GERD

Potential Barriers and Suggested Ideas for Change

Key Activity: Diagnosis and Testing

Rationale: Gastroesophageal reflux (GER) is common in pediatric patients and accounts for a large number of physician visits to both primary care and subspecialists. In fact, gastroesophageal reflux (GER) occurs in more than two thirds of otherwise healthy infants and is the topic of discussion with pediatricians at 1 quarter of all routine 6-month infant visits.[1,2] Proper management of these patients can only be accomplished if an accurate diagnosis is made; therefore, it is imperative that primary pediatricians become familiar with the resources that are available regarding pediatric reflux and feel comfortable diagnosing these patients. The subspecialist can expect to be consulted by primary care providers for help in managing such cases. A strong relationship with referring physicians provides an opportunity for the subspecialist to educate them on the difference between GER and GERD, which should help avoid testing and unnecessary treatment of infants with GER, while leading to a better understanding of the indications and limitations of specific types of investigative testing.

GER in infants is a benign condition that resolves completely in the majority of cases by 1 year of age.[3] Therefore, testing is not indicated in a majority of these patients. GERD in pediatric patients, on the other hand, is present when reflux of gastric contents is the cause of either troublesome symptoms or complications. The 2018 NASPGHAN Guidelines have identified symptoms and signs that require investigation. (Refer to 2009 A Global, Evidence-based Consensus on the Definition of Gastroesophageal Reflux Disease in the Pediatric Population and 2018 NASPGHAN Guidelines for the definition of GERD.)

[1]Nelson SP, Chen EH, Syniar GM, Christoffel KK; Pediatric Practice Research Group. Prevalence of symptoms of gastroesophageal reflux during childhood: a pediatric practice-based survey. *Arch Pediatr Adolesc Med.* 2000;154(2):150–154

[2] Campanozzi A, Boccia G, Pensabene L, et al. Prevalence and natural history of gastroesophageal reflux: pediatric prospective survey. *Pediatrics.* 2009;123(3):779–783

[3] Davies I, Burman-Roy S, Murphy MS; Guideline Development Group. Gastro-esophageal reflux disease in children: NICE guidance. *BMJ*. 2015;350:g7703

Potential Barriers	Suggested Ideas for Change	Still Not Seeing Results?
Gap: GER is not appropriately diagnosed according to the 2018 NASPGHAN Guidelines criteria.		
Provider may misdiagnose GER as GERD due to poor understanding of criteria for GER diagnosis.	Review the following: ✓ 2018 Pediatric Gastroesophageal Reflux Clinical Practice Guidelines: Joint Recommendation of NASPGHAN and ESPGHAN ✓ 2013 AAP Clinical Report: Gastroesophageal Reflux: Management Guidance for the Pediatrician ✓ 2009 A Global, Evidence-based Consensus on the Definition of Gastroesophageal Reflux Disease	
Gap: GERD diagnosis is not appropriately established based on the presence of GERD symptoms/signs.		
NASPGHAN Guidelines are not	Become familiar with symptoms and signs, 'red flags' and differential	• In physician staff meetings, periodically

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consistently followed in practice.	diagnoses when considering alternative diagnoses. Establish a clear protocol for diagnosing GER and GERD that is consistent with the 2018 NASPGHAN Guidelines criteria for diagnosis. ✓ Create a GER/GERD encounter form (or drop down "Smart Phrase" or "Smart Form" for the electronic medical record) to document symptoms, signs, and warning signals consistent with reflux. Complete a detailed medical history and physical examination to help establish the diagnosis. Structured algorithms as illustrated in the 2018 Pediatric Gastroesophageal Reflux Clinical Practice Guidelines can aid in this effort: • Algorithm 1: The diagnostic and therapeutic work-up in infants with a suspicion of GERD • Algorithm 2: The diagnostic and therapeutic work-up in children with a suspicion of GERD (typical symptoms) Also helpful are the Decision Trees created for this course: • Approach to infant with recurrent regurgitation and vomiting • Approach to child with GERD symptoms	review and discuss charts of patients diagnosed with GERD to confirm that appropriate criteria were present. • Use the EQIPP Data Collection Tool to identify gaps.
Gap: GER diagnosis is not always documented in the patient chart.		
The provider is not able to distinguish between GER vs GERD diagnosis, and thereby give the appropriate diagnosis, or is confused by diagnosis codes.	Establish a policy for committing to and documenting all diagnoses on a patient's chart. ✓ Review GER/GERD diagnosis criteria mentioned above. ✓ Create an encounter form to document diagnosis criteria. ✓ Become familiar with GERD coding, See Coding at the AAP at AAP.org.	• Consider having a lunch-and-learn session with physicians of the practice to be sure everyone understands the importance of appropriate documentation of diagnoses.
Staff is reluctant to label the diagnosis as GER if the parent is	Suggest nonpharmacological (lifestyle) strategies as a treatment solution (conservative therapies, see *Treatment,* Lifestyle Strategies in the Clinical	• Direct parents to GIKids.org for reliable patient education materials.

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requesting medications.	Guide), and educate the family about unnecessary medication exposure and possible side effects. Review Influence of "GERD" Label on Parents' Decision to Medicate Infants. Provide family with educational materials regarding GER in infants and children. Remember to stress that GER is a benign condition.	
Gap: Tests are ordered for pediatric patients with GER, which is inconsistent with 2018 NASPGHAN Guidelines.		
2018 NASPGHAN Guidelines are not consistently followed for pediatric patients with GER—unnecessary testing is done.	Establish a policy that outlines how to use the 2018 NASPGHAN Guidelines for pediatric patients with GER. Testing is not required. Review the natural history of GER in children. See *Diagnosis and Testing* Clinical Guide and *Education* Clinical Guide.	Conduct an in-service program for all staff to review the policy and 2018 NASPGHAN Guidelines for pediatric patients with GER and to inform them that testing is not required.
GER may be misdiagnosed as GERD. • The natural history and benign nature of GER in infants and children is not clearly understood. • Clinical manifestations of GER are not clearly understood. • Manifestations that constitute GERD are not clearly understood.	Establish a clear protocol that addresses clinical manifestations of GER and GERD and is consistent with the 2018 NASPGHAN Guidelines. ✓ Complete a detailed medical history and physical examination to help establish the diagnosis. Use symptoms and signs and 'red flags' as a guide to consider an alternative diagnosis.	Provide training that reviews the 2018 NASPGHAN Guidelines targeting the benign nature of GER in infants and how to make a positive clinical diagnosis based on patient history and physical examination findings. Also see 2009 Global Definition of GER.
Standards of care for testing to diagnose and treat GERD in pediatric patients are not clearly understood.	Consider benefits and limitations of all diagnostic modalities for GERD in infants and children, specifically the following: ✓ Barium contrast radiography ✓ pH/Impedance ✓ Upper gastrointestinal endoscopy ✓ Abdominal ultrasound ✓ Scintigraphy For additional information, see 2018 NASPGHAN Guidelines, *Diagnosis*	

	and Testing Clinical Guide, and the *Treatment* Clinical Guide.	
Staff is unaware of recommended criteria for testing of patients based on GERD or GER diagnosis.	Provide training that reviews the 2018 NASPGHAN Guidelines targeting how to differentiate between GER and GERD in children and appropriate testing based on diagnosis criteria. Also see 2009 Global Definition of GERD. Review the 2013 AAP Clinical Report: Gastroesophageal Reflux: Management Guidance for the Pediatrician. Develop a policy that references the *2018 NASPGHAN Guidelines* to emphasize that children with GER *should not* be tested.	Periodically review and discuss in physician staff meetings charts of patients diagnosed with GER/GERD for whom testing was ordered to confirm appropriate testing recommendations were followed. Use the EQIPP Data Collection Tool to identify gaps. Create an encounter form (or Smart Phrases, Smart Form for those practices that use an EMR) for use in your practice.
The practice is unaware of when and what tests to perform to rule out alternative diagnoses.	Develop a protocol that outlines consulting with a pediatric gastroenterologist when further evaluation is needed. Consideration will be given in the protocol for those investigations that can be done by the pediatrician prior to referral, eg, upper GI series. Consider generating an appropriate referral list of subspecialists for referrals and consultations.	
Staff is reluctant to label diagnosis as GER if a parent wants a treatment solution.	Suggest nonpharmacological (lifestyle) strategies as a treatment solution (conservative therapies, see *Treatment*, Lifestyle Strategies in the Clinical Guide), and educate the family about unnecessary medication exposure and possible side effects. Review Influence of "GERD" Label on Parents' Decision to Medicate Infants. Provide family with educational materials regarding GER in infants and children. Remember to stress that GER is a benign condition.	Conduct an in-service program for all staff to review the protocol and 2018 NASPGHAN Guidelines for staff who are reluctant to label a diagnosis as GER if a parent wants a treatment solution. Be sure to cover why there is potential harm in labeling a patient as having a disease.

Key Activity: Treatment

Rationale: The 2018 NASPGHAN Guidelines discuss 3 primary treatment strategies for pediatric patients with gastroesophageal reflux disease, or GERD. They are nonpharmacological treatment, pharmacologic therapy, and surgery. Nonpharmacological lifestyle management of reflux should be discussed in all patients with physiological reflux and with suspected reflux disease or proven GERD, and is probably underutilized in practice. Shalaby and Orenstein (2003)[1] found that 27% of infants referred to a drug trial for GERD because they failed treatment by their primary care provider actually responded to lifestyle management given over the phone and did not require medical treatment. The 2018 NASPGHAN Guidelines stress that there are no indications for using pharmacological treatment for patients with GER. They also recommend various pharmacological treatment strategies to treat GERD. Because surgical procedures for GERD can result in significant morbidity and even mortality, careful consideration needs to be given to make sure the procedure is indicated and the child has GERD and not another condition that can mimic GERD (for example, eosinophillic esophagitis).

[1]Shalaby TM, Orenstein SR. Efficacy of telephone teaching of conservative therapy for infants with symptomatic gastroesophageal reflux referred by pediatricians to pediatric gastroenterologists. *J Pediatr.* 2003;142(1):57–61

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Gap: Nonpharmacological treatment options are not discussed with the patient/family and documented in the patient chart.		
The practice lacks clarity and understanding of the current recommendations regarding nonpharmacological treatment.	Review the following: • 2018 NASPGHAN Guidelines • 2013 AAP Clinical Report: Gastroesophageal Reflux: Management Guidance for the Pediatrician • Shalaby TM, Orenstein SR. Efficacy of telephone teaching of conservative therapy for infants with symptomatic gastroesophageal reflux referred by pediatricians to pediatric gastroenterologists. *J Pediatr.* 2003;42:57–61	Consider having a lunch-and-learn session with physicians of the practice to discuss everyone's understanding of the policies, and/or what is unclear.
The practice lacks a process for discussing age-specific nonpharmacological (formerly called "conservative methods") options with the patient/family during the visit.	Develop your own patient handout that discusses nonpharmacological treatment at different ages or consider using the Parent's Take Home Guide to GERD available on the GI Kids Home Page. Create a checklist of nonpharmacological options by age group to ensure you do not miss any of the following points: For infants ▪ Avoid overfeeding ▪ Thickened formula ▪ Trial of protein hydrolysate or amino-acid based formula (at least 2 weeks). ▪ Positioning:	

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	▪ Keep the infant upright for 30 to 45 minutes after meals. ▪ Prone positioning may be used if the infant is observed and awake. **Note:** "*However, because of the risk of sudden infant death syndrome, supine positioning is recommended for sleep. Although elevating the head of the bed by 30° is recommended* ***not*** *to use positional therapy to treat symptoms of GERD in sleeping infants*."[1] For children and adolescents ▪ Eat smaller, more frequent meals. ▪ Avoid eating or drinking 2 to 3 hours before bedtime. ▪ Elevate the head of the bed to 30° if having nocturnal symptoms. ▪ Sleep in the left lateral decubitus position. ▪ Limit or avoid carbonated drinks, chocolate, caffeine, and foods high in fat or that are acidic or spicy. ▪ Avoid large meals before exercise. ▪ Lose weight, if overweight.	
The practice does not have a process or place in the medical record to document recommended nonpharmacological treatment options.	All discussions should be documented in the medical record. Develop process and a place in the medical record to document: • Create an encounter form with a space for documenting the recommended nonpharmacological /treatment. Or use the encounter form provided with this course.	
Gap: Recommended nonpharmacological treatment options are not confirmed.		
The practice does not have a process to confirm that the patient/family initiated the recommended nonpharmacological treatment options.	Include a procedure in your treatment protocol to flag the chart/medical record of patients for whom compliance is to be confirmed in "x" number of weeks. Have appointed office staff contact the family via phone, e-mail, or patient portal to ensure the patient: ✓ Is following recommended treatment and that they are correctly administering treatment	

Potential Barriers	Suggested Ideas for Change	Still Not Seeing Results?
	✓ Has no questions regarding the recommended treatment ✓ Is clear on what signs/symptoms to watch for ✓ Does not have any concerns ✓ Knows when to return for follow-up and has made an appointment	
Gap: Acid suppression medications or other treatments/interventions* are inappropriately initiated and/or continued for patients with a diagnosis of GER. *****(*Other treatments include, but are not limited to: nasogastric tubes, continuous or transpyloric feeds, maternal elimination diet, hypoallergenic formula, surgical referral.*)		
Empiric trial (ie, acid suppression medications and other treatments/interventions) of therapy is not clearly understood. The practice does not have a process in place to assess patient response to empiric therapy.	Review *Treatment* section in the Clinical Guide with medical staff. Develop a protocol that clearly establishes criteria for prescribing an empiric trial of therapy for patients with GERD that includes the following: o Identification of specific GERD symptoms and signs that require improvement before initiation of treatment. o Determination of dose and type of acid-suppressant medication. Considerations should include severity of disease; compliance issues, including cost formulation and insurance requirements; and any underlying patient medical conditions. o Determination of the definitive length of a trial appropriate to a particular condition. See 2018 NASPGHAN Guidelines. o Schedule follow-up appointments within 2 to 4 weeks to assess patient response to empiric trial of therapy. **Note:** Prior to additional testing, it may be necessary to first rule out alternative diagnosis.	Educate health care providers about the use of acid-suppressant therapy before referral.
There is a lack of time to **manage** patients with GERD.	Create an office protocol for the treatment of patients with GERD that includes the following: ✓ Symptoms and signs of GERD ✓ What empiric treatments should be attempted and for how long before referral ✓ When to appropriately refer a patient ✓ If the patient can be managed by the primary care practice,	

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	consider the following: • What medications/lifestyle changes should be recommended and how long of a trial is necessary? • When should the patient return for follow-up? • Set up a process for nursing staff to call patients during the interim to check in on the patient's progress. ✓ Flagging of the chart with the condition to alert physicians to make sure they inquire about current status of condition.	
Gap: Metoclopramide is inappropriately initiated or continued.		
Initiating appropriate pharmacologic treatment for patients diagnosed with GERD is not clearly understood. Practice is unaware that current evidence does not support the benefit of metoclopramide because there are definitive risks such as potentially serious CNS sequlae with this drug.	Educate medical staff. See the *Treatment* section in the Clinical Guide. o Develop a practice-wide protocol that addresses the various pharmacologic treatment options and strategies for patients with GERD. (Provide office-wide training once a protocol is developed.) Realistically, pediatricians may spend considerable time determining doses and adjusting doses. Allow for patient contact time, which may include nurse-specific follow-up phone calls, to determine and adjust medication dosages before GERD symptoms improve.	

Key Activity: **Referral**

Rationale: Most pediatric patients with uncomplicated gastroesophageal reflux (GER) can be managed by their primary care provider (PCP). Understanding when to refer pediatric patients with gastroesophageal reflux disease (GERD) to a gastroenterologist helps eliminate unnecessary referrals.

Potential Barriers	Suggested Ideas for Change	Still Not Seeing Results?
Gap: Appropriate referral to a gastroenterologist is not always performed for patients with persistent clinically evident reflux.		
Criteria for primary care practice referring patients with GERD or GERD masqueraders are not well understood.	Review the following for information regarding 'red flags' that might suggest GERD or an alternative diagnosis: ✓ 2018 NASPGHAN Guidelines ✓ 2009 A Global, Evidence-based Consensus on the Definition of Gastroesophageal Reflux Disease (See *Education* in the Clinical Guide.) ✓ 2013 AAP Clinical Report: Gastroesophageal Reflux: Management Guidance for the Pediatrician Consider referral to a pediatric gastroenterologist or other pediatric subspecialist ***when***: ⇨ Onset of GER symptoms first occurs after 6 months of age or when symptoms persist beyond 12 months. This raises the possibility the symptoms are not due to benign GER of infancy and alternative diagnoses and/or therapy need to be considered. ⇨ The presumed GERD signs and symptoms have not resolved or significantly improved after nonpharmacological lifestyle changes in an infant, and/or after 4 to 8 weeks of PPI pharmacological therapy with an older child or adolescent. ⇨ The patient has a significant complication of GERD. Complications might include anemia, hematemesis, persistent nighttime awakening due to heartburn, noncardiac chest pain, regurgitation, and failure to thrive, as well as severe respiratory or upper airway (ie, otolaryngological) symptoms. ⇨ The primary care physician believes the diagnosis is something other than reflux, based on 'red flag' symptoms or lack of improvement. ⇨ The infant or child displays alarm signs or symptoms suggesting an underlying gastrointestinal disease (see Table 3). ⇨ Patients cannot be permanently weaned from pharmacological treatment within 6–12 months. Consult local gastroenterologists for guidance on what they would consider	Conduct an in-service program for all medical staff to review the 2018 NASPGHAN Guidelines, eg, Grand Rounds, lunch symposium, webinars. After reviewing the 2018 NASPGHAN Guidelines discuss with your team how to distinguish between a true GERD diagnosis and what might be a GERD masquerader.

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	an appropriate referral.	
Subspecialty practice does not have consensus among all providers as to what is and is not an appropriate referral to the pediatric gastroenterologist.	All providers of subspecialty practice should review all current guidelines and set standards for: ✓ The criteria of symptoms and signs that would support evaluating and continued care of the patient ✓ Agreement on what situations would warrant sending the patient back to the referring physician Reach out to local referring physicians to discuss what they should be looking for when referring a patient for evaluation of GERD. Provide training for all medical staff (such as using the content provided in EQIPP) about appropriate criteria for referral to a gastroenterologist.	Routinely meet with all providers of the practice and review/discuss recent cases of GERD referrals and outcomes of such referrals.
Gap: Trial of acid-suppressant medication is not routinely recommended before referral to a subspecialist for patients 1 year of age or older.		
The practice does not have a protocol to address when empiric treatment is appropriate for patients with GERD before referral to a specialist.	Review 2018 NASPGHAN Guidelines for information about when to use acid-suppressant therapy before referral to a gastroenterologist: • **In patients 1 year of age or older**, an empiric trial of acid suppression should be initiated or continued prior to referral to a subspecialist. • **In patients under 1 year of age**, acid suppression should not be started for patients before referral to a gastroenterologist, unless one is not available. Determine if there is reasonable access to a pediatric gastroenterologist for your patients. Develop a practice protocol not to use empiric treatment and instead refer to a pediatric gastroenterologist. If a gastroenterologist is not available, then develop a protocol for empiric treatment before referring patients with reflux.	• Educate health care providers about the unnecessary use of acid-suppressant therapy with infants under 1 year of age before referral. • Discuss inappropriate use of acid suppression therapy and PPIs when still in the pediatrician's office.
Gap: The primary healthcare physician (PHP) and other pertinent information is not sent with the referral or obtained by the subspecialist.		
The primary care practice does not have a process to ensure that all pertinent information accompanies the referral.	Create a checklist to add to referral forms that include the following to assure all pertinent information is sent to the subspecialist: ☐ History ☐ Physical examination ☐ Growth charts ☐ Any nonpharmacological lifestyle changes attempted	

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	☐ Dietary, formula (if applicable) changes attempted ☐ Medications, if any ☐ Laboratory results, if any ☐ Imaging results, if any ☐ Summary of case (ie, impression of concern) ☐ Any psychosocial concerns ☐ Contact information for the referring physician ☐ Contact information for the patient/family Contact local gastroenterologists to inquire what information they would like to have sent along with the referral.	
The subspecialty practice does not have a process in place to confirm or obtain all pertinent information from the referring physician.	Contact local physicians that refer to the subspecialty practice and send them a checklist of items that should accompany the referral. At the time of a new patient referral appointment, have front-office staff get the name and contact information for the referring physician so they can be contacted for the medical records. One day prior to patient referral appointments, have office staff confirm all information has been received.	
Patients/caregivers make appointments without referral or copies of medical information.	Create a process for front office staff to confirm the following when making appointments for GERD evaluation: ✓ Ask if the patient is being referred by a physician: • If referred by a physician, get the name and contact information of the referring physician. Call the referring physician to make sure the information from the above checklist will accompany the referral. • If not referred by a physician, get the patient's primary care physician's information and a signed request for medical records.	

Key Activity: Education, Follow-Up, and Communication

Rationale: According to experts in the field, providing education and anticipatory guidance to patients and/or their caregivers leads to better management of children with GER and GERD.[1,2]

Regarding follow-up, Nelson[2,3] (1998, 2000) followed a cohort of infants with GER (Happy Spitters) and found that for the majority, reflux is a benign condition with symptoms that resolve by age 12 months. When symptoms persist beyond 12 months without adequate treatment, infants and children with GERD are at increased risk for complications related to acid reflux including erosive esophagitis, esophageal strictures, Barrett's esophagus, vocal cord damage, growth failure, and chronic lung disease. Regular follow-up of children with GERD to ensure both optimal treatment and compliance can minimize the risk for developing complications and may also lead to early identification and treatment of any that do occur. In some cases, recommended follow-up of infants and children with GER or GERD may be with the primary healthcare provider. At other times, it may be with a subspecialist.

The other important piece of the puzzle is appropriate and regular communication. *For effective care of patients with gastroesophageal reflux disease (GERD),* bidirectional communication *is necessary between the GERD Core Team (comprised of the primary healthcare provider [PHP], subspecialist, patient, and family) and the rest of the multidisciplinary team. This exchange is particularly important with regards to the sharing of follow-up and care plans.* It is the PHP's responsibility to obtain and support the care plan and to communicate important health status changes. It is the subspecialist's responsibility to communicate essential care and management parameters.

[1]Rosen R, Vandenplas Y, Singendonk M, et al. Pediatric gastroesophageal reflux clinical practice guidelines: joint recommendations of the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition and the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition. *J Pediatr Gastroenterol Nutr.* 2018;66(3):516–554. doi: 10.1097/MPG.0000000000001889

[2]Nelson SP, Chen EH, Syniar GM, Christoffel KK; Pediatric Practice Research Group. One-year follow-up of symptoms of gastroesophageal reflux during infancy. *Pediatrics*. 1998;102:e67–e69

[3]Nelson SP, Chen EH, Syniar GM, Christoffel KK; Pediatric Practice Research Group. Prevalence of symptoms of gastroesophageal reflux during childhood: a pediatric practice-based survey. *Arch Pediatr Adolesc Med.* 2000;154(2):150–154

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Gap: Anticipatory guidance regarding pediatric gastroesophageal reflux is not provided to the family and/or patient or documented in the patient chart.		
Importance of education and anticipatory guidance when managing patients with reflux is not fully understood.	Provide information to health care team that documents the importance of education and anticipatory guidance when managing patients with GER or GERD. (See 2018 NASPGHAN Guidelines and 2013 AAP Clinical Report: Gastroesophageal Reflux: Management Guidance for the Pediatrician.) Use tools provided in *Education* and *Treatment* Clinical Guides of this course.	
Lack of appropriate, helpful information and/or materials to provide to patient/caregiver.	Develop a protocol to provide education and anticipatory guidance to patients and caregivers of patients with GER or GERD. Provide simple, straightforward materials that can be used in educating patient/caregiver regarding GER and GERD. Take into account cultural,	Provide take-home materials (for patients/caregivers) regarding GER and GERD from GIKids.org. Have these resources readily available in the treatment room, the waiting room, and/or with the patient's chart.

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	literacy level, and language barriers when choosing education materials for your patient population. Direct parents to the following: **GIKids.org,** which provides videos, audio, and downloadable pdf materials such as: o Parent's Take Home Guide to GERD (also recommended by AAP) o Infants Reflux Checklist o Coping Guide for Parents o Teen's Checklist for GER or GERD AAP **HealthyChildren.org** web site for these useful information topics: o GER and GERD Parent FAQs o Not All Reflux in Infants is Disease, According to AAP o Infant Vomiting o What Is a Pediatric Gastroenterologist? Ensure that the patient/caregiver is aware of nonpharmacological lifestyle changes, expectations, and when and how to follow up with health care provider. A written care plan should be created by the **Subspecialis**t, with input from the patient/family. The care plan should be specific and easy for the patient/parent/caregiver to understand. For more information see *Follow-up* and *Communication* in the Clinical Guide. Note: *It is the **generalist's** responsibility to send essential information with the initial referral, to obtain and support the care plan, and to communicate important health status changes.* *It is the **subspecialist's** responsibility to develop and share the care plan with team members and communicate important care plan updates after every visit.*	Primary care practices can consider contacting local gastroenterologists to ask for sources of reliable patient education materials or informative Web sites
There is inadequate time to provide education and	Use a treatment protocol that highlights specific anticipatory guidance.	Provide skill-building training for staff to effectively deliver relevant GER/GERD

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anticipatory guidance to patient/caregivers.	Put together a list of reliable Web sites and resources that can be handed to the patient/caregiver. Check the following home pages for more information: GIKids.org, NASPGHAN.org, and HealthyChildren.org. Create an information center in any small unused space of your office, and label it the *Education Center*. Designate a staff person to be your Education Champion responsible for: o Reviewing educational materials with patients/caregivers o Ensuring that the patient/caregiver understands: a. Symptoms/signs to watch for b. How and when to administer medications c. Who to contact with questions or concerns o Maintaining inventory of up-to-date patient education materials	education.
There is not a standard place in the medical record to document patient education was provided.	Document in the chart of each patient with newly diagnosed GER or GERD that the GER or GERD materials were discussed and given to the patient/caregiver. During follow-up visits, reiterate key points summarized on the handout used. Create an encounter form with an area to record educational materials and discussion. A sample encounter form is provided with this course. Update EHR systems to include prompts for documentation of discussions and educational materials provided.	
Gap: A follow-up plan is not established/updated/maintained or documented in the patient's chart.		
Follow-up appointment to assess GER or GERD symptom management, either in the primary healthcare office or with the subspecialist, is not regularly scheduled or documented within a practice.	Develop a follow-up plan protocol. • Review the current follow-up scheduling process to identify gaps and areas of potential breakdown. • Examine your process for the following: o Follow-up appointment scheduling process: ▪ *What is your current process for scheduling follow-up appointments?* ▪ *How do you apply this process for patients with GER or GERD?* ▪ *Are there steps in the process that consistently fail? If so,*	Meet with the health care team to discuss how ensuring follow-up appointments to monitor GER and GERD can help keep patient care in line with the 2018 NASPGHAN Guidelines and brainstorm ways to meet the recommendations of the guidelines. Identify communication breakdown to improve bidirectional communication between referring providers and subspecialists when follow-up

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	what are they and why do they fail? o Communication between physicians and staff when a follow-up appointment is requested and not made: ▪ *How does your practice track a follow-up appointment for GER or GERD?* ▪ *How does your practice ensure that patients appropriately follow up with either the primary health care provider or a subspecialist?* o Patient appointment reminder system: ▪ *Does your practice's reminder and recall system work as well as it should?* ▪ *Is there a process to document all follow-up recommendations and appointment referrals in the medical record?* • Identify and correct defects in the appointment reminder system. • Consider follow-up appointments via phone contact. • Implement systemwide changes (in the practice) that track patients who do not keep follow-up appointments.	appointments are recommended, but not scheduled. Review and post in the office the GERD Bidirectional Communication Diagram as a reminder of effective communication
Parents or caregivers do not understand the potential for complications associated with GER and GERD.	Identify parent's level of understanding of GER and GERD in infants. ▪ Educate parents through discussion, as well as educational brochures and pamphlets, such as those available at GIKids.org. (Additional materials are listed in the Potential Barriers and Suggested Ideas for Change in the *Education* Clinical Guide of this course.) ▪ Explain and emphasize the need to monitor for bothersome symptoms or 'red-flag' signals while providing anticipatory guidance. ▪ Ask parents to verbalize understanding of the natural history of GER and GERD, including red flag warning signals. ▪ Ask parents to verbalize understanding of GERD and the potential complications associated with inadequate treatment.	Instruct parents to complete Infants Reflux Checklist and Parent's Take Home Guide to GERD. Provide GIKids Web site guidance for parental self-education on GER and GERD. Print information to use as handouts if computer access is an issue.
Primary healthcare providers and medical staff may be unaware of appropriate treatment duration for infants and children with GERD and/or appropriate timing	Review the *Treatment* and *Referral* sections in the Clinical Guide of this course for tips on how to accomplish the following: • Educate primary healthcare providers and medical staff regarding appropriate GER and GERD treatment and referral.	Meet with health care team to discuss 2018 NASPGHAN Guidelines and to establish follow-up appointments as a mainstay of monitoring GER and GERD. Engage health care team in brainstorming about ways to

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for referral to a gastroenterologist.	• Develop a practice-wide protocol that addresses the various pharmacologic treatment options and strategies for patients with GERD. (Provide officewide training once a protocol is developed.)	meet the recommendations of the guidelines.
Gap: A written care plan developed by the subspecialist with input from the patient and family is not available. *It is the **subspecialist's** responsibility to develop and share the care plan with team members and communicate important care plan updates after every visit.*		
The importance of developing or maintaining a written care plan with input from the patient and family is not recognized.	• Review the policies and guidelines that outline clinician responsibilities for developing and maintaining patient care plans, including: ✓ The 2002 AAP Medical Home Policy Statement (reaffirmed 2008), which defines the concept of the medical home and outlines the importance of care coordination between the pediatric medical home, the specialty care team, and other providers ✓ The 2011 transition guidelines clinical report from the AAP, AAFP, and ACP, Supporting the Health Care Transition From Adolescence to Adulthood in the Medical Home ✓ The 2012 AAP clinical report, Home Care of Children and Youth with Complex Health Care Needs and Technology Dependencies, which addresses the development of an interdisciplinary and coordinated plan of care for the child with complex medical needs with technology dependencies	• Review examples of care plans that have helped in the care of patients in your practice. • Discuss with staff the importance of developing and maintaining a care plan. ✓ To improve patient care and long-term patient outcomes ✓ To determine the need for referral and treatment ✓ To monitor the effects of intervention • Identify families in your practice willing to be part of a team of staff and patient users who jointly develop a written policy for how your practice will develop and maintain care plans. • Use online resources such as national listservs to share ideas.
A ready-made care plan template to use for the patient's medical condition is not available to the subspecialist. The subspecialist is not aware of what information should be included in a care plan. A systematic approach for creating, reviewing, and updating the care plan is not in place.	• Identify elements of a complete written patient care plan and adapt for the practice's 2 or 3 most common specific conditions. (See *Follow-Up and Communication* Clinical Guide.) • Establish clear office procedures for creating and maintaining a care plan for each patient with GER and GERD. Consider the following: ✓ Meet with staff to gather information and ideas about establishing an officewide procedure for creating and maintaining care plans. ✓ Identify roles and responsibilities for documenting and maintaining information in the plan, including specific responsibilities for updating elements of the case plan (as identified above). ✓ Develop a visit flow for documentation and maintenance of the care plan that considers the patient/family, physician, staff members, office	• Consult with other practices about their office procedures for care plans and adapt them for your purposes. • Stress with staff the importance of care plan documentation as a necessary component of high-quality care. Help them recognize that actions that are not documented may not have been done.

Potential Barriers	Suggested Ideas for Change	Still Not Seeing Results?
	efficiency, equipment, and backup contingencies. ✓ Include checks and balances in office procedures to ensure that: – The clinician reviews the care plan at each visit. – All care plan elements are documented or updated. – The care plan is shared with the patient, family, and essential team members. – The benefits and possible side effects of treatment are communicated to the patient/family. – Any identified diagnostics tests have been completed, reviewed, documented, and communicated to the patient/family. – If tests are not completed, follow up to identify the reason and document the reason for noncompletion. • Periodically audit office procedures to assure their effectiveness and that staff members follow them consistently and correctly. • Standardize how and where the care plan is documented and maintained: ✓ After visit summary ✓ Care plan as a separate document ✓ EMR ✓ Other	
Patients miss follow-up visits, thereby making health supervision and care plans out of date.	• Set up a registry or other system to track patients who are not being seen regularly. Designate a staff member to reach out to patients/families that are behind with appointments. • Schedule a return appointment at the time the patient comes in for a visit. • Implement a reminder and recall system (using EMR, internal memo, or chart reminder). • Educate patients/families about the importance of ongoing health supervision visits to monitor GER/GERD and well-being. Review the recommended assessments and timeframes that support favorable health outcomes. • Check to see if patients are unnecessarily receiving care from subspecialists (if you are a generalist) or unnecessarily scheduling	• Educate patients and families about the importance of health supervision visits and the gradual educational process of transition. • Educate patients and families about appropriate location for follow-up (ie, with the Primary Healthcare Provider [PHP]). • Ensure the PHP is appropriately obtaining and supporting care plans recommended by the subspecialist, and that there is appropriate bidirectional communication about any important health status changes. • Ensure the subspecialist is appropriately communicating any recommended care plans to the PHP, and that there is

Potential Barriers	Suggested Ideas for Change	Still Not Seeing Results?
	follow-up with subspecialists rather than their primary care provider (if you are a subspecialist). • Check to see if financial or psychosocial factors play a role in visit noncompliance and consider involving social services as needed. • Consider ways to improve access to care within the practice, by providing additional evening or Saturday appointments, for example. • Consult with other care team members regarding barriers to keeping regular appointments and strategize approaches for return visits.	appropriate bidirectional communication about any important health status changes. • Adhere to a written policy of no prescription refills without adequate and appropriate general health supervision, stressing the importance of patient safety. • Engage social workers or case managers in an attempt to improve adherence to regular health supervision. Refer patients/families with psychosocial issues for counseling.
Gap: The care plan is not routinely shared with the patient/family.		
A systematic approach for sharing the care plan and reviewing the care plan with the patient/family is not in place.	• Include checks and balances in office procedures to ensure that: ✓ The clinician reviews the care plan at each visit. ✓ The care plan is shared with the patient/family. ✓ The benefits and possible side effects of treatment are communication to the patient/family.	• Consult with other practices about their office procedures for communicating and documenting patient/family discussions.
Gap: The current care plan is not obtained or important health updates are not shared on a timely basis. *It is the **generalist's** responsibility to send essential information with the initial referral, to obtain and support the care plan, and to communicate important health status changes.* *It is the **subspecialist's** responsibility to develop and share the care plan with team members and communicate important care plan updates after every visit.*		
All team members are not identified in the care plan or their contact information is incomplete or unavailable.	• Identify essential care team members and designate a staff member to update contact information in the care plan. Create processes for keeping this information up-to-date and communicated to essential stakeholders in the child's care. ✓ Help patients/families create/maintain a list of team members that supports the patient's care. Communicate to patients/families their responsibility to maintain the contact list. ✓ Verify care team members with the patient/family at every visit and update the contact list after intake appointment. ✓ Flag changes in team members when the patient notifies you.	• Consult with other practices about how their care teams are documented and updated in the patient's medical record. Adapt ideas that work for other practices into your office procedures.

Potential Barriers	Suggested Ideas for Change	Still Not Seeing Results?
There is no process in the subspecialist's office for communicating the current care plan and important updates to all team members. There is no process in the PHP's office for obtaining the patient's care plan or communicating important health status changes to all team members.	• Establish clear office procedures for sharing/obtaining the care plan and important changes to all team members. Consider the following: ✓ Who (staff) is responsible for sharing/obtaining the care plan ✓ What should be included in the communication ✓ Who should be included in the communication ✓ How the patient/family will receive a copy of the current care plan ✓ The form of team communications, eg, fax the care plan to the primary care office and request verification that it was received and understood; alternatively, submit electronically to practices sharing the same EMR system and have 1 staff person in the clinic responsible for transmission of the updated plan at every encounter ✓ The frequency of communication for changes to the plan, eg, after every visit or when clinical changes occur	• Consult with other practices about how care plan changes are communicated to members of the care team. Adapt ideas that work for other practices into your office procedures. • If the practice uses an EMR, consult with EMR management to develop a method for transmitting care plan updates to appropriate team members. • If the practice uses a dictation system, consult with dictation management to develop a method for transmitting plan updates to appropriate team members.