



## Options for consideration for **OUTPATIENT GERD** management/aspiration prophylaxis with resources/tools

The resource below has been developed to assist clinicians in considering treatment alternatives for discussion with patients/families (specifically neonatal/pediatric and pregnant patients). These options are based on gastroesophageal reflux (GERD) as the primary indication. **We have only provided dosing for medications currently used within IWK.** Clinicians should consider each patient

<ul style="list-style-type: none"> <li>• <b>Deprescribe or discontinue +/- incorporation of non-pharmacologic strategies below</b></li> </ul>			
<ul style="list-style-type: none"> <li>• <b>Suggest non-pharmacological strategies</b> Information on non-pharmacologic approaches: <a href="#">About Kids Health : Gastroesophageal Reflux</a> <a href="#">HealthLink BC: Gastroesophageal Reflux Disease During Pregnancy</a></li> </ul>			
<ul style="list-style-type: none"> <li>• <b>Suggest alternative pharmacological options (below)</b></li> </ul>			
<p><b>Antacids/Foaming Barriers</b></p> <ul style="list-style-type: none"> <li>• Calcium carbonate chewable tablets (TUMS) <ul style="list-style-type: none"> <li>○ “Regular Strength” (200 mg elemental calcium)</li> <li>○ “Ultra Strength” (400 mg elemental Calcium)</li> </ul> </li> <li>• Aluminum/Magnesium Hydroxide Oral Suspension (Almagel)</li> <li>• Sodium Alginate/ Aluminum Hydroxide (Gaviscon)</li> </ul>	<ul style="list-style-type: none"> <li>• TUMS likely only a viable option for older children who can chew</li> </ul> <p>In pregnant patients:</p> <ul style="list-style-type: none"> <li>• Avoid antacids containing sodium bicarbonate because they may cause metabolic alkalosis and fluid overload in mother and fetus</li> <li>• Antacids containing Mg<sup>2+</sup>, Ca<sup>2+</sup>, and Al<sup>2+</sup> or alginic acid are safe and effective</li> <li>• Options include: <ul style="list-style-type: none"> <li>○ TUMS (max 3.2 grams per day or 16 regular strength TUMS tablets) TUMS dosing depends on product used <a href="https://www.tums.com/antacid-products/">https://www.tums.com/antacid-products/</a></li> <li>○ Almagel Adult Dosing: 30mL (regular strength) PO PRN after meals</li> <li>○ Gaviscon dosing depends on product used <a href="https://www.gaviscon.ca/products">https://www.gaviscon.ca/products</a></li> </ul> </li> </ul>		
<p><b>Alternative H<sub>2</sub> Blockers</b></p> <p>Famotidine (current IWK formulary alternative oral H<sub>2</sub> blocker)</p> <ul style="list-style-type: none"> <li>• <a href="#">oral 20 mg strength (non-prescription)</a></li> <li>• <a href="#">IWK compounded suspension 8 mg/mL</a></li> </ul> <p><b>Famotidine is associated with QT interval prolongation, caution with other drugs or conditions associated with QT interval prolongation.</b></p> <p>Neonatal: We are not currently using oral H<sub>2</sub> blockers in neonates.</p> <p>-----</p> <p>Cimetidine</p> <ul style="list-style-type: none"> <li>• oral 200, 300, 400, 600 and 800 mg strength (prescription)</li> <li>• Safe and effective in pregnancy</li> <li>• Potential for many drug-drug interactions</li> <li>• May also see this used for patients undergoing C-sections (dosing: 400mg PO night before and 400mg PO 2 hours before surgery)</li> </ul> <p>Nizatidine</p> <ul style="list-style-type: none"> <li>• oral 150 and 300 mg strength (prescription)</li> <li>• Most expensive H<sub>2</sub> Blocker</li> </ul>	<p><b>Ranitidine</b></p>	<p><b>Famotidine</b></p>	
	<p><b>150 mg PO ranitidine is equivalent to 20 mg PO famotidine</b></p>		
		<p><b><u>Pediatrics</u></b> <i>GERD</i> 2.5-5 mg/kg/dose PO BID Max: 150 mg/dose <b><u>OR</u></b> 1.7-3.3 mg/kg/dose PO TID Max: 100 mg/dose</p> <p><b><u>Pregnant patients</u></b> <i>GERD</i> 300 mg/24h divided PO once to twice daily</p> <p><i>C-section (aspiration prophylaxis)</i> 150 mg PO night before and 2 hours before surgery</p>	<p><b><u>Pediatrics</u></b> <i>GERD</i> 0.5- 1 mg/kg/dose PO once to twice daily Max: 40 mg/24h</p> <p><b><u>Pregnant patients</u></b> <i>GERD</i> 10 to 20 mg PO twice daily</p> <p><i>C-section (aspiration prophylaxis)</i> PO: 20 mg PO night before and 2 hours before surgery</p>

<p><b>Proton Pump Inhibitors</b></p> <p><b>Note: Ideally, would avoid all proton pump inhibitors in the first trimester if possible</b></p> <p>Lansoprazole</p> <ul style="list-style-type: none"> <li>oral 15 and 30 mg strength (FastTabs or caps), 3mg/mL suspension (prescription)</li> <li>Safe and effective in pregnancy</li> </ul> <p>Dexlansoprazole</p> <ul style="list-style-type: none"> <li>oral 30 and 60 mg strength (prescription)</li> <li>Expensive</li> <li>Safe and effective in pregnancy</li> </ul> <p>Pantoprazole</p> <ul style="list-style-type: none"> <li>oral 20 and 40 mg strength (prescription)</li> <li>Safe and effective in pregnancy</li> </ul> <p>Omeprazole</p> <ul style="list-style-type: none"> <li>oral 20 mg strength (prescription)</li> <li>Safe and effective in pregnancy (may have the most evidence for safety)</li> </ul> <p>Esomeprazole</p> <ul style="list-style-type: none"> <li>oral 20 and 40 mg strength (prescription)</li> <li>14 days' supply of 20mg strength available OTC</li> <li>Safe and effective in pregnancy</li> </ul> <p>Rabeprazole</p> <ul style="list-style-type: none"> <li>oral 10 and 20 mg strength (prescription)</li> <li>Safe and effective in pregnancy</li> </ul>	<p><b>Lansoprazole</b></p> <p><i>IWK GERD PO dosing:</i></p> <p><u>Neonates:</u> 0.5 - 1.66 mg/kg/24hr PO once daily <u>OR</u> 0.25-0.83 mg/kg/dose PO BID</p> <p><u>Pediatrics:</u> Infants greater than 28 days – less than 1 year: 1-2 mg/kg/dose PO daily <u>OR</u> 0.5-1 mg/kg/dose PO BID</p> <p>Children 1 – 11 years: <b>30 kg or less:</b> 15 mg PO daily <b>over 30 kg:</b> 30 mg PO daily Some patients may need to increased doses (up to 30 mg PO BID) if still symptomatic Max: 3 mg/kg/24hr or 60 mg/24h, whichever is less</p> <p><u>Children 12 years and older and Adults:</u> 15-30 mg PO once daily</p> <p><u>Pregnant patients:</u> Lansoprazole at usual adult dosing</p>
<p><b>Other agents (e.g. prokinetics)</b></p> <p>Domperidone</p>	<p><b>Domperidone</b></p> <p><i>IWK GERD PO dosing:</i></p> <p><u>Neonates:</u> 0.1-0.3 mg/kg/dose PO q6-8 hours 15-30 minutes pre-feeds</p> <p><u>Pediatrics:</u> Infants older than 1 month and Children: 0.4-0.8 mg/kg/dose PO TID <u>OR</u> 0.3-0.6 mg/kg/dose PO QID Max: 30 mg/24hr</p> <p><u>Older children and Adolescents:</u> 10 mg PO TID Max: 30 mg/24h</p>