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VOLUME 11, NUMBER 1
Urgent Care Association of America
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NEW: *JUCM* CME

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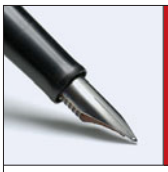

LETTER FROM THE EDITOR-IN-CHIEF

Introducing *JUCM* CME

With this October issue, the editorial staff is very pleased to introduce ***JUCM* CME**, a convenient and cost-effective way to meet your annual continuing medical education (CME) requirements while reading the only peer-reviewed journal about urgent care. For over 10 years *JUCM*, the *Journal of Urgent Care Medicine*, has been a reliable source for the latest and most relevant clinical and practice-management guidance in the industry. Our cover-to-cover readership regularly exceeds the benchmarks for other journals, and that reflects your desire for professional development and the quality of our journal. Receiving CME credit for your effort just makes logical sense.

We have partnered with Case Western Reserve University (CWRU) School of Medicine, which will be our accreditation sponsor. CWRU is a national leader in medical education, and we are very pleased to be working with them to provide this CME program for you.

Here's how the program works: For a very reasonable annual subscription fee, you can claim up to *33 AMA PRA Category 1 Credits™* throughout the year. To obtain credit for an article, simply ready one that is designated for CME, take a short online quiz, and answer a brief survey. Once you complete these steps, a CME certificate will be generated for that activity. You can even track your completed CME at www.jucm.com/cme/ and print a progress report anytime you like. Articles available for CME will be clearly identified in each issue and can be accessed in print or online.

As an evolving discipline, urgent care has the responsibility to produce and disseminate CME content that reflects the core competencies of urgent care practice. This content should be original, delivered by experts in the field, and peer-reviewed for relevance, accuracy, and adequate coverage. It should reflect the latest evidence, and apply current guidelines and best practices whenever possible. The editorial staff at *JUCM* takes great pride in supporting this very process by recruiting and working with a growing list of authors, many from urgent care practices just like your own. Without an academic track in urgent care medicine, we rely on author submissions from practicing physicians, advanced practitioners, and subject-matter experts from the urgent community at large. Most of these contributors have little to no experience writing articles for a clinical journal. Our editorial departments deserve appreciation for their work developing and nurturing authors so that we can deliver a topnotch journal every month. Each department editor now takes on the additional responsibility of ensuring that these authors' submissions comply with the standards of the Accreditation Council for Continuing Medical Education (ACCME). I would be remiss if I did not take the opportunity to recognize Dr. Michael Weinstock, our clinical editor, and Alan Ayers, our practice-management editor, for their work on this project. With the support of our managing editor, Katharine O'Moore-Klopf, the *JUCM* editorial team has delivered an incredible effort to make this CME program possible for our readers.

I present to you the inaugural edition of ***JUCM* CME**. Happy learning! ■

Lee A. Resnick, MD, FAAFP
Editor-in-Chief, *JUCM, The Journal of Urgent Care Medicine*

"As an evolving discipline, urgent care has the responsibility to produce and disseminate CME content that reflects the core competencies of urgent care practice. This content should be original, delivered by experts in the field, and peer-reviewed for relevance, accuracy, and adequate coverage. It should reflect the latest evidence, and apply current guidelines and best practices whenever possible."

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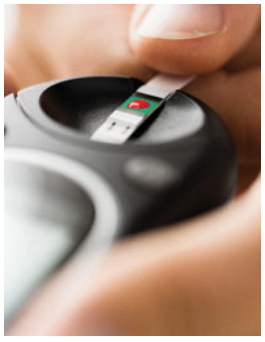

CLINICAL

27 Original Research: Early Diabetes Screening in the Urgent Care, Part 2

Undiagnosed type 2 diabetes mellitus affects more than 9 million Americans. Part 2 of this two-part article reports the outcomes of a quality-improvement study of a diabetes-screening pathway devised for implementing screening for diabetes in all adult patients.

Shannon R. Clark, DNP, MSN, RN, RNFA, FNP-C, and Marisa L. Wilson, DNSc, MHSc, RN-BC, CPHIMS

IN THE NEXT ISSUE OF *JUCM*

Do you know the many causes of oral lesions that children may present with? Authors Therese L. Canares, MD, and Shawna S. Mudd, DNP, CRNP, explain how you can thoroughly examine these patients even if they are scared and in pain.

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Mission Statement
JUCM The Journal of Urgent Care Medicine supports the evolution of urgent care medicine by creating content that addresses both the clinical practice of urgent care medicine and the practice management challenges of keeping pace with an ever-changing healthcare marketplace. As the Official Publication of the Urgent Care Association of America and the Urgent Care College of Physicians, *JUCM* seeks to provide a forum for the exchange of ideas and to expand on the core competencies of urgent care medicine as they apply to physicians, physician assistants, and nurse practitioners.

Affiliations
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Abdominopelvic pain is quite complex, but it is even more so in women than in men. In the second part of a two-part article, Taylor L. Fischer, MMS, PA-C, discusses the various etiologies of such pain in women. He covered abdominopelvic pain in men in our September 2016 issue.

Fischer is an Assistant Professor at the Wingate University, Harris Department of Physician Assistant Studies, Hendersonville Campus, in North Carolina.

In part 2 of their two-part article, authors Shannon R. Clark, DNP, MSN, RN, RNFA, FNP-C, and Marisa L. Wilson, DNSc, MHSc, RN-BC, CPHIMS, report the outcomes of their quality-improvement study of a diabetes-screening pathway devised for implementing screening of all adult patients in urgent care centers. They call for additional research on how best to implement such testing across the United States, thus decreasing the health and financial burdens of type 2 diabetes mellitus.

Clark is a Doctor of Nursing Practice from Johns Hopkins University, Baltimore, Maryland, and is President and Chief Executive Officer of Synergy Health Center and Urgent Care, Pleasanton, California. Wilson is an Associate Professor in the University of Alabama at Birmingham School of Nursing, Birmingham, Alabama.

The use of telemedicine is growing in urgent care. In our *Practice Management* section this month, Alan A. Ayers, MBA, MAcc, discusses with expert Thomas E. Gibbons, MD, MBA, FACEP, how you might use telemedicine to improve throughput and build market share, increasing patients' loyalty to your center.

Ayers is Vice President of Strategic Initiatives for Practice Velocity, LLC, and is Practice Management Editor of the *Journal of Urgent Care Medicine*. Gibbons is President and Chief Medical Officer of Doctors Care, and is a member of *JUCM*'s editorial board.

Patricia Robitaille, MD, FACEP, recounts the case of an infant with bloody vomitus who presents not once but twice, because of a missed diagnosis. She explains how a more thorough assessment can help health-care providers get the diagnosis right the first time.

Robitaille is Credentials Chairman, Mount Carmel Health System, and Human Resources Officer and Attending Emergency Physician, Immediate Health Associates, Columbus, Ohio.

Also in this issue:

In *Health Law and Compliance*, **Spencer Hamer, JD,** and **Chloe Ghoogassian, Esq.,** spell out how you can protect patients' privacy while using social media platforms to build rapport with your urgent care center's community.

Sean M. McNeeley, MD, and the **Urgent Care College of Physicians** review new reports from the literature on the female athlete triad, serotonin syndrome, stuffed sinuses, hand-food-and-mouth disease, antibiotics and secondary infections, decreasing the need for imaging in possible pulmonary embolism, a vaccine for chlamydia, and elevated glucose levels at discharge.

In our *Coding Q&A* column, **David E. Stern, MD, CPC,** explains how to talk with your health-care providers about documentation when they know the terminology but not the billing codes.

In our *Developing Data* column, we take a look at the most frequently occurring x-ray views in urgent care centers and why your center needs radiologist over-read of x-ray images.

To Submit an Article to *JUCM*

JUCM, *The Journal of Urgent Care Medicine* encourages you to submit articles in support of our goal of providing practical, up-to-date clinical and practice-management information to our readers—the nation's urgent care clinicians. Articles submitted for publication in ***JUCM*** should provide practical advice, dealing with clinical and practice-management problems commonly encountered in day-to-day practice.

Manuscripts on clinical or practice-management topics should be 2600 to 3200 words in length, plus tables, figures, and references. Articles that are longer than this will, in most cases, need to be cut during editing.

We prefer submissions by e-mail, sent as Word file attachments (with tables created in Word, in multicolumn format) to *editor@jucm.com*. The first page should include the title of the article, author names in the order they are to appear, and the name, address, and contact information (mailing address, phone, fax, e-mail) for each author. See http://www.jucm.com/submit-an-article/.

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CONTINUING MEDICAL EDUCATION

Release Date: October 1, 2016
Expiration Date: September 30, 2017

Target Audience
This continuing medical education (CME) program is intended for urgent care physicians, primary-care physicians, resident physicians, nurse-practitioners, and physician assistants currently practicing, or seeking proficiency in, urgent care medicine.

Learning Objectives
1. To provide best practice recommendations for the diagnosis and treatment of common conditions seen in urgent care
2. To review clinical guidelines wherever applicable and discuss their relevancy and utility in the urgent care setting
3. To provide unbiased, expert advice regarding the management and operational success of urgent care practices
4. To support content and recommendations with evidence and literature references rather than personal opinion

Accreditation Statement

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This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Case Western Reserve University School of Medicine and the Institute of Urgent Care Medicine. Case Western Reserve University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Case Western Reserve University School of Medicine designates this journal-based CME activity for a maximum of 3 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Planning Committee
- **Lee A. Resnick, MD, FAAFP**
  Member reported no financial interest relevant to this activity.
- **Michael B. Weinstock, MD**
  Member reported no financial interest relevant to this activity.
- **Alan A. Ayers, MBA, MAcc**
  Member reported no financial interest relevant to this activity.

Disclosure Statement
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CONTINUING MEDICAL EDUCATION

JUCM CME subscribers can submit responses for CME credit at www.jucm.com/cme/. Quiz questions are featured below for your convenience. This issue is approved for up to *3 AMA PRA Category 1 Credits*™. Credits may be claimed for 1 year from the date of this issue.

Abdominopelvic Pain, Part 2: Approach to Women in the Urgent Care Setting (p. 11)

1. **What percentage of patients with acute appendicitis will have an elevated white blood cell (WBC) count?**
   a. 1%
   b. 5%
   c. 36%
   d. 90%
   e. 100%

2. **Which of the following are true?**
   a. A urine with no red blood cells (RBCs) excludes a ureteral stone.
   b. Up to 33% of patients with a symptomatic ureteral stone will have fewer than 5 RBCs in the urine.
   c. Blood in the urine is diagnostic of a ureteral stone.
   d. Anticoagulants will never cause hematuria.
   e. Painless hematuria in an elderly patient is a nonconcerning finding, usually due to a broken blood vessel in the bladder occurring with exercise.

3. **Which of the following are recommended treatment for pelvic inflammatory disease (PID) from the Centers for Disease Control and Prevention (CDC)?**
   a. Amoxicillin, 875 mg, twice a day for 14 days
   b. Flagyl, 500 mg, four times a day for 7 days
   c. Azithromycin, 2 g, as a one-time dose
   d. Ceftriaxone, 250 mg IM, and a 14-day oral course of twice-daily doxycycline, 100 mg, with or without 14 days of twice-daily metronidazole, 500 mg
   e. Doxycycline, 100 mg, three times a day for 28 days

Using Telemedicine to Improve Throughput and Build Market Share (p. 45)

1. **Which of the following is a potential impact of telemedicine on urgent care?**
   a. Telemedicine can provide cheaper, more convenient treatment for patients with minor upper respiratory conditions commonly seen in urgent care.
   b. Telemedicine can help improve provider utilization and patient throughput when it is used to balance loads across centers in a multisite footprint.
   c. Telemedicine can expand a center's geographic catchment while driving in patients who need in-person treatment for procedures like repairing lacerations or setting fractures.
   d. Telemedicine could jeopardize total revenue by substituting higher-cost office visits for lower-cost telemedicine consultations.
   e. All of the above are potential impacts.

2. **Which of the following are considerations when developing a telemedicine program for urgent care?**
   a. Provider capacity and productivity
   b. Center throughput and wait times
   c. Insurance contracting and reimbursement rates
   d. Patient experience and satisfaction
   e. All of the above are considerations.

3. **In summation, based on information in the article, the impact of telemedicine on urgent care can be described as follows:**
   a. Telemedicine can augment an urgent care operation, facilitating service delivery and improving provider efficiency, but some medical procedures will always have to be done in a clinic setting.
   b. Consumer adoption just isn't there. If you look at other industries—such as bookstores and banks—consumers have always chosen to go to brick-and-mortar locations versus receiving services online.
   c. Telemedicine is a great idea, but it's just cost prohibitive. Few centers can afford the technology, and consumers just won't pay the high prices required to deliver medical visits online.
   d. Telemedicine risks disrupting a center's flow and throughput, increasing wait times, and running off existing patients. Therefore, it's just not compatible with brick-and-mortar urgent care operations.
   e. None of the above is an impact.

A 16-Week-Old Infant with Bloody Vomitus (p.21)

1. **Which of the following are true?**
   a. Subdural hematomas occurred in greater frequency with inflicted traumatic brain injury ([TBI] 80%) than accidental TBI (45%).
   b. Seventy percent of patients with inflicted TBI were younger than 1 year of age.
   c. Fifty percent of patients with inflicted TBI had no reported history of trauma. In patients with accidental TBI, all had a reported history of trauma.
   d. Retinal hemorrhages occurred in 70% of patients with inflicted TBI but in none with accidental TBI.
   e. All of the above are true.

2. **Which is the most common type of child abuse?**
   a. Neglect
   b. Physical abuse
   c. Emotional abuse
   d. Sexual abuse
   e. Dietary abuse

3. **Which of the following are mandatory reporters of child abuse?**
   a. Physicians
   b. Nurses
   c. School professionals
   d. Social workers
   e. All of the above are mandatory reporters.

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UCAOA: The Power of One—Standing Together, Standing Strong!

P. JOANNE RAY

We often hear about the power of one. The urgent care industry is a multidisciplinary group of one, and UCAOA offers the greatest opportunity to combine your personal power and the power of your urgent care center or company with the power of the most comprehensive group of thousands of others. We are strongest when individuals come together as one. In the UCAOA, we become one—a catalyst, a change agent, a rallying cry.

As we continue to grow UCAOA membership, educational meetings, analyses, products, services, and other resources, we are constantly listening for what is important to you and your team. Most recently, we have changed educational agendas at the last few meetings in response to your feedback. Exhibitors and attendees alike asked for more time to network and to learn from the vendor companies, and so the Fall Conference offered vendor-hosted sessions and brunch with the exhibitors to encourage more interaction.

Formalized interviews, focus groups, and survey outreach to elicit your feedback have informed the UCAOA Board of Directors' focus toward our association's strategic plan. Next month's column will highlight these plans.

Being a part of UCAOA through your individual (physician, nonphysician, or student), clinic, or vendor membership brings you the power of one in many ways. Lifting your voice and becoming actively involved will help you to personalize your experience. You bring the enthusiasm, and UCAOA will help to

- Enrich our lives and practices and improve our skills to serve our patients through
  - Bringing together the brightest minds, leading experts, and partners in lifelong learning for the most comprehensive, high-quality continuing medical education and practice-management education
  - Serving as the conduit to best practices through urgent care operational policies, procedures, and clinical guidelines
  - Facilitating the largest meetings of multidisciplinary urgent care clinical and practice-management professionals and the vendors providing products and services so necessary to our everyday practice
- Keep us competitive by
  - Setting standards for quality and safety that are specific to urgent care and recognizing those urgent care centers who meet and exceed these standards
  - Defining and promoting the value and role of urgent care
  - Gathering industry-specific metrics and benchmarking
- Affect our future by
  - Increasing national awareness of urgent care and the unique role we play in the health-care continuum and providing tools and resources to help us do the same locally
  - Providing position statements and talking points to help educate and convince regulatory and legislative bodies, third-party payors, the media, and others
- Fuel our passion and commitment by
  - Creating opportunities for volunteerism toward improving the world we work in and networking with our peers
  - Facilitating communities, publications, and opportunities to share our experience and knowledge with each other
- Gather the power and collective knowledge of thousands who are passionate about our industry and even more passionate about providing high-quality, accessible, affordable health care. ■

"We are strongest when individuals come together as one. In the UCAOA, we become one—a catalyst, a change agent, a rallying cry."

P. Joanne Ray is chief executive officer of the Urgent Care Association of America. She may be contacted at *jray@ucaoa.org*.

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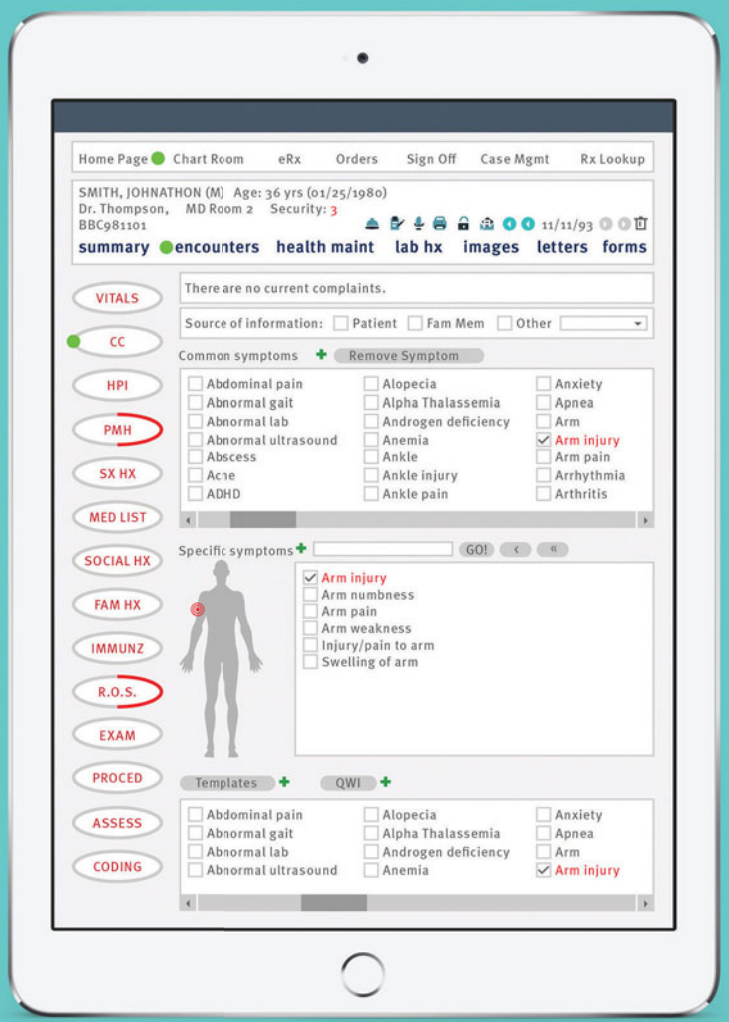

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See **CME Quiz Questions** on page 7.

Abdominopelvic Pain, Part 2: Approach to Women in the Urgent Care Setting

Urgent message: Diagnosis of abdominal pain is more complex in women than in men because of the more complex anatomy involved. Using a stepwise approach and involving patients in their care can make a difference.

TAYLOR L. FISCHER, MMS, PA-C

Introduction

Part 1 of this article [see "Abdominopelvic Pain, Part 1: Approach to Men in the Urgent Care Setting," at http://www.jucm.com/abdominopelvic-pain-part-1-approach-men-urgent-care-setting/] explained that finding the cause of abdominopelvic pain can be a difficult task for any health-care provider because the diagnostic process is riddled with important decisions. This second part of the article focuses on causes of pain specific to women, and then discusses common pitfalls when evaluating, treating, and discharging patients with abdominal or pelvic complaints. Diagnosis is more complex in women than in men, given the presence of additional organs. It is important to note that pregnancy is discussed here, but the signs, symptoms, causes, and treatment of abdominal pain in pregnancy are beyond the scope of this article. This review focuses on non-pregnancy-related causes of pain.

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Consider this case: A 21-year-old woman presents to an urgent care center with a 4-day history of worsening pelvic pain. The pain comes and goes but is worse at night. The patient reports that she has not had vomiting or diarrhea but has had some nausea. She has not taken anything for pain, and she debated going to an emergency department (ED) the preceding night, but the pain subsided. She last had sexual intercourse 2 days before presentation. She says that she has not had vaginal bleeding, vaginal discharge, or urinary symptoms. Her last menses was 2 weeks before presentation. She used a home pregnancy test when the pain started, and she says the findings were negative. She has no history of sexually transmitted infections (STIs). She rates the pain as a 3 on a scale of 1 to 10 but says that it increases to a level of 10 periodically before subsiding. These intense episodes usually last about an hour. She has a temperature of 99.5°F (37.5°C) and a pulse of 101 beats per minute.

Taylor L. Fischer, MMS, PA-C, is an Assistant Professor at Wingate University, Harris Department of Physician Assistant Studies, Hendersonville Campus, in North Carolina. The author has no relevant financial relationship with any commercial interests.

Table 1. Abdominopelvic Signs and Symptoms and Possible Causes

Associated Sign or Symptom	Possible Clinical Significance
Nausea with or without vomiting	Viral gastroenteritis, obstruction, appendicitis, food poisoning, mesenteric ischemia, ovarian torsion
Diarrhea	Diverticulitis, infectious gastroenteritis, cholecystitis, food poisoning, mesenteric ischemia
Vaginal discharge	Chlamydia, gonorrhea, trichomoniasis (STI)
Urinary burning/urgency	Renal calculi, STI, cystitis
Flank pain	Renal calculi, STI, cystitis, aortic dissection, renal carcinoma, pelvic inflammatory disease
Midline back pain	Aortic dissection
Fever	Diverticulitis, cholecystitis, infectious gastroenteritis, pyelonephritis, appendicitis, mesenteric ischemia, pelvic inflammatory disease
Tachycardia	Appendicitis, gastrointestinal bleeding, mesenteric ischemia, pelvic inflammatory disease, ruptured ovarian cyst, ruptured ectopic pregnancy
Hypotension	Aortic dissection, gastrointestinal bleeding, mesenteric ischemia, ruptured ovarian cyst, ruptured ectopic pregnancy
Peripheral neuropathy	Aortic dissection
Hypertension	Aortic dissection, any condition causing pain
Vaginal bleeding	Menorrhea, dysmenorrhea, ruptured ectopic pregnancy, spontaneous abortion, endometriosis

STI, sexually transmitted infection.

This patient presents a wide set of challenges that will require a detailed medical history, a thorough but focused physical examination, and possibly some ancillary testing. What follows is a brief overview of the anatomy specific to women, and then guidance on examination and a discussion of pathology and treatment.

Anatomy

The digestive tract is the same in men and women. The esophagus, the stomach, the small intestines, the large intestines, the rectum, and the anus comprise the passageway for food and liquid moving through the body. The liver, the gallbladder, and the pancreas aid in metabolism and perform other important functions such as detoxifying the blood and controlling blood glucose levels. The urogenital tract is also similar, but women lack a prostate and possess a much shorter urethra, making certain urogenital infections more common. The bladder sits above the musculature of the pelvic floor in the true pelvis, although it is situated higher in men because of the prostate. The descending aorta and the inferior vena cava pass through the abdominopelvic cavity. The intraperitoneal organs are the same, but the ovaries, uterus, and adnexa are added to the retroperitoneal lineup. The vagina extends from the vulvar vestibule externally, up and into the body approximately 7.6 cm, seated between the rectum and the urinary bladder. The cervix of the uterus protrudes into the upper end of the vaginal canal, leaving a cavity around it in the vagina known as the fornix. The central opening is the os. Just posterior to the vagina internally is an important space for fluid accumulation, the pouch of Douglas, which is between the vagina and the rectum. The adnexa connect the uterus on each side directly to the peritoneal space. At their lateral ends, they broaden to accept oocytes from the ovaries. The uterus, ovaries, and fallopian tubes are suspended by the broad and suspensory ligaments, which are reflections of the peritoneum. The round and ovarian ligaments are the remains of the gubernaculum, components of embryonic development that also play a suspensory role in regard to the ovaries and uterus.[1]

Medical History and Physical Examination

The initial assessment of a woman with abdominopelvic pain begins on entry into the examination room. Stability and the need for immediate resuscitation must be addressed. A knowledgeable clinic staff can aide in this process.

Once the patient's condition is deemed stable, obtaining a thorough medical history is the next step. This can present an uncomfortable, emotional, and sometimes embarrassing challenge for the patient. Consider having the patient's family or friends leave the room when

addressing sensitive topics like sexual history. An in-depth description of the pain should include location, onset, worsening and relieving factors, duration, radiation, character, and severity. Although level and quality of pain do not necessarily correlate with severity of illness, they can give clues to the origin. For instance, patients experiencing ectopic pregnancy may describe sudden and severe pelvic pain. Colicky pain may indicate ovarian torsion, and cramping may indicate dysmenorrhea or spontaneous abortion. Timing related to menstrual cycle and sexual intercourse should be considered, because postcoital or mid-cycle pain is indicative of ovarian cyst rupture. Abdominal pain can be the presenting symptom in acute myocardial infarction, more so in women than in men. In fact, up to 33% of women older than 65 years experiencing acute myocardial infarction present with abdominal pain as the chief symptom.[2]

Associated symptoms like fevers, vaginal bleeding, diarrhea, and vomiting should all be documented as well. **Table 1** lists associated symptoms and possible etiologies. Note the symptom crossover between gastrointestinal and gynecologic diagnoses.

A full gynecologic and obstetric history is of utmost importance. This should include the date of last menstrual cycle, sexual history and birth control methods, history of STIs, pregnancy and birth history, and history of previous gynecologic problems like polycystic ovarian syndrome or endometriosis. Current pregnancy status or likelihood of current pregnancy should be ascertained, but even patients who say that they are not pregnant should undergo pregnancy testing if they are of childbearing age. The past medical history should highlight risk factors for serious, life-threatening problems. Inquire about history of malignancy, atherosclerotic disease, and previous abdominal surgery. Up to 93% of patients who undergo abdominal surgery, for instance, will develop adhesions that can lead to ectopic pregnancy or spontaneous abortion.[3] Some causes of abdominal pain in women can be recurrent as well. Endometriosis, urinary tract infections (UTIs), and ovarian cysts may cause repeated trips to an ED or urgent care center. Even ovarian torsion can be preceded by episodic partial torsion, spontaneous correction, and pain. Note that in this case, the patient had waxing and waning pain for a few days before being evaluated.

After the medical history, the physical examination should be completed in an equally thorough manner. Recall, however, that the examination actually begins when entering the room. Key information can be gathered simply by observing the patient. Is the patient obviously pregnant? Is she diaphoretic? Are there signs of associated vaginal bleeding? The provider's ability to process information in this brief moment can allow for critical, timely, and potentially life-saving medical decisions. Simply put, is the patient sick or not?

Vital signs are useful but should be interpreted in context of the patient's clinical picture. Free bleeding into the peritoneum can cause reflex bradycardia, and lack of fever can provide misleading reassurance. A cardiopulmonary examination should be done prior to evaluation of the abdomen and pelvis. The presence of adventitious lung sounds, new-onset murmur, or abnormal heart rhythm should send the clinician down a different diagnostic pathway and may preclude further evaluation of the lower abdomen or pelvis. The abdominal examination should include standard techniques such as checking for any scars, bruising, or swelling; auscultation of bowel sounds; palpation for tenderness, masses, and ascites; and percussion for increased dullness or tympany.

The importance of the routine use of pelvic examination at this point cannot be understated. A full pelvic examination with speculum and bimanual technique should be considered in all women without an obvious nongenitourinary source of pain. The pelvic examination can provide a wealth of information about the reproductive tract. The external genitalia should be evaluated for the presence of ulcers, erythema, and frank discharge from the vaginal canal. A speculum should then be inserted to allow visualization of the vaginal mucosa and the uterine cervix, which may show signs of inflammation and friability if STI is present. Vaginal discharge in the setting of abdominopelvic pain strongly suggests the presence of pelvic inflammatory disease (PID). Any bleeding from the cervical os should be noted, along with any cervical dilation, and an estimation of blood loss should be made. Once the speculum examination is complete, a bimanual examination using the index and middle fingers on a gloved hand should be performed to investigate for the presence of cervical motion tenderness or uterine, adnexal, or ovarian masses or tenderness. Percussion of the costovertebral angles bilaterally should be performed on all patients with signs or symptoms of UTI to evaluate for renal involvement of the infection or for a potential kidney stone.

Unless there is suspicion for gastrointestinal bleeding, a rectal examination adds no usable information in women.

Diagnostic Testing

There is no standard set of ancillary tests for abdominal pain. A complete blood cell count and comprehensive metabolic panel can be pursued, but both tests have low potential for reassurance when findings are normal, and they should never be used to rule out serious conditions. For example, only about 36% of patients presenting with acute appendicitis will have an elevated white blood cell count.[4]

Simple urinalysis is easy to do and can provide valuable information when considering urinary infection or calculus. Caution should be taken, however, just as with the complete blood cell count and the comprehensive metabolic panel. Up to 33% of patients with a symptomatic kidney stone will have fewer than 5 red blood cells per high-powered field on microscopy, and in 11%, no red blood cells are visualized.[5] Furthermore, up to 33% of patients with appendicitis present with flank pain and urinary symptoms. One in seven may have pyuria on urinalysis, and one in six may have hematuria.[6]

All women of childbearing age should be questioned about pregnancy. Testing via urine for human chorionic gonadotropin should be considered in patients who will require imaging or whose medical history and age do not rule out pregnancy.

In the setting of vaginal discharge, testing for gonococcal and chlamydial infections via cervical swab should be accomplished. Fluid sampling for potassium hydroxide and wet-mount evaluation might be considered to evaluate for trichomoniasis, candidal infection, or bacterial vaginosis.

The mainstay of imaging in the woman with a suspected gynecologic problem is transvaginal ultrasonography. Ultrasonography is less expensive and exposes the patient to less radiation. It is sensitive and specific for the identification of ovarian and uterine masses, ectopic pregnancies, uterine fibroids, ovarian cysts, and endometriomas. Computed tomography is the imaging modality of choice for non-female-specific causes of pain and should be considered a second-line modality in women with questionable genitourinary involvement.[7]

Diagnosis-Specific Treatment

The following are possible causes of abdominopelvic pain specific to women, along with the typical treatment plans that should be considered.

- **Ovarian cyst rupture:** Sudden onset of sharp pain, especially mid-cycle in a premenopausal woman, can signal rupture of an ovarian cyst. A ruptured cyst can be identified by pelvic ultrasonography and can generally be treated with pain control and rest in the absence of heavy blood loss. A cyst larger than 5 cm is at higher risk for torsion.[8] If the patient has signs or symptoms of hypovolemia, significant bleeding on pelvic examination or ultrasonography, or signs of infection, then she should be transported to an ED for resuscitation and laparoscopy.
- **Ovarian torsion:** Torsion can be a complication of a benign ovarian cyst or a complication of ovarian malignancy. These patients may present with a sudden onset of severe, low pelvic pain with nausea and vomiting. Diagnosis is confirmed by color flow Doppler ultrasonography. The patients should always be evaluated in an ED once identified, because this is a surgical emergency.
- **Ectopic pregnancy:** Patients with vaginal bleeding and positive findings on a pregnancy test should be treated presumptively as having an ectopic pregnancy. In the urgent care setting, that means establishing intravenous access, administering fluids, and transporting the patient to an ED via emergency medical services if she is hemodynamically unstable, but transportation by private car can be considered if her condition is stable. In the absence of bleeding or signs of hemodynamic instability, with positive findings on a pregnancy test, it is reasonable to pursue pelvic ultrasonography to differentiate ectopic from intrauterine pregnancy, with the knowledge that this patient will likely need ED evaluation if an ectopic pregnancy is identified.
- **Spontaneous or threatened abortion:** As with ectopic pregnancy, all patients with vaginal bleeding and positive findings on a pregnancy test should be treated in the ED setting. In the absence of bleeding, if pelvic ultrasonography reveals a threatened abortion or a nonviable pregnancy, such as in the case of an empty sac, it may be reasonable to consult with an obstetrician-gynecologist (OB-GYN) and determine a quantitative human chorionic gonadotropin level rather than refer the patient to an ED. The decision to send a patient for follow-up with an OB-GYN rather than send the patient to an ED should be measured against the risk of complications like infection and the likelihood that the patient will follow discharge instructions.
- **Normal pregnancy:** Pregnancy can cause abdominal pain in various forms. Women may experience more gastroesophageal reflux disease, changes in bowel habits, and pain related to anatomic changes

to the pelvis, commonly referred to as round ligament pain. The urgent care provider should take great care before discharging a pregnant patient with only reassurance. If no positive findings are revealed through the medical history, physical examination, urinalysis, or pelvic ultrasonography, a discussion with an OB-GYN with plans for follow-up should be considered.

- **Endometriosis**: Patients with endometriosis may experience severe acute pelvic pain and dysmenorrhea. In the absence of an endometrioma, or "chocolate cyst," ultrasonography is not helpful for the diagnosis of endometriosis.[9] Pain control and follow-up with an OB-GYN are the mainstays of therapy, but ED evaluation may be warranted if there is no previous history of this diagnosis or if the pain is severe.
- **PID:** The minimum diagnostic criteria for PID includes pelvic pain with one of the following: cervical motion tenderness, uterine tenderness, or adnexal tenderness. Presumptive treatment can be accomplished from the urgent care setting. This includes a single dose of ceftriaxone (250 mg given intramuscularly) and a 14-day course of oral doxycycline (100 mg taken twice daily) with or without 14 days of metronidazole (500 mg twice daily).[10]
- **Ovarian hyperstimulation syndrome:** It is important to ask patients about fertility treatments because of the risk of developing ovarian hyperstimulation syndrome. Although it is not common, some fertility treatments may lead to ovarian enlargement, which can cause fluid third-spacing and hypercoagulability. Thus, patients currently undergoing fertility treatment who present with abdominal pain should be transferred to an ED if no obvious nongynecologic cause is identified.
- **UTI:** UTIs in the absence of urosepsis can be treated with antibiotics from the urgent care setting. If pyelonephritis is suspected, outpatient treatment with a fluoroquinolone or a sulfonamide is still acceptable if the patient is able to keep down fluids and medications.
- **Renal calculus:** Like UTIs, kidney stones are often seen in the urgent care setting. Routine treatment and discharge home is acceptable, provided that there is no associated infection, that nausea and pain can be controlled with oral medications, and that the patient is able to pass urine. Discussions of stone size and definitive care go beyond the scope of this article. Both kidney stones and pyelonephritis will likely present with costovertebral angle tenderness. Any patient with an infected stone should be sent to an ED for consideration of placement of a nephrostomy tube or ureteral stent, because these patients can become septic quickly.

Discharge and Follow-Up Summary

It is not uncommon for a patient to present with confusing symptoms and then for the examination to reveal further ambiguities. As noted repeatedly, abdominal pain is a complex topic, even more so in women than in men. Sometimes ancillary testing is not helpful either, and the clinician must decide how to handle the patient's symptoms despite the lack of specific diagnoses.

Consulting a colleague should always be the first step once an impasse is reached. Medicine is increasingly being viewed from a team perspective, and multiple studies have revealed the importance of avoiding hindsight bias and diagnosis anchoring,[11] which is the tendency to go along with previous diagnoses without further investigation. A fresh set of eyes, or ears if no other provider is on-site, can help break through these cognitive errors by providing a different set of experiences and skills to use in problem-solving.

If multiple heads cannot clearly discern the answer, perhaps sending the patient home with detailed instructions about returning should be considered. This is discussed more fully near the end of this section; however, caution must be taken with patients who appear ill, elderly patients, patients with significant comorbidities, or patients who do not have adequate transportation to return to the urgent care center if necessary.

If direct follow-up is not an option or the patient is not reliable, consider having ancillary staff members check on the patient via telephone. Patients are sometimes reluctant to return for one reason or another. Lack of money, fear, and wishful thinking can all play a part in a patient's decision-making, and a friendly call from a caring staff member can provide reassurance and open the door to further problem investigation.

If a patient's diagnosis is in question but she appears ill or has other medical-history factors that make follow-up unlikely, consider transportation to an ED. This decision is not a failure by the clinician but rather a wise and appropriate step in the diagnostic process. The urgent care center is not the ultimate link in the health-care chain.

If the decision is made to send the patient home, the importance of solid education cannot be understated. This decision should be based on the patient's appearance,

ability to return, comorbidities that may complicate the problem, and understanding of any instructions given. A 1997 ED study revealed that patients retain only two-thirds of the information given to them at discharge, with specific difficulty remembering information about medications and follow-up. This percentage improved slightly when the provider gave the discharge instructions—64% compared with 59% when delivered from a nonprovider source.[12] This should underscore the critical point that patients discharged home need clear instructions, preferably written, with easy-to-follow directions on three key points: when to return to the clinic, when to bypass the clinic and go to an ED, and when improvement should be expected. The clinician should be responsible for delivering these instructions and should consider making plans for contacting the patient at a later date to gauge improvement.

"If direct follow-up is not an option or the patient is not reliable, consider having ancillary staff members check on the patient via telephone. Patients are sometimes reluctant to return for one reason or another. Lack of money, fear, and wishful thinking can all play a part in a patient's decision-making, and a friendly call from a caring staff member can provide reassurance and open the door to further problem investigation."

Conclusion

Recall the patient presented in the introduction of this article. Her physical examination revealed mild tenderness bilaterally in the lower abdomen but nothing else. Her medical history was equally nonspecific. A pregnancy test and simple urinalysis were ordered, and both produced negative findings. Given the lack of specifics, the decision was made to hold off on imaging pending changes in her symptoms. The patient was engaged in her visit and eager to feel better, so she was sent home with nonsteroidal anti-inflammatory drugs and a detailed plan that discussed possible causes, outcomes, and what to do if the pain got worse. She was also advised to monitor her temperature, to maintain a bland diet, and to increase her fluid intake.

As directed, she returned the next day because of symptoms that had worsened overnight. The decision was made to proceed with outpatient computed tomography (perhaps ultrasonography should have been considered first) of the abdomen and pelvis, which revealed an ovarian cyst of approximately 8 cm on the right ovary. Transvaginal ultrasonography was ordered for better characterization, and this revealed a torsed ovary with diminished blood flow. The patient was referred immediately to an ED, where she was evaluated by the OB-GYN surgeon on call. She was taken to surgery, where the torsion was corrected and oophoropexy was performed.

Although initially sent home, this patient was immensely grateful for the thorough evaluation she received at the urgent care center. By simply using a stepwise approach, involving the patient in her own care, and astutely recognizing when imaging was needed, the provider was able to make a difference. With appropriate investigative measures, a good outcome can be achieved. ■

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See **CME Quiz Questions** on page 7.

A 16-Week-Old Infant with Bloody Vomitus

In *Bouncebacks*, we provide the documentation of an actual patient encounter, discuss patient safety and risk-management principles, and then reveal the patient's bounceback diagnosis. This case is from the book *Bouncebacks! Pediatrics*, by Michael B. Weinstock, Kevin M. Klauer, Madeline Matar Joseph, and Gregory L. Henry, and is available at www.anadem.com and www.amazon.com.

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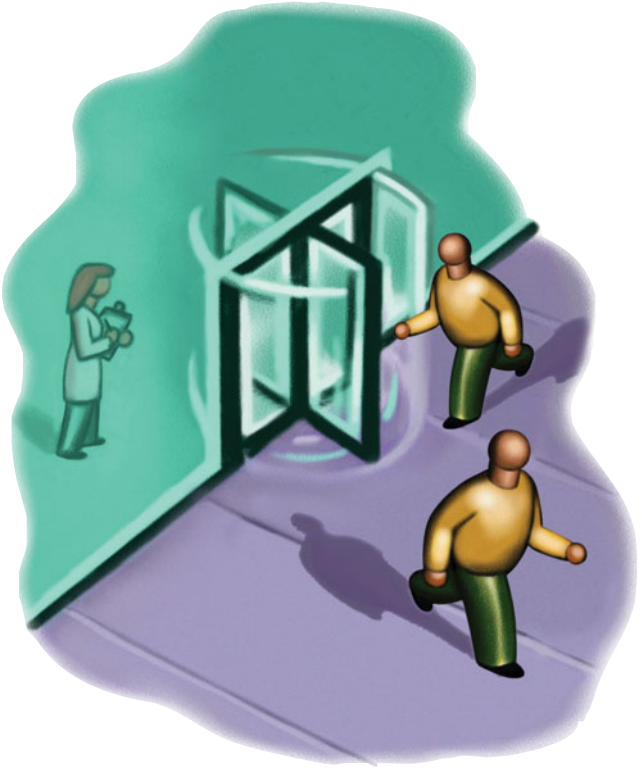

Introduction

A 16-week-old infant was brought by her parents to the emergency department (ED) of a children's hospital. **Note:** The following is the actual documentation by the provider.

Visit to the Emergency Department

Chief complaint: Bloody vomitus

Triage (at 09:02)

Mother states, "Blood in spit-up. Babysitter put paper towel in baby's mouth and it came out with blood. Looks like she is gagging." Parents brought patient in with paper towel that has blood on it that patient's mother states came from patient's mouth. Patient does have pink-tinged vomit on the collar of her clothing.

Past Medical History

Allergies: No known allergies
Meds: Axid
Immunizations: The infant's/child's immunizations are current
Past medical history: GERD [gastroesophageal reflux disease]
Surgical history: Nothing significant

History of Present Illness (Documented at 13:51)

This child apparently vomited a pinkish fluid today that may have been blood. Child has no significant medical or surgical history except being approximately 10 weeks premature at birth. There is a history of reflux. There have been no black or tarry stools noted at home. Has been no diarrhea or nausea or vomiting. No fever, chills, nausea, blood in stools, constipation.

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Vital Signs									
Time	Temperature	Right	Pulse Rate	Respiration Rate	Systolic Blood Pressure	Diastolic Blood Pressure	Position	Oxygen Saturation (Room Air)	Percent Oxygent Saturation
09:14	97.8°F	Temporal artery	127 beats/min	34 breaths/min	98 mm Hg	Palpable	Left arm	99%	On room air

Physical Examination (Documented at 13:52)
Examination: Exam was unremarkable, with the following notation:
Oral: Posterior pharynx is pink without exudates, erythema. There are two areas that may be a source of bleeding—one is the frenula, and the other is a small area on the mucosa that may have leaked a small amount of blood.
Orders (at 10:44): CBC [complete blood cell count]. [Patient's] parents refused blood draw after first attempt was unsuccessful.

Progress Notes (Documented at 13:53)
We attempted a blood draw for a CBC [count]. The parents at this time feel the child is okay and that the lesions in the mouth are the source of the bleeding and want to follow up with her pediatrician and are not interested in any more attempts at a blood draw. I let them go at this time.
Diagnosis (at 10:42): GI [gastrointestinal] bleed
Disposition: The patient was discharged to home, carried by parent [and] accompanied by parent/guardian. Aftercare instructions for gastritis/heartburn/peptic ulcer. [Patient] released from ED at 10:52.

The Errors: Risk Management and Patient Safety Issues

Error #1: Nonspecific History
Discussion: This pediatric patient requires a specific neonatal pediatric history.

- Pregnancy history: Was the pregnancy uncomplicated, or was there gestational diabetes, preeclampsia, preterm labor, or other issues?
- Delivery history: Was the patient full term or an early delivery? Any complications with the delivery? Birth weight and current weight?
- Medical history: Any health issues? Any surgeries? Immunizations up to date?
- Social history: Breast-fed or bottle-fed? Smokers in the house? Who are the primary caregivers?

If you commit to having these data on every chart, for patients younger than age 1 year, you will unearth information that was not volunteered, will be prompted to consider important issues and diagnoses, and will generate a more thorough and defensible medical record.

Teaching point: Casting a wide net will often yield important information.

Error #2: Presumption of No Significant Medical History
Discussion: "Child has no significant medical or surgical history except being approximately 10 weeks premature at birth." This is a significant piece of information, which mandates follow-up questions:

- Why was the patient premature?
- Was the patient on a ventilator? How long?
- How is the family/caregivers responding to the stressors of caring for a premature infant?

As medical providers, we must understand when unexpected data require additional investigation.

Teaching point: Concerning data often require further investigation.

Error #3: Two Potential Bleeding Sites in the Mouth Not Investigated
Discussion: The physical examination findings include the possibility that the frenulum and another small mucosal region might be the source of bleeding. If that is true, there would have to be some source of oral trauma. Breast-feeding or bottle-feeding should not cause a mucosal injury. There was no mention of potential trauma or fall in the triage note, history of present illness (HPI), or progress notes.

Teaching point: In nonverbal pediatric patients, it is important to ensure that the mechanism explains the injury.

Error #4: Incomplete Hematologic Evaluation
Discussion: Whether a CBC count was warranted is debatable. However, once ordered, the hematologic evaluation should be completed. The CBC count will check for leukemia, anemia, and thrombocytopenia. If you are going down this pathway, consider coagulation studies to rule out bleeding disorders such as hemo-

philia. Questions regarding excessive maternal bleeding associated with delivery and requiring blood transfusion, bruises, or blood in the urine or stool will further clarify the medical history.

Teaching point: If you initiate an investigation, finish the thought process.

Error #5: Committing to a Gastrointestinal Source of Bleeding as a Diagnosis

Discussion: What do we really know about the source of the blood? Blood from the patient's mouth is shown on a paper towel and on the collar of the clothing. The blood could actually be from the nose, mouth, lungs, or stomach, or even from the mother's nipple. HPI notes specify "no black or tarry stools," but a rectal examination for occult blood or trauma was not done. It is unlikely that reflux would cause GI bleeding in a neonate. Patients and physicians would all like to have a pinpoint diagnosis in the ED setting; however, that is not always possible. The source of bleeding remains unknown.

Teaching point: Understand the limitations of an evaluation and the difficulty of making a definitive diagnosis.

Error #6: Lack of a Clear, Unified Story in the Chart

Discussion: A chart narrative must flow from triage to diagnosis. In any medical encounter, the triage and HPI dictates the examination, followed by the appropriate work-up, then medical decision-making, diagnosis, and disposition. In this instance, the triage and HPI concentrate on potential vomiting as the source of blood. The physical examination notes point to potential bleeding from the frenulum and another mucosal region, as does the progress note. The diagnosis then goes back to "GI bleeding," with aftercare instructions for "gastritis/heartburn/peptic ulcer."

Teaching point: This chart should tell a single story from beginning to the end.

The Bounceback

The infant was brought back 12 days later to the ED of the children's hospital.

- **Chief complaint:** Eyes rolled back
- **Vital signs:**
  - Afebrile
  - Pulse rate, 148 beats/min
  - Respirations, 40 breaths/min
  - Blood pressure, 108/53 mm Hg
- **Triage:** Put baby down for nap—baby rolled from back to belly and was unresponsive
- **HPI (18:30):** At babysitter → feeding—crying → on back to stomach/eyes roll back—call 911—cry/episode lasts ? minutes. Shaking (per babysitter) lasted 10 minutes. Occurred at 2:30 p.m. Runny nose for 3–4 weeks. Cough improved. No N/V/D [nausea, vomiting, or diarrhea], earache, pulling at ears, red eyes, sore throat, headache, rash, fever.
- **Examination:**
  - General: Consolable, alert
  - Head: Atraumatic
  - Ears: No hemotympanum
  - Respiratory: No respiratory distress
  - Cardiology: RRR [regular rate and rhythm] without murmur
  - Abdomen: Nontender
  - Extremities: Normal
  - Neurology: No sensory or motor deficit
- **Results**
  - CT [computed tomography] results: New and old subdural hematomas
  - XR [x-ray] results: Negative left wrist XR
- **MDM [medical decision-making]:** PMD [private medical doctor] concerned about possible abuse, so sent patient to ED for evaluation. Abuse concern due to previous injuries at babysitter[']s home] that cannot be adequately explained.
- **Diagnosis:** Subdural hematoma, alleged physical abuse

Discussion

The Differential Diagnosis

In this case, the patient is a 16-week-old, born prematurely at 30 weeks' gestation, and blood has been noted in the patient's mouth. What is the etiology of this bleeding? A generic differential diagnosis may include the following:

1. Trauma: force-feeding, drop, fall, abuse
2. Environmental temperature or humidity (dry or cracked lips or oral mucosa)
3. Bleeding dyscrasia caused by a low platelet count, hemophilia, or von Willebrand disease
4. Neonatal leukemias or cancer
5. Vitamin K deficiency bleeding of the newborn occurs in the first 2 weeks of life. Late deficiency bleeding may also occur, at some point between 2 and 12 weeks, in infants who are breast-fed (i.e., receiving no formula) or who have malabsorption due to diarrhea, intestinal bacterial overgrowth, hepatitis, cholestatic jaundice, celiac disease, or cystic fibrosis.[1]
6. Vitamin C deficiency and an increased histamine level may occur with hyperemesis gravidarum,

malnutrition, surgery, or infection in the pregnant patient. Subdural hemorrhages have been diagnosed by antepartum ultrasonography. Barlow disease or infantile scurvy can be considered in cases with bruising, broken bones, or subdural hematoma.[2]

7. Glutaric acidemia, a genetic disorder caused by a missing or decreased-function enzyme called glutaryl-CoA dehydrogenase, which breaks down certain amino acids, results in acidemia and causes a myriad of symptoms, including cerebral edema and cerebral hemorrhage.[3] It is clinically important to be aware that this genetic disorder does not predispose the patient to fractures.
8. Hemorrhagic pulmonary edema from suffocation or strangulation, with bloody fluid in the mouth
9. Blood in the mouth of an infant being breast-fed is often from cracks in the nipples of the mother, although the findings in this case were not consistent with that situation.

Subdural Hematoma in Children

Though head injuries in children may be caused by accidental trauma, inflicted head trauma is the most common cause of death in children who are younger than 1 year. Of patients with head trauma, 45% of those in whom it is inflicted have permanent neurologic damage, whereas only 5% of those in whom it is accidental have damage.

In a prospective, longitudinal study by Ewing-Cobbs et al[4] of newborns and children up to age 6 years who were hospitalized for traumatic brain injury (TBI), a comparison of inflicted TBI and accidental TBI showed the following:

- Of patients with inflicted TBI, 70% were younger than 1 year of age.
- Of patients with inflicted TBI, 50% had no reported history of trauma. Of those with accidental TBI, all had a reported history of trauma.
- Subdural hematomas occur in greater frequency with inflicted TBI (80%) than with accidental TBI (45%).
- Epidural hematomas (20%) and shear injuries (20%) were seen only in the group with accidental TBI.
- Retinal hemorrhages occurred in 70% of patients with inflicted TBI but in none with accidental TBI.
- Subsequent seizures occurred more often in patients with inflicted TBI (65%) than in those with accidental TBI (20%).
- Mental deficiency occurred more often in the patients with inflicted TBI (45%) than in those with accidental TBI (5%).
- There were no differences in motor skills scores between the two groups.

Risk Factors for Child Abuse

The World Health Organization has published a comprehensive list of risk factors for child maltreatment.[5] This is a condensed list:

- **Risk factors for parents or caregivers:** Difficulty bonding with the child, maltreatment of the parent or caregiver as a child, lack of awareness of typical child development or unrealistic developmental expectations, lack of parenting skills, disciplining of child with physical punishment, presence of physical/mental/cognitive health issues, lack of self-control, alcohol and or drug abuse, criminal activity, and social isolation
- **Risk factors for the child:** Unwanted baby, has high needs (premature, disabled, chronic illness), crying and difficult to comfort, mental health issues, part of a birth of multiples, and many siblings
- **Relationship factors:** Lack of parent–child bonding, family breakdown, violence in the family, disrespect in the family, isolation in the community, and lack of support network
- **Community factors:** Violence, gender and social inequality, lack of housing and support services, unemployment, poverty, and alcohol and/or drug abuse
- **Societal factors:** Social, economic, health, and education policies that cause a poor standard of living or socioeconomic inequality or instability, and social or cultural norms of violence toward others

Work-Up in Patients with Suspected Child Abuse

A multidisciplinary approach should be used when investigating alleged abuse, to include some or all of the following:

- Pediatrician
- Pediatric neurosurgeon, for management of any intracranial injury
- Pediatric neurologist, for examination and optimization of outcomes
- Orthopedist, for fracture management
- Ophthalmology, for a complete eye examination and confirmation of retinal hemorrhages
- Forensic pathologist, in the case of death, for classification of the timing and mechanism of injury

- Social services, including child protective services
- Police

"If you initiate an investigation, finish the thought process."

Laboratory studies may include a CBC count, prothrombin time, partial thromboplastin time, bleeding time, vitamin K and vitamin C levels, and histamine levels. If a genetic bone disease such as osteogenesis imperfecta or a mineralization defect is suspected, then screens for calcium, magnesium, phosphorus, and vitamin D levels are indicated.

Radiographic Studies

- Noncontrast brain CT is the initial screen for subdural hematoma, subarachnoid hemorrhage, cerebral contusion, cerebral edema, infarction, and white matter changes.
- Diffusion-weighted magnetic resonance imaging may distinguish between acute and chronic cerebral infarction.
- An initial skeletal survey will pinpoint occult fractures. Rib fractures and long bone fractures are more prevalent in children with inflicted traumatic injuries, with rib fractures having the highest probability (70%) for abuse as a cause. There is a high correlation between multiple fractures and abuse. Eighty percent of inflicted fractures are seen in children who are younger than 18 months of age.
- A bone scan will identify subperiosteal hemorrhage and early fracture healing.

Incidence of Child Abuse

Child maltreatment or abuse is underreported because it often is not considered, recognized, or detected. Child maltreatment is divided into four categories:

- Neglect
- Physical abuse
- Emotional abuse
- Sexual abuse

Neglect is the most common child maltreatment, with physical abuse being the second most common. Physical abuse affects all cultures and socioeconomic groups, with an incidence that is similar for male and for female children. This risk of abuse increases with age, but *fatal and serious injuries are most common in children younger than 2 years*.[6,7]

Mandatory Reporting of Child Abuse

Physicians, nurses, and health-care workers are mandatory reporters of suspected child abuse and neglect, as are school professionals, social workers, mental health professionals, child-care providers, medical examiners and coroners, and law-enforcement officers. The exact requirements for mandatory reporting vary from state to state. A report must be made if the reporter "suspects or has a reason to believe that a child has been abused or neglected" or "has knowledge of, or observes a child be subjected to, conditions that should reasonably result in harm to the child."[8] The report of child abuse or neglect can be made to child protective services or to law-enforcement agencies. Many states have a telephone hotline or internet mechanism for reporting.

A report made in good faith means that the reporter had actual knowledge or reason to believe that the child was subjected to abuse or neglect. There is immunity, for both mandatory and voluntary reports of child abuse or neglect, when the reports made in good faith.[9] There are penalties for the failure to report child abuse or neglect, including felony charges and state charges, the latter of which vary and include misdemeanor charges, monetary fines, jail terms, and civil liability for any subsequent damages.

Conclusion

Abuse does escalate. Therefore, it is imperative to make the diagnosis early (bleeding gums in this case), before the infant sustains a more serious injury or dies. ■

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Original Research: Early Diabetes Screening in the Urgent Care, Part 2

Urgent message: The findings of a quality-improvement study show the usefulness of a screening pathway for early detection of type 2 diabetes mellitus in adult patients of an urgent care center.

SHANNON R. CLARK, DNP, MSN, RN, RNFA, FNP-C, and MARISA L. WILSON, DNSc, MHSc, RN-BC, CPHIMS

Abstract

Background: Undiagnosed diabetes affects over 9 million Americans, with over 79 million estimated to have blood glucose levels in the range of prediabetes. Various methods have been suggested to screen for undiagnosed diabetes in the asymptomatic population, although a consensus about the best evidence-based approach, especially in settings outside primary care, is required.

Objective: We evaluated the usefulness of a diabetes-screening pathway for the early detection of undiagnosed diabetes in in an urgent care population.

Methods: A convenience sample of 64 patients was recruited from an independent urgent care center in California for participation in a nonexperimental study. Inclusion criteria included adulthood and no prior diagnosis of prediabetes or diabetes. All participants were assessed using the Early Diabetes Detection Pathway (EDDP), a two-phase process that is based on the 2014 American Diabetes Association diabetes-screening guidelines and includes participant completion of a diabetes risk questionnaire and collection of diabetes diagnostic data. Participants found to be at risk were further screened using fingerstick testing of glycated hemoglobin (HbA_{1c}) levels. To determine the pathway's usability and feasibility in the urgent care setting, staff members were surveyed regarding their satisfaction with it.

Results: At baseline, the 64 participants (100%) who met eligibility criteria had previously undiagnosed prediabetes or diabetes. An HbA_{1c} of 5.7% to 6.4% produced a diagnosis of prediabetes in 7 participants (10.9%), and a value of 6.5% or more produced a diagnosis of diabetes in 3 participants (4.7%). All 10 participants in whom prediabetes or diabetes was diagnosed were referred by the urgent care center to a primary-care provider. The survey showed that 93.3% of urgent care center staff members were satisfied with use of the pathway, with a 90.6% compliance rate with pathway criteria.

Conclusion: Use of the EDDP is an effective and feasible method for diabetes screening in urgent care centers, although study in a much larger population is necessary to confirm this finding. Early diabetes detection measures implemented in the urgent care setting will increase detection of previously undiagnosed prediabetes and

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diabetes and referrals to primary-care providers in patients who present to urgent care centers.

Introduction

Lack of access to established primary-care services, medical workforce shortages, and lack of time have led to dramatic growth in the urgent care industry in order to meet the health-care demands of the nation. Urgent care centers have become one of the first-line providers for a large proportion of the U.S. population, with millions of insured and uninsured Americans presenting to urgent care centers annually for both urgent and nonurgent problems. This highlights the need for urgent care specialists to respond by adjusting current practice standards to include both acute and chronic disease detection and management. With millions of people living with undiagnosed type 2 diabetes mellitus or prediabetes, earlier and more widespread detection and intervention are warranted to prevent the morbidity and mortality that follows.

Part 1 of this article focused on evaluation of diabetes screening for the adult urgent care patient. [See "Original Research: Early Diabetes Screening in the Urgent Care, Part 1," at http://www.jucm.com/original-research-early-diabetes-screening-urgent-care-part-1/.] Undiagnosed diabetes affects more than 9 million Americans, with 79 million Americans estimated to have blood glucose levels in the range of prediabetes. In total, the numbers place more than 100 million Americans at risk for developing diabetes.[1] In 2013 the total U.S. expenditure on diabetes care reached approximately $48 billion, and that is projected to escalate to over $79 billion[2] by 2023. Diabetes is one of the leading causes of premature morbidity and mortality.[3,4] The burden of diabetes continues to grow: The number of adults with type 2 diabetes is projected to increase from 371 million in 2012 to approximately 552 million by 2030 worldwide.[5,6] The significant health and financial impact supports the critical need to implement early diabetes detection strategies in all practice settings to reduce the long-term burden of the disease.

Effectiveness of diabetes screening in the asymptomatic patient population has been poorly described in the literature.[7,8] Several studies have looked at diabetes screening in the perioperative setting.[7–10] Data from this research suggest that prediabetes or diabetes would be diagnosed earlier in the disease process in millions of individuals through the screening processes described in these studies alone.[7] Consistent data within the literature reveals that a high proportion of those with new diagnoses already have comorbidities, demonstrating a link between early diabetes detection and reduced future complications.[7–12]

In this second part of a two-part article, we discuss a study of the feasibility of early detection of prediabetes and type 2 diabetes in the fast-paced environment of urgent care. We performed the study because of the current lack of evidence regarding the diagnosis and treatment of those with impaired glycemic control in urgent care.[7,8] With diabetes being a disease with severe subsequent health consequences, and considering that urgent care centers provide care to much of the population, continued efforts to investigate early screening methods appropriate for the specialty of urgent care medicine are warranted.

Methods

Literature Search

We conducted an electronic literature search using PubMed, CINAHL (Cumulative Index to Nursing and Allied Health Literature), EMBASE, Cochrane Library, and Scopus. The search included articles written in English and published between 2010 and 2014. Keyword search terms elicited well over 10,000 studies across all databases. Articles that met both the inclusion and exclusion criteria were selected for analytical review, reducing the major search to approximately 200 articles. After reading the full text and performing a manual search of the reference lists, we conducted further refinements, which decreased the final count to 16 articles. The content of the 16 selected studies included diabetes statistics and recommendations for screening, diagnostic, and therapeutic actions that have been shown to favorably affect health outcomes in patients who have prediabetes or diabetes.[11] The Johns Hopkins Nursing Evidence-Based Rating Scale was used to evaluate and critique the evidence. The quality and strength of the evidence was carefully assessed, allowing only good to high-level research to be used for translation into clinical management and practice discussion.

Participants and Procedures

We conducted a 3-month nonexperimental quality-improvement study using a convenience sample to determine the feasibility of diabetes screening in urgent care centers and referral from urgent care centers to primary-care providers (PCPs) for the population with disease diagnosed via the Early Diabetes Detection Pathway (EDDP) that we developed. The study was approved by the Johns Hopkins University School of Medicine

Institutional Review Board. Inclusion criteria were defined as adult patients age 18 years or older presenting to Synergy Health Center and Urgent Care with no prior diagnosis of prediabetes or diabetes. All participants meeting inclusion criteria were invited to enroll in the study and were provided information about it and then indicated their consent in writing.

All participants underwent assessment with the EDDP (**Table 1**), a two-phase pathway that included participant completion of a diabetes risk questionnaire ([DRQ] **Table 2**) and collection of diabetes diagnostic data (DDD). The 2014 American Diabetes Association diabetes-screening guidelines were used as a foundation to design the pathway criteria.[11] Study participants determined to have a positive diabetes risk on the basis of results from the DRQ and DDD were further screened by fingerstick testing for glycated hemoglobin (HbA_{1c}) levels to detect prediabetes or type 2 diabetes. The final stage of the study included a staff satisfaction survey and evaluation of pathway compliance to determine feasibility in the urgent care setting.

Measurements

Data were collect by local health-care providers from August 1, 2015, until October 31, 2015, at one of the Synergy Health Center and Urgent Care sites, which are independent urgent care centers in Northern California. All adults who presented for care at the urgent care center and in whom diabetes had never been diagnosed were invited to participate in the study. Clinic staff members recorded patient consent, administered the DRQ, and collected DDD. The DDD included documentation of participant age, body mass index (BMI), and blood pressure (BP). Testing was conducted to detect diabetes and prediabetes in asymptomatic adults who (1) were overweight or obese, with a BMI ≥25 kg/m^2, combined with one or more risk factors on the DRQ, and/or (2) had elevated BP with a reading of ≥140/90 mm Hg, with one or more risk factors on the DRQ. For those age 45 years and older, testing was conducted regardless of BMI, BP, or DRQ results.

For each participant, capillary blood HbA_{1c} concentration was measured in a fingerstick blood sample collected by health-care providers and analyzed on a calibrated Siemens DCA/2000 Analyzer. The Siemens point-of-care machine is a standard in the industry and is routinely used for detecting diabetes. The aim of the study was to evaluate effectiveness and feasibility of using the pathway in a real-world urgent care setting, so we believed that rapid HbA_{1c} testing was the most

Table 1. Urgent Care Early Diabetes Detection Pathway

1. EDDP informational brochure given to participant
2. EDDP informed consent form signed by participant
3. DRQ completed by participant
4. Age: _____ (if age ≥45 years, perform HbA_{1c} test)
5. BMI: _____ (if ≥25 kg/m^2 and ≥1 risk factors on DRQ, perform HbA_{1c} test)
6. BP: ____ /____ (if ≥140/90 mm Hg and ≥1 risk factors on DRQ, perform HbA_{1c} test)
7. Fingerstick HbA_{1c} value: _____%
8. HbA_{1c} value ≥9% requires fingerstick blood glucose: _____ (if ≥350 mg/dL, send participant to ED)
9. Health-care provider reviews UC-EDDP results
10. Diagnosis of prediabetes = fingerstick HbA_{1c} value of 5.7%–6.4%
11. Diagnosis of diabetes = fingerstick HbA_{1c} value ≥6.5%
12. Prediabetes or diabetes information brochure given to participants with newly diagnosed disease
13. PCP referral list given for all participants with newly diagnosed prediabetes or diabetes

BMI, body mass index; BP, blood pressure; DRQ, diabetes risk questionnaire; ED, emergency department; EDDP, early diabetes detection pathway; HbA_{1c}, glycated hemoglobin; PCP, primary-care provider.

Table 2. Diabetes Risk Questionnaire

1. Have you ever been diagnosed with prediabetes or diabetes (high blood sugar)?
2. Has a medical professional ever told you that you have high blood sugar, a high HbA_{1c} value, or abnormal blood test results related to blood glucose or blood sugar?
3. Do you exercise *less* than 2 hours per week?
4. Does your mother, father, or sibling(s) have diabetes?
5. Do you consider your race to be any of the following: African American, Latino, Native American, Asian American, or Pacific Islander?
6. Do you have a personal or family history of cardiovascular disease (heart attack, congestive heart failure, stroke)?
7. Have you ever been diagnosed with high blood pressure (hypertension)?
8. Do you take medication to treat high blood pressure?
9. Have you ever been diagnosed with high cholesterol or triglycerides?
10. **Women only:** Have you ever delivered a baby weighing 9 pounds or more?
11. **Women only:** Have you ever been diagnosed with gestational diabetes mellitus (pregnancy-induced diabetes)?
12. **Women only:** Have you ever been diagnosed with polycystic ovary syndrome?

Table 3. Study Outcome Measures

Measure	Frequency (*n* = 64)	Percent	Percent Diagnosed
Diabetes detection			
No diagnosis	54	84.4	0
Diagnosis of prediabetes	7	10.9	10.9
Diagnosis of diabetes	3	4.7	4.7
Total	64	100.0	**15.6**
Referral to PCP for participants with diagnosis			
No PCP referral	54	84.4	0
PCP referral	10	15.6	100
Total	64	100.0	**100**
Staff satisfaction with screening method			
Satisfied (score of 4 or 5)	12	93.3	93.3
Neutral (score of 3)	0	0	0
Dissatisfied (score of 1 or 2)	0	0	0
Total	12	100.0	**93.3**
Compliance with screening pathway criteria			
No pathway omissions	58	90.6	90.6
Pathway omissions	6	9.4	0
Total	64	100.0	**90.6**

PCP, primary-care provider.

appropriate and reliable test. HbA_{1c} measurement does not require fasting, and values provide an established measure of long-term glycemic control that is not affected by transient hyperglycemia from acute stress or illness.[13]

American Diabetes Association diagnostic criteria were used to evaluate participants' HbA_{1c} values to diagnose prediabetes or diabetes. An HbA_{1c} range of 5.7% to 6.4% produced a diagnosis of prediabetes, and a cutoff of ≥6.5% produced a diagnosis of diabetes.[11] Participants identified as having HbA_{1c} values ≥9% underwent measurement of capillary blood glucose levels in a fingerstick blood sample by a calibrated glucometer. Participants whose blood glucose levels measured ≥350 mg/dL were sent to a local emergency department (ED).

DDD were reviewed by health-care providers with all participants. Participants in whom prediabetes or diabetes was diagnosed were given handouts on diabetes and a list of PCPs so that they could arrange for follow-up care. At the conclusion of the study collection period, a staff satisfaction survey using a six-question Likert rating scale was administered to all study team members to evaluate satisfaction with utilization of the pathway in the urgent care center.

Results

A total of 64 adult patients presenting for care at Synergy Health Center and Urgent Care in Pleasanton, California, in whom diabetes had never been diagnosed were recruited for participation in the urgent care EDDP. Participant ethnicity was as follows: 71.9% White/non-Hispanic, 12.5% Asian, 12.5% Hispanic, 3.1% African American. Of the participants, 43.8% were men and 56.3% were women, and their age ranged from 23 to 71 years (mean, 45 years). Participant payor mix was as follows: 61% privately insured, 19% cash, 12% workers' compensation, and 8% Medicare.

At baseline (**Table 3**), 64 participants (100%) had previously undiagnosed prediabetes or diabetes. An HbA_{1c} range of 5.7% to 6.4% produced a diagnosis of prediabetes in 7 participants (10.9%). An HbA_{1c} of ≥6.5% produced a diagnosis of diabetes in 3 participants (4.7%). All 10 participants with diagnosed prediabetes or diabetes were referred from the urgent care center to a PCP. Of the 12 urgent care center staff members surveyed, 93.3% were satisfied with use of the pathway, and there was a 90.6% staff compliance rate with pathway criteria. Additional study findings (**Table 4**) identified 55 participants (86%) with positive findings for diabetes risk factors, 54 (84.4%) qualifying for HbA_{1c} testing, 46 (71.9%) with an elevated BMI, and 22 (34.4%) with elevated BP.

Discussion

The data demonstrate that 15.6% of the 64 participants screened had previously undiagnosed, asymptomatic prediabetes or diabetes. Given the opportunity to expand this screening method to a larger scale, we could be identifying millions with diabetes substantially earlier in the disease process. Earlier diagnosis and treatment would lead to reduced complications, improved health, and a dramatic reduction in diabetes-related financial expenditures. Improved screening measures using the EDDP will also serve to reduce unnecessary visits to an ED for undiagnosed or uncontrolled diabetes, which alone causes significant financial burden to the system.

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Table 4. Additional Study Findings: Participant Diagnostic Data

- 86% had diabetes risk factors
- 84% qualified for glycated hemoglobin (HbA_{1c}) testing
- 72% had an elevated body mass index
- 34% had elevated blood pressure

High staff satisfaction with the EDDP demonstrates strong feasibility in the urgent care environment. Despite the fast pace of urgent care, staff members were able to learn and adhere to the pathway criteria efficiently and effectively, as evidenced by a 90.6% compliance with the pathway. A 100% PCP referral rate for the 10 participants with diagnosed disease further establishes the importance of urgent care centers providing continuity of care between the specialties of urgent care and primary care. This also highlights the volume of patients who present to urgent care centers with chronic illness and the critical need for the population to have access to primary-care services through urgent care centers.

Synergy Health Center and Urgent Care provides internal primary-care services, and the majority of our study participants found to have diabetes or prediabetes elected to receive care within our facility. This provided additional opportunity to monitor and evaluate patient adherence to treatment regimens. The majority of participants with newly diagnosed prediabetes or diabetes continue to receive care at our facility and have improved health outcomes as a result of the EDDP. The data strongly demonstrate that the EDDP is an effective and feasible method for diabetes screening in the urgent care setting and will improve referral from urgent care centers to PCPs for patients with newly diagnosed diabetes or prediabetes.

The growing trend of using urgent care centers for nonurgent problems emerged as a response to increased demand for quick, accessible, and affordable care. In the past, the field of urgent care medicine was expected to provide solely episodic acute care. The urgent care center stands as one of the most evolved and established walk-in clinic models and represents two of the most recent financial cornerstones in health care: quality and value. As the standard in the convenient-care industry, urgent care must take up the next task of improving the consistency with which walk-in clinics provide treatment for chronic disease and coordinated services with primary care either internally or externally.

The Urgent Care Association of America's 2014 Benchmarking Survey Results reveal that an average of 75% of urgent care patients have a PCP outside the center, leaving nearly 25% who may be using urgent care centers as their PCPs. Approximately 26% of urgent care centers now provide formal primary care. The benchmarking survey shows that 93% of urgent care centers have a standard process in place to help patients find a regular provider, yet only 55% of patients are actually assisted with this task.[14]

Limitations

Our study was limited by a small sample size, an inherent feature of our pilot study design. As a result, we cannot generalize the results of our intervention to the large volume of patients who present to urgent care centers each year in the United States. Further implementation of our pathway in urgent care centers across the nation would allow for continued evaluation of this screening method.

Conclusion

With a health-care system already faced with capacity strain, the demand for urgent care centers to provide primary-care services will continue to grow. Health-care reform has translated to an increase in the number of individuals seeking primary-care services at urgent care centers. The best way to address this challenge is to implement screening modalities directed at serving the volumes of Americans who are in need of health care but have access only to urgent care centers for primary care. To accomplish this, urgent care providers must readjust current specialty standards to adopt new roles that include the provision of preventive care and chronic disease management.

Measures to create efficient and cost-effective ways for urgent care providers to use screening methods such as the EDDP will translate to increased disease detection and a reduction in associated complications. We demonstrated that the EDDP is an effective and feasible method for diabetes screening in the urgent care setting and will improve referral rates from urgent care centers to PCPs for patients with previously undiagnosed diabetes. Data from further implementation of the pathway in urgent care centers across the United States will allow for more accurate accounting for the prevalence and incidence of prediabetes and diabetes and will provide a means for detecting diabetes earlier in the disease process.

Urgent care providers are uniquely positioned to provide a hybrid approach to address both acute and chronic illness by using screening methods such as the EDDP that have been studied and demonstrated to be

feasible in this setting. Over the long term, this practice approach will lead to dramatic improvements in the health and quality of life of those people who have diabetes and other chronic illness. ■

Conflict of Interest

The authors have no conflicts of interest to disclose.

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ABSTRACTS IN URGENT CARE

SEAN M. McNEELEY, MD

Each month the Urgent Care College of Physicians (UCCOP) provides a handful of abstracts from or related to urgent care practices or practitioners. Sean M. McNeeley, MD, leads this effort.

Watching for the Female Athlete Triad

Key point: Understanding the female athlete triad is the best way to identify it.

Citation: Weiss Kelly AK, Hecht S; Council on Sports Medicine and Fitness. The female athlete triad. *Pediatrics*. 2016;138: e20160922.

The female athlete triad continues to be better understood over time. As more females participate at higher levels of competition this disorder must be considered. The report's authors note that the triad of amenorrhea, osteoporosis, and disordered eating is no longer considered a dyad of present versus absent but rather a spectrum in all three areas. Increased caloric demands and inadequate intake are key hallmarks for this disorder. It also should be noted that the disorder can be focused on one or more of the three areas of concern. Acute-care practitioners may be the only health-care providers that these young females see, so we should be alert for the symptoms of the triad. ■

Sean M. McNeeley, MD, is an urgent care practitioner and Network Medical Director at University Hospitals of Cleveland, home of the first fellowship in urgent care medicine. Dr. McNeeley is a board member of UCAOA, UCCOP, and the Board of Certification in Urgent Care Medicine. He also sits on the *JUCM* editorial board.

Diagnosing Serotonin Syndrome

Key point: Serotonin syndrome is not easy to diagnose.

Citation: Werneke U, Jamshidi F, Taylor DM, Ott M. Conundrums in neurology: diagnosing serotonin syndrome—a meta-analysis of cases. *BMC Neurol*. 2016;16:97.

This systematic review describes the findings when a patient's serotonin is at a toxic level. Currently, making the syndrome diagnosis on clinical grounds is challenging. Rapid onset and hyperthermia have long been considered important factors in diagnosis. The authors note that onset depends on the pharmacokinetics of the causative agent. Diagnosing hyperthermia also is based on the presence of multiple factors, including confusion, changes in consciousness, and agitation. Tremor and hyperreflexia are predominant neurologic signs. Tachycardia, hypertension, and fever are also important factors. The diagnosis continues to be challenging, but at least considering it is the most important first step for urgent care providers. ■

Steam Inhalation Doesn't Unstuff Sinuses, but Sinus Irrigation Might

Key point: Say yes to sinus irrigation, but there is no benefit from steam inhalation.

Citation: Little P, Stuart B, Mullee M, et al, for the SNIFS Study Team. Effectiveness of steam inhalation and nasal irri-

ABSTRACTS IN URGENT CARE

"The authors found no benefit from steam inhalation and less benefit than previously shown for saline irrigation. Acute-care providers may want to advise patients that steam inhalation may not be beneficial but that saline irrigation may be helpful."

gation for chronic or recurrent sinus symptoms in primary care: a pragmatic randomized controlled trial. *CMAJ*. 2016 July 18. doi: 10.1503/cmaj.160362. [Epub ahead of print.]

In the discussion of how to assist patients with chronic or recurrent sinusitis, steam inhalation and sinus irrigation have often come up. In the randomized, controlled study from the United Kingdom reported here, 871 patients were assigned to groups by treatment: standard care, steam inhalation, saline irrigation, or both inhalation and irrigation. The authors found no benefit from steam inhalation and less benefit than previously shown for saline irrigation. Acute-care providers may want to advise patients that steam inhalation may not be beneficial but that saline irrigation may be helpful. ■

Adults Can Develop Hand-Foot-and-Mouth Disease

Key point: Hand-foot-and-mouth disease is not just for children.

Citation: Banta J, Lenz B, Pawlak M, et al. Outbreak of hand, foot, and mouth disease caused by Coxsackievirus A6 among basic military trainees—Texas, 2015. *MMWR Morb Mortal Wkly Rep*. 2016;65:678–680.

This is a report from a Texas military base about the spread of hand-foot-and-mouth disease diagnosed in 53 adults in the 2 months after it was diagnosed there in a 22-year-old. The infection rate was 4.7 % of those exposed. Symptoms included malaise, fever, and then oral lesions that spread to the hands and feet. Some patients had lesions that extended beyond the normal surface of the hands and feet. Urgent care providers who remain aware of this etiology, particularly in the summer and fall, will find it easier to arrive at a diagnosis in adults who present atypically. ■

Restricting Antibiotic Prescribing May Not Increase Risk of Secondary Infections

Key point: Limiting antibiotic prescriptions for respiratory illness appears to be safe.

Citation: Gulliford MC, Moore MV, Little P, et al. Safety of reduced antibiotic prescribing for self limiting

"When to discharge a patient with an elevated glucose level is an important decision at the point of care. . . . Statistical analysis showed no relationship between discharge glucose level and the need for a return visit or hospital admission."

respiratory tract infections in primary care: cohort study using electronic health records. *BMJ*. 2016;354:i3410.

One reason for prescribing antibiotics for respiratory illnesses is the fear of a secondary infection. To determine whether this reason is valid, the authors in this cohort study assessed data for a total of 45.5 million patient-years to determine whether the incidence of serious bacterial illness (peritonsillar abscess, pneumonia, mastoiditis, empyema, intracranial abscess, etc.) was higher among patients whose health-care providers wrote fewer prescriptions for antibiotics. The antibiotic prescription rate between 2005 and 2014 for both men and women per 1000 respiratory symptoms had decreased: from 53.9% to 50.5% for men, and from 54.5% to 51.5% for women. Also, rates for all serious bacterial illness except pneumonia decreased; the occurrence rate for pneumonia increased 0.4% over the study's time frame. A closer look at the data also showed that those providers with the lowest prescribing rate did see more peritonsillar abscesses. For the urgent care provider, this is good news overall. It is important to pay close attention to spot those patients who may be more likely to develop pneumonia or peritonsillar abscesses, as well as to provide good follow-up instructions. Additional retrospective studies are necessary to confirm these findings. ■

Using D-Dimer Values Cuts Down on the Need for Imaging in Possible Embolism

Key point: Adding D-dimer values to the Wells rule decreases need for imaging.

Citation: van Es N, van der Hulle T, van Es J, et al. Wells rule and D-dimer testing to rule out pulmonary embolism: a systematic review and individual-patient data meta-analysis. *Ann Intern Med*. 2016;165:253–261.

This meta-analysis looked at using the Wells criteria and D-dimer testing to rule out pulmonary embolism. A total of 7268 patients were evaluated. The authors concluded that using age-adjusted D-dimer values could increase the percentage of patients, from 28% to 33%, who do not need imagining. The biggest areas of increase were for elderly patients and those with chronic obstructive pulmonary disease. For urgent care providers, determining which patients are least likely to have an embolism is relevant to daily practice, although a work-up is still necessary for all patients with the potential for embolism. Even without using D-dimer values, embolism was ruled out in the study in 28% of patients on the basis of the Wells rule alone. ■

Researchers Take the First Step Toward a Chlamydia Vaccine

Key point: A chlamydia vaccine may not be far away.

Citation: Bulir DC, Liang S, Lee A, et al. Immunization with chlamydial type III secretion antigens reduces vaginal shedding and prevents fallopian tube pathology following live *C. muridarum* challenge. *Vaccine*. 2016;34:3979–3985.

Chlamydia is the leading sexually transmitted disease in the United States and afflicts 113 million people around the world. Serious infection can be silent and result in infertility. Authors from McMaster University in Canada report a first step in finding a highly effective chlamydia vaccine. After vaccination in mice, vaginal secretions were cleared by 95%, infections cleared sooner, and hydrosalpinx was reduced. A commercially available vaccine is likely years away, even if human trials prove equally as effective. In the meantime, it is important that urgent care providers remember to treat for chlamydia even when only gonorrhea is found. ■

An Elevated Glucose Level at Discharge Doesn't Mean Patients Will Have to Return for Treatment

Key point: Discharge glucose levels do not predict return visits.

Citation: Driver BE, Olives TD, Bischof JE, et al. Discharge glucose is not associated with short-term adverse outcomes in emergency department patients with moderate to severe hyperglycemia. *Am Emerg Med*. 2016 June 25. doi: 10.1016/j.annemergmed.2016.04.057. [Epub ahead of print.]

When to discharge a patient with an elevated glucose level is an important decision at the point of care. This retrospective chart-review cohort study sought to determine whether the level of glucose at discharge is correlated with the need for a return visit. The inclusion criterion was a glucose level of >400 mg/dL. A total of 422 patients' charts were reviewed. In the 7 days after discharge, 62 patients were seen again in an emergency department and 36 were admitted to a hospital. Statistical analysis showed no relationship between discharge glucose level and the need for a return visit or hospital admission. For urgent care providers, these findings may help decrease concern about discharging a patient with a mildly elevated glucose level. ■

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Don't Post That! Protecting Patient Privacy in the Age of Social Media

Spencer Hamer, JD, and Chloe Ghoogassian, Esq.

Urgent message: Using social media platforms helps your community get to know your urgent care center. But be sure that you protect your patients' privacy when doing so.

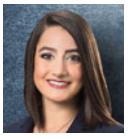
Introduction

Social media has great utility for urgent care centers, providing invaluable opportunities to connect with the local community and offering a host of educational tools for providers and patients. The explosion of myriad social media platforms, however, has created a variety of new channels for exposure of confidential patient medical information, resulting in traps for the unwary. Predictably, the rising use of social media in the health-care environment has led to lawsuits and regulatory scrutiny. Urgent care operators must understand the unique health-care-related legal risks posed by social media and develop an action plan for mitigating these risks.

The Expansive Reach of HIPAA

The U.S. Health Insurance Portability and Accountability Act (HIPAA) regulates use and disclosure of protected health information (PHI). PHI is defined under HIPAA as "individually identifiable health information transmitted or maintained in any form or medium, whether in electronic or other form." HIPAA, as modified by the Health Information Technology for Economic and Clinical Health (HITECH) Act, governs the use and disclosure of PHI by health-care providers, including urgent care centers. State laws also prohibit such disclosures.

HIPAA authorizes heavy fines and potential criminal charges for the unlawful disclosure—whether orally, on paper, or electronically—of PHI. To comply with HIPAA's Privacy Rule, information concerning patients must be "de-identified": All personal identifying information and any revealing references must be removed. Inadvertent breaches of the rule can result in corrective action, hefty fines, and investigations by the U.S. Department of Health and Human Services (HHS). In addition, HIPAA breaches can result in reputational damage and loss of business.



Spencer Hamer, JD, is a partner working in the Irvine, California office of the law firm of Michelman & Robinson, specializing in labor and employment matters for health-care clients. **Chloe Ghoogassian, Esq.,** is a health-care attorney in Los Angeles, California.

Social Media and Patient Privacy

Use of social media potentially violates HIPAA when posts, blogs, tweets, photos, videos, or other information concerning a patient is posted to a social networking site. Even a well-intentioned provider can be responsible for a violation, by using ineffective safeguards against disclosing PHI. Even a single unauthorized PHI disclosure may be sufficient to generate an HHS investigation.

For example, in 2013, an administrative employee at a university medical center accessed, took a screenshot of, and posted a patient's medical records to a Facebook group, mocking the woman's diagnosis. The story went viral, and the hospital suffered substantial reputational harm. Ultimately, a private lawsuit brought by the patient was dropped, and the hospital avoided civil liability, after the judge determined that the employee's actions were outside the scope of her employment as defined by the hospital's social media policy.

HIPAA violations can also occur when health-care providers attempt to share success stories. In a well-publicized case, a nursing student took a picture of a 3-year-old patient who had cancer and posted it on her personal Facebook page, with a caption praising the young boy's bravery. Despite her admirable intentions, the post was a HIPAA violation, and the student was expelled from nursing school for unauthorized disclosure of PHI—the patient's face and his diagnosis.

Problems can also arise when conflict occurs between patients and providers. In one case, a nursing assistant used Snapchat to record and share a video of a partially undressed nursing-home resident who was "giving [the nursing assistant]

a hard time getting changed." Another Snapchat user reported the video to her employer; the nursing assistant was fired, and criminal charges were filed against her.

Negative patient reviews are another common source of violations. For example, a California dentist accused by a patient of misdiagnosis in a one-star Yelp! rating responded to the review by defending his diagnosis, but he disclosed PHI in the process. The patient reported him to HHS, which warned the dentist that responses to negative reviews must not disclose PHI. Even if a patient publicly discloses her PHI, a provider can violate HIPAA by referring to the information in response to the initial disclosure.

Urgent Care Best Practices

In the rapidly expanding and competitive urgent care industry, establishing a brand and engaging the community are critical to success, and social media is an integral part of this strategy. Employees in new and expanding centers, however, are often hired without being fully apprised of the legal risks presented by social media, while also being tasked with using social media to promote the center and connect with the local community. Given the speed with which a single social media post can transform into a potential HIPAA violation, centers must develop and implement a strategy to protect PHI from inadvertent disclosure.

Hiring

Ask potential hires about their experience in handling PHI. If they have minimal to none, that may not exclude them from being hired, but you will at least know the level of experience you are dealing with and can tailor the amount of training accordingly. Employees with substantial knowledge of PHI may be able to separate themselves from other candidates. Talk about social media use in the center, and gauge the level of familiarity the applicant has with PHI protocol. Develop hypothetical questions related to PHI disclosure through social media, and see whether the applicant can spot the issues.

Training

Training on PHI, including a review of how the center uses social media, and how inappropriate use of social media can result in HIPAA violations, should begin in the orientation process. For example, employees should know the identifiers specified by the HIPAA regulations that can result in a violation. They should be informed that seemingly private communications can illegally disclose PHI, and they should be provided with examples of how PHI breaches can occur on social media. In addition, employees who interact with the public on social media should be given specific instructions on how to use various platforms. For example, they should be advised that responses to negative reviews must not contain PHI. The center's social media policy should also be reviewed for compliance with the growing body of state and federal laws, including recent decisions of the National Labor Relations Board, regarding employee rights related to social media in the workplace.

"Use of social media potentially violates HIPAA when posts, blogs, tweets, photos, videos, or other information concerning a patient is posted to a social networking site."

Employees should not be given access to any of the center's social media passwords until training has been completed and documented. Employees should receive regular follow-up training on HIPAA requirements, with social media remaining a key area of focus.

Written Policies

In conjunction with their HIPAA training, all employees should receive written policies on the use of social media, both in the employee handbook and as stand-alone documents. These policies should be saved in the employees' personnel files.

Monitoring

A well-trained employee should be designated to regularly monitor social media sites used by the center, and to review and respond to information posted about the center on the internet. Work with your information technology department to set up procedures that will maximize your ability to monitor all relevant posts.

Employee Feedback

Bring your employees into the conversation about best practices. Make social media a regular topic in meetings, review breaches that are reported in the news, and survey employees for their opinions on how to prevent breaches.

Terminations

When employees leave the center, a review must be immediately conducted to determine whether they had access to social media passwords. Your information technology department should ensure that former employees can no longer post anything on the center's social media platforms.

Conclusion

Though the world of social media presents substantial risk regarding PHI, the good news is that with careful preparation and consistent practices, urgent care centers can proactively manage this risk. ■

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INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 1

In each issue, *JUCM* will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of conditions that real urgent care patients have presented with.

If you would like to submit a case for consideration, please e-mail the relevant materials and presenting information to *editor@jucm.com*.

A Fall from a Roof by an Adult

Figure 1.

Case

A 29-year-old woman presents to an urgent care center after a fall from the roof of her house, where she was cleaning the gutters. She reports that her right heel began hurting intensely immediately after the fall and that the pain worsened in the time it took for a family member to get her to the center. She cannot bear weight on her right leg. She mentions that she is a runner who often takes part in marathons and triathlons.

View the image taken (**Figure 1**) and consider what your diagnosis would be.

Resolution of the case is described on the next page.

THE RESOLUTION


Figure 2.

Differential Diagnosis

- Ankle dislocation
- Jones fracture
- Calcaneal fracture
- Talus fracture
- Bimalleolar fracture

Diagnosis

An x-ray (**Figure 2**) is obtained that shows a comminuted fracture of the calcaneus.

Learnings

Calcaneal fractures account for 1.2% of all fractures in adults, occurring most commonly at the age of 40 years, with the incidence three times higher in men than in women. Most injuries (71%) occur from a fall from a height, usually over 6 feet (1.8 m). When other injuries are present, they are most likely to be to the lower limbs (13%) or the spine (6%). There is significant morbidity with prolonged pain and disability, which is increased if the fractures are not recognized or appropriately treated. The poor prognosis may result from direct trauma to the articular surfaces, calcaneal fat pad, and peroneal tendons. Fractures are divided into intra-articular (75%), which involve the subtalar joint (more severe fractures having worse outcomes), and extra-articular (25%), which do not involve the subtalar joint (these often have a favorable outcome).

The calcaneus is the first bone to be impacted with walking or with a fall from a height. Depending on the position of the foot (valgus or varus), the overlying talus bone will transmit a force to a unique portion of the calcaneus, resulting in specific types of fractures.

What to Look For

When obtaining the medical history, ask questions about the following.

- **Onset:** Ask whether the onset was gradual versus sudden. Most often, the mechanism will be a fall from a height with sudden onset of pain.
- **Location:** The typical location is over the heel, but there may be referred pain, so even with a mechanism of ankle strain, palpate the heel.
- **Duration:** The typical timeline involves the patient seeking immediate medical care, though if there are extenuating circumstances, such as substance use, assault, or abuse, the patient may delay seeking care.
- **Severity:** Pain is typically severe and increases with any attempt to bear weight.
- **Other trauma:** Ask about trauma to the ankle, leg or hip pain, intraabdominal pain, or pain in the chest, neck, and head.
- **Social history:** Inquire about occupation, alcohol or substance use, and any possibility of assault.

Do the following during the physical examination:

- Examine the foot, ankle, knee, and hip.
- Inspect the foot for signs of swelling, abrasions, and lacerations. Ecchymosis is not a sensitive finding but is specific for a calcaneal fracture.
- Palpate the heel and ankle.
- Assess the range of motion, unless there is severe pain.
- Check the neurovascular status, and document the pulses (dorsalis pedis and posterior tibial) and gross sensation.
- Look for compartment syndrome, which may be a consideration with massive swelling. It is present in 10% of patients with a calcaneal fracture, and it is typically caused by a high-energy deceleration injury.

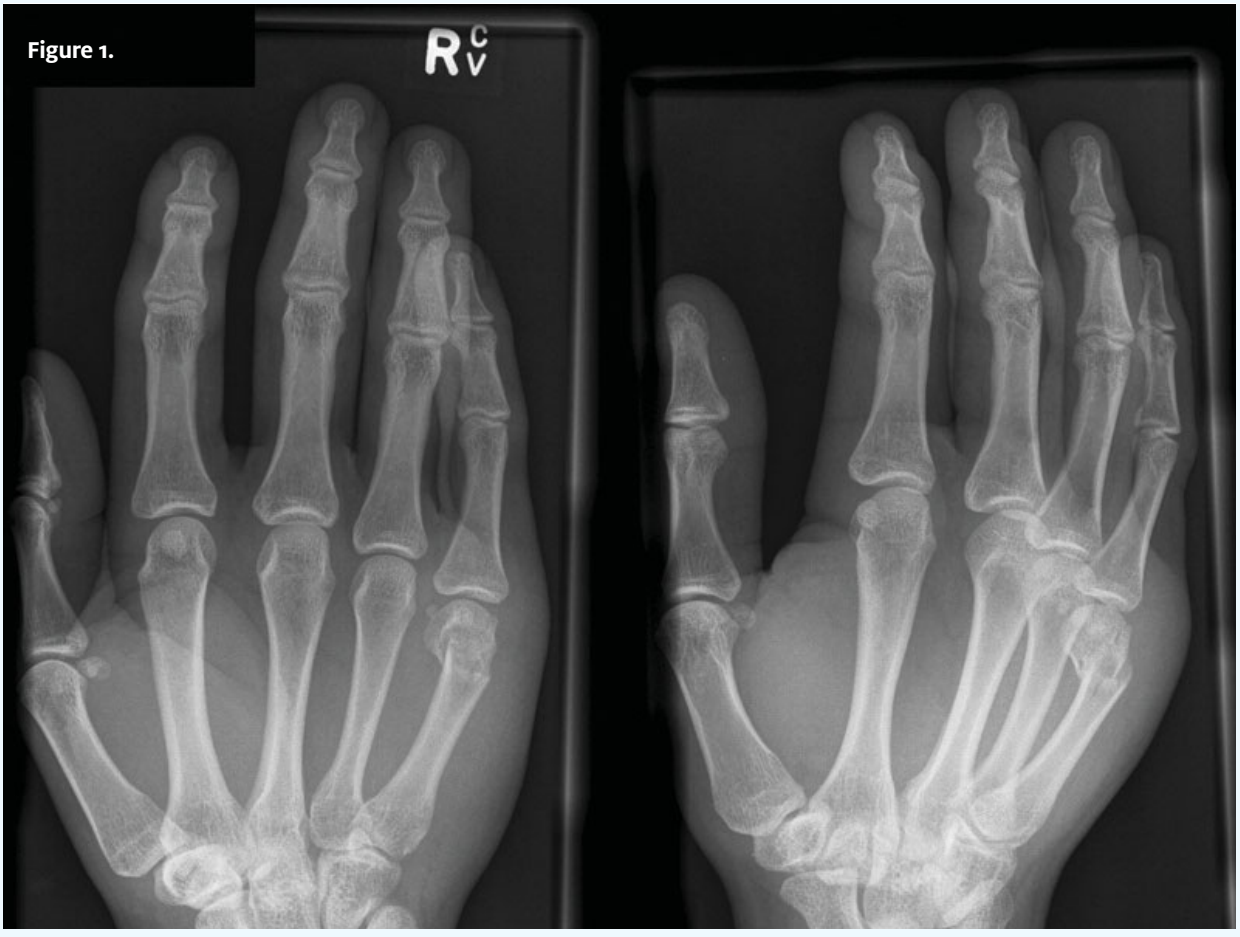
Most of these patients will be sent to an emergency department. Indications for transfer include the following:

- Open fracture
- Severe pain
- Possibility of compartment syndrome
- Neurovascular compromise
- Fractures with dislocation
- Possible comorbid conditions such as coagulopathy, anticoagulant use, immunosuppression, and difficulty with ambulation at baseline

Acknowledgment: Figure 1 is used with permission under a GNU Free Document License, Version 1.2, from Jojo. Original figure available from https://upload.wikimedia.org/wikipedia/commons/e/e8/Calcaneus_Fracture.jpg. ■

CLINICAL CHALLENGE: CASE 2

Pain in the Hand After Punching a Wall



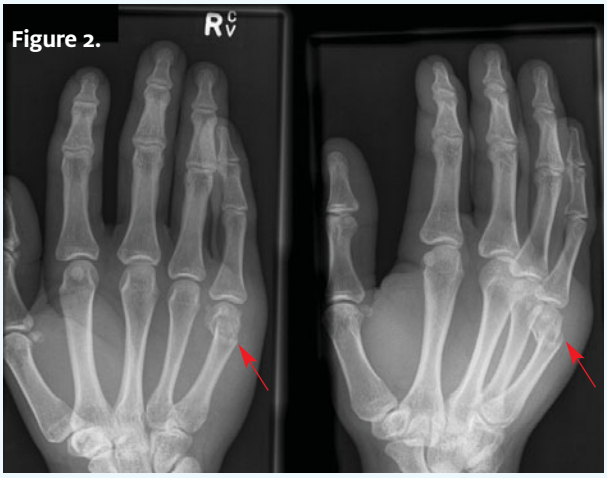
Case

An 18-year-old man presents to an urgent care center with pain at the distal aspect of the metacarpal bone of the little finger. The pain began 2 hours earlier, after he punched a wall. He has pain with range of motion and a minimal amount of numbness in the finger. He reports that he has no other injuries.

View the image taken (**Figure 1**) and consider what your diagnosis would be.

Resolution of the case is described on the next page.

THE RESOLUTION



Differential Diagnosis

- Osteoarthritis
- Mallet finger
- Gamekeeper's thumb
- Rheumatoid arthritis
- Osteosarcoma

Physical Examination

The patient is afebrile, he has a pulse rate of 120 beats/min, his respiration rate is 20 breaths/min, and his blood pressure is 110/89 mm Hg. He is alert and oriented, is not in acute distress, but is holding his right hand in his lap. There is swelling of the hand, and he experiences a moderate amount of pain with palpation over the metacarpophalangeal (MCP) joint of the little finger. He has pain with even a minimal range of motion. He has no tenderness over the proximal interphalangeal or distal interphalangeal joints of the little finger or over the MCP of the ring finger. His wrist is not tender with palpation, and it has good range of motion. The neurovascular status is intact, with a 2+ radial pulse, and sensation is grossly intact.

Diagnosis

A hand x-ray (**Figure 2**) is obtained that confirms a fracture of the distal metacarpal bone of the little finger with 30° of angulation. The patient has a boxer's fracture.

Learnings

A boxer's fracture is a distal metacarpal fracture of the middle, ring, or long finger. It is one of the most common hand injuries occurring in young males who strike an object such as a wall or a face with a closed fist.

The mechanism is typically a blunt force against the MCP of the little finger. Note that a very vigorous mechanism may result in a carpometacarpal dislocation or an open fracture. A fracture resulting from a fight where the hand comes in contact with a mouth can result in oral organisms causing a skin or bone infection. These injuries are called closed-fist injuries, or fight bites. Patients may be reluctant to reveal the etiology of the injury for fear of legal or other issues. Injuries often present with a laceration over the MCP joint of the middle, ring, or little finger.

What to Look For

The physical examination should include the following:

- Inspection of the skin for swelling, abrasions, and lacerations
- Palpation of the area of greatest pain as well as the joint proximal and distal to the injury
- Assessment of strength; strength may be preserved with up to 90% disruption of a tendon
- Assessment of neurovascular status; document sensation and pulse or capillary refill

By using a stepwise approach to evaluation of a hand x-ray, the clinician can avoid missing important findings. Start with the metacarpal bones, looking for alignment, signs of soft-tissue swelling (indicating location of greatest injury), and fracture. Watch for

- A break in the cortex on any of the three x-ray views
- Disruption in trabeculations
- Lucency within the bone
- Angulation or impaction

Next, evaluate the bones of the wrist (carpal bones) for fracture or dislocation. Obtain a dedicated wrist x-ray if there is any wrist pain with palpation or range of motion.

Should a boxer's fracture be reduced, or should it be splinted? If there is angulation of <40° of the fracture, this will not result in loss of function and does not require reduction. The patient should be cautioned that there may be a cosmetic deformity. Provide ice, immobilization with an ulnar gutter or volar splint, elevation, and a referral to an orthopedist or hand surgeon within 2 or 3 days.

The following are indications for transfer to an emergency department:

- Open fracture
- Carpometacarpal dislocation
- Open wound with infection
- Osteomyelitis
- Intractable pain ■

CME: This article is offered for *AMA PRA Category 1 Credit*.™
See **CME Quiz Questions** on page 7.

Using Telemedicine to Improve Throughput and Build Market Share

Urgent message: Telemedicine can augment walk-in urgent care operations via provider load–balancing across centers in multiunit networks as well as direct-to-consumer platforms that expand a center's geographic coverage, differentiate a center's brand from that of competitors, and drive additional revenue.

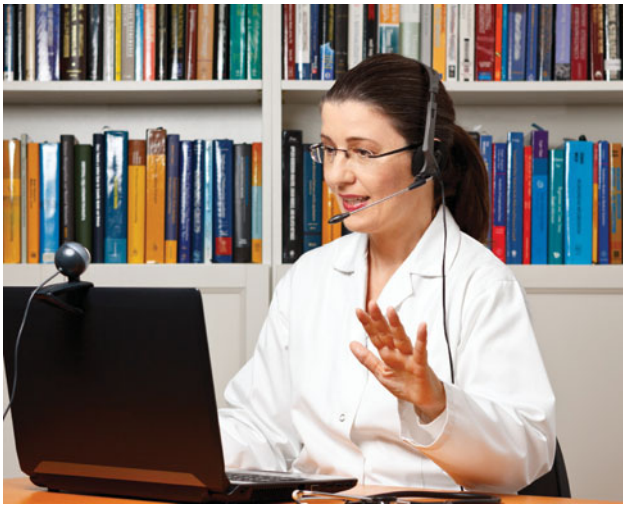
ALAN A. AYERS, MBA, MAcc

Introduction

Given that the most common diagnoses seen in urgent care centers are low-acuity, low-touch conditions affecting the respiratory system, ears, nose, or throat—many of which can be treated via telemedicine—the looming question for many urgent care operators is "What will telemedicine's impact be on my business?"

According to experts, there were 100 million e-visits globally in 2014, up 400% from 2012, with 75% occurring in North America. It is estimated that by 2024, 17% of all provider visits will occur virtually, steering 260 million encounters away from doctors' offices.[1] Although some common urgent care procedures, such as laceration repair, foreign-body removal, and setting fractures, can only be performed in person, many other urgent care visits can be done by telemedicine, which can be cheaper and more convenient for consumers.

Doctors Care, which is based in Columbia, South Carolina, has used telemedicine to stay ahead of the curve, balancing patient loads across its centers since 2014. In 2016, it launched direct-to-consumer telemedicine accessible via home computer, tablet, and smartphone. Load-balancing uses telemedicine to connect a patient who presents at one urgent care center, which may have long wait times due to the ebb and flow in a walk-in medical practice, with a physician at a less-busy center who has time available (**Figure 1**). For insurance purposes, such visits are considered in-office consultations and are reimbursed at the same rate as an office visit. Direct-to-consumer telemedicine makes possible a physician visit via a patient's electronic device, without the patient traveling to a physical location (**Figure 2**). Doctors Care currently charges $55 for virtual visits, which may be reimbursed by a health or flexible savings account but are not covered by many insurance plans.



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Doctors Care operates 80 walk-in urgent care, physical therapy, and wellness centers in South Carolina and Tennessee. Doctors Care's management company, UCI

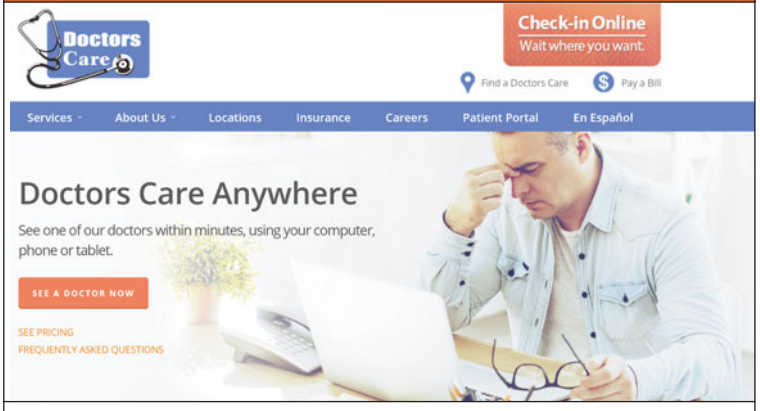
1. SG2 Intelligence. Virtual health: aligning solutions with enterprise-wide priorities [internet]. Skokie, IL: SG2 Intelligence; © 2014 [cited 2016 June 10]. Available from: http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Technology-Media-Telecommunications/gx-tmt-2014predictionevisits.pdf

Alan A. Ayers, MBA, MAcc, is Vice President of Strategic Initiatives for Practice Velocity and is Practice Management Editor of the *Journal of Urgent Care Medicine*. **Thomas E. Gibbons, MD, MBA, FACEP,** is President and Chief Medical Officer of Doctors Care, and is a member of *JUCM's* editorial board. The author has no relevant financial relationship with any commercial interests.

Figure 1.

Doctors Care urgent care facility in Lexington, South Carolina. Using telemedicine to balance patient loads between busy centers and those with excess capacity improves provider utilization, reduces wait times, and increases patient satisfaction. (Source: Doctors Care.)

Figure 2.



Doctors Care Anywhere offers South Carolina residents telemedicine consultations using their home computer, tablet, or smartphone starting at $55 per encounter. (Source: Doctors Care.)

Medical Affiliates, is owned by BlueCross BlueShield of South Carolina. In the following *JUCM*-exclusive interview, Chief Medical Officer Thomas E. Gibbons explains how telemedicine fits within Doctors Care's strategy.

Interview

Alan Ayers: Doctors Care has implemented a couple of different models of telemedicine within and parallel to its urgent care delivery system. Can you differentiate telemedicine used for site-to-site load-balancing, employer/on-site services, and direct-to-consumer?

Thomas Gibbons: Our mission is to provide convenient medical and health care to our customers. To achieve this, we leveraged the applications, quality, and information technology teams on the nonmedical management side of our business, UCI Medical Affiliates, to explore all consumer channels available and develop creative solutions. One result of that effort is a site-to-site load-balancing program we developed in 2014 that allows patients to avoid queues and wait time when they physically walk into one of our 55 urgent care centers. Using this in-office telemedicine program, patients have the choice of waiting for the provider who is physically present in the urgent care center, or of being assisted by a nurse in a connected examination room and undergoing evaluation via telemedicine equipment by one of our staff physicians located in another center or from their homes. We refer to this as "zero wait time." We can offer this same setup and service to employers.

Our direct-to-consumer service, which we soft-launched in April 2016, simply offers new and existing patients access to one of our employed, trained, and insured physicians directly from DoctorsCare.com using a phone, tablet, or computer. This service is currently available from 8 a.m. to 5 p.m., but we intend to expand those hours over the next few months.

Ayers: What clinical presentations are best suited for telemedicine? How does the technology Doctors Care is using enable physical examination and facilitate diagnosis?

Gibbons: For our direct-to-consumer service from DoctorsCare.com, the most common ailments are runny nose, head congestion, headache, cough, ear pain, nausea or vomiting, diarrhea, skin rashes, sore throat, fever, dizziness, allergies, conjunctivitis, urinary tract infections, and so on. With our site-to-site load-balancing model, the list expands, of course, because the patients physically present in our brick-and-mortar centers—allowing them immediate access to laboratory testing, x-rays, injections, and other services.

Ayers: How does Doctors Care charge for its telemedicine services? What has the response of third-party payors been thus far?

Gibbons: Our in-center load-balancing service is priced

". . . Patients have the choice of waiting for the provider who is physically present in the urgent care center, or of being assisted by a nurse . . . and undergoing evaluation via telemedicine equipment by one of our staff physicians located in another center or from their homes."

low and reimbursed at the same rates as traditional office services. This makes perfect sense to us when considering that our costs are no lower in this model. The major benefit is convenience to our patients. We get very flexible with the model in employers' work sites and can work out convenient PEPM [per employee per month] rates, a flat per-month reimbursement rate, or variations on those themes. Our direct-to-consumer service from DoctorsCare.com is priced at $55 for visits lasting 15 minutes or less.

Ayers: What are the benefits telemedicine brings to urgent care in terms of improved clinical outcomes, increased revenue/profitability, and greater patient satisfaction?
Gibbons: Our driving force was increased patient satisfaction. Doctors Care has 55 centers in South Carolina—so we have a pretty good footprint across the state. This allows us to refer direct-to-consumer telemedicine patients to one of our centers for any necessary laboratory testing or other ancillary care that might be needed. Because our tele-physicians are Doctors Care employees and are physically located in South Carolina, they know the most effective specialist that might be required. This is a huge advantage over some of the national telemedicine players where the tele-physician might have the appropriate in-state licensure but physically resides in, say, California, Texas, or Illinois.

The jury is still out on increased revenue and profitability with telemedicine. Of course, we're careful to avoid cannibalization of our top-line revenue. The strategy is to actually increase the utility of our services so this becomes a "blue ocean" initiative for us—that is to say, by using telemedicine to offer more options and better convenience without increasing our prices, we provide a better value for our patients [**Sidebar 1**].

Ayers: How does telemedicine enhance or contribute to positive patient satisfaction scores, repeat visits, and positive word of mouth?
Gibbons: Doctors Care has been offering telemedicine services since 2014, but we have also implemented a significant number of other patient-centric service initiatives. Accordingly, it is difficult to state that our patient satisfaction scores increased x% because of this single service.

Sidebar 1. Questions to Ask When Implementing an Urgent Care Telemedicine Strategy

- Does telemedicine help expand your existing patient base for your current service offerings?
- Can it help deliver new services to the existing patient base?
- Will it expand your existing services into new markets?
- Will it enable you to offer new services to new patients?

Source: Vasquez I. Telemedicine's impact on urgent care: what you need to know. *Journal of Urgent Care Medicine*. 2012;6:15–20. Available from: http://www.jucm.com/telemedicines-impact-urgent-care-need-know/

Ayers: Are you concerned that telemedicine could cannibalize conventional low-acuity urgent care cases like sinusitis, upper respiratory infections, or otitis media?
Gibbons: We have worked hard to stay attuned to consumer trends—and to not wake up one morning asking ourselves the question "What just happened?" if we were to suddenly see 30% of our patients slip away. Sure, we might lose some revenue along the way, but we expect to make it up in increased patient traffic and efficiencies with this improved service.

Ayers: What additional insights or learnings can you share related to your telemedicine experience?
Gibbons: Telemedicine may not be for all providers and all organizations, and it may not be to the liking of all patients. We implemented telemedicine services as simply another consumer channel for what we have been offering for 35 years—convenient medical and health care.

Conclusion

Although the impact of telemedicine on urgent care has yet to be determined, progressive urgent care providers are finding ways to integrate the technology. Whether telemedicine is used for load-balancing or to attract new patients, pilot initiatives like those being conducted at Doctors Care will demonstrate the degree to which telemedicine improves throughput, shortens wait times, increases patient satisfaction, and provides additional revenue for existing urgent care operations, thus making a business case to expand the capabilities and reach of telemedicine solutions over time. ■

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CODING Q&A

How to Talk About Billing Codes to Providers Who Don't Know Them

DAVID E. STERN, MD, CPC

Q. How do I talk to my providers about the documentation to support specific *International Classification of Diseases, 10th Revision, Clinical Modification* (ICD-10-CM) codes when most of them do not really know the codes, but they know the terminology?

A. Now that we are 1 year into using ICD-10-CM codes, most expect the Centers for Medicare & Medicaid Services (CMS) to lift the grace period for allowing providers to assign unspecified diagnosis codes. It is important that you are documenting to get to the highest specificity. For example, when assigning a code for a fracture, consider the following categories:

- What type of fracture is this (e.g., type I, type II, greenstick, displaced, nondisplaced, open, closed)?
- What is the anatomic location (e.g., shaft of the radius, radial styloid)?
- What is the status of the fracture (e.g., initial encounter, subsequent encounter with routine healing)?
- What is the laterality of the fracture (e.g., right arm, left leg)?

Once these questions are answered, you should be able to code the highest-specificity fracture code possible. Here are more examples of specifics needed for some diagnostic categories:

Neoplasms (C00–C99)

- Type: Benign, premalignant, malignant, uncertain behavior, etc.
- Anatomic location: Stomach, intestine, skin, etc.
- Examples:
  - **C43.31**, "malignant melanoma of nose"
  - **C43.__**, "malignant melanoma of skin"
  - **___.3_**, ". . . unspecified parts of face"
  - **___._1**, ". . . nose"

Endocrine (E00–E99)

- Type: type 1, type 2, gestational
- Causes: chemical exposure, renal disease, pregnancy, etc.
- Complications/manifestations: glaucoma, ulcers, etc.
- Laterality: right, left, bilateral
- Body system affected: renal, pancreas, etc.
- Example: **E11.3211,** "type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye"
  - **E11.____**, "type 2 diabetes mellitus"
  - **___.3___**, ". . . with ophthalmic complications"
  - **___._2__**, ". . . with mild nonproliferative diabetic retinopathy"
  - **___.__1_**, ". . . with macular edema"
  - **___.___1**, ". . . right eye"

Diseases of the Nervous System (G00–G99)

- Type: pain, neuropathies, etc.
- Laterality: right, left, bilateral
- Example: **G56.03**, "carpal tunnel syndrome, bilateral upper limbs"
  - **G56.__**, "mononeuropathies of upper limb"
  - **___.0_**, ". . . carpal tunnel syndrome"
  - **___._3**, ". . . bilateral"

Diseases of the Eye and Adnexa (H00–H59)

- Type: acute, chronic, mechanical, mucopurulent, senile, etc.
- Laterality: right, left, bilateral
- Example: **H10.011**, "acute follicular conjunctivitis, right eye"
  - **H10.___**, "conjunctivitis"
  - **___.0__**, ". . . mucopurulent"

David E. Stern, MD, CPC, is a certified professional coder and is board-certified in internal medicine. He was a director on the founding board of UCAOA and has received the organization's Lifetime Membership Award. He is CEO of Practice Velocity, LLC (www.practicevelocity.com), NMN Consultants (www.urgentcareconsultants.com), and PV Billing (www.practicevelocity.com/urgent-care-billing/), providers of software, billing, and urgent care consulting services. Dr. Stern welcomes your questions about urgent care in general and about coding issues in particular.

- **___._1_**, ". . . acute follicular"
- **___.__1**, ". . . right eye"

Diseases of the Ear and Mastoid Process (H60–H95)

- Type: acute, chronic, externa, serous, etc.
- Laterality: right, left, bilateral
- Example: **H65.01**, "acute serous otitis media, right ear"
  - **H65.__**, "nonsuppurative otitis media"
  - **___.0_**, ". . . acute serous"
  - **___._1**, ". . . right ear"

Diseases of the Circulatory System (I00–I99)

- Associated complications/signs/symptoms: Infection, exposure to smoke, etc.
- Type: hypertensive, ischemic, etc.
- Site/anatomic location: heart, kidney, etc.
- Causes: plaque, calcification
- Stage: 1, 2, mild, severe, etc.
- Example: **I48.0**, "paroxysmal atrial fibrillation
  - **I48._**, "atrial fibrillation and flutter"
  - **___.0**, ". . . paroxysmal"

Diseases of the Digestive System (K00–K95)

- Type: hemorrhaging, necrotizing, etc.
- Temporal factors: bleeding, weight loss, etc.
- Anatomic location: large intestine, small intestine, etc.
- Stage: 1, 2, etc.
- Laterality: right, left, bilateral
- Example: **K57.32**, "diverticulitis of large intestine without perforation or abscess without bleeding"
  - **K57.__**, "diverticular disease of intestine"
  - **___.3_**, ". . . large intestine without perforation or abscess without bleeding"
  - **___._2**, ". . . diverticulitis"

Diseases of the Musculoskeletal System and Connective Tissue (M00–M99)

- Type: arthritis, fibromyalgia, greenstick, oblique, etc.
- Anatomic location: ankle, wrist, etc.
- Laterality: right, left, bilateral
- Status: initial encounter, healing, tophi, etc.
- Example: **M13.811**, "other specified arthritis, right shoulder"
  - **M13.___**, "other arthritis"
  - **___.8__**, ". . . other specified arthritis
  - **___._1_**, ". . . shoulder"
  - **___.__1**, ". . . right"

Diseases of the Genitourinary System (N00–N99)

- Type: cystitis, stone, etc.
- Anatomic location: bladder, kidney, ovary, etc.

"Now that we are 1 year into using ICD-10-CM codes, most expect the Centers for Medicare & Medicaid Services (CMS) to lift the grace period for allowing providers to assign unspecified diagnosis codes. It is important that you are documenting to get to the highest specificity."

- Laterality: right, left, bilateral
- Example: **N30.01,** "acute cystitis with hematuria"
  - **N30.__**, "cystitis"
  - **___.0_**, ". . . acute"
  - **___._1**, ". . . with hematuria"

Symptoms, Signs, and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified (R00–R99)

- Type: abnormality, pain, etc.
- Anatomic location: abdomen, kidney, etc.
- Laterality: right, left, bilateral
- Example: **R10.31**, "right lower quadrant pain
  - **R10.__**, "abdominal and pelvic pain"
  - **___.3_**, "pain localized to other parts of lower abdomen"
  - **___._1**, "right"

Injury, Poisoning, and Certain Other Consequences of External Causes (S00–T88)

- Type: spiral, comminuted, displaced, etc.
- Anatomic location: radius, ulna, femur, etc.
- Status: initial encounter, subsequent encounter, etc.
- Laterality: right, left, bilateral
- Causes: a fall down stairs at home, etc.
- Complications/manifestations: malunion, infection, etc.
- Example: **S52.351A**, "displaced comminuted fracture of shaft of radius, right arm, initial encounter"
  - **S52.____**, "fracture of forearm"
  - **___.3___**, ". . . shaft of radius"
  - **___._5__**, ". . . comminuted"
  - **___.__1_**, ". . . right arm"
  - **___.___A**, "initial encounter"

CMS offers free guidance on ICD-10-CM documentation guidelines at https://www.cms.gov/Medicare/Coding/ICD10/ICD-10-Coding-Resources.pdf. ■

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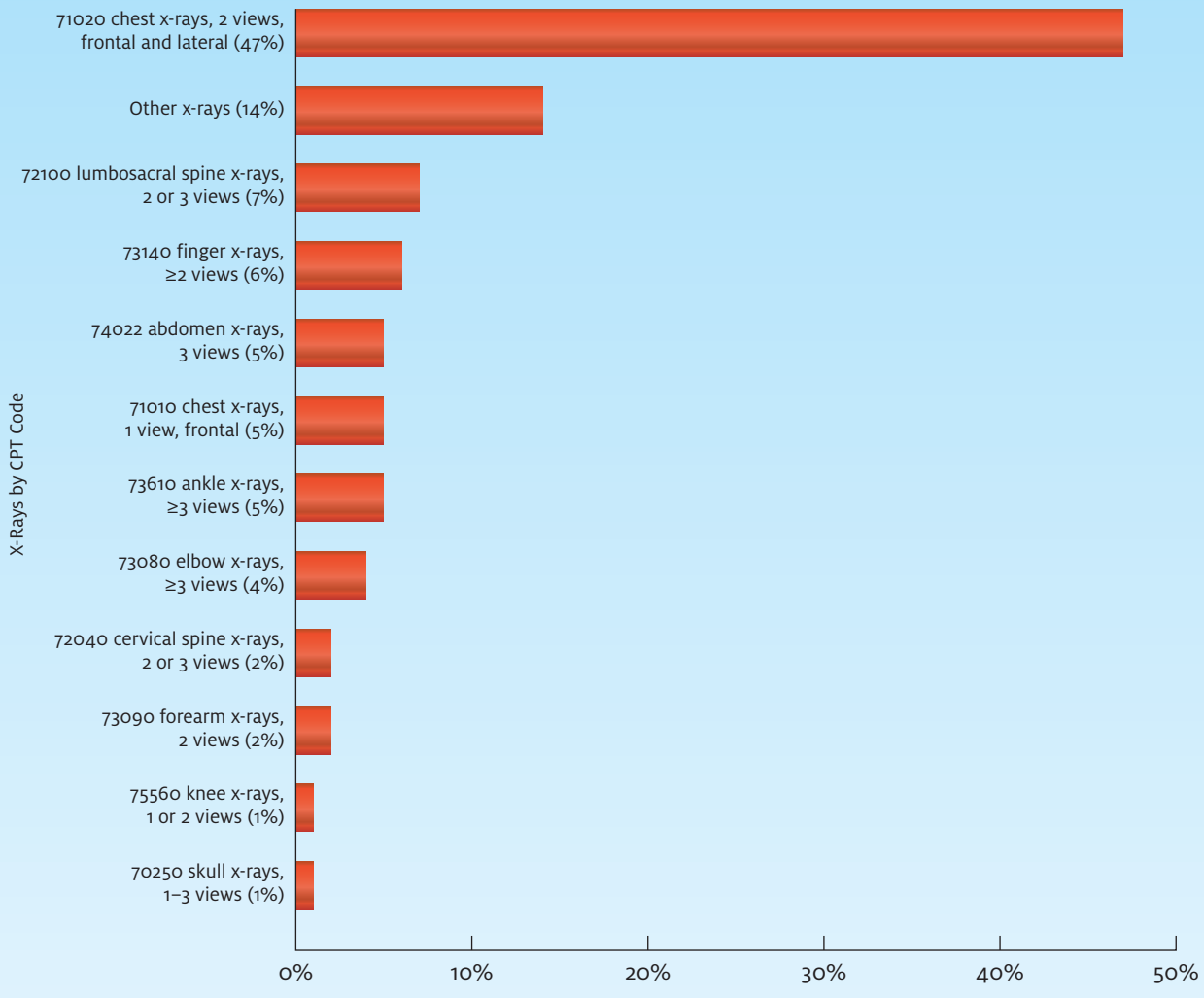

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