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As scientists, we are trained to question through research—to pose hypotheses and test for proof. Science, however, is notoriously flawed and imperfect, and has left a trail of discarded practice standards refuted through additional study or missed statistical error. Many a medical proverb has fallen out of favor this way—but none has withstood the test of time longer than “First, do no harm.” With an almost religious fervor, physicians have embraced the saying as fundamental doctrine and would not dare to challenge its unquestionable truth.

“First, do no harm” has been a subconscious rule of thumb in medicine for centuries now. While not officially part of the Hippocratic Oath (a surprise to most), it was born of the same teachings. The problem with such heuristics is their potential for error. Blind acceptance can mislead, whereby, one does not consider or prematurely closes the door on alternatives. In clinical medicine, this can lead to diagnostic and/or treatment errors.

When ‘First, Do No Harm’...Harms
Unwillingness to prescribe controlled substances is perhaps the best example of overconfidence in the “First, do no harm” heuristic. It is assumed that drugs with the potential for abuse and dependence should be avoided at all costs. Accordingly, patients in pain are judged critically on the legitimacy of their pain. If their pain is deemed clinically “unworthy,” narcotic pain relievers are withheld. Worthiness is determined through a semi-clinical assessment of objective and subjective criteria. While clearly prone to errors of assumption and judgment, we routinely rely on this assessment to designate these drugs as “harmful,” with very few clinical exceptions. And while no one can specifically quantify the error rate of these assessments, it is almost certainly non-trivial.

So, what if we are wrong? What is the risk of our diagnostic error?

Two negative outcomes are possible:
- A missed opportunity to help a patient in need
- A missed diagnosis of potentially threatening nature.

Take, for example, back pain. Clinicians often feel the need to determine the truthfulness and expected intensity of this presentation despite the lack of reliable diagnostic tools. We seek to quickly label those patients we deem drug-seeking or histrionic, often based on simple first impressions. While we defend this step as protecting the patient from harm, all too frequently we are simply protecting ourselves from the discomfort of our own uncertainty. At risk is a missed opportunity to help a patient in pain, or far worse, a missed epidural abscess or tumor. When confronted with the possibility of being bamboozled by a drug seeker for a few Vicodin, we seem willing to accept the risk of undue harm and pain. Our overconfidence in the principle of “First, do no harm” has unwittingly led us to miscalculate overall risk—an error with serious, and ironically harmful implications.

We have, in effect, been bamboozled by our own arrogance and scripture, and failed to account for the implications of our blind faith.

I propose that we reassess the judicial nature by which we interpret our patients’ pain, and more honestly consider the cost of false judgments. We need to grow more comfortable and accepting of being “conned” in return for the opportunity to help a patient in need. I would argue that is the true meaning of the Hippocratic Oath. With no intention to shred the principles of “First, do no harm,” I offer you this counter-principle from the famous Old-English author, Samuel Johnson: “It is better to suffer wrong than to do it, and happier to be sometimes cheated than not to trust.”

Lee A. Resnick, MD
Editor-in-Chief
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Oral and Facial Injuries in Urgent Care

For patients, cosmesis is often the top priority. But for clinicians, ruling out serious or life-threatening injury is paramount.
Sean McNeely, MD

Right-Sided Chest Pain in a 30-Something Woman

Physical examination was normal in a woman with an ache in her chest. But could the same be said of her x-ray?
Joseph Toscano, MD

Technology in Urgent Care: Digital or Conventional Imaging?

More and more urgent care clinics are wrestling with whether to offer digital or conventional x-rays. In this article, Registered Technologist Trip Hale offers expert advice on how to make the decision.
Trip Hale, RT (R)

Telephone Interpreting: Improving Healthcare Outcomes and the Bottom Line

Using interpreters in the urgent care setting can help you provide quality healthcare and save time and money. Bruce Merley, a member of the National Board for Certification of Medical Interpreters, explains how telephone interpreting works and what qualifications to look for in an interpreter.
Bruce Merley

Ureterolithiasis, or stones in the ureter, is a common cause of flank and abdominal pain that can be debilitating. Some 7% of adult females in the United States and 12% of adult men will develop stones at some time in their lives, and prevalence is rising. Our cover story next month looks at the etiology of stone formation, options for imaging, and ways to tailor treatment based on stone composition. The goal of care is to rule out other potentially life-threatening causes of pain, such as appendicitis or diverticulitis, and to control pain.

From the UCAOA
Executive Director

Health Law
Insights in Images: Clinical Challenges
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The Journal of Urgent Care Medicine

Mission Statement

The Journal of Urgent Care Medicine (JUCM) 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, 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.

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Patients who have been in motor vehicle accidents, tumbled from bicycles, or gotten into physical altercations often present to urgent care providers with trauma. Their biggest concerns about oral and facial injuries may be related to cosmesis, but providers need to look below the surface for more serious sequelae.

That’s one of the observations made by Sean McNeely, MD, author of our cover story this month. Dr. McNeely reviews steps in a comprehensive oral and facial examination, including significant problems that should not go unmissed. He also reviews treatment of oral injuries ranging from external lacerations to pharynx and soft palate injuries and dental trauma. As Dr. McNeely notes, nasal lacerations are the most common facial fractures, followed by mandible fractures. Included in the cover story are tips for assessing mandible fractures, recognizing midface fractures, and knowing when an oral and facial injury can be managed in an urgent care setting and when to refer to a specialist.

Dr. McNeely is Medical Director for University Hospitals Urgent Care Network, a member of the Board of Certification of Urgent Care Medicine, and Treasurer of the Urgent Care College of Physicians.

Chest pain is a common presentation in urgent care, but what is the cause in a 36-year-old woman with a normal physical examination? Dr. Jospeh Toscano tackles that question in our Case Report this month, which underscores the need to look beyond physical examination and pay careful attention to chest x-ray findings. A plain chest film that reads as normal on initial review may reveal a significant problem on closer inspection. See if your differential diagnosis includes the final diagnosis.

Dr. Toscano is a member of the JUCM editorial board and in practice at San Ramon (CA) Regional Medical Center Urgent Care Center, Palo Alto (CA) Medical Foundation.

Diagnostic studies are an important part of care at urgent care centers and many practices are facing a decision about whether to use conventional imaging or digital technology. In our first practice management article this month, Registered Technologist Trip Hale puts into perspective the advantages of digital imaging and provides a real-world case study of the cost to operate a digital vs analog radiology area in the setting of a start-up clinic.

In addition to his radiology certification, Mr. Hale is Regional Manager of Blue Ridge X-Ray Co., Inc., in Arden, North Carolina.

More than 45 million people in the United States today speak a language other than English, notes Bruce Merley of Pacific Interpreters in setting the stage for our second
practice management article this month. We truly live—and practice medicine—in a global community, and language, says Mr. Merley, and it takes the average non-English-speaking person 7 years to become sufficiently fluent to communicate about and understand instructions about his or her healthcare in English. Using telephone interpreters in an urgent care setting to better understand patients who are Limited English Proficient, he believes, can improve healthcare outcome and save money.

Also in this issue:
John Shufeldt, MD, JD, MBA, FACEP, continues the discussion he started in the January issue, of capital sources for funding an urgent care startup or expansion. In this month’s column, Dr. Shufeldt reviews the multiple sources of debt and equity capital. While noting the country’s current financial problems, he believes there is money available for urgent care practices that are poised for growth and willing to work at raising capital.

Nahum Kovalski, BSc, MDCM, reviews new abstracts on current literature germane to the urgent care clinician, including a study that shows healthcare workers often neglect hand hygiene when using gloves; a report on antibiotic prescribing practices during ambulatory pediatrics visits in the United States; FDA approval of the first hand-held device designed to aid in detection of intracranial hematomas, using near-infrared spectroscopy; a large study that outlined predictors of death in the 1 in 2,000 adult patients who succumb within 7 days after discharge from an emergency department; and troponin assays for evaluation of patients with chest pain.

In Coding Q&A, David Stern, MD, CPC, discusses administration codes for injections, billing for a Medicare wellness exam, billing joint injections with E/Ms, and coding for keloid injection.

Our Developing Data end piece this month looks at the number of hours per month and hours per shift by day that physicians are working in urgent care practices. Most centers staff with a mix of physicians and/or nurse practitioners and/or physician assistants, with only about 36% of centers having a physician-only model. How many hours are physicians working at urgent care centers? You’ll find the answer on the last page of this issue.

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You probably know by now that we are having our Convention in April. We’re going back to Las Vegas, but there are many new things you’ll see and experience, so I thought I’d give you a little preview this month.

The first new experience will be on our PreCon day, when we typically have 1-day courses on different topics, plus the first day of Clinic Startup. We’re still doing that, but we’ve added both morning and afternoon “half day” courses so you can get a little education and have the afternoon off to play in Las Vegas, or you can sleep in and just do a course in the afternoon. Or, you can combine them and have a full day just as usual.

Our most unusual new full-day PreCon is “What if ____ Ran Your Urgent Care?” For this Convention, we’re filling in that blank with Southwest Airlines, Zappos, and Caesars Palace. We’re hoping this can turn into a regular series that will bring in different companies every year to help you think out of the box about how you run your center. The last surprise for the PreCon day is an offsite tour to the headquarters of Zappos to spend a few extra hours with their leadership and staff.

Because the exhibit hall opens the evening of the PreCon, let’s talk about that, too. We’re opening it a little early that afternoon, which is a good thing because it’s bigger than it has ever been, so you’ll need plenty of time to see everything. We have many, many new companies this year, and you can check them all out ahead of time online and in the Exhibit Hall guide we’ll mail out before you come. We will have a little something extra happening in the Hall off and on during the Convention, but you’ll have to wait and see what those “extras” turn out to be!

We are keeping our opening and closing general sessions in the panelist format so you can hear from experts with many different perspectives, instead of just one keynote speaker. Our opening session brings in leaders from different areas of healthcare delivery to discuss what they see as the future for urgent care. Our panelists include someone from the telemedicine industry, an accountable care organization (ACO) expert, a payor’s medical director, an industry “watcher,” a private equity professional, and someone representing urgent care itself. I can’t wait to hear the perspectives of these different leaders, given everything that is happening in our industry.

The closing general session will be something a little different as well. Before and during the meeting we’ll be mining your thoughts about urgent care success. Beyond having a good location and good contracts, there are additional critical factors that make some centers wildly successful, while others struggle. For the closing session, we’ll tap into those results and the experiences and observations of our three panelists, who are each very experienced consultants in the industry. We hope you’ll take home more than one new way of thinking about what drives your center’s success.

In there somewhere we’ll have about 40 other sessions to help you build great urgent care centers. It will be a full week in Vegas! You should have a brochure by now with all the details, and you can visit our website (ucaoa.org) or just give us a call. I didn’t even have room here to go into our new ways for you to network with each other. It’s crystal clear to me—you need to be there! See you in April.
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Oral and Facial Injuries in Urgent Care

Urgent message: For patients, cosmesis is often the top priority. But for clinicians, ruling out serious or life-threatening injury is paramount.

SEAN McNEELEY, MD

Introduction

Patients with oral and related facial injuries often present to urgent care providers. Consider JT. He is a 25-year-old male who was taken to an urgent care clinic by his friends after falling while mountain biking near his Ohio home. His friends were concerned because the hill was steep, and although he was wearing a helmet, JT fell over his handlebars and landed face-first in a bush surrounded by rocks. JT, however, was concerned about his lacerations and the cosmetic outcome he could expect. As urgent care providers, we also are often concerned about cosmesis and the patient’s reason for evaluation; however, it is important to consider other possibly more serious or even life-threatening injuries as well (see Problems Not to Miss on page 10). This article considers some of the oral and dental injuries that are commonly seen in the urgent care setting.

Patient Assessment

Patient assessment for oral and dental injuries includes a complete physical examination to rule out life-threatening injury, followed by a comprehensive oral and facial examination.

Physical examination

As with any patient, the best approach is to begin with the basics: airway, breathing, and circulation. Once you establish that the patient is stable, you should perform a complete exam, including visualization of any possible injury. Important considerations for patients with facial trauma include evaluation for neck or brain injury. While assessing the neck, evaluate for any cervical bone tenderness, decreased range of motion, or paresthesia, preferably by CT scan, because it has high sensitivity and specificity. Lower-risk patients can be screened with adequate plain-film radiography. These patients should also have a cervical collar placed until cleared. Evaluation for clinically important brain injury should take into consideration the need for CT scan of the brain. Patients with a Glasgow Coma Score (GCS) of less than 15 should be transferred to a trauma center. Those with a normal GCS should be considered carefully for use of a CT scan.

Oral and facial examination

Once life-threatening injuries are ruled out, a comprehensive oral and facial exam can be performed. The lips are the most obvious structure that must be evaluated. Under-
standing their anatomy and healing potential is critical for the best results. Important anatomical considerations include the external skin, vermillion border, internal mucous membrane, and the muscles within the substance of the lip. From a cosmetic standpoint, the most important consideration is the vermillion border. Even a 1-mm variance in how it is closed will be readily visible.

### Treatment of Oral Injuries

Oral injuries in the urgent care setting can include external lacerations, multilayer lacerations of the lip, buccal lacerations, tongue wounds, posterior pharynx and soft palate injuries, tooth injury, and mandible fractures.

#### External lacerations

External lacerations, particularly those that are gaping, should be closed. Shallow lacerations that are not under tension are often good candidates for dermal glue. Others often can be closed with 6-0 nylon or polypropylene. Lacerations that cross the vermillion border should be closed, starting with alignment of the border.

#### Multilayer lacerations of the lip

Providers should carefully weigh their skills against consideration for a plastic surgery consultation. This is of particular concern when a laceration splits the lip in a V-shaped pattern that involves the outside, muscle, and inner lip. Such multilayer lacerations usually are repaired by first closing the muscle with absorbable material, closing the outside with attention to the vermillion border, and then loosely approximating the inside. Lacerations limited to the inner lip usually can be left to heal on their own as long as they are small (<2 cm), not open to the outside, and do not deform the lip. It is not uncommon to find missing pieces of teeth in a lip laceration. Careful examination is needed. When deformity is present, consideration must also be given to the effect of swelling compared with the actual laceration. The deformity often is more related to swelling than to laceration. Laceration through the lip, such as a hole from the patient’s own teeth, is best closed on the outside, even if it is small. Most providers then leave the internal laceration to close on its own.

#### Buccal lacerations

Buccal lacerations are treated similarly to lip lacerations. External lacerations are usually closed with 6-0 suture, and occasionally, with dermal glue. Internal lacerations less than 2 cm are left to close on their own. Larger internal lacerations are loosely closed with absorbable suture. Before closing any oral laceration, thoroughly examine the wound, including searching for foreign bodies such as chips from the patient’s teeth.

#### Tongue wounds

Tongue wounds are another common injury, often caused when a patient bites down at the time of impact. Like most of the oral cavity, the tongue heals quite quickly and is also difficult to anesthetize and stabilize during repair. For these reasons, careful consideration should be given to whether to repair a tongue laceration. Small wounds and puncture holes often heal quite well with dietary restrictions, including a soft diet that avoids items that might sting—such as spicy or salt-covered food—and a recommendation to rinse after eating. Lacerations that cause deformities, such as forking of the tongue, need to be closed. Lacerations greater than 1 cm also should at least be reapproximated. Often a quick, single stitch with an absorbable suture can accomplish this. Anesthesia of the anterior two-thirds of the tongue can be performed with a local field block or lingual nerve block.

#### Posterior pharynx and soft palate injuries

Posterior pharynx and soft palate injuries most often are caused by foreign bodies in the mouth at time of impact. Even a straw or water bottle can be at fault. More important than closing soft palate injuries is controlling bleeding and risk of more significant unseen damage. Bleeding from the area of the tonsils can be life-threatening and should be completely controlled before discharge. Consideration for imaging once bleeding is controlled should include soft-tissue plain films and, if more serious trauma is suspected, CT. Although considered rare, dissection of the internal carotid has been reported. Antibiotic prophylaxis has not been well researched but generally is suggested. Discharge instructions, including risk of return of bleeding and infection, should be provided to the patient or a parent if the patient is a minor.

#### Tooth injury

Tooth injury, although not entirely a physician’s spe-
ORAL AND FACIAL INJURIES IN URGENT CARE

Important Facial Trauma Considerations

- Airway
- Bleeding
- Vision
- Sensation

- Tenderness
- Crepitus
- Mechanism of injury
- Best location for evaluation

Dental trauma can span a spectrum from a tiny chip to complete avulsion. The most significant injury is complete tooth loss. Avulsed primary teeth should not be replaced. Permanent teeth need to be replaced as soon as possible. If a tooth is contaminated, gentle rinsing with normal saline should be performed before re-implantation.

If it is necessary to transport a tooth, a special transport device and media should be used. Lacking that, milk, normal saline, or the buccal mucosa are reasonable alternative transport media for teeth. A delay of more than 5 minutes greatly decreases the likelihood of long-term success with reimplantation. If more than 30 minutes have elapsed since avulsion, the patient should understand the low likelihood of success.

Teeth also can be subluxed. A subluxed tooth is loose but in the correct place. The etiology is loss of connection of the periodontal ligament. Treatment consists of splinting of the tooth in place. There are two types of luxation: extrusion and intrusion. Extrusion is similar to avulsion. The tooth remains partially out of the socket but is not loose. Replacement without removal to the original location with splinting is the best treatment. Intrusion occurs when a tooth is pushed into the socket. Intrusions less than 3 mm often will heal on their own. A tooth that has been intruded 3 to 6 mm should be moved back into place and splinted. Intrusion of more than 6 mm carries a poor prognosis because of severe compression of periodontal ligament and surrounding structures. Whether a tooth is avulsed, extruded, or intruded, dental consultation should be obtained as soon as possible.

Damage to a tooth itself is classified based on the depth of the injury. An Ellis class 1 dental fracture is...
damage to only the outermost layer: the enamel. This is just a cosmetic problem and can be smoothed and fixed at the patient’s convenience. Ellis class 2 injuries involve the dentin as well. These injuries cause pain, and the dentin will be visible as a brownish-orange color. These injuries should be covered with dental cement, such as calcium hydroxide paste, and the patient should be sent to a dentist for follow-up within 24 hours. Ellis class 3 injuries involve the enamel, dentin, and pulp, where the blood vessels and nerve roots are found. Urgent dental consultation is best for these.

Dental fracture also can occur when a tooth is separated into two pieces at all three layers. This is often subtle and best seen on true dental films, but not an urgent matter because fractured teeth cannot be repaired and eventually will have to be extracted.

**Other Facial Trauma**

Facial lacerations unrelated to the mouth are also common. As stated before, all facial lacerations are complicated by the patient’s expectations. Most such injuries bleed heavily at first but respond well to pressure. The risk of infection is usually less and therefore the commonly used 6- to 8-hour window for primary closure is often extended to improve cosmetic outcome. Uncomplicated forehead, lateral face, and chin lacerations usually can be repaired in an urgent care setting. Topical mixtures of lidocaine, epinephrine, and tetracaine often can be used on these areas with great success, particularly in children. Non–absorbable 6-0 sutures are most commonly used to close these wounds. Dermal glue also works well for closing low-tension wounds without anesthesia. Some physicians even use deep sutures to reduce tension and then glue the area above them. (This is an off-label use of the glue.) Lacerations of the eyelids, nose, and external ear are complex, and therefore, beyond the scope of this article.

Facial trauma also can lead to damage to the bones of the face including the nose, orbit, maxilla, and mandible. When entertaining the possibility of a facial fracture, you should also consider the airway, bleeding, vision, sensation, and other related trauma. Palpation for tenderness, crepitus, and deformity combined with mechanism of injury should be used to guide decisions for imaging. Patients with multiple injuries are best treated at a trauma center, if possible.

**Nasal fractures**

Nasal fractures are the most common facial fracture. Examination of the nose begins with external visualization to identify for swelling, bruising, lacerations, or visible deformity. Periorbital ecchymosis usually indicates nasal fracture. Palpation may reveal crepitus, excessive movement, or other deformities. Internal exam for septal deviation, lacerations, septal hematoma, and presence of cerebral spinal fluid should be performed next. Plain films rarely change the management of nasal fractures but are often done because of patient expectations. Clinical exam alone should reveal the need for emergent treatment. Patients with uncomplicated nasal fractures, and particularly those who have significant swelling, should be referred to an ear, nose, and throat specialist for treatment in 6 to 10 days. Results are better when swelling does not obscure the cosmetic result of reduction. After 10 days, reduction becomes more difficult because the healing process has begun. Septal hematomas should be treated emergently with incision and drainage by an experienced physician with necessary tools, including suction. Treatment of septal hematomas prevents septal necrosis and eliminates a nidus for infection.5, 6

**Mandible fractures**

Mandible fractures are the second most common facial fractures.7 Mandible alignment is best assessed by having the patient open and close the mandible and testing alignment of the bite. Causes of bite misalignment include subluxation or displacement of the temporomandibular joint and fracture of the mandible. Fractures tend to cause pain with minimal movement and are best seen on panorex films or CT scan.8 Most maxillary fractures are a result of significant trauma, such as motor vehicle accidents and severe beatings. They usually are not subtle and require referral to a specialist. If you note or suspect a fracture, perform a careful intra-oral examination to rule out an open fracture. Patients with open fractures should be considered for admission. Because small mucosal tears are common with mandible fractures, antibiotics should be prescribed for patients with such injuries.

**Midface fractures**

Midface fractures are uncommon in urgent care practice, but they are important to recognize when present. They usually result from significant impact and can be life threatening. The LeFort classification represents the most common maxillary fractures. With a Type I fracture (the least serious) the maxillary teeth are separated from the remainder of the face. On physical exam, the upper
teeth and hard palate are loose, similar to an upper denture. LeFort II fractures extend into the nasal portion of the face, forming a pyramid. Extension into the orbits and through the zygomatic suture lines describes a LeFort III fracture. These are the most significant injuries and usually compromise the airway and sometimes cause blindness. All midface fractures are best identified with CT scan. 

Isolated zygomatic fractures present in two types: tripod and depressed. Depressed fractures are less common and usually palpable as a depression. Tripod fractures can be non-displaced (10%) and require only observation, or they can be displaced or depressed fractures and require urgent expert consultation. 

Orbital floor fractures usually present with infraorbital anesthesia and often result in muscle entrapment. Orbital blowout fractures usually occur when an object smaller than the eye sends forces through the eye to the orbit. Patients who have isolated orbital fractures but no globe, eye muscle, or nerve damage often can be sent home with antibiotics such as amoxicillin/clavulanate and decongestants. They should also be instructed not to blow their noses. Expert consultation is suggested before discharge. 

Most other orbital fractures are not isolated. Significant trauma to the nose also can cause naso-orbito-ethmoid fractures. Patients with these injuries present with the proximal upper nose pushed backward. Serious complication include possible CSF leakage, ocular injury, and damage to the lacrimal apparatus. Orbital and other complex facial fractures are best managed with expert consultation and possibly transfer to the emergency department, particularly if CT scan and appropriate personnel to monitor the patient are unavailable.

**Conclusion**

With the few exceptions described above, most common oral injuries can be managed in an urgent care setting. Midface fractures other than to the nose are uncommon in an urgent care setting, but you should consider them in any patient who has significant facial trauma. Your initial evaluation must include the patient’s overall condition, severity of other injuries, and consideration of head and neck trauma. Once life-threatening conditions are ruled out, a comprehensive oral and facial exam will help guide the care provided next.

**References**

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Introduction

The traditional differential diagnosis for chest pain includes spontaneous pneumothorax. Chest x-ray is necessary for confirming the diagnosis, and sometimes the findings can be subtle. As in dealing with any infrequently encountered condition, clinicians should consider the diagnosis and closely examine every chest film they order to avoid missing this uncommon diagnosis.

Case Presentation

TE is a 36-year-old female who developed right-sided chest pain while at rest earlier that same day. She had a constant sensation of soreness in her anterior and apical right chest, with periods of increased, sharper pain with deep inspiration. TE had mild shortness of breath and denied trauma, recent illness, fever, or cough. She otherwise felt well and noted no prior history of similar problems. Her past medical history was negative for asthma, other pulmonary problems or medical conditions. She took oral contraceptives, but no other medications and had no allergies. She did not smoke or use illicit drugs.

Observations and Findings

Evaluation of the patient revealed the following:

- **Temp:** 98.9 °F
- **P:** 84
- **R:** 22
- **BP:** 115/74
- **O₂ Sat:** 98% RA
- **Gen:** WD, WN, no Marfanoid features; mild distress due to intermittent sharp pain
- **HEENT:** No signs of trauma, mass, infection, edema,
- **Neck:** Supple, nontender, no lymphadenopathy, no JVD
- **Chest:** No visible abnormalities or tenderness
- **Lungs:** Decreased breath sounds, no wheezes or rales
- **CV:** RRR, no murmur or gallop, palpably symmetric radial pulses
- **Abd:** Nontender, no distension
- **Neuro:** Normal MS; no abnormalities of strength, sensation, coordination, gait

Radiology results revealed the following:

Chest x-ray (**Figure 1**): Initially read by the urgent care clinician as showing a normal cardiac and mediastinal silhouette, clear lung fields, no effusions.
CASE REPORT: SPONTANEOUS PNEUMOTHORAX

Course and Treatment
The patient was diagnosed with pleurisy and prescribed ibuprofen and hydrocodone/APAP, and primary MD follow-up was recommended for 2-3 days later. A radiologist over-read the film later the same day and diagnosed a right pneumothorax. The patient was contacted and instructed to go to the emergency department, where a chest tube was placed, with successful re-expansion of her lung. The patient was admitted, her chest tube was discontinued after 3 days, and she was discharged. A CT scan of the chest showed no bullous changes or other pulmonary parenchymal abnormality.

Discussion
Pneumothorax results from the passage of air into the normally gasless pleural space, either through a defect externally in the chest wall or internally in the pulmonary parenchyma or tracheobronchial tree. The majority of pneumothoraces are due to trauma, but some do occur spontaneously, at an annual rate of about 0.007-0.018% in men and a rate of about one-third to one-fifth of that in women. Recurrence rates can be as high as 35%. The typical patient who develops spontaneous pneumothorax is a tall, thin male smoker, so TE is an unusual case.

Typical symptoms include dyspnea and chest discomfort, which may be sharp or achy. Small pneumothoraces (<15% of the hemithoracic volume) may be difficult to detect on physical exam. Although CT scanning is more sensitive than plain films, clinically significant pneumothoraces should be visible on chest x-ray. In addition to a lack of normal pulmonary markings in the periphery of the hemithorax, finding a “pleural line” (Figure 2) increases the specificity of the diagnosis. Since the advent of digital radiography, there are some data to suggest that diagnostic accuracy is lower at resolutions near 1.25 line pairs per millimeter (lp/mm), so those using digital technique at their clinics should ensure system settings of at least 2.5 lp/mm. Reliable techniques for diagnosing pneumothorax using bedside ultrasound have been developed for situations in which rapid diagnosis is important. Otherwise, though it is arguable whether every patient with chest pain requires a chest...

Figure 1: TE’s PA and lateral chest film obtained in urgent care clinic.
x-ray (and ECG), this diagnosis cannot be confirmed without it.

Treatment includes evacuation of air from the pleural space through any of a variety of methods, some of which (such as a small-gauge catheter and Heimlich valve) may be performed in an outpatient setting. Further work-up of patients with spontaneous pneumothoraces includes chest CT without contrast to identify pulmonary parenchymal abnormalities such as bullae that predispose to recurrence and can be corrected surgically.

Simple pneumothoraces are not life threatening, though a rare complication includes development of a tension pneumothorax, which occurs when a flutter-valve effect develops in the chest wall or pulmonary defect. This permits air to pass only into the pleural space, allowing positive pressure to develop there, compressing the lung tissue, and more importantly, impeding venous return to the heart, causing hemodynamic instability. This requires immediate needle thoracostomy.

**Conclusion**

Spontaneous pneumothorax is a rare cause of chest discomfort or dyspnea and patients with it can present to the urgent care clinic. Correct diagnosis requires careful attention to chest x-ray findings.

**References**

Practice Management

Technology in Urgent Care: Digital or Conventional Imaging?

**Urgent message:** More and more urgent care clinics are wrestling with whether to offer digital or conventional x-rays. In this article, Registered Technologist Trip Hale offers expert advice on how to make the decision.

TRIP HALE, RT, (R)

**Introduction**

For today’s urgent care clinics, imaging is an integral part of providing complete diagnostic and treatment services. Because reimbursement for diagnostic studies is lower for physician-owned than for hospital or outpatient imaging facilities, a well-planned and efficient imaging area is a must. With advances in image capture devices and more user-friendly x-ray units, it is possible to achieve outstanding image quality on a very modest budget.

This article will explain the differences between the two primary types of digital imaging and the advantages that digital technology can offer an urgent care practice. The box on page 20 provides a comparison of cost of ownership for x-ray imaging with digital vs analog technology for a new or start-up urgent care practice.

**Understanding Imaging Modalities**

The two primary types of digital imaging are computerized radiography (CR) and direct radiography (DR).

**CR technology** utilizes image plates with various types of phosphor material, which are housed in a traditional cassette. The cassettes come in various sizes, and fit in standard trays for x-ray tables and wall stands. Once the material is exposed, the cassette is inserted in a digitizer and a laser scans the image plate. Processing times range from 45 to 180 seconds per plate. Manufacturer-specific algorithms are used for processing to produce a a digital image. CR images typically are stored in the standard DICOM (Digital Imaging and Communications in Medicine) format.

With **DR technology**, the detector is directly x-rayed. This eliminates the need for cassettes or a digitizer. DR
technology combines speed (image acquisition in 4–20 seconds) with superior image quality. DR typically is more expensive to purchase and maintain, but the cost gap is closing. As with most high-tech products, supply and demand determine price. DR detectors come in a variety of configurations from charge-coupled device (CCD) to thin film transistor (TFT). DR panels can be either fixed devices or portable. For the urgent care market, portable panels usually have a tether or cable connecting the panel to the acquisition computer. With a tethered portable panel, a special housing cabinet replaces the typical bucky or grid cabinet.

**Benefits of Digital vs Conventional Imaging**

Digital technology has a number of advantages over conventional imaging, including higher quality, more flexibility in image manipulation, and greater storage capacity.

**Consistent image quality.** Because digital images have a much higher dynamic resolution range, more latitude is possible in image quality. As long as exposure factors are within plus or minus 30%, current algorithms will produce a good image.

**Image manipulation.** Digital images have very large data sets (10-16MB per image). Because there is so much data, images can be magnified, the contrast and density adjusted, and annotations added to allow better diagnostic qualities.

**Reduced construction cost.** No darkroom or file room space is required for digital imaging and the total square footage needed for an imaging area is reduced by about 30%. There is no need for plumbing or electricity for a film processor.

**Availability of images.** All digital modalities can be stored electronically and made available immediately on a typical personal computer. Image quality is very good when displayed on a standard 1.5-mp monitor. If you use larger monitors, be sure to consult with an IT professional to ensure that the resolution is set properly and the right graphics card is installed.

**Integration with electronic medical records (EMR).** As digital imaging continues to mature, integration with EMRs will become easier and more streamlined. Digital image files are stored in a standard file structure, called DICOM. Integration with HL7 files requires a broker or bridge.

**Image sharing.** With digital technology, images can be transmitted over a VPN to a radiologist for over-reading, which is much quicker and easier than sending films by courier. Most digital viewing systems include the capability to burning a CD with a DICOM viewer embedded. Referral images thus can be created easily and viewed and manipulated on most standard PCs.
Cost of Ownership for X-Ray Imaging: Digital vs Analog in an Urgent Care Start-Up Setting

<table>
<thead>
<tr>
<th>Exams: 2,290</th>
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<tbody>
<tr>
<td><strong>$/Study</strong></td>
<td></td>
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<tr>
<td>CR Filmless Operation</td>
<td>Film-Based Operation</td>
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<tr>
<td>Material</td>
<td>—</td>
</tr>
<tr>
<td>Facilities</td>
<td>5.82</td>
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<tr>
<td>Equipment</td>
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<td>Resources</td>
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<tr>
<td><strong>Total</strong></td>
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<tr>
<td><strong>Savings</strong></td>
<td>(5.11)</td>
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<table>
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<tr>
<th>Images: 6,424</th>
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<tr>
<td><strong>$/Image</strong></td>
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<tr>
<td>CR Filmless Operation</td>
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<td>Material</td>
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<tr>
<td>Facilities</td>
<td>2.65</td>
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<tr>
<td>Equipment</td>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>Savings</strong></td>
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<th>Annual Expense</th>
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<tr>
<td><strong>CR Filmless Operation</strong></td>
<td>Film-Based Operation</td>
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<td>Material</td>
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<tr>
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<td><strong>Total</strong></td>
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<tr>
<td><strong>Annual Savings</strong></td>
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The summary sheet shows the entire cost of ownership for both digital and analog imaging in a sample start-up urgent care practice. The difference in annual costs is shown in red. The assumptions underlying the calculations are as follows:

- **Site information:** Daily procedures assume eight studies per day, 7 days per week. Total printed images include retakes, lost films, multiple views, etc.
- **Material:** This is the cost for consumables such as film, chemistry, filing jackets, and utilities. Film pricing is at current cost. Speculation in the industry is widespread that film and chemistry costs are going to rise significantly based on supply and demand.
- **Facility cost:** This is the cost of space for the imaging area. An x-ray unit is required for a digital or analog set-up. With digital technology, however, neither a darkroom area—which typically measures 6’ x 8’—nor film storage space (usually 6’ x 12’)—is required.
- **Equipment cost:** This is based on an average single-plate CR reader and x-ray system for a digital configuration versus a table-top processor, darkroom accessories, and x-ray system for an analog version.
- **Maintenance cost:** This includes a monthly fee for processor maintenance for an analog system, and the service contract on a CR system for digital technology.

**Conclusion**

Urgent care clinics just starting up or looking to add imaging to their practices should weigh the pros and cons of offering digital versus conventional x-rays. Understanding the differences between the two technologies and assessing the true cost of ownership are the keys to an educated decision.
with reduced creatinine clearance will have diminished clearance of the drug. SPRIX® is contraindicated in patients with advanced renal impairment. Patients treated with SPRIX® should be adequately hydrated. Use SPRIX® with caution in patients with impaired renal function, heart failure, liver dysfunction, these taking diuretics or ACE inhibitors, and the elderly. Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury such as interstitial nephritis and nephrotic syndrome.

Anaphylactoid Reactions. As with other NSAIDs, anaphylactoid reactions may occur in patients with or without a history of allergic reactions to aspirin or NSAIDs and in patients with no known prior exposure to ketorolac. SPRIX® should not be given to patients with the aspirin triad.

Cardiovascular Effects

- **Cardiovascular (CV) Thrombotic Events**
  Clinical trials of several COX-2 selective and nonselective NSAIDs of up to three years duration have shown an increased risk of serious CV thrombotic events, myocardial infarction and stroke, which can be fatal. Patients with known CV disease or risk factors for CV disease may be at greater risk. To minimize the potential risk for an adverse CV event in patients treated with an NSAID, the lowest effective dose should be used for the shortest duration possible.

- **Hypertension**
  NSAIDs can lead to onset of new hypertension or worsening of preexisting hypertension, either of which may contribute to the increased incidence of CV events. Patients taking thiazides or loop diuretics may have impaired response to these therapies when taking NSAIDs.

- **Congestive Heart Failure and Edema**
  Fluid retention, edema, retention of NaCl, oliguria, and elevations of serum urea nitrogen and creatinine have been reported in clinical trials with ketorolac. Therefore, only use SPRIX® very cautiously in patients with cardiac decompensation or similar conditions.

Skin Reactions. NSAIDs, including ketorolac, can cause serious skin adverse events such as exfoliative dermatitis, Stevens-Johnson Syndrome (SJS), and toxic epidermal necrolysis (TEN), which can be fatal. These serious events may occur without warning. Inform patients about the signs and symptoms of serious skin manifestations, and discontinue use of the drug at the first appearance of skin rash or any other sign of hypersensitivity.

- **Pregnancy**
  Starting at 30 weeks gestation, SPRIX® can cause fetal harm when administered to a pregnant woman due to an increased risk of premature closure of the ductus arteriosus. If SPRIX® is used at or after 30 weeks gestation, the patient should be apprised of the potential hazard to a fetus.

- **Hepatic Effects**
  Use SPRIX® with caution in patients with impaired hepatic function or a history of liver disease. Borderline elevations of one or more liver tests may occur in up to 15% of patients taking NSAIDs, including ketorolac. In addition, rare cases of severe hepatic reactions, including jaundice, fulminant hepatitis, liver necrosis, and hepatic failure, some of them with fatal outcomes, have been reported.

- **Inflammation and Fever**
  The pharmacological activity of SPRIX® in reducing inflammation and fever may diminish the utility of these diagnostic signs in detecting infections.

- **Preexisting Asthma**
  Patients with asthma who may have aspirin-sensitive asthma. The use of aspirin in patients with aspirin-sensitive asthma has been associated with severe bronchospasm which can be fatal. Since cross reactivity, including bronchospasm, between aspirin and other NSAIDs has been reported in such aspirin-sensitive patients, do not administer SPRIX® to patients with this form of aspirin sensitivity, and use with caution in patients with preexisting asthma.

- **Eye Exposure**
  Avoid contact of SPRIX® with the eyes. If eye irritation occurs, wash out eye with water or saline, and consult a physician if irritation persists for more than one hour.

ADVERSE REACTIONS

The most frequently reported adverse reactions were related to local symptoms, i.e., nasal discomfort or irritation. These reactions were generally mild and transient in nature. The most common drug-related adverse events leading to premature discontinuation were nasal discomfort or nasal pain (rhinagia).

The data described below reflect exposure to SPRIX® in patients enrolled in placebo-controlled efficacy studies of acute pain following major surgery. Most patients were receiving concomitant opioids, primarily PCA morphine.

<table>
<thead>
<tr>
<th>Table 1. Post-operative Patients with Adverse Reactions Observed at a rate of 2% or more and at least twice the incidence of the placebo group.</th>
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<tbody>
<tr>
<td><strong>SPRIX® (N=455)</strong></td>
</tr>
<tr>
<td>Nasal discomfort</td>
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<tr>
<td>Rhinagia</td>
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<tr>
<td>Lacrimation increased</td>
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<tr>
<td>Throat irritation</td>
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<tr>
<td>Oliguria</td>
</tr>
<tr>
<td>Rash</td>
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<tr>
<td>Bradycardia</td>
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<tr>
<td>Urine output decreased</td>
</tr>
<tr>
<td>ALT and/or AST increased</td>
</tr>
<tr>
<td>Hypertension</td>
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<tr>
<td>Rhinitis</td>
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</table>

In controlled clinical trials in major surgery, primarily knee and hip replacements and abdominal hysterectomies, seven patients (N=455, 1.5%) treated with SPRIX® experienced serious adverse events of bleeding (4 patients) or hematoma (3 patients) at the operative site versus one patient (N=245, 0.4%) treated with placebo (hematoma). Six of the seven patients treated with SPRIX® underwent a surgical procedure and/or blood transfusion and the placebo patient subsequently required a blood transfusion.

**DRUG INTERACTIONS**

**Ketorolac** is highly bound to human plasma protein (mean 99.2%). There is no evidence in animal or human studies that ketorolac induces or inhibits hepatic enzymes capable of metabolizing itself or other drugs.

- **Warfarin, Digoxin, Salicylates, and Heparin.** Therapeutic concentrations of digoxin, warfarin, ibuprofen, naproxen, piroxicam, acetaminophen, phenytoin, and tolbutamide did not alter ketorolac protein binding.

- **Aspirin.** When ketorolac is administered with aspirin, its protein binding is reduced, although the clearance of free ketorolac is not altered. The clinical significance of this interaction is not known; however, as with other NSAIDs, concomitant administration of SPRIX® and aspirin is not generally recommended because of the potential of increased side effects.

**Diuretics.** Clinical studies, as well as postmarketing observations, have shown that ketorolac can reduce the natriuretic effect of furosemide and thiazides in some patients.

- **Probenecid.** Concomitant administration of oral ketorolac and probenecid resulted in decreased clearance and volume of distribution of ketorolac and significant increases in ketorolac plasma levels (total AUC increased approximately threefold from 5.4 to 17.8 mcg/hr/ml) and terminal half-life increased approximately twofold from 6.6 to 15.1 hours. Therefore, concomitant use of SPRIX® and probenecid is contraindicated.

- **Lithium.** NSAIDs have produced an elevation of plasma lithium levels and a reduction in renal lithium clearance. The mean minimum lithium concentration increased 15%, and the renal clearance was decreased by approximately 20%. Thus, when SPRIX® and lithium are administered concurrently, observe patients carefully for signs of lithium toxicity.

- **Methotrexate.** NSAIDs have been reported to competitively inhibit methotrexate accumulation in rabbit kidney slices. This may indicate that they could enhance the toxicity of methotrexate. Use caution when SPRIX® is administered concomitantly with methotrexate.

- **ACE Inhibitors/Angiotensin II Receptor Antagonists.** Concomitant use of ACE inhibitors and/or angiotensin II receptor antagonists may increase the risk of renal impairment, particularly in volume-depleted patients. Reports suggest that NSAIDs may diminish the antihypertensive effect of ACE inhibitors and/or angiotensin II receptor antagonists. Consider this interaction in patients taking SPRIX® concomitantly with ACE inhibitors and/or angiotensin II receptor antagonists.

Antiepileptic Drugs. Sporadic cases of seizures have been reported during concomitant use of ketorolac and antiepileptic drugs (phenytoin, carbamazepine).

**Psychoactive Drugs.** Hallucinations have been reported when ketorolac was used in patients taking psychoactive drugs (fluoxetine, thiophene, alprazolam).

- **Pentoxifylline.** When ketorolac is administered concurrently with pentoxifylline, there is an increased tendency to bleeding. Therefore, concomitant use of SPRIX® and Pentoxifylline is contraindicated.

- **Nondepolarizing Muscle Relaxants.** In postmarketing experience there have been reports of a possible interaction between ketorolac and nondepolarizing muscle relaxants that resulted in apnea.

- **Selective Serotonin Reuptake Inhibitors (SSRls).** There is an increased risk of gastrointestinal bleeding when selective serotonin reuptake inhibitors (SSRls) are combined with NSAIDs.

- **Fluoxetine/Oxymetazoline.** The rate and extent of absorption of ketorolac from SPRIX® administration were assessed in subjects with allergic rhinitis before and after the administration of a single daily dose of fluoxetine and oxymetazoline. There was no effect on the pharmacokinetic characteristics of SPRIX® that can be considered clinically significant.

**DRUG ABUSE AND DEPENDENCE**

Ketorolac does not bind to opiate receptors.

**Symptoms and Signs.** Symptoms following acute NSAID overdose are usually limited to lethargy, drowsiness, nausea, vomiting, and epigastric pain, which are generally reversible with supportive care. Gastrointestinal bleeding can occur. Hypertension, acute renal failure, respiratory depression, and coma may occur, but are rare.

**Treatment.** Manage patients using symptomatic and supportive care following an NSAID overdose. There are no specific antidotes.

**PATIENT COUNSELING INFORMATION**

Instruct patients to read the NSAID Medication Guide that accompanies each prescription dispensed.
Imagine that it is late Friday night and you and a nurse are the last remaining staff on duty at your urgent care center. A couple arrives and the woman appears to have several facial cuts and bruises. When you greet them, the man responds in a language you do not understand. You turn to the woman and she only says one or two words, also in a language you do not know. Finally, the man says in very limited English that they are from Russia, his wife has fallen, and asks you to fix her wounds—he will tell her to do as you say. You immediately suspect domestic violence but have no way of communicating with the woman. Now what?

In the United States today, there are over 45 million people who speak a language other than English as their primary language at home. Even more people are considered by our government to be “Limited-English Proficient” or LEP, which means that they do not speak or understand English sufficiently well to understand instructions about their healthcare. Amazingly, there are over 325 different languages spoken in the United States, with the number growing almost every month, and over 6,000 languages spoken in our ever-so-mobile global population. Linguists tell us that because English is a complicated language fraught with exceptions to its grammatical structure, it takes the average non-English-speaking person 7 years to become sufficiently fluent to communicate about and understand instructions about their healthcare in English.

**Urgent message:** Using interpreters in the urgent care setting can help you provide quality healthcare and save time and money.

**BRUCE MERLEY**
While immigration to the United States from Central and South America continues at high rates, less noticed but even more challenging are the large numbers of immigrants, both voluntary and refugee, arriving on our shores from all over the world. In recent years, we have seen large numbers of new immigrants from Africa and South-east Asia. Refugees from Myanmar (formerly Burma) who speak a number of languages new to the United States, are settling in towns and cities all across the country. As air transportation takes the dominant role for global travel, many new cities are appearing as immigration gateways: Atlanta, Buffalo, St. Louis, New Orleans, and Dallas, among others. New immigrants need work to survive, so they go where the jobs are—often to growing suburban communities.

When you combine the immigration trends above with the socio-economic demographics (new immigrants are, as a group, underinsured and on the lower end of the socio-economic scale), and add to that a generalized social mistrust of authority and government, it is not surprising that the LEP population tends to keep a low profile and seek healthcare in community health centers, local walk-in clinics, and small hospital emergency rooms. If you aren’t seeing them already, it is only a matter of time before they find you. The U.S. LEP population represents an enormous healthcare market if you can successfully meet the challenges. Urgent care centers are ideally positioned to serve this community.

But why do you have to use interpreters? After all, insurance companies don’t cover the cost, it’s really expensive, and a lot of your patients bring their children to interpret for them, right? Well, not exactly. Let’s look at some of the facts and some reasons why using interpreters makes good sense.

Why Use Interpreters?

First, there is the law. Title VI of the Civil Rights Act of 1964, and President Clinton’s Executive Order 13166 of August 16, 2000 (www.justice.gov/crt/cor/Pubs/eolep.pdf) make it clear that it is illegal to discriminate against someone because of national origin, and language is specifically identified as an indicator of national origin. Furthermore, the National Standards on Culturally and Linguistically Appropriate Services (CLAS standards) mandate that healthcare organizations receiving Federal funds must offer and provide language assistance services at no cost to each LEP patient. In addition, the Joint Commission now has very specific requirements about language services for LEP patients that hospitals must meet to maintain their accreditation. The federal government, most states, and the Joint Commission discourage the use of family members, friends, and ad hoc strangers as interpreters. Also, they prohibit the use of minor children as interpreters except in dire emergencies. (The reasons are fairly obvious, but you need only consider a teenage Arab boy interpreter who must explain to his mother that she has a sexually transmitted disease to understand the inappropriateness of this idea.)

To supplement the Federal laws, several states have passed regulations regarding language services. New York State’s Patient’s Bill of Rights requires that any written material be translated into the language of the patient if the patient is an LEP patient. This is not only advisable, but required in most states. It is estimated that only 10% of LEP patients speak the language of their healthcare provider. The Joint Commission now requires that all healthcare organizations provide language services to their patients to maintain their accreditation. As if that wasn’t enough, the Joint Commission requires that hospitals and healthcare organizations provide language services to all their patients, regardless of whether they are LEP patients. (The reasons are fairly obvious, but you need only consider a teenage Arab boy interpreter who must explain to his mother that she has a sexually transmitted disease to understand the inappropriateness of this idea.)

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Rights gives patients the right to communicate with providers about their health care in a language they can understand, and healthcare facilities are expected to provide language assistance within 20 minutes or less. In Massachusetts, Emergency Rooms are required by law to provide interpreters. California now requires that health insurance companies provide interpreting services for non-English-speaking customers, and many other states have regulations requiring healthcare entities to provide language services.

The cost of a lawsuit for discrimination or the loss of accreditation over language service dwarf any concerns about the cost of providing the service. However, these are only the compliance reasons for using interpreters. There are much better reasons, the most obvious of which is to provide the best health care you can as a responsible medical professional.

The second reason to use interpreters is to improve healthcare outcomes. Without verbal communication with patients, you cannot ask them for a medical history, assess their degree of pain or distress, ask them to show you where it hurts, how they feel, or whether they are dizzy or nauseated. Medical schools tell us that 70% of a doctor’s diagnosis comes from direct verbal communication with a patient. In addition, if a patient can understand you, he or she is more likely to follow your instructions, use medication appropriately, appear for appointments on time, and so forth. Numerous studies have shown that LEP patients who have been provided with interpreters have better healthcare outcomes than those who were not given language assistance. Consequently, using an interpreter significantly lowers your risk exposure as a provider.

The third reason to use an interpreter—and this is a big one—is that the service they provide saves money in several ways:

- Using an interpreter to provide verbal communication with the patient avoids the cost of otherwise unnecessary diagnostic testing and longer-term observation. A 1988 study by Lee, Rosenberg et al, showed that an Emergency Room doctor was 70% more likely to order additional testing and overnight stays for LEP patients, when the doctor could not verbally communicate with the patient.

- Using an interpreter improves provider and support staff productivity. You waste less time trying to communicate inadequately with an interpreter than without one.

- Better compliance from LEP patients with your healthcare instructions means fewer unnecessary return visits and improved payment histories. A recent study at a Massachusetts medical center showed that providing easy access to language services at every point of patient contact reduced the cost of care, improved staff productivity, enhanced patient satisfaction, and reduced the LEP inpatient length of stay by 1.3 days. To read the entire study, visit http://www.innovations.ahrq.gov/content.aspx?id=2657.

Currently, most health insurers do not cover the cost of interpreting services. However, it is worth noting that some insurers are considering it, and 17 states have plans in place or in progress to offer some reimbursement for interpreting expenses for Medicaid patients.

**Telephone Interpreting**

So the healthcare industry has taken to using interpreters to communicate with the ever-growing number of LEP patients. Many hospitals have staff interpreters, especially for frequently needed languages like Spanish. In major cities, interpreters for a number of languages are often available from local agencies. However, finding interpreters for hundreds of languages when you need them is not easy. Even more challenging is finding interpreters who understand our healthcare system, know the vocabulary needed for medical conversations, have the skills to manage an interpreting encounter, abide by a code of ethics and confidentiality agreement, and qualify under HIPAA regulations. The cost of recruiting and training qualified interpreters
is high and few facilities can afford the luxury of on-site interpreters for more than a couple of languages. An agency interpreter might cost upwards of $100 for a 2-hour minimum call where the actual encounter with the patient might only take 10 or 15 minutes. Enter telephone interpreting.

Launched by AT&T in the 1980s, telephone interpreting has grown into a $1 billion industry that serves multiple industries and worldwide markets. With its economies of scale and ability to source and deliver interpreters anywhere in the country where there is phone service, telephone interpreting has transformed language services in health care from an expensive luxury to an indispensable everyday tool. Using a telephone interpreter or an over-the-phone interpreting (OPI) company, obtaining an interpreter on-demand in over 200 languages can be as easy as picking up the phone. The cost is equally accessible—in many markets, OPI costs approximately $1 per minute. Furthermore, you can access interpreters who are skilled and experienced in healthcare interpreting and who have qualifications to ensure compliance with federal laws, state laws, and accrediting agencies.

**How It Works**

Several vendors provide telephone interpreting (OPI) services in the United States, and some offer services specifically for the healthcare industry. With most, you can easily open an account, after which they will provide you with a toll-free phone number to call and an account code to access the service. Once you indicate the language needed, typically in a minute or less, you will be connected to an interpreter who will facilitate the communication between you and your patient. The interpreter will introduce her/himself to both parties in both languages and you are ready to go.

Once on the phone with the interpreter, if you are using an ordinary phone, you will have to pass the handset back and forth with your patient while the interpreter consecutively interprets the conversation in both directions. Good telephone interpreters are skilled at helping set the rhythm of this process to make it easier for you, and once you have done it a couple of times, you’ll find it relatively easy. If you have privacy (for confidentiality), using a speakerphone eliminates the need to pass the phone back and forth and offers the added benefit of leaving you hands-free. However, speakerphones, depending on the physical environment, often make it more challenging for the interpreter to hear all parties clearly. Another option is a dual-handset phone, which provides a handset for both parties, a modicum of privacy, and good hearing capabilities for all parties. Cordless dual-handset phones often are more convenient in an urgent care or clinic environment where multiple exam rooms may not have phones lines installed, and they avoid the complication of extra wires in technology-congested areas. These devices can normally be purchased for $50 to $100 per set.

When your budget so dictates, you can often simply add a splitter to your business phone base unit, and plug in two handsets, basically creating your own dual-handset phone for about $15-$20. If you are fortunate enough

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**Additional Resources**

- Centers for Medicare & Medicaid Services: https://www.cms.gov/
- International Medical Interpreters Association: http://www.imiaweb.org/
- The Joint Commission: http://www.jointcommission.org/
- National Council on Interpreting in Health Care: http://www.ncihc.org
- U.S. Dept. of Health & Human Services Office for Civil Rights: http://www.hhs.gov/ocr/

**Comprehensive Study by UMass Memorial Medical Center Offers Cost-Effective Interpreting Solution**

UMass Memorial Medical Center participated in an 18-month collaborative sponsored by Robert Wood Johnson Foundation’s National Language Services Network. Its purpose was to test various measures of the effectiveness of interpreter services in 10 different hospitals throughout the United States.

Through this collaborative, UMass Memorial’s Language Service department came up with innovative solutions to their various language access challenges. In order to do so, they had to implement a solid data collection and analysis protocol to identify performance trends. From there they worked towards cost-effective solutions including increased use of OPI services, electronic transfer shift logs instead of paper logs, automatic scheduling for interpreter appointments, and a more prominent display of LEP patients’ preferred languages, as well as how to access an interpreter.

The results of the program were overwhelmingly positive, including a lower length of stay time, increased language and interpreter availability, and shorter wait time for an interpreter. The full study and results can be found on the Agency for Healthcare Research and Quality’s Innovations Exchange website at http://www.innovations.ahrq.gov/content.aspx?id=2657.
to have some of the more advanced communications devices like the voice-activated Vocera lapel communicator, telephone interpreting services are easily accessed through these devices, again improving your communications with your patients and your productivity.

**The LEP Population and Culture Collisions**

As you might expect, with the arrival in the United States of people from throughout the world—from countless different cultures, faiths, and social systems—there are inevitable conflicts where, through ignorance or misunderstanding, either our behavior or the LEP’s behavior offends, conflicts with, or makes no sense to the other party. Issues of gender, modesty, spiritual beliefs, and social authority all can contribute to misunderstandings and embarrassment at a minimum, and even to treatment failures and catastrophic healthcare outcomes at the other end of the spectrum. This is where a qualified interpreter is an invaluable resource; the qualified interpreter brings a sound, first-hand understanding of both cultures to each encounter. Professional medical interpreting allows for the interpreter to intervene with either party to explain a potential cultural roadblock and recommend solutions for addressing the issue. The reputable telephone interpreting companies in our industry make a point of hiring interpreters with qualified cultural competence that can help you avoid the pitfalls of practicing your best Western medicine with people of other cultures.

**Interpreter Qualifications**

Reputable telephone interpreting companies have strict qualification requirements for interpreters, particularly in healthcare, and are normally prepared to address all the quality compliance obligations of government and regulatory agencies. Some telephone interpreting companies require interpreter candidates to take tests that measure bilingual fluency, cultural competence, knowledge of medical terminology, process and procedures; knowledge of ethical dilemmas and conflicts of interest, and the ability to manage both; demonstrable interpreting skill; knowledge of HIPAA, Joint Commission and Centers for Medicare & Medicaid Services (CMS) regulations as they relate to language services; the ability to remain transparent (to not take sides); and the ability to intervene appropriately when required, among other protocols. In addition to passing the aforementioned tests, ideal interpreters would have at least 2 years of college-level education, professional interpreter training, and 2 years of previous interpreting experience.

The Joint Commission, CMS, and several states now have specific guidelines about the qualifications they expect for people providing language services for healthcare professionals. You may wish to visit the resources section of the websites of the National Council on Interpreting in Healthcare or the International Medical Interpreters Association for additional information. In addition to source documents on compliance issues and links to primary sources such as the Office of Civil Rights and CMS, there are a number FAQ documents and recommendations for language service programs that can help you craft a language access program for your facility that addresses your resources and the needs of both your patients and your organization.

Recently, the community of medical interpreters across the country has pushed to develop a third-party professional certification for medical interpreting. At this point in time, there are two very new bodies offering certification in medical interpreting in Spanish: The Commission for Certification of Healthcare Interpreters (CCHI) and the National Board for Certification of Medical Interpreters (NBCMI). As of this writing, there are approximately 450 Certified Spanish Medical Interpreters in the United States, divided between the two bodies. Over time, both organizations will offer certifications in additional languages, but there will always be a need for qualification assessments of interpreters, either for specialty skills (pediatric interpreting, for example) or for languages where the demand does not justify the test development costs for the certifying organizations.

In the next few years, as the number of certified interpreters grows to a meaningful number, it will be in your best interest to work with OPI vendors that have a clear strategy toward the offering of Certified Medical Interpreters whenever possible.

**The Global Community**

Living in a global community is something we have talked about for years. Now it appears we are actually experiencing it. Our discoveries may be amusing, terrifying, and even catastrophic. However, we must accept and embrace the reality of our world. Language is key to understanding culture and an anchor to our social stability. Using interpreters where language skills are missing can open doors of success in providing quality health care and of personal discovery that enrich our lives beyond measure. Oh, and yes, it will actually save you time and money. ■
In last month’s column, I presented an overview of capital sources that can be used to fund your urgent care start-up or expansion. This month I will discuss the different sources of debt and equity capital.

Much of the decision regarding which capital source is best for you is determined by your stage of development. For a startup, you will probably have to use traditional bank debt or raise capital, either in the form of debt or equity from friends and family. If your center has been up and running for a period of time, factoring receivables may be an option, as well as a bank-sponsored line of credit based upon your accounts receivables. If you have 5 to 10 centers open, a solid track record, and a proven management team, you may be able to garner some attention from a private equity (PE) firm.

Sources of Debt Capital

**Debt capital** is simply money supplied to a business from a loan. The loan can be from traditional sources, such as a bank. Or from less traditional sources, such as friends and family, credit card, mezzanine financing (a hybrid of debt and equity), and factoring. Debt capital is capital that typically is repaid based on a fixed annual percentage and may have a prepayment penalty.

Most of us start or started with the most traditional form of financing: a bank loan. These loans are generally at a “low” fixed interest, do not have a prepayment penalty, and require a personal guarantee as well as sufficient collateral. The days of getting “signature loans” are probably over. Physicians were historically considered good credit risks, thus finding a bank to loan 70% to 80% of the amount necessary to open and fund working capital was not terribly difficult. Although securing credit has become a bit more challenging, banks are still willing to lend physicians start-up capital, provided they have a good business plan, solid advisors, and a solid credit history and are adequately collateralized.

Banks continue to lend on the 5 “Cs” of credit: Character, Capacity, Collateral, Condition, and Capital. However, even if you have mastered the 5 “Cs,” the time to borrow money is when you don’t need it. Going to a bank for a loan in the midst of a cash flow crisis is doomed for failure.

**Credit card financing** is simply using credit cards to get cash advances to fund your operations. I would strongly caution against this form of debt capital. Credit card balances usually carry very high interest and significant penalties are charged for not paying timely.

**Mezzanine capital** or “mezz financing” refers to a subordinated debt which is senior only to common stock. Mezz capital is more expensive than traditional bank debt because it is typically unsecured and subordinated. In other words, mezz financing is less likely to be paid back until all other obligations have been satisfied. A typical mezz note will consist of an interest payment to be made in cash; payable in kind (PIK) interest, which is not paid but added to the principle amount; and warrants that permit the holder of the note to buy a portion of the stock in the company at an agreed upon strike price.

**Factoring** is a financial tool used by businesses that carry a balance of receivables on their books. In most medical practices, the average time it takes to collect money owed runs between 35 and 65 days (DSO). A practice may consider selling part or all of their accounts receivable at a discount in order to receive cash on a timelier basis. Companies involved in factoring typically concentrate more on the value or credit worthiness of the receivable as opposed to banks, which focus more on the credit worthiness of the borrower. Most factoring companies allow a borrower to factor governmental and other third-party payors but will not factor patient self-pay receivables. Generally speaking, bank lending is much less expensive than factoring; however, by factoring, small companies can time their cash flows more closely to their cash needs, especially during times of growth.

Four Avenues for Equity

Generally speaking there are four ways in which to obtain equity financing.

**Friends and Family:** Convincing people who know and trust
you that your idea and execution of that idea will be successful. A word of caution. Do this the right way. Find an attorney who drafts a note (debt instrument) or prepares the appropriate subscription and other agreements necessary for the purchase of an equity stake. As the old saying goes, “It’s all fun and games until someone loses an eye.” Translation: “If everything goes according to plan it’s all good. If something goes awry, you may lose a friend in the process or family events can become very chilly.”

Angel Investor: An offshoot of friends and family whereby you convince one or a few high-net-worth individuals to invest in your business plan. Again, have an attorney draft the appropriate agreements. If the angel investor has any sophistication at all, this is something upon which he or she will insist.

Venture Capital (VC): Early-stage or start-up equity. This is usually reserved for individuals who have great track records or an already proven model. VC firms always take a controlling interest in a company.

Private Equity (PE): Later-stage financing for companies that, generally speaking, have at least $10 million in revenue and $1 million in EBITDA (earnings before interest, taxes, depreciation, and amortization). PE groups want their capital deployed to grow the business, that is, to purchase other centers, build out de novo clinics, round out a management team, etc. In other words, they want you to put their money to work.

Typically, companies looking for PE capital are farther along in their life cycle. They have an existing track record of success, senior management and a well-thought-out game plan for growth. Although some PE firms may enter the business as a minority investor, they will ensure that they have a number of control levers they can pull if the business is not performing as planned.

A word of caution regarding the use of institutional capital: This is “smart money.” Despite everything they will tell you, their obligation is only to their shareholders (as it should be). They have no obligation to you, your management team, the preservation of your culture, or even to your patients. They are in the game to make money and will have no qualms about replacing you or any practice that does not lead to the highest return on their investment (ROI) in the shortest amount of time. These firms typically want their money out within 3 to 5 years, therefore, long-term strategies, building “goodwill” amongst your staff or patients, and “over the horizon strategies” are not in their DNA because these types of activities do not produce a tangible, near-term ROI.

Conclusion
Despite our country’s current financial challenges, there is money available for you to grow your clinic. It will take some work and some potential hardship to find it, but it is out there. Also, the knowledge you will gain by going through the process will be invaluable to your future endeavors!

Don’t Be Afraid to Write for JUCM
If you have contemplated writing for JUCM but are a little awed by the prospect of becoming a published writer after all those years of being convinced you weren’t a writer, we’re here to say: You can do it.

We need physicians, nurse practitioners, and physician assistants in urgent care to author review articles on a wide range of clinical subjects, from dermatology to pediatrics to orthopedics. Let us email you a topic list, outline, and sample articles.

We would also welcome Case Reports on common clinical problems and diagnostic challenges in urgent care. We can email you samples to follow for style.

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

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

---

**FIGURE 1**

The patient, an otherwise healthy 70-year-old, presented with a fever and cough on the right side of the chest. View the image taken (Figure 1) and consider what your diagnosis would be. Resolution of the case is described on the next page.
The diagnosis is a cavitory lesion in the right upper lung. The following mnemonic can be used for differential diagnosis:

C = Carcinoma  
A = Autoimmune (Wegener’s granulomatosis, rheumatoid nodules)  
V = Vascular (emboli)  
I = Infection (lung abscess, bacterial pneumonia, fungal pneumonia, tuberculosis, pneumatocele)  
T = Trauma (pulmonary laceration)  
Y = Young (congenital) (congenital cystic adenomatoid malformation, pulmonary sequestration, bronchogenic cyst)

Refer for CT and further evaluation.

Acknowledgement: Case presented by Nahum Kovalski, BSc, MDCM, Terem Emergency Medical Centers, Jerusalem, Israel.
The patient, a 66-year-old male, presented with a twisted right foot, with lateral tenderness.

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

Resolution of the case is described on the next page.
The diagnosis is a true Jones fracture involving the metaphyseal-diaphyseal junction of the fifth metatarsal, which should not be confused with the more proximal avulsion fracture involving only the tuberosity (Figure 2).

Jones fractures are managed either operatively or with a non-weight-bearing (NWB) cast for 6 to 8 weeks. Therefore, immobilization, a NWB cast, and orthopedic follow-up are indicated for this patient. For simple avulsion fractures of the proximal tuberosity, usual management is a bulky dressing, postoperative shoe, and weight bearing as tolerated.

Acknowledgement: Case presented by Nahum Kovalski, BSc, MDCM, Terem Emergency Medical Centers, Jerusalem, Israel.
Gloves Are No Substitute for Proper Hand Hygiene

Key point: Healthcare workers frequently neglect hand hygiene when they use gloves.


Although the use of latex gloves by healthcare workers (HCWs) can protect against transmission of pathogens, gloves are subject to perforation, and contamination can occur when the gloves are donned or removed. Consequently, WHO guidelines recommend that gloves be changed between patients and that hands be cleaned both before putting on gloves and after removing them. Investigators recently assessed compliance with these guidelines in 56 wards in 15 hospitals in the United Kingdom that were participating in a larger national study on HCWs’ hand hygiene.

Overall, gloves were used in 26% of 7578 HCW hand-hygiene “moments.” They were worn in 17% of low-risk contacts (when they would not have been clinically indicated) but were not worn in 25% of high-risk contacts (when they would have been indicated). The rates of hand-hygiene compliance before and after patient contact were 30% and 47%, respectively, when gloves were worn — significantly lower than those observed when gloves were not worn (40% and 52%). Published in J Watch Infec Dis. December 14, 2011 — Richard T. Ellison III, MD.

Nahum Kovalski is an urgent care practitioner and Assistant Medical Director/CIO at Terem Emergency Medical Centers in Jerusalem, Israel. He also sits on the JUCM Editorial Board.

Pediatric Antibiotic Prescribing in the U.S.: Frequent and Frequently Inappropriate

Key point: Pediatric ambulatory care visits in the United States frequently lead to antibiotic prescriptions for conditions for which they are not clearly indicated.


Researchers examined nationally representative data from more than 60,000 pediatric ambulatory visits for the years 2006 through 2008. Among the findings:

- Antibiotics were prescribed in roughly 20% of the visits.
- Broad-spectrum antibiotics were prescribed in about half the visits that resulted in antibiotic prescriptions.
- Roughly a quarter of visits resulting in antibiotics were for acute respiratory tract infections for which antibiotics are not clearly indicated.
- Factors increasing the likelihood of broad-spectrum prescriptions included the use of private health insurance and geographic variation (with the highest risk rates in the South).
**ABSTRACTS IN URGENT CARE**

**Facilitate Early Rule-out of AMI.** A serial change in hsTnI or cTnl levels from admission (using the 99th percentile diagnostic cutoff value) to 3 hours after admission may facilitate an early diagnosis of AMI.


To evaluate the diagnostic performance of a highly sensitive troponin I (hsTnI) assay, researchers compared it with a contemporary troponin I (cTnl) assay and their serial changes in the diagnosis of acute myocardial infarction (AMI). A total of 1818 patients with suspected acute coronary syndrome were consecutively enrolled at the chest pain units of the University Heart Center Hamburg, the University Medical Center Mainz, and the Federal Armed Forces Hospital Koblenz, all in Germany, from 2007 to 2009. Twelve biomarkers including hsTnI (level of detection, 3.4 pg/mL), and cTnl (level of detection, 10 pg/mL) were measured on admission and after 3 and 6 hours.

Of the 1818 patients, 413 (22.7%) were diagnosed as having AMI. For discrimination of AMI, the area under the receiver operating characteristic (ROC) curve was 0.96 (95% CI, 0.95-0.97) for hsTnI on admission and 0.92 (95% CI, 0.90-0.94) for cTnl on admission. Both were superior to the other evaluated diagnostic biomarkers. The use of hsTnI at admission (with the diagnostic cutoff value at the 99th percentile of 30 pg/mL) had a sensitivity of 82.3% and a negative predictive value (for ruling out AMI) of 94.7%. The use of cTnl (with the diagnostic cutoff value at the 99th percentile of 32 pg/mL) at admission had a sensitivity of 79.4% and a negative predictive value of 94.0%. Using levels obtained at 3 hours after admission, the sensitivity was 98.2% and the negative predictive value was 99.4% for both hsTnI and cTnl assays. Combining the 99th percentile cutoff at admission with the serial change in troponin concentration within 3 hours, the positive predictive value (for ruling in AMI) for hsTnI increased from 75.1% at admission to 95.8% after 3 hours, and for cTnl increased from 80.9% at admission to 96.1% after 3 hours.

**Death Within 1 Week After ED Discharge**

**Key point:** In a large study, 1 in 2000 adult patients died within 7 days after ED discharge. Predictors of death included increasing age, noninfectious lung disease, and renal disease.


To determine the rate and predictors of death within 7 days after emergency department (ED) evaluation in adults, researchers studied data from the Kaiser Permanente system in Southern California and government databases.

During 2007 through 2008, there were 728,312 discharges of 475,829 patients and 357 deaths. The rate of death within 7 days of ED discharge was 0.05%. The major risk factor for death was older age. Patients aged ≥80 had nearly 11 times the odds of death relative to those aged 18-39.

Comorbid diseases that were strong predictors of death included noninfectious lung disease (odds ratio 7.1), renal disease (OR, 5.6), ischemic heart disease (OR, 3.8), neoplasm (OR, 3.7), and diseases of the blood (OR, 3.6).

Published in J Watch Emerg Med. December 22, 2011 — Daniel J. Pallin, MD, MPH.

**Troponin Assays Improve Evaluation of Patients With Chest Pain**

**Key point:** Among patients with suspected acute coronary syndrome, hsTnI or cTnl determination 3 hours after admission may facilitate early rule-out of AMI. A serial change in hsTnI or cTnl levels from admission (using the 99th percentile diagnostic cutoff value) to 3 hours after admission may facilitate an early diagnosis of AMI.

Citation: Gabayan GZ, Derose SF, Asch SM, et al. Patterns and predictors of short-term death after emergency department discharge. Predictors of death included increasing age, noninfectious lung disease, and renal disease.

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**Had Any Interesting Cases Lately?**

Case Reports are one of JUCM’s most popular features. Case Reports are short, didactic case studies of 1,000-1,500 words. They are easy to write and JUCM readers love them. If you’ve had some interesting cases lately, please write one up for us. Send it to Judith Orvos, ELS, JUCM’s editor, at jorvos@jucm.com.

**JUCM** The Journal of Urgent Care Medicine | February 2012 www.jucm.com
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CODING Q & A

Administration Codes for Injections, Billing for Medicare Wellness Exam, Billing Joint Injections With E/Ms, Coding for Keloid Injection

DAVID STERN, MD, CPC

Q. What is the appropriate administration code for a Medicare patient who receives influenza, Pneumovax, and tetanus vaccinations? What are the proper administration codes for the same patient if he/she receives a tetanus and flu shot?

A. For Medicare:

- Influenza vaccine administration is G0008
- Pneumovax administration is G0009
- Tetanus vaccine administration is 90471

Q. If you perform an annual Medicare wellness exam, can you bill for additional services provided, such as administration of Tdap and zoster vaccinations?

A. These vaccines are covered only under Medicare Part D prescription plans. You have three choices here: 1) Become a Medicare provider for Part D vaccines to receive payment directly; 2) Write a prescription for the patient to receive these vaccines at a pharmacy; or 3) Provide the vaccines at a direct cost to the patient. If you choose the last option, then you should provide the patient with a printed CMS-1500 to submit to the Part D plan for any benefits payable for out-of-network services.

Q. Can I bill a joint injection on the same date as an E/M? I was taught you should bill the joint injection only.

A. If you saw the patient previously and brought him/her back in for a scheduled visit for the injection, then you may only bill the joint injection. If the patient visited the clinic for evaluation of a joint and if you evaluated the patient and documented a significant and identifiable E/M, then you may bill the E/M with modifier -25 (significant, separately identifiable evaluation and management service by same physician on same day of procedure or other service), plus the CPT code for joint injection, plus the HCPS code for the medication injection. Note: If you mix the corticosteroid with an anesthetic, such as lidocaine, there is no additional HCPS code for the lidocaine medication.

Q. What is the correct code for an injecting a keloid?

A. You should use code 11900 (intralesional injection up to seven lesions). Note: You can only report one unit per seven lesions even if multiple injections are required for some lesions.

Note: CPT codes, descriptions, and other data only are copyright 2012, American Medical Association. All Rights Reserved (or such other date of publication of CPT). CPT is a trademark of the American Medical Association (AMA).

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For details contact Kathy Schenk
Director of Physician Development Services
St. Mary’s Medical Center
812-485-7962
KSchenk@stmarys.org

All correspondence will be handled confidentially.

Urgent Care position
Manchester, New Hampshire

Elliot Health System in Manchester, New Hampshire offers an outstanding practice opportunity for family medicine physicians with an interest in urgent care. The position offers a variety of urgent care cases including pediatric and qualified candidates should be comfortable with suturing, casting and reading x-rays and EKG’s.

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Elliot Hospital is a 296-bed, JCAHO-accredited acute care facility and Level II Regional Trauma Center distinguished not only by its highly regarded Emergency Department, but also by an extensive Primary Care Physician Network, Women’s Health Program, Geriatrics Programs, a Regional Cancer Center and a Level III NICU.

Recently, Elliot Hospital was named one of healthcare’s Top Wired Hospitals in the country according to Hospitals & Health Networks Magazine. Elliot Health System has made information technology a priority in patient care, implementing electronic medical records, My E Chart (which allows patients to manage their personal medical records), wireless internet access for hospitalized patients, and a wealth of information provided to both patients and staff via the internet.

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These data from the 2010 Urgent Care Benchmarking Survey are based on responses of 1,691 US urgent care centers; 32% were UCAOA members. The survey was limited to “full-fledged urgent care centers” accepting walk-ins during all hours of operation; having a licensed provider and x-ray and lab equipment onsite; the ability to administer IV fluids and perform minor procedures; and having minimal business hours of seven days per week, four hours per day.

In this issue: How many hours are physicians at your center working?

The 2008 Survey looked generally at the numbers of professionals on staff, as well as patient volume per provider (68.3 patients per physician per week, 41.86 per all clinicians per week [includes physicians, nurse practitioners, physician assistants and registered nurses]), qualifications of physicians, and physician benefits. The 2010 Survey delved into these aspects much more in depth and in some new areas.

The majority of centers staff with a mix of physicians and/or nurse practitioners and/or physician assistants, with only about 36% of centers having a physician-only model. Results in the full survey further examined hours per month and hours per shift per day by each provider type, which vary (not surprisingly) with the typical patient flow. Among centers which staff physicians, the number of physician hours per month was highest in January and lowest in December. Physician hours per shift per day were highest on Sundays between the hours of noon and 4 p.m.

Acknowledgement: The 2010 Urgent Care Benchmarking Study was funded by the Urgent Care Association of America and administered by Professional Research Associates, based in Omaha, NE. The full 40-page report can be purchased at www.ucaoa.org/benchmarking.
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