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# Hypertrophic Pyloric Stenosis Care Pathway

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## 1.0 Introduction

# 1.1 Target Population:

- This pathway is for use with children aged 2-8 weeks old with no underlying disease or comorbidity who have been diagnosed with hypertrophic pyloric stenosis by the General Surgery Team who require open or laparoscopic pyloromyotomy.
- Patients are to be removed from this pathway if there are significant postoperative complications for example bowel obstruction or prolonged TPN; or a change in diagnosis.

# 1.2 Target users:

 Surgeons, medical trainees (residents and fellows), Nurse Practitioners, and bedside nurses.

# 2.0 Guideline

#### Hypertrophic Pyloric Stenosis Care Pathway

#### **Expected Date of Discharge:**

	PRE-OPERATIVE	RECOVERY	DISCHARGE
GOALS	Hydration maintained     Electrolyte correction     Patient prepared for OR     Child and family to complete pre-op bath (wipes provided upon arrival);     Refer to procedure document	Afebrile with vital signs stable     Adequate pain control     Begin feeding as tolerated     Incision intact and no drainage	Afebrile     Adequate pain control     Ambutating     Able to tolerate diet     Incision dry and intact     Child/ caregiver teaching completed     Family understands discharge teaching
PHYSICAL EXAM	Obtain history     Complete physical exam     Obtain weight and height     Assess vital signs     Complete pain assessment (refer to Pain Assessment Guidelines)     Obtain in and out	Complete pain assessment every 4 hours Ensure child has adequate pain control (refer to Pain Management Guidelines) Monitor vital signs as per BPews Obtain accurate in and out Complete wound assessment Obtain daily weights Remove surgical dressing and leave steristrips	
DIET & IV FLUIDS	Ensure NPO     Set NG tube to low intermittent suction     Administer DSW/0.9 NaCl with 20mmol KCL/L at maintenance     Bolus as indicated     Refer to Fluid and Electrolyte Guidelines	Administer D5W/0.9 NaCl with 20mmol KCL/L at maintenance until adequate fluid intake     Bolus as indicated     Refer to Fjuid and Flectrolyte Guidelines     Initiate feeds 2 hours post-op or when child is alert (full strength formula or breast milk); obtain pre-post weight; ideal volume feed based on 150 mL/Kg/day     If child folterating feeds, continue towards goal of ideal volume feed (breast feed or formula every 3 hours); and continue until discharge     If child not tolerating feeds (if vomit ≥25% of ideal feed volume), wait 1 hour and repeat     Refer to feeding algorithm	
LABS & MEDICATION	Complete CBC and differential Order electrolytes (K*, Ct, Na*, VBG, urea, creatinine)	Complete labs as indicated     Ensure adequate pain control     If pain/fever, administer Acetaminophen as indicated     If signs of wound infection, assess need for antibiotics (refer to r-formulary)	Provide prescription for oral antibiotics if indicated
EDUCATION	Provide caregiver education i.e. diagnosis is not a surgical emergency and that child may have to wait for surgery, and review pre-operative process Review and obtain informed consent for surgery	Review incision care: leave steristrips in until they fall off or remove after 10 days; and gently wash incision with soap and water Review signs and symptoms of wound infection: fever, redness around incision. Drainage from incision, and increasing pain around incision Review bathing i.e. may bathe 48 hours after surgery	Review when to call surgeon's office: wound infection, increase in vomiting from baseline, and fever

### Printable versions of:

# Hypertrophic Pyloric Stenosis Pathway Post-op Feeding Algorithm

#### 3.0 References

- Ostle, D. J & Holcomb, GW. (2007). Open versus laparoscopic pyloromyotomy for hypertrophic pyloric stenosis. Advances in Surgery, 41, 81-91.
- 2. Adibe, O, Nichol, P, Lim, F, Mettei, P. (2007). Ad libitum feeds after laparoscopic pyloromyotomy: a retrospective comparison with a standardized feeding regimen in 227 infants. *Journal of Laparoendoscopic and Advanced Surgical Techniques Part A.* 17, (2) 235-7.
- 3. Aseplund, G. & Langer, J. Current Management of hypertropic pyloric stenosis. Seminars in Pediatric Surgery, 16 (1), 27-33.
- 4. Helton, K., Strife, J., Warner, B., Byczkowski, T. & Donovan, E. (2004). The impact of a clinical guideline on imaging children with hypertrophic pyloric stenosis. *Pediatric Radiology, 34, 733-736*.
- 5. Puapong, D., Kahng, D., Ko, A. & Applebaum, H. (2002). Ad libitum feeding: Safely improving the cost-effectiveness of pyloromyotomy. *Journal of Pediatric Surgery, 37, 1667-1668.*
- 6. Garza, J., Morash, D., Dzakovic, A., Mondschein, J. & Jaksic, T. (2002). Ad libitum feeding decreases hospital stay in neonates after pyloromyotomy. *Journal of Pediatric Surgery, 37, 493-495*.
- 7. Michalsky, M., Pratt, D., Caniano, D. & Teich, S. (2002). Streamlining the care of patients with hypertrophic pyloric stenosis: Application of a clinical pathway. *Journal of Pediatric Surgery*, *37*, *1072-1075*.

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- 8. Cincinnati Children's Hospital Medical Center. (2001). Evidence based clinical practice guideline for hypertrophic pyloric stenosis. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; Aug 8.
- 9. Children's Hospital Central California Pyloric Stenosis Surgical Pathway
- 10. University of Maryland Medical Systems Physician Order Sheet Pyloric Stenosis
- 11. Hall, N., Pacilli, M., Eaton, S., Reblock, K., Gaines, B., Pastor, A., Langer, J., Koivusalo, A., Pakarinen, M., Stroedter, L., Beyerlein, S., Haddad, M., Clarke, S., Ford, H. & Pierro, A. (2009). Recovery after open versus laparoscopic pyloromyotomy for pyloric stenosis: a double-blind multicentre randomised controlled trial. *Lancet*, *373*, *390-98*.
- 12. International Pediatric Endosurgery Group.(2004). IPEG Guidelines for surgical treatment of infantile hypertrophic pyloric stenosis. Pediatric Endosurgery & Innovative Techniques, 7(2): 214-7.
- Jobson, M & Hall, NJ (2016). Contemporary management of pyloric stenosis. Seminars in Pediatric Surgery. 25, 219-224. https://doi.org/10.1053/j.sempedsurg.2016.05.004

# 4.0 Guideline Group and Reviewers

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#### Attachments:

py stenosis final 2019.pdf

Pyloric Stenosis Post-op Feeding Algorithm.pdf

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