NG tube

# Documentation in Epic & Nursing Teaching Points



# “Discharge Home with NG” Epic Patient/Family Education



Education

Assessment | Education

Active | All | Filter

- Why does my child have an NG Tube
- Caring for a Feeding Tube
  - General Information
  - Skin Care
  - Checking placement
  - Flushing the Tube
  - Giving Medications
  - Cleaning of Tube
- Feeding
  - Intermittent or bolus feed
  - Continuous feed
  - Feeding Pump
  - Gravity Feed
- Potential Problems
  - Leaking
  - Discomfort
  - Aspiration
  - Clogging
  - Skin Breakdown
  - Equipment problems
  - Tube dislodgement or Malposition
  - When to call the doctor

+ Add Title + Add Point

Review bullets  
with caregivers  
and document  
education

Education Category	Educational Topic
Caring for a Feeding Tube	<ul style="list-style-type: none"><li><input type="checkbox"/> What is an NG</li><li><input type="checkbox"/> Why does my child have an NG Tube</li><li><input type="checkbox"/> General Information</li><li><input type="checkbox"/> Skin care/ breakdown</li><li><input type="checkbox"/> Checking placement</li><li><input type="checkbox"/> Flushing the tube</li><li><input type="checkbox"/> Giving medications</li></ul>
Feeding	<ul style="list-style-type: none"><li><input type="checkbox"/> Intermittent or bolus feeds</li><li><input type="checkbox"/> Continuous feeds</li><li><input type="checkbox"/> Feeding pump use</li><li><input type="checkbox"/> Gravity feeds</li></ul>
Potential Problems	<ul style="list-style-type: none"><li><input type="checkbox"/> Leaking</li><li><input type="checkbox"/> Discomfort</li><li><input type="checkbox"/> Aspiration</li><li><input type="checkbox"/> Clogging</li><li><input type="checkbox"/> Equipment problems</li><li><input type="checkbox"/> Tube dislodgement or Malposition</li><li><input type="checkbox"/> When to call the doctor</li></ul>

# Checking the pH of a Nasogastric Tube

# Checking the pH – Nursing Education



Gather supplies, including syringe and pH strips.



Wash your hands with soap and water

3

**RN Skills**  
Verification will be scheduled for pH testing of NG fluid soon. Refer to your Unit Based Educator for more information



Remove syringe from the feeding tube.



Check the pH of the fluid using the provided pH paper (should be < 6)\*.

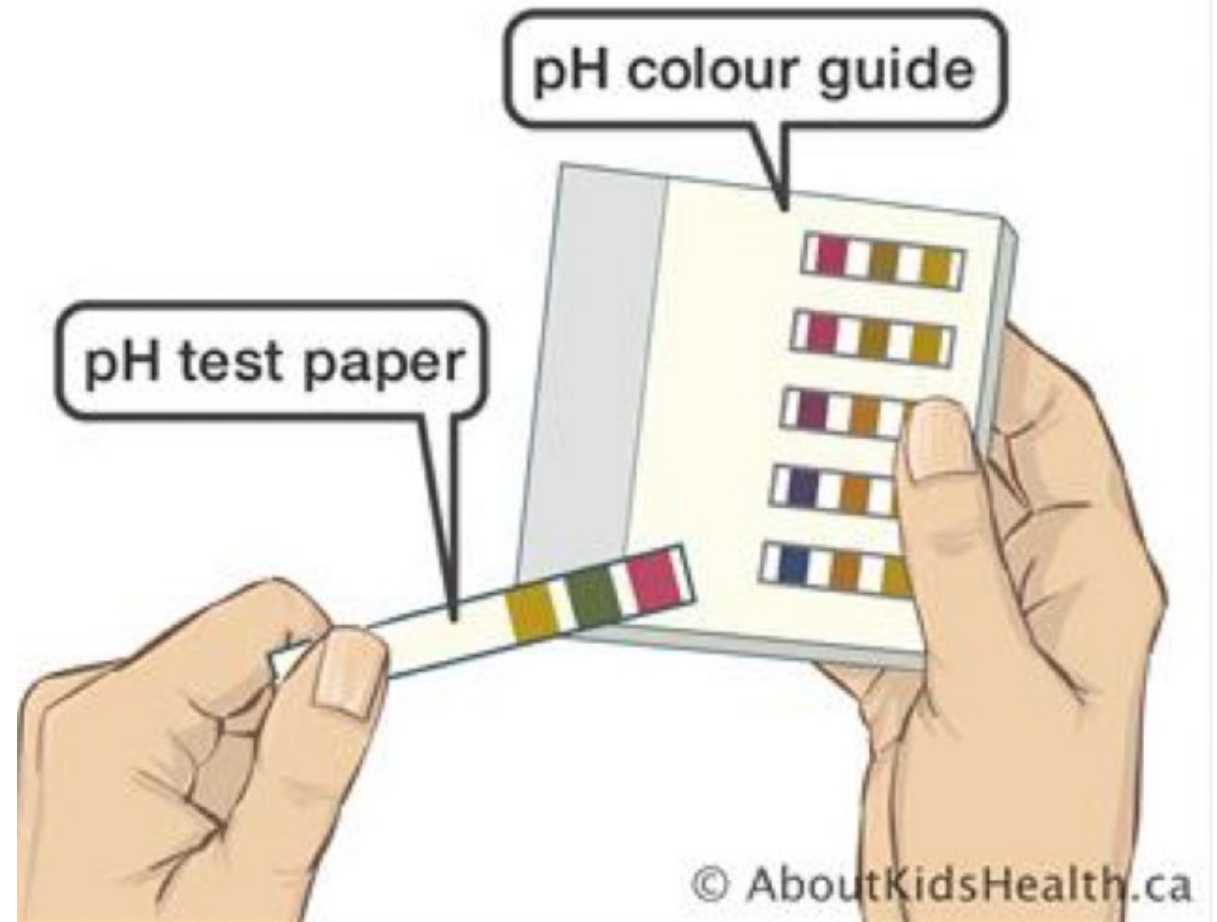
pH Test Strips found in Omni

\*The pH strips vary based on home care companies. Families are advised to follow the instructions that the home care company provides.

# Trouble Shooting pH Checks for Families

If pH above 6, **do not** use the tube and call your provider.

If your child is on continuous nighttime feedings, the pH value might not be accurate (the pH will be from the feeding) In this case, you can confirm that the aspirate is formula/breastmilk.



# Decreasing Oral Feeds after Discharge

Some infants may decrease oral intake of breastmilk or formula after leaving the hospital

- **Action for Families:**

- **Call the GI Clinic or Pediatrician** if oral intake decreases





# Thank you to this Collaborative Workgroup!



Name	Specialty/Area	Role
Kathleen Kellerman	Cardiology	Cardiology APRN
Carleen Leclaire	Case Management	NICU East Case Manager
Pam Wheelock	Case Management	NICU West Case Manager
Erica Colangelo	Clinical Nutrition	NICU East
Kate Haines	Clinical Nutrition	NICU East
Annmarie Spizzoucco	Clinical Nutrition	NICU East
Kate Vance	Clinical Nutrition	Gastroenterology
<b>Bella Zeisler</b>	<b>Gastroenterology</b>	<b>Medical Director for Gastroenterology</b>
Heidi Sweeney	Gastroenterology	Lead GI APRN with work in GI- G tube clinic
Jenny Bunick	Gastroenterology	GI Nurse
Nicole Lewie	Gastroenterology	GI nurse
Meghan Martin	Gastroenterology	GI Nurse
Maria Thierman	Gastroenterology	GI Nurse
Annmarie Golioto	NICU East	NICU East Medical Director
David Sink	NICU	Physician Quality & Safety Officer, NICU West Medical Director
Brett Citarella	NICU	Neonatologist, Medical Director at Danbury
Shabnam Lainwala	NICU and NICU Follow Up	Medical Director for NICU Follow up Clinic

Name	Specialty/Area	Role
Mariann Pappagallo	NICU West	Neonatologist at NICU West
<b>Usha Prasad</b>	NICU	Neonatologist
<b>Alaina Pyle</b>	NICU East	Neonatologist at NICU East and Danbury
Nazifa Rahman	NICU	NICU Fellow
Kristi Zuniga Aguilar	NICU East	NICU Practitioner
Courtney Conlan	NICU East	Assistant Nursing Manager
Lisa Dion	NICU West	Nurse Manager
Jeanne Silverwatch	NICU East	Nurse Manager
Laura Lissner	NICU East	NICU Educator
Lisa Stoecklin	NICU West	NICU Educator
Emily Milliken	Occupational Therapy	NICU West
Anand Sekaran	Pediatric Hospital Medicine (PHM)	Division Chief of PHM
<b>Allyson McDermott</b>	Pediatric Hospital Medicine	PHM Fellowship Director
Sara Burnham	Speech Therapy	Speech Language Pathologist
Kerri Byron	Speech Therapy	Speech Language Pathologist
Kamie Chapman	Speech Therapy	Speech Language Pathologist
Virginia Van Epps	Speech Therapy	Speech Language Pathologist
Katerina Dukleska	Surgery	Pediatric Surgeon



**For questions, please  
contact Alaina Pyle, MD,  
Allyson McDermott, MD,  
or Usha Prasad, DO.**