



Body System: Gastrointestinal		
Session Topic: Hernia (Abdominal)		
Educational Format		Faculty Expertise Required
REQUIRED	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>
Professional Practice Gap	Learning Objective(s) that will close the gap and meet the need	Outcome Being Measured
<ul style="list-style-type: none"> • Knowledge and practice gaps regarding the anatomical classifications of common hernias • Knowledge and practice gaps regarding differentiation based on examination and presentation those hernias that require urgent versus delayed treatment • Knowledge and practice gaps regarding the preferred radiological diagnostic test based on hernia location • Knowledge and practice gaps regarding common surgical techniques for hernia repair to assist in patient appropriate referral and education. 	<ol style="list-style-type: none"> 1. Review the anatomical classifications of common hernias. 2. Differentiate based on examination and presentation those hernias that require urgent versus delayed treatment. 3. Identify the preferred radiological diagnostic test based on hernia location. 4. Review common surgical techniques for hernia repair to assist in patient appropriate referral and education. 	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.
ACGME Core Competencies Addressed (select all that apply)		
X	Medical Knowledge	Patient Care
	Interpersonal and Communication Skills	Practice-Based Learning and Improvement
	Professionalism	Systems-Based Practice
Faculty Instructional Goals		



Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
 - Visit <http://www.aafp.org/journals> for additional resources
 - Visit <http://familydoctor.org> for patient education and resources
- Provide a review the anatomical classifications of common hernias.
- Provide strategies to differentiate based on examination and presentation those hernias that require urgent versus delayed treatment.
- Provide recommendations for identifying the preferred radiological diagnostic test based on hernia location.
- Provide recommendations regarding common surgical techniques for hernia repair to assist in patient appropriate referral and education.

Needs Assessment

Abdominal wall hernias account for 4.7 million ambulatory care visits annually. More than 600,000 surgical repairs for inguinal hernias are performed nationwide each year, making it one of the most common general surgical procedures performed in the United States.¹ While the symptoms of an asymptomatic inguinal hernia may appear gradually over time, symptomatic patients often present with groin or abdominal pain.

Although abdominal pain is common and often benign, acute and severe abdominal pain is almost always a symptom of intra-abdominal disease. Approximately 1.6% of office visits and 8% of emergency department visits are for abdominal pain.² Ten percent of patients presenting to the emergency department for abdominal pain have a severe or life-threatening cause for their abdominal pain and may require surgery.³ Approximately one-fourth of patients presenting to the emergency department are older than 50 years of age, and tend to present later in the course of their illness and have more nonspecific symptoms.⁴

Practice Gaps

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians have knowledge gaps related to evaluating and managing abdominal pain, including selecting and interpreting appropriate imaging modalities.⁵ More specifically, CME outcomes data from 2013-2015 AAFP FMX (formerly Assembly): *Acute and Chronic Abdominal Pain* sessions suggest that physicians have knowledge and practice gaps



with regard to evaluation, especially the inclusion of testicular exams in males and pregnancy tests for females of childbearing age presenting with abdominal pain; the identification of red flags for comorbid conditions; selection of appropriate laboratory and/or imaging tests; performing appropriate physical examination techniques; and strategies to increase guideline adherence.⁶⁻⁸ Additionally, data from a 2016 AAFP CME Training Needs Survey, indicate that family physicians have educational needs with regard to initial diagnosis of abdominal pain.⁹

The diagnosis of abdominal pain, especially acute appendicitis, is challenging in children, especially in infants and toddlers.¹⁰ Additionally, studies suggest a disparity of outcomes exists in the acute ED setting among children presenting with abdominal pain based on race and SES, with differences in appendicitis with perforation, length of stay, and time until surgery.¹⁰ Missed or delayed diagnosis can result in perforation, which can cause longer hospital stays, bowel obstruction, and sepsis.¹¹ Abdominal and pelvic CT can be used in children to confirm or rule out acute appendicitis. However, CT is expensive and exposes the patient to ionizing radiation. For these reasons, physicians should consider using ultrasonography as the initial imaging modality. Ultrasonography is fast, safe, well tolerated, and does not expose the patient to radiation. It can confirm the diagnosis of acute appendicitis in children, but it cannot definitively rule out the condition. If the diagnosis remains uncertain after ultrasonography, CT can be performed.¹²

Physicians may improve their care of patients with acute abdominal pain by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:^{1,3,4,13-15}

- Although imaging techniques such as ultrasonography, computed tomography, and magnetic resonance imaging are rarely needed to diagnose inguinal hernias, they may be useful in certain clinical situations.
- Ultrasonography has good sensitivity and specificity for the detection of groin hernias.
- Small, minimally symptomatic, first hernias do not necessarily require repair, and these patients may be followed expectantly. They should be counseled on symptoms of incarceration or strangulation, and to seek prompt evaluation if these occur.
- Patients with symptomatic, large, or recurrent inguinal hernias should be referred for repair, generally within one month of detection.
- Ultrasonography is the initial imaging study of choice for evaluating patients with acute right upper quadrant pain.
- Computed tomography is the initial imaging study of choice for evaluating patients with acute right lower quadrant or left lower quadrant pain.
- Conventional radiography has limited diagnostic value in the assessment of patients with acute abdominal pain.
- Beta human chorionic gonadotropin testing should be considered before performing diagnostic imaging in all women of reproductive age presenting with acute abdominal pain.
- A normal white blood cell count does not rule out appendicitis.
- Simultaneous amylase and lipase measurements are recommended in patients with epigastric pain.
- Abdominal radiography is an effective initial examination in patients with suspected intestinal obstruction.



- Consider cholecystitis even if an older patient does not present with classic symptoms, because they often are absent in older persons.
- Consider small bowel obstruction in the older patient with a history of surgery who presents with diffuse, colicky pain, nausea, vomiting, altered bowel sounds, distention, dehydration, diffuse tenderness, and possibly an ill-defined mass.
- Consider abdominal aortic aneurysm in the older patient with back or abdominal pain, particularly if they are male or have a history of tobacco use.
- Consider acute mesenteric ischemia if a patient presents with severe, poorly localized pain out of proportion to physical findings.
- Urinalysis, complete blood count, pregnancy test, and erythrocyte sedimentation rate or C-reactive protein should be the initial laboratory tests in the evaluation of acute abdominal pain in children.
- Ultrasonography is the imaging choice for acute abdominal pain in children.
- Opiates may be safely used in children with acute abdominal pain without delaying or affecting the accuracy of diagnosis.

Best practices in emergency medicine: Recommendations from the Choosing Wisely Campaign:¹⁵

- Computed tomography is not necessary in the routine evaluation of abdominal pain. (American Academy of Pediatrics)
- Do not do computed tomography for the evaluation of suspected appendicitis in children until after ultrasonography has been considered as an option. (American College of Surgeons)

Physicians can improve patient satisfaction with the referral process by using readily available strategies and tools such as, improving internal office communication, engaging patients in scheduling, facilitating the appointment, tracking referral results, analyzing data for improvement opportunities, and gathering patient feedback.^{16,17}

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Inguinal Hernias: Diagnosis and Management¹
- Diagnostic Imaging of Acute Abdominal Pain in Adults¹⁴



- Evaluation of acute abdominal pain in adults³
- Diagnosis of acute abdominal pain in older patients⁴
- Acute Abdominal Pain in Children¹⁵
- ACR Appropriateness Criteria: Left lower-quadrant pain¹⁸
- Acute Pancreatitis¹⁹
- Abdominal Aortic Aneurysm²⁰
- ACR Appropriateness Criteria: right lower quadrant pain--suspected appendicitis²¹
- ACR appropriateness criteria right upper quadrant pain²²
- Engaging Patients in Collaborative Care Plans²³
- The Use of Symptom Diaries in Outpatient Care²⁴
- Health Coaching: Teaching Patients to Fish²⁵
- Encouraging patients to change unhealthy behaviors with motivational interviewing²⁶
- Integrating a behavioral health specialist into your practice²⁷
- Simple tools to increase patient satisfaction with the referral process¹⁶
- FamilyDoctor.org. Abdominal Pain, Short-term. Search by Symptom (patient resource)²⁸
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References

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