Urinary Tract Infection
in the Pediatric Patient

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In my last column, I explained how physician reimbursement is determined by a relatively obscure and highly politicized committee shockingly biased by specialist representation. The so called “RUC” (Relative Value Scale Update Committee) has created a pay formula that heavily favors proceduralists at the undeniable expense of the primary care physician. This biased system of reimbursement has not only created an unbalanced pay scale amongst physicians, but has equally contributed to skyrocketing healthcare costs. It should come as no surprise that physicians favor procedures and procedural specialties when their reimbursement can be as high as 12 times the hourly rate for clinical evaluations.

Paul Fischer, MD, a family physician, and 5 of his colleagues, have filed suit against the Department of Health and Human Services and the Centers for Medicare & Medicaid Services for the conflicts inherent in their relationship with RUC. These conflicts, the suit claims, have led to a biased payment system that has encouraged medically unnecessary procedures at the expense of fair payment for primary care physicians. Dr. Fischer blames the complicated way procedures are billed as the primary cause of overuse and abuse. He notes that while evaluation and management services are billed on a five-level scale, procedures are billed using a system of codes that consumes 400 pages of the CPT manual. Each CPT code accounts for subtle differences between procedures, which can represent significant differences in reimbursement. By contrast, despite the well-known subtleties and work variability of clinical evaluations, we have only five levels of care from which to choose. Add on a layer of fear for billing higher level codes, and you have a perfect formula for underpayment.

Dr. Fischer goes on to suggest that the current CPT codes be replaced with a “Procedure and Follow-up” coding system that resembles the evaluation and management (E&M) coding rules. In it would be four categories of procedure: “Easy,” “not too easy,” “hard,” and “very hard.” RUC would be tasked with determining which procedures fall into each category and how much to reimburse at each level. Many will argue that the formula does not take into account the wide subtleties and intricacies of each of these procedures. That said, an equally compelling argument surely can be made with regard to E&M services. Although Dr. Fischer’s proposal can easily be criticized as an oversimplification, he is clearly attempting to pull back the curtain and reveal that the great and powerful proceduralist is no more a physician than his or her primary care colleague.

Other, more modest proposals have been offered as bridging actions until more permanent solutions can be achieved. For example, the American Academy of Family Physicians has proposed the following:*  
- Four more primary care seats  
- A permanent seat for gerontology  
- Sunsetting of the RUC’s rotating subspecialty seats  
- New seats for non-physicians, such as economists, purchasers and consumers

In addition, several insurers are subverting RUC and proactively seeking to increase the effective role of primary care by increasing payment for their services. WellPoint recently announced a 10% primary care pay increase with promises of more to come. In collaboration with several pilot practices, WellPoint has seen tremendous cost savings with the approach while participating physicians are generating bonuses topping $100,000 per year. Specialty and emergency room referrals are way down, and advanced diagnostics are less utilized. Perhaps we are seeing a novel revision of the managed care craze of the early 1990s. Instead of actively restricting care or punishing utilization, primary care physicians are simply fairly paid for doing the job they were trained to do.

It seems that perhaps we are capable of doing the right thing when we are simply rightly paid to do it. A novel concept indeed. □


Lee A. Resnick, MD  
Editor-in-Chief  
JUCM, The Journal of Urgent Care Medicine
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Urinary Tract Infection in the Pediatric Patient

Diagnosing UTI in a child is challenging in the urgent care setting. Fever, abdominal or back pain, frequency or new onset of incontinence all should raise your index of suspicion.

Kimberly Gibson, MD

IN THE NEXT ISSUE OF JUCM

With the U.S. population aging and dental services sometimes scarce—particularly on weekends and evenings, when few dentists have office hours—more patients are coming to urgent care centers with dental complaints. To render appropriate care for non-traumatic dental emergencies, urgent care providers need an understanding of the dental disease process, familiarity with presentation and diagnosis, and knowledge of treatment protocols that can relieve pain and prevent the spread of infection. Our cover story next month looks at the challenge of diagnosing and treating non-traumatic dental complaints, such as pulpal and periapical pathoses, pericoronitis, and acute necrotizing ulcerative gingivitis.

From the UCAOA Executive Director

DEPARTMENTS

Insights in Images: Clinical Challenges
Health Law
Abstracts in Urgent Care
Coding Q&A
Developing Data

CLASSIFIEDS

Career Opportunities

CORRECTION
On page 26 of the March 2012 print edition of JUCM, we ran the wrong affiliation information for John Shufeldt, MD, JD, MBA, FACEP. Dr. Shufeldt is the author of our Health Law column, a member of the JUCM Editorial Board, and Principal, Shufeldt Consulting. We regret the error.
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In our cover story this month, Kimberly Gibson, MD, explains how to accurately diagnose UTI in infants and children in the urgent care setting who may not be able to communicate symptoms. She reviews methods of urinalysis, options for treatment, red flags for high-risk patients, indications for referral, and consideration for special populations.

Dr. Gibson is Lead Physician at Doctors Express in Tampa, Florida.

In this month’s case report, Erica Marshburn, BS, BA, and John Shufeldt, MD, JD, MBA, FACEP continue their series on back pain diagnostics with the case of a 17-year-old male who presents with para-spinous cervical pain after a front-end automobile collision 3 days ago. As this account underscores, while significant cervical spine injuries are rare, it’s important to pay attention for signs and symptoms suggestive of these problems because missing one can have serious implications for patient and provider.

Ms. Marshburn is an independent business consultant and the principal of Medical Business Technologies in Scottsdale, Arizona. Dr. Schufeldt is principal of Shufeldt Consulting and a member of the editorial board of JUCM.

Telemedicine is a new growth opportunity for urgent care centers that want to attract consumers looking for on-demand medicine. Ian Vasquez’s review will help you understand applications of telemedicine to urgent care and assess key risks and benefits that the technology can afford your practice.

Mr. Vasquez is the Chief Operating Officer of MeMD, a virtual provider network for telemedicine.

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Ms. Bunnell is the CEO of Travel Health 101, LLC.

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FROM THE EXECUTIVE DIRECTOR

Raising Awareness About Urgent Care: It’s Coming

LOU ELLEN HORWITZ, MA

If you were at the 2011 Members Meeting in Chicago, or if you are a regular column reader, you know that one of the major Urgent Care Association of American (UCAOA) initiatives for 2012 is for us to put significant resources toward raising industry awareness. When it comes down to it, this is the root of our industry issues – lack of awareness and true understanding among patients, payors, employers and the government. So, this is the year we do something about that – TOGETHER – starting in June.

Here’s what UCAOA has done so far:

- Engaged a national healthcare public relations and branding firm in Chicago to develop a year-long urgent care awareness campaign (remedychicago.com).
- Created a series of quarterly (seasonal themes) campaign messages and graphics that we will be using nationally and providing to you FOR FREE.

We’re unveiling the campaign themes, messages and graphics for the first time in Las Vegas at the 2012 convention. It’s based around a series of very short rhymes, so they really stick in your head.

How the Campaign Will Work

In late April/early May, we’ll launch a campaign web page through which we’ll provide original artwork for ads, direct mail pieces, website graphics, html templates for emails and more—all in easy-to-use templates that you can download and customize with your own center information.

We’ll also provide a “campaign toolkit” with a schedule, tips, and all kinds of other goodies in it.

In June, July, and August ALL OF US will launch the campaign together. UCAOA will roll it out nationally to payors, employers and the government, and you will roll it out locally to your patients, media, referral sources – and anyone else who will listen!

We’ll all be saying the same thing—all across the country—all at the same time—in lots of different ways. Whether you are big or small, you can (and must!) participate. If we do this right, it will be amazing.

“Are you a Vendor? Investor? Insurer? We’d love to have you participate, too. Make sure you are on the UCAOA email list and we’ll make sure you get access to everything. The more publicity the better.”

Come September, October, and November we’ll do it all again—with a new rhyme and new free resources. In December, January, and February, we’ll do it a third time, then again in March, April, and May.

By this time next year, it should be a whole new ballgame. We may all be rhyming in our sleep, but people WILL UNDERSTAND URGENT CARE!

What Comes Next

Later this month, we’ll start showing you how it’s done—in the vein of “See One, Do One, Teach One”—so next you’ll See One—then in June you’ll Do One. We’ll keep it simple, and easy, and doable.

For today, just start looking at your marketing budget with an eye toward setting aside a portion to take advantage of all the creative materials that UCAOA will provide. We’ve done the design work for you and all you need to do is use the materials—whether that’s in email, on your website, or as part of your advertising.

Together, we can do this.

Lou Ellen Horwitz is Executive Director of the Urgent Care Association of America. She may be contacted at lorwitz@ucaoa.org.
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**Clinical**

**Urinary Tract Infection in the Pediatric Patient**

**Urgent message:** Diagnosing UTI in a child is challenging in the urgent care setting. Fever, abdominal or back pain, frequency or new onset of incontinence all should raise your index of suspicion.

KIMBERLY GIBSON, MD

**Cases such as the following are common in urgent care and they present unique challenges:**

J.S., a 2-year-old girl, presents to an urgent care clinic on a Saturday afternoon for evaluation of low-grade fever and fussiness. Her parents have been trying to potty train her, but now the child is indicating that it hurts her to urinate. She has no prior history of a urinary tract infection (UTI). Her parents deny any cough, complaint of ear pain, vomiting or diarrhea. The child’s dietary intake is normal.

On observation, J.S. is quiet but interactive, and she appears to be a well-developed child. Her temperature is 99.2°F; pulse 110. Physical exam is normal except for mild pain on palpation of the bladder area. Examination of the child’s external genitalia is normal.

J.S. is not cooperative with collection of a clean-catch urine specimen. Therefore, the urgent care clinician gently cleanses her perineum with an obstetrical towlette and applies a bag for urine collection underneath her “pull-ups.” Forty-five minutes later, a urine sample is obtained. Dipstick urinalysis reveals the following:

- pH: 6
- Blood: negative
- Sp. Gravity: 1.020
- Nitrites: positive
- Glucose: negative
- Leukocytes: 250/microL
- Protein: negative

**Introduction**

Urinary tract infections (UTIs) in children, such as that illustrated by the case vignette above, are common and a major source of morbidity. Estimates indicate that 7% of girls and 2% of boys will have a UTI by age 6. Among infants younger than age 1, more boys are diagnosed with UTI than girls, and incidence is 10-fold greater in uncircumcised than in circumcised boys. Beyond age 1 year, UTIs are largely diagnosed in girls.

UTI can involve the bladder or the kidney. Kidney infections are of particular concern because they can lead to permanent renal scarring in children. Kidney infections represent a significant health burden, accounting for 13,000 annual inpatient pediatric admissions in the United States, at an estimated cost of $180 million.
In the urgent care setting, diagnosis of UTI can be divided into two categories. The first category is differential diagnosis of fever in a child who is too young to communicate symptoms. The second category is evaluation of dysuria in the child who can talk.

Our challenge, as with all illnesses and injuries for which patients present to an urgent care clinic, is to accurately diagnose, treat if appropriate, triage if hospital work-up and care is necessary, and arrange for timely follow-up care and/or consultation.

History
Fever may be the only presenting complaint of a significant UTI in a non-verbal child. In one study, 5.9% of infants with fevers higher than 38° C had culture-confirmed UTIs. In older children who present with UTI, most of whom are girls, the children themselves (or the parents) may give a history of vomiting, diffuse or suprapubic abdominal pain, constipation, dysuria, urgency, frequency and enuresis, as well as fever (Table 1). Evidence supports that most UTIs are ascending infections that begin with perimeatal colonization. The shorter length of the urethra, rather than the narrower caliber, accounts for the increased incidence of UTI in girls. Therefore, urethral dilatation is not useful in limiting UTIs and is discouraged.

Local irritation is a common cause of dysuria and should be explored. However, diagnostic evaluation for UTI should be pursued because local irritation is a common finding in children with and without UTI. It should also be noted that urinary frequency, urgency, and intermittent incontinence are common, even in potty-trained children, largely because of uninhibited detrusor muscle contractions in this age group.

Neurogenic and congenital abnormalities should be considered potential risk factors for UTI. Vesicoureteral reflux (VUR) is the most common anatomic abnormality. Neurogenic causes of voiding dysfunction vary and predispose patients to UTI via impaired urodynamics. Often, overlapping cognitive impairment lends additional challenges that can predispose these children to UTI.

Secondary incontinence, starting after at least 6 months of continence, can be associated with sexual abuse, though not exclusively. Withdrawn nature and unusual fear of examination are also risk factors.

Sexual activity is the most common risk factor for UTI in older children. Careful history-taking is warranted to evaluate for the presence of risk factors. Sexually transmitted diseases (STDs) such as chlamydia, gonorrhea and trichomoniasis all can cause urethritis and symptoms that mimic UTI. The pain of herpetic lesions also may be described as “burning with urination.” It is advisable, as a matter of routine, to interview all teenagers both with and without a parent in the room. The presence of fever, abdominal pain, or vaginal discharge should alert the clinician to the possibility of an STD in this age group and should prompt consideration of pelvic examination and diagnostic testing.

Physical Examination
Findings on physical examination can be non-specific. In addition to a thorough general examination to rule out other sources of fever, particular attention should be paid to documenting the abdominal exam, including presence or absence of suprapubic and/or costovertebral angle tenderness (Table 2). An external genital exam also should be performed to look for vulvovaginitis, vaginal foreign body, epididymitis, and circumcision. Irritation of the urethral opening from yeast infection or dermatitis should be considered in children who complain of dysuria but in whom a urine specimen is negative for UTI. Presence of genital or perianal bruising or lacerations should alert the clinician to the possibility of sexual abuse. Prompt—and even immediate—referral to child protective services is warranted in such cases.

When children present to an urgent care clinic with a history of recurrent UTIs, structural abnormalities such as VUR or renal scarring, and/or chronic conditions that render them immunocompromised, the clinician should have a low threshold for transferring them to the

<table>
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<tr>
<th>Table 1. Signs and Symptoms of UTI in Children</th>
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<tr>
<td>• Fever</td>
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<td>• Dysuria</td>
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<td>• Urgency</td>
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<td>• Urinary Frequency</td>
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<td>• Enuresis</td>
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<td>• New-Onset Incontinence</td>
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<td>• Constipation</td>
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<td>• Genitourinary Irritation</td>
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<tr>
<th>Table 2. Diagnostic Essentials for UTI in Children</th>
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<tr>
<td>• Abdominal Examination: Presence/absence of suprapubic and/or costovertebral angle tenderness</td>
</tr>
<tr>
<td>• External Genital Examination: Presence/absence of vulvovaginitis, vaginal foreign body, epididymitis, circumcision</td>
</tr>
<tr>
<td>• Urine Dipstick: Presence of leukoesterase and nitrites highly specific for UTI</td>
</tr>
<tr>
<td>• Urine Culture: Obtain culture on all children in whom dipstick is positive</td>
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</tbody>
</table>
STOP WADING THROUGH SPREADSHEETS AND PAPER REPORTS TO DETERMINE HOW YOUR CLINIC IS PERFORMING. DOCUTAP’S ENTERPRISE DASHBOARD PROVIDES YOU UP TO THE MINUTE STATS TO UNDERSTAND WHERE YOUR CLINIC IS AT — AND WHERE IT’S GOING.

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emergency room (ER), where a more in-depth work-up can be undertaken. Likewise, unstable children who appear septic and those with drainage problems or underlying renal insufficiency should be transferred to the ER for evaluation and possible admission.

**Diagnosis**
The standard test for diagnosing UTI is urine culture yielding a colony count of greater than $10^5$ cfu/mL of pure bacterial growth. However, this method requires a 48- to 72-hour incubation period, reducing its performance in the acute evaluation of children.

In the urgent care setting, the primary diagnostic tool is a dipstick urinalysis. A well-collected urine specimen is critical to making the diagnosis of UTI, but an uncontaminated specimen can be hard to obtain. In children who are not toilet-trained, urine collection can be from a bag, or from a urine pad, provided that the pad is changed every 30 to 45 minutes to reduce the risk of contamination. The National Institute for Health and Clinical Excellence (NICE) guidelines suggest urine collection pads over bags, because they are most cost-effective, have a similar contamination rate, and are easier for both clinic staff and parents. Perineal/genital cleansing prior to application of a pad or bag will reduce risk of false-positives and unnecessary antibiotic treatment.

Suprapubic aspiration and catheterization are invasive approaches for obtaining non-contaminated urine, but may be impractical in an urgent care setting because most urgent care providers lack experience with the procedures and they can be anxiety-provoking for both parent and physician. Dipstick urinalysis via bagged specimen is suitable for the diagnosis of UTI in non-toilet-trained infants and children aged 2 months to 2 years. There remains some disagreement over whether a properly obtained bagged specimen can be used for culture, although the most current American Academy of Pediatrics (AAP) guidelines still suggest a more sterile method (like transurethral catheterization) for culture. This is of particular importance in the evaluation of infants with fever of undetermined source.

**Treatment**
Enterobacteriaceae, which include *Escherichia coli*, *Klebsiella*, *Proteus*, *Pseudomonas*, and enterococci, account for more than 95% of urinary isolates. Initial oral antibiotic treatment should address these pathogens. After a positive urine dipstick has been obtained, and urine has been collected for culture, empiric antibiotic treatment for cystitis can be initiated with trimethoprim/sulfamethoxazole (TMP/SMX). Traditionally, amoxicillin was used as a first-line antibiotic, but rates of *E. coli* resistance are increasing, and studies have found higher cure rates with TMP/SMX. Amoxicillin/clavulanate or cephalosporins, such as cefixime, cefpodoxime, cefprozil and cephalexin, are good alternatives in patients with sulfa allergy (Table 3).

Fluoroquinolones are not generally used in children because of concern about injury to developing joints. Ciprofloxacin, however, is FDA-approved for complicated UTI and pyelonephritis in patients aged 1 to 17 years. The duration of treatment for uncomplicated lower

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**Table 3. Selected Antibiotic Regimens for UTI in Children**

<table>
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<tr>
<th>Antibiotic Regimen</th>
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<tr>
<td>Trimethoprim/sulfamethoxazole</td>
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<tr>
<td>Amoxicillin/clavulanate</td>
</tr>
<tr>
<td>Cephalosporins (cefixime, cefpodoxime, cefprozil, cephalexin)</td>
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...
UTI is controversial. Shorter courses of therapy have been advocated in order to reduce cost, limit side effects, and increase compliance. In children older than age 5, cystitis can be treated with a 3- to 5-day course of oral antibiotics. In children younger than age 5, antibiotics should be continued until radiologic evaluation has been completed to detect renal scarring. Children with pyelonephritis have a much higher (40%-50%) risk of renal scarring, therefore, treatment should be started immediately with an oral third-generation cephalosporin or consideration for 1 to 2 days of ceftriaxone administered intramuscularly. This should be followed by a full 10- to 14-day course of the appropriate oral antibiotic, as determined by culture.

Consideration of admission should be given for any child who is acutely ill or younger than age 2 months, and in the following circumstances:
1. Toxicity
2. Dehydration
3. Inability to manage oral fluids
4. Failure of outpatient treatment
5. Concerns regarding compliance with recommendations

**Follow-up**
Follow-up assessment in 48 to 72 hours should be arranged for all children in whom antibiotic therapy is initiated. Strong consideration should be given to referring all children with positive dipsticks back to their pediatricians for follow up on culture results and consideration for imaging of the upper urinary tract to look for reflux, renal stones, or renal scarring. A history of high-grade fever with a UTI suggests kidney involvement.

In 1999, the AAP recommended renal ultrasound and a voiding cystourethrogram (VCUG) to identify anatomic abnormalities that could lead to recurrent infections and kidney damage. Although renal ultrasound is noninvasive, VCUG requires urethral catheterization and radiation exposure. An alternative to this is to take a “top-down” approach and do an initial dimercaptosuccinic acid (DMSA) renal scan and proceed to VCUG only if DMSA shows renal cortical defects.
Prevention

While preventive advice is plentiful, little in the way of scientifically valid studies support any specific recommendations for UTI. Nonetheless, several practical suggestions can be made, with little in the way of risk or undue burden.

Perineal exposure to chemical irritants is best avoided whenever possible, including exposure to bubble baths, oils, and many lotions (especially fragrances). Swimming and using a hot tub can cause chemical irritation that is exacerbated by friction from water slides, etc.

Cotton underwear dries readily, whereas synthetic undergarments retain moisture and create an environment conducive to bacterial overgrowth. Airing out the perineal area is a good idea when practical, and night time would be an appropriate time for a child to go without clothing from the waist down. Moisture barriers such as petroleum jelly can be useful for children who are not yet potty-trained.

Aggressive management of constipation is perhaps the most important intervention for reducing the risk of UTI and other urinary voiding problems in children.

Children should be encouraged to take their time when urinating to allow for the bladder to completely empty; to take bathroom breaks every 3 to 4 hours while awake; and to drink plenty of fluids. They should be instructed to drink enough fluids to turn urine light yellow in color. Dark yellow or brown urine indicates they are not getting enough fluids. Cleaning the perineal/anal area from front to back after using the toilet is common sense, but supporting evidence for prevention of UTI is limited.

Indiscriminate use of antibiotics for viral illness not only contributes to resistant organisms, but greatly diminishes helpful bacteria counts in the perineal area, thereby contributing to overgrowth of bacteria known to cause UTI.

Patient information on UTI can be downloaded for free from the Website for the National Institute of Diabetes and Digestive and Kidney Diseases of the U.S Department of Health and Human Services.


Conclusion

Diagnosing UTI in children, particularly in those who cannot verbalize their symptoms, presents challenges in the urgent care setting. The presence of a fever in addition to abdominal pain, back pain, dysuria, frequency or new onset incontinence, increases the likelihood of the diagnosis by two–to six-fold. Special consideration should be given to infants with fever of uncertain origin, risk factors for STD, signs of child abuse and/or history of recurrent UTI. Hospitalization should be considered for newborns aged less than 2 months and any patients who are unable to tolerate or fail to respond to outpatient therapy.

Finally, while bagged specimens are reasonable for preliminary diagnosis of UTI, sterile specimens are necessary for culture and should be strongly considered before empiric therapy is initiated in infants with fever of uncertain source. The AAP guidelines released in 2011 stress that urinalysis of an appropriately collected specimen can only suggest a UTI diagnosis. Confirmation is made by definitive culture of 50,000 colonies/mL or more of a single uropathogenic organism. ■

Bibliography

Practice Management

Telemedicine’s Impact on Urgent Care: What You Need to Know

Urgent message: Telemedicine represents a new growth opportunity for urgent care centers that want to attract consumers looking for on-demand medicine.

IAN VASQUEZ, MBA

Urgent care providers are well positioned to take advantage of new market opportunities being driven by consumers and employers who increasingly look to the Internet for on-demand medicine. Telemedicine represents one such opportunity. This article will help you understand applications of telemedicine to urgent care and assess key risks and benefits that the technology can afford your practice.

Case Study: Conjunctivitis

Twenty years ago, the emergency room (ER) was the only available option for the parents of a child with conjunctivitis, whose primary care physician was unavailable for an extended period of time because of a full appointment book or office closure. The concept of urgent care did not yet exist.

Last year, more than 8,700 urgent care clinics were available to parents in the United States in a similar situation, according to estimates from the Urgent Care Association of America (UCAOA). In addition, there were 1,100 retail clinics in stores such as Walmart, Target, CVS, and Walgreens according to the Deloitte Center for Health Solutions. Growth projections for both urgent care and retail clinics were, and still are, high.

Meanwhile, two-thirds of ERs had closed since the late 1980s as the marketplace shifted towards urgent care and most ERs became financially insolvent.

Today, the parents of a child with conjunctivitis have a new option that doesn’t require them to leave the house. Through telemedicine and the emergence of numerous online services connecting patients and physicians over the Web, these individuals can receive care from home, the office, or a hotel room for conjunctivitis and a large list of other low-acuity yet urgent ailments.

Ian Vasquez is the Chief Operating Officer of MeMD, a virtual provider network for telemedicine. He may be contacted at ivasquez@memd.me or (480) 339-5005.
Currently, most consumers are not yet aware of the Internet/telemedicine option, but awareness is growing—fast. The impact that telemedicine will have on urgent care cannot be overstated. It will be critical in the months and years ahead for the urgent care industry to determine how to capitalize on this movement rather than be displaced by it.

Thankfully, modern telemedicine is creating new opportunities to drive growth for urgent care centers. Using telemedicine, urgent care practices and providers can grow patient volume during early months of operation and even before they open their doors. With telemedicine, the patient pool a clinic or provider can treat can be expanded statewide rather than including only those who live within a 3- to 5-mile radius. Clinics and providers can also provide telemedicine-based follow-up visits that create stronger relationships with patients, increase repeat business, and potentially reduce risk of medical malpractice claims. Moreover, urgent care centers can leverage telemedicine to compete in the rapidly growing space of employer-based health and wellness services.

**Modern Telemedicine**

Despite strong awareness of the potential telemedicine holds, broad use of the practice was stymied for years, but not for lack effort. Notable politicians and thought-leaders such as Newt Gingrich and Tommy Thompson spoke and wrote at length about the potential for telemedicine to expand access while simultaneously lowering costs. Even Barack Obama described the possibility for patients to have Web-based video-chats with their providers in his 2011 State of the Union address. Until recently, however, telemedicine was challenged by persistent obstacles. Rather than gaining widespread adoption, telemedicine has been limited to highly specialized, high-cost pilot programs connecting specialists to patients with acute needs via fixed access points and private broadband networks.

Today things are changing. An emerging class of telemedicine solutions are becoming available that target the routine ailments of regular people using everyday Web technology. Five basic factors have driven these recent advancements:

1) **Basic videoconferencing technology and access to the Web are now commonplace for people at all socioeconomic levels.** Virtually every laptop and mobile device comes with a webcam pre-installed. A basic webcam capable of broadcasting high-quality video for computers not already equipped with one typically costs only $20.

2) **Medical malpractice risk associated with telemedicine encounters is now readily underwritten.** Many insurers now underwrite telemedicine in their existing policies or will do so upon request. This ensures a competitive market, fair rates and manageable application processes.

3) **States are increasingly requiring payors to reimburse telemedicine visits and many private insurers are voluntarily doing so as a way to reduce costs and improve outcomes.** Twelve states (California, Colorado, Georgia, Hawaii, Kentucky, Louisiana, Maine, New Hampshire, Oklahoma, Oregon, Texas and Virginia) have some form of mandate requiring payors to reimburse for telemedicine visits and such legislation is in process in many more states.

4) **Providers are becoming more familiar and comfortable with telemedicine practices.** The same academic medical centers researching the antiquated form of high-cost, highly specialized telemedicine are those where new physicians are completing their educations.

5) **Overall healthcare costs continue to spiral higher, and despite Congressional Budget Office (CBO) analysis to the contrary, many experts predict that healthcare reform legislation will have a compounding as opposed to moderating effect on total healthcare costs.** The financial case for telemedicine, thus, continues to become more compelling. Modern telemedicine has made it possible for urgent care clinics to compete for patients in an entirely new space. However, it is also now possible for new Web-based services to compete for urgent care patients. It is therefore critical that urgent care providers understand this emerging space. The following are four market-based opportunities to consider building a telemedicine growth strategy around:

**Opportunity 1: E-Visits**

E-Visits allow providers to complete the same interview and diagnosis that occurs in a traditional office visit using the Web and videoconference technology. Routine ailments that commonly drive urgent care visits, such as upper respiratory infections, urinary tract infections, and minor abrasions can be treated via e-Visits.

E-Visits enable providers to treat patients wherever their license allows them to legally do so. A provider in California, for example, can therefore expand his or her potential pool of customers to all of California’s 37 million residents instead of only those within a 3- to 5-mile radius. In addition, providers can perform e-Visits to expatriates overseas.
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Opportunity 2: Follow-Up Care
Urgent care patients rarely follow up directly with their urgent care clinic or provider after making an office visit. Urgent care customers are inherently conscious of cost and time. Provided that a patient’s condition is not worsening, the cost and drive time associated with a follow-up visit are prohibitive to pursuing a follow-up encounter.

Urgent care centers that offer e-visits for follow-up can do so at a lower cost and in significantly less time on the part of both patient and provider. Patients inevitably respond favorably to a differentiated service, greater personal attention, and more convenient access to a provider. Increasing a clinic’s number of “promoter” customers drives more referrals and increased loyalty. Closer follow up also improves compliance and lowers medical malpractice risk.

Opportunity 3: Virtual Worksite Healthcare
Large employers and an increasing number of medium and small employers are adopting population-health-management strategies in an attempt to control rising health insurance premiums. Providing care at the worksite and/or through contracted providers has become a primary strategy for controlling costs. The profusion of worksite clinics is one of the fastest-growing trends in employer-based healthcare. A 2008 Watson Wyatt study concluded that nearly one-third of all large companies had or were considering a worksite clinic for their businesses. However, the high up-front investment and fixed overhead costs of a worksite clinic remain a major impediment to further adoption.

Leveraging telemedicine e-visits, urgent care centers and providers can join networks that staff virtual worksite clinics. Employees can obtain access to physicians for the same ailments they would in a traditional worksite clinic at a dramatically lower cost to employers and employers benefit from reduced absenteeism and increased employee satisfaction. A typical worksite clinic nets the employer $1 in savings via increased productivity for every $1 spent on the clinic. By reducing the up-front capital investment, virtual worksite clinics promise to deliver a significantly higher return on investment.

Opportunity 4: Worksite Wellness
Another opportunity in employer-based healthcare is the constantly expanding realm of wellness visits and personal pathway programs. Today, the first step toward implementation of the modern employer wellness program is establishing a population “baseline” that typically includes all employees completing a Health Risk Assessment (HRA) questionnaire and a biometric screening. The HRA provides an individual employee feedback on his or her personal risk factors based on self-reported behavioral choices and biometrics, such as height and weight. A biometric screening provides verified measurements of height, weight, and blood pressure, as well as basic blood-panel information such as cholesterol.

Taken together, these baseline assessments help identify individuals considered to be “at-risk” for more serious chronic conditions such as heart disease and diabetes. Employees are then provided a recommended “personal pathway” program designed to address the specific chronic diseases for which they are considered to be at risk. Employers are provided the de-identified baseline information to understand how their group compares with the general population and strategies for interventions that best suit their employee base.

Employers are now looking for medical providers to be involved in the review of employee HRAs, biometric screening results, and development of personal pathways for at-risk employees. Payors are increasingly covering these types of wellness visits in their standard plans.

The burgeoning wellness industry is delivering these high-margin services to employers by bringing medical providers directly to the worksite during wellness fairs and screening events. By joining virtual networks that provide telemedicine-based wellness visits, HRA reviews, and personal pathway program development, urgent care clinics can significantly participate in this rapidly expanding field while providing a more cost-effective solution to employers.

Risk Factors, Legal Considerations, and Technological Issues
Urgent care centers and providers must be cognizant of the myriad of risk factors, legal considerations (which vary considerably by state), and technological challenges associated with practicing telemedicine. It would be ill-advised, for example, for a clinic to simply use Skype to chat with patients and call that a telemedicine e-visit. Such a practice would almost certainly be in violation of the Health Insurance Portability and Accountability Act (HIPAA), the Health Information Technology for Economic and Clinical Health (HITECH) act, and state medical board regulations.

Issues to consider differ from state to state, but some of the more common issues of which to be aware are: Notifications to patients and informed consent. Many states have very specific requirements for notifications that must be provided to patients at the time services are rendered through telemedicine.
TELEMEDICINE

HIPAA and HITECH act compliance. The entire software set-up and provision of service must ensure the privacy and security of patient data. This includes technical requirements such as encrypting data feeds, electronically logging who accesses medical records, and instituting password strength and expiration policies. It also includes process requirements, such as preventing inappropriate disclosure of personal health information to non-covered entities.

Malpractice coverage. Not all malpractice policies currently cover telemedicine. Urgent care providers should be certain their policy covers telemedicine or purchase a separate policy that specifically covers telemedicine visits.

Various telemedicine solutions and providers are now available to urgent care providers through subscriptions or partnerships. Some solutions providers even offer to cover the medical malpractice insurance associated with telemedicine visits. Urgent care owners and providers would be advised to make a thorough review of their state's telemedicine regulations and available solution providers before launching their e-practice.

Evaluating Telemedicine As An Urgent Care Growth Strategy

Despite extensive education and training, business managers often rely too heavily on raw intuition to make mission-critical decisions that warrant methodical analysis. Pets.com, for example, was one of the most notable overreaches for Internet-based commerce. The company closed its doors after less than 2 years in business and with expenditures of more than $300 million in venture capital; their business selling pet supplies online actually lost more money than it took in. Pets.com is now known best for the sock-puppet mascot that appeared in Super-Bowl XXXIV commercials and as one of the most notable corporate failures in history. Conversely, many other household brands have been wiped off the corporate map as a result of underestimating the Internet's impact on their core business. Circuit City, Blockbuster Video and Borders come to mind, among others.

A growth strategy framework commonly taught in business schools is Igor Ansoff’s “Product-Market Growth Matrix”. It suggests that growth can be created via four approaches:

1. Market Penetration: Driving more sales of existing services to existing customers;
2. Product Development: Offering new services to existing customers;
3. Market Development: Selling existing services to new markets; and
4. Diversification: Selling new services to new markets. A telemedicine growth strategy for urgent care centers, then, can be evaluated based on the answer to four basic questions:

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

The urgent care industry is in a state of rapid transformation. Larger corporate players, insatiable for increased scale and leverage, are acquiring and building at a rapid pace. Occupational medicine and worksite wellness are driving an increased focus on employer-based services. Retail clinics and alternative concierge models seek to siphon patients away.

Given the rapidly changing nature of the industry, urgent care enterprises and providers should evaluate a telemedicine strategy using the four basic strategic questions derived from Ansoff’s product-market growth matrix, and assess the associated legal and technological considerations. An examination of the current marketplace of telemedicine solution providers is another critical step to determine if a partnership will help your clinic navigate the risk factors and state-by-state regulations. Once adopted, appropriate implementation and monitoring is paramount.

References

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**Enhancing Profits with Travel Health Care**

**Urgent message:** Adding travel health services to an urgent care center can increase a practice’s income and enhance its client base.

LYNNE BUNNELL, RN

Providing pre-travel health services in an urgent care clinic makes good business sense. The setting is natural to patients who want to be seen for care just days before leaving on a trip. It also works well for those who are more flexible in scheduling visits because their trips are planned further in the future. Whether clients plan ahead or delay treatment until right before travel, providing travel health services can help grow an urgent care clinic’s business by addressing an unmet need and contributing to patient satisfaction and loyalty over time.

Where should you begin if you want to add travel health services to your urgent care clinic? This article will introduce you to things you need to consider and provide the resources you need to get started.

**Services Provided by Travel Health Care Providers**

Among the services provided by travel health care providers are:

1. Talking to patients about details of their planned trips, including countries to be visited, expected activities, and accommodations;
2. Gathering travelers’ health and immunization history.
3. Customizing a risk-reduction plan for each patient that includes vaccines, prescriptions, and consciousness-raising about behavioral risks, drawing on available resources;
4. Referring travelers to primary care and/or specialists as indicated;
5. Reviewing Vaccine Information Statements (VIS), giving the first round of immunizations, and planning follow up to complete the series;
6. Providing prescriptions, if indicated;
7. Educating travelers about how to stay healthy during travel and what to do if they become ill; and
Start With What Your Office Already Has
Urgent care clinics already have office setups and highly visible locations designed to encourage walk-in traffic. They have examination rooms and a waiting room, plus medical and support staff. There is a refrigerator and the capability to store and administer vaccines. Emergency medications and training are part of an urgent care clinic’s scope of current practice. And in today’s health environment, computers are obviously an integral part of the office setup. With a few additions, your clinic can easily accommodate the function of a travel clinic. Here are the steps to take:

■ Evaluate your clinic refrigerator for reliability and invest in thermometers if you don’t already have them. Your refrigerator should have a separate freezer section and maintain consistent temperatures. Identify at least two staff members who will be responsible for receiving and logging in vaccines, plus recording the refrigerator and freezer temperatures twice daily so that the cold chain is maintained in order to ensure that vaccines are properly stored. Many resources on proper vaccine storage and handling and documentation (such as temperature logs) are available for free through the Immunization Action Coalition (IAC) at www.immunize.org.

■ Invest in a wall map of the world and/or a good atlas. This helps staff learn about world geography and facilitates discussion with travelers about their destinations.

■ Subscribe to some travel magazines for the waiting room to help set the scene. Put up a sign prompting patients to ask about travel health needs when they plan trips so they know you provide such care.

■ Apply to the local public health department for a Yellow Fever Stamp in order to administer that vaccine. There is a course on the CDC site called: Yellow Fever Vaccine: Information for Health Care Professionals Advising Travelers.

■ Familiarize yourself with the Centers for Disease Control Website at www.cdc.gov/travel. The CDC’s Health Information for International Travel, also known as “The Yellow Book,” is an essential resource because it sets out the U.S. standard of care in the field. On the CDC site, you can look up destination recommendations and requirements for the countries your travelers plan to visit. As
ENHANCING PROFITS WITH TRAVEL HEALTH CARE

Table 1. Resources on Travel Health*

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<td>CDC vaccine information statements for patients</td>
<td><a href="http://www.immunize.org/vis">http://www.immunize.org/vis</a></td>
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<td>CDC Pink Book: Epidemiology and Prevention of Vaccine-Preventable Diseases</td>
<td><a href="http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm">http://www.cdc.gov/vaccines/pubs/pinkbook/default.htm</a></td>
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<td>U.S. Advisory Committee on Immunization Practices: Recommendations on individual vaccines</td>
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<td>The Practice of Travel Medicine: Guidelines by the Infectious Diseases Society of America</td>
<td><a href="http://www.journals.uchicago.edu/doi/pdf/10.1086/508782">http://www.journals.uchicago.edu/doi/pdf/10.1086/508782</a></td>
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*Source: CDC Yellow Book 2012, Table B-01

your practice grows, you may want to subscribe to a service like TravelCare (www.travelcare.com) or Travax (www.shoreland.com) that provides regularly updated, computerized information about destination countries and vaccine recommendations/education concerns for specific itineraries.

Add some new reference books to your clinic library for quick staff reference and also for patients to look at during appointments. The CDC’s Yellow Book is available online, but it’s good to have a current hard copy on hand as well. The indexed pages of Shoreland’s Travel & Routine Immunizations (The Blue Book) provide an easy way to quickly access vaccine information. Becoming familiar with the contents allows you to field patient questions with ease. The CDC Pink Book, Epidemiology and Prevention of Vaccine-Preventable Diseases, is another excellent reference source. As time goes by, other books can be added to your clinic’s travel health library.

Develop and adopt policies and procedures related to your practice’s new function. Many examples of such policies and procedures are available online to download and review/change as needed by your clinic. The Immunization Action Coalition (IAC; www.immunize.org) has many standing orders for vaccines. By becoming a member of the American

Travel Health Nurses Association you also can gain access to their recommended policies via their Website (www.athna.org). While adverse reactions are rare, it is important to orient all staff to your plan for dealing with anaphylaxis.

Obtain history and charting forms online, from your reference books or use an electronic medical record for documentation.

Obtain International Certificates of Vaccination or Prophylaxis for travelers (“yellow cards”) from the U.S. Government Printing Office. Consult The Yellow Book for information about how to order them.

Obtain VIS forms, which federal law requires that you show to patients before administering vaccines, at www.immunize.org/vis or www.cdc.gov/vaccines/pubs/vis/default.htm.

Links to online resources on travel health are listed in Table 1.

Understandably, this article cannot cover everything you need to consider when expanding your clinic to include travel medicine. Details about setting up a travel clinic are available from various sources, including those listed in Table 2.

Determine What To Charge for Travel Health Care Services

Decide upon a consultation fee for travel health services that is in line with the fees your clinic charges for other longer consultations. Consider reduced fees for couples or groups of travelers who visit the clinic together. A small administration charge can be added to each vaccine charge. Most travel clinics require that patients pay on the day they receive the services in cash or with a credit card, and patients then submit claims to their health insurance companies.

Travel clinic billing should be kept separate from billing for urgent care services. If your urgent care clinic has contracts with medical insurers, you will need to set up the travel clinic as a separate business with its own tax ID#. Otherwise, you will have to accept insurance discounts for the vaccinations. As an alternative, Travel Clinics of America membership eliminates the need for setting up a separate business and accounting system for the travel health function (see reference in Table 2).

Seek Training For Providers

The body of knowledge in the travel medicine field is
large and encompasses vaccines and prescriptions, geographical risks for diseases, consultation with and management of travelers of various ages and in different states of health, special risks associated with travel activities and destinations, and how to deal with illness and accidents abroad. These wide-ranging clinical responsibilities and information are reviewed very well in the clinical article, “The Traveling Patient,” by Francine Olmstead, MD, FACP, in the February 2010 issue of JUCM—The Journal of Urgent Care Medicine.

The challenge (and fun) of providing travel health care is in the details. Each traveler presents a new profile of history and itinerary needs and it can be satisfying to sort out the risk-specific recommendations for vaccines, prescriptions, and health education. Providers who want to serve international travelers must first commit to learning the basics, and continue to study as new scenarios arise and as vaccine and destination information changes. Providers must also cultivate an awareness of what is going on in the world from a political, climatologically, and disease-outbreak point of view and keep abreast of current medical literature pertinent to the field.

### Table 2. Resources for Setting Up a Travel Clinic

- Travel Clinics of America offers membership and assistance in setting up a travel clinic, travel medicine course, marketing, accounting, corporate referrals, a vaccine buying group and a listing on their website at [http://www.TravelClinicsofAmerica.com](http://www.TravelClinicsofAmerica.com).
- The International Society of Travel Medicine’s ([http://www.ISTM.org](http://www.ISTM.org)) monograph, *How to Begin and Operate a Travel Clinic*, is available to members.
- Shoreland’s *Clinic Guide*, which can be found at [http://www.shoreland.com](http://www.shoreland.com), is available for free.
- VaxServe, a subsidiary of Sanofi Pasteur, has a program to help people start providing travel health care. Contact Robert Hettes at raltettes@vaxserve.com.

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Reading the CDC Yellow Book from cover to cover is a great start, but daunting. It is easier to take a course about pre-travel care and then familiarize yourself with the rich CDC resources. The ISTM website (www.istm.org) has a listing of available courses, of various lengths—courses to travel to and attend at a particular place and time, and others that can be taken online at your convenience. At the outset, taking a shorter course probably makes the most sense so that you are not overwhelmed by the quantity of information to be learned. The www.TravelHealth101.com online course is a thorough introduction in a format that is especially accessible to beginners in the field because the material can be viewed multiple times over several months. ISTM offers more specialized online courses related to specific areas of travel health care.

A key part of your learning process will be identifying mentors in the field who are willing to help you as you start out, and who can later help you find solutions to difficult cases. Even the most seasoned travel health care providers find it helpful to compare patient scenarios with colleagues.

The payoff for providers is the enjoyment derived from talking to travelers. Listen closely to the stories your travelers tell you about what they look forward to doing on their trips to identify the type of travelers you are dealing with—such as conservatives, risk-takers, high-end vacationers, and backpackers. The challenge is to provide quality care for all travelers based on the current CDC guidelines, taking into account the facts and risks unique to each individual.

**Educate Travelers**

Vaccines and prescriptions are important because of the diseases and illnesses for which they afford protection. But accidents pose the greatest risk to travelers and can be life-threatening. Intestinal problems also can contribute to loss of productive vacation days. Educating travelers is essential because knowledge about behaviors that reduce the risks of getting ill or injured during travel can mean the difference between a wonderful trip and a stressful one. The teaching process should also include information about travel health insurance and how to access health care during a trip.

While taking a client’s history and listening to stories about his or her previous travel, a provider can learn about a patient’s specific concerns, which in turn help identify what to teach. Patients often listen best when being taught about ways to avoid a repeat problem. Some providers give patients handouts that review the important points about issues such as precautions against insects and concerns about food and water. If a particular patient is going to a high altitude or will be doing riskier travel activities, such as deep sea diving or a bicycle tour, extra time for teaching may be indicated.

To save time, you may want to show travelers the video at www.travelhealth101.com (offered by subscription), which reviews essential pre-travel health information that every traveler should know. Clients can view it during the pre-travel visit, while you are writing chart notes and filling out the traveler’s immunization record, and they can also be signed up to view the video again later at home to enhance their learning, which they will see as an added service provided by your clinic.

During the pre-travel visit, don’t forget to chart everything, including the patient’s medical and immunization history, destination information, details about the vaccines and VIS forms given, educational topics covered in the session, and your plans for follow up. You may want to have travelers sign a vaccine consent form, although it is not required. Give each patient a handout with a reminder about the need for follow up and have him or her address a “reminder” postcard. A follow-up email reminder also can be sent to travelers.

Finally, provide travelers with a record of all immunizations on a World Health Organization Certificate of Vaccination, or update the certificate that a patient brought to his or her appointment. Encourage travelers to make copies of this document so the data are not lost.

**Networking and Advertising Your Clinic’s New Service**

There are many ways to get your urgent care clinic’s name out there as a resource for travelers. For example, you can write a press release to let people in your community know that you are available to see travelers or have a grand opening.

Another idea for expanding your market is offering to discuss travel needs with groups of travelers, such as mission groups, students, seniors, and clubs like Rotary International. Talking to a group will help educate them all at once, after which the travelers can come to the clinic for one-on-one appointments to get their vaccines and prescriptions. You can also write articles for your local newspaper.

To promote your services to business travelers, research corporations in your area and identify those that are likely have employees traveling abroad on business. Make an appointment to meet with the human resources or corporate medical officer of each company.
to offer your clinic’s services.

To increase your exposure among the medical community, present an interesting case at a hospital grand rounds. Or call specialists such as infectious disease providers to whom you can refer complex cases or patients with post-travel illness. Tell primary care physicians about the travel services you provide and invite them to refer their patients to you. Many primary care providers don’t have time to spend with travelers, or an interest in doing so. After you see a traveler who was referred to you, write a thank you note to the referring clinician and list the vaccines and patient education topics covered to reinforce the referral relationship.

**Remember to Listen**

Listen carefully as you see urgent care patients, because you may identify travelers who have come into the clinic to check a health need before a trip but were not aware that they needed special pre-travel care. For such last-minute travelers, you may only be able to provide fairly basic information, and perhaps administer a tetanus booster or hepatitis A immunization. Nevertheless, you can use this visit to agree on scheduling a follow-up appointment after the trip to complete the immunization series and plan ahead for future travel. As you get to know your travelers, subsequent visits will be easier because you will build on the previous encounters. Remember that you won’t have time to do everything for every traveler; the goal and challenge is to do the best that you can.

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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, JUCM’s editor, at jorvos@jucm.com.

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Case Report

High-Risk Conditions Presenting as Back Pain (Part 2)

Urgent message: Significant cervical spine injuries are rare in urgent care but missing one can have serious implications for patient and provider.

ERICA MARSHBURN, BS, BA, and JOHN SHUFELDT, MD, JD, MBA, FACEP

Overview

In this continuing series on back pain diagnostics in urgent care medicine, we urge providers to carefully consider any high-risk spinal conditions that could be presenting as simple back pain. Although many cases of back pain can be attributed to musculoligamentous injury and respond well to physical measures and pain medication, it is important to pay attention to signs and symptoms of more precarious spinal conditions. In order to avoid diagnostic mishaps, providers should be aware of complaints indicative of spinal injury or degeneration.

Case Presentation

A 17-year-old male presents with para-spinous cervical pain after a front-end automobile collision 3 days ago. He says he was driving and was wearing a seatbelt, and his car suffered moderate front-end damage. The patient was ambulatory on the scene and had a contusion to his forehead, but did not lose consciousness and had no chest wall pain.

Pertinent Physical Exam

All vital signs are normal. HEENT examination demonstrates ecchymosis to forehead.

The patient’s neck elicits para-spinous muscle spasm and slight midline bony tenderness. Neurological exam reveals that the central nervous system is intact with no focal neurological deficits. Chest exam indicates tenderness to the anterior chest wall, with no bruising or crepitus.

Erika Marshburn is an independent business consultant and the principal of Medical Business Technologies in Scottsdale, Arizona. She plans on entering medical school in the fall. John Shufeldt is principal of Shufeldt Consulting and sits on the Editorial Board of JUCM. He may be contacted at jshufeldt@shufeldtconsulting.com.

Labs/Imaging

No lab tests are indicated. A plain film is ordered, revealing the images in Figures 1 and 2.

The first view shows an adolescent cervical spine, as determined by the non-fused bony end plates. These are evident at the inferior surfaces of each vertebral body. This patient’s neck was “cleared” after the first film and
The Urgent Care College of Physicians (UCCOP) is a young, independently governed organization committed to clinical urgent care medicine and the physicians who practice it. With the support of the Urgent Care Association of America (UCAOA), The Journal of Urgent Care Medicine (JUCM) and others, UCCOP has been able to begin it’s work and move onto critical growth tasks.

Specialty development and advocacy efforts, initially supported by UCAOA, have now become a primary part of the UCCOP mission. Some of these efforts include authoring and reviewing clinical articles for JUCM, developing, performing, and publishing clinical research, furthering fellowship training in urgent care and developing and providing clinical education programs specifically for the urgent care practitioner. Please consider joining us as a member and help improve our strength by participating.

Visit us at www.uccop.org and find out what we can do together to help UCCOP continue inspiring excellence and advancing the future of urgent care. We have several committees we encourage members to work on, and only together can we be successful.

Look for future information on our website, via email, and at the Spring UCAOA/UCCOP conference in Las Vegas at Caesar’s Palace April 16-19, 2012.

Sincerely,

William Gluckman, DO, MBA, FACEP
President, UCCOP
the patient was then allowed unprotected movement. Shortly thereafter, he developed symptoms consistent with cervical injury. If you look closely, you can see a widened pre-vertebral soft tissue space, a widened pre-dental space, and a subtle widening of the C2/C3 interspinous space with subtle anterior subluxation of C2 on C3 or reversal of the lower cervical lordosis.

With a passive patient flexion view, we now see obvious ligamentous disruption of C2-C3 (Figure 2). Widening of the interspinous space and a subluxation/dislocation of C2 on C3 are apparent.

Magnetic resonance imaging (MRI) demonstrates evidence of cervical ligamentous injury and cord compression (Figure 3).

**Diagnosis**
The patient was diagnosed with C2-C3 anterior subluxation. A subluxation is an aggregation of functional, structural, and pathological changes in the spinal joints that can compromise neural integrity and may affect organ system function. A lateral radiograph with the neck in neutral position may only show widening of both the interspinous and intervertebral spaces posteriorly at the level of injury. Oblique views may demonstrate widening or abnormal alignments of the facets.

Findings are often subtle and may be missed if flexion views are not obtained.

Differential diagnoses that should be considered are cauda equina syndrome, cervical strain, vertebral artery dissection, hanging injuries and strangulation, neck trauma, spinal cord neoplasm, septic shock, spinal cord infection, spinal cord injury, thoracic outlet syndrome, and torticollis.

Trauma from an automobile accident, falling, poor lifting techniques and bad posture can cause or exacerbate subluxations. Cervical subluxation is a potentially unstable condition that can cause cord compression. Cervical subluxation can cause symptoms ranging from migraines to insomnia, tingling, facial pain, dizziness, and difficulties with balance.

**Course and Treatment**
The patient should be referred to an emergency department for consultation with a neurosurgeon, and can be given a C-spine collar to immobilize the cervical spine. Treatment ranges from conservative rehabilitation to surgical stabilization.

**Discussion**
Vertebrae that are not properly aligned create tension or stretching in the nerves of the spinal cord and around the spine. Nerve signals cannot be transmitted properly in this situation, causing a number of deleterious side effects. It is important to correctly diagnose subluxations because undiagnosed spinal trauma can significantly impair sensory, motor and involuntary functions.

Imaging is very important in correctly diagnosing subluxation. Plain films have the benefit of being relatively easy to obtain, depending on patient body morphology. Also, the control of the patient and direct observation are not relinquished because most of these studies can be done in an urgent care setting.

Bony injuries and the soft tissue abnormalities associated with fractures are common with cervical subluxation. The negative predictive value of plain films, however, may not be high enough with a severe mechanism of injury. An occult fracture or ligament injury can still exist with “normal films.” Alignment or the lack thereof may be seen if ligament injuries are present. Limitations that can decrease the usefulness of plain films include patient body habitus, lack of patient cooperation, and associated musculoskeletal injuries. Further, a certain percentage of patients may have fractures or ligamentous injuries that are unidentifiable even on good quality plain films.
Plain films with supplemental stress views are very helpful to identify ligament injuries when neutral views are thought to be normal. These should only be obtained in patients who are cooperative and have no signs or symptoms of a cord injury. Obviously, that would not include neck pain because pain itself would not disqualify a patient from getting flexion or extension views.

In theory, stress views can cause cord damage, but the risk is small if these views are obtained properly. Ask the patient to flex his or her neck forward until just at the point of discomfort. Typically, that is enough forward motion to identify a ligamentous injury. Occasionally, occult fractures that are invisible on plain films may become apparent on stress views, although that is not the intended purpose of the studies.

Computed tomography (CT) scans (obviously contrast is not needed for the trauma C spine) should identify all cervical fractures that are present, particularly those requiring coronal and sagittal reconstruction. Rapid-sequence scanners allow additional studies to be done with minimal time delay. If you believe a patient requires a CT scan of the C-spine to rule out an injury, sending him or her to the nearest emergency department is typically the path of least resistance.

MRI is an important outpatient imaging technique that provides objective visualization of bony and soft tissue injuries. Rarely is MRI necessary during the acute phase of an injury.

Significant cervical spine injuries are rare in an urgent care setting. That having been said, providers must remain vigilant because missed spinous injuries are a significant patient safety and medical malpractice concern.
Understanding Your Cost Per Patient

Urgent message: Assessing the true cost per patient is key to determining which pricing model will generate the most revenue for an urgent care center.

JORDAN TODD RICE, MD

The graphs and illustrations in this article are illustrative only and are not meant to represent an actual center. Members of the Urgent Care Association Of America (UCAOA) can download from the UCAOA website an Excel worksheet into which they can import information from an accounting program, practice management software, or electronic medical record to help determine the cost per patient.

Introduction

A cost-per-patient analysis may not work for every urgent care center owner, but this article is intended to give JUCM readers the basic tools they need to understand the formulas. It can also serve as a baseline for discussions with urgent care center staff, executives, managers, clinicians, and owners.

The goal of the exercise is to help urgent care providers better understand key elements of patient costs so they can determine which pricing model will best serve their organizations, be they for-profit, nonprofit, a single urgent care center or a practice with multiple locations. We will focus on three salient issues:

1. How do operators of urgent care centers truly break down the cost for providing care to a single patient for primary care, urgent care or Workers’ Compensation services?
2. How can the operator of an urgent care center do a true cost/benefit analysis to find out if it makes sense to switch to a single payment from payors rather than traditional fee-for-service reimbursement?
3. How can and will paperless and digital systems affect the answers to the previous two questions?

Overcoming Accounting Obstacles

One of the biggest challenges in calculating cost per patient is getting information from an urgent care center’s accounting and practice management systems. This is the most difficult task because such systems are great for generating information about pricing and revenue but not set up to provide costs, unless the Relative...
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or go to www.ucaoa.org/ucmc

UCAOA Professional Learning Program
Value Unit (RVU) option is switched on. Some providers thought that the advent of all-in-one systems and single databases combining practice management (billing, scheduling, claims follow-up, etc.) and an electronic medical record would make the task easy to accomplish. In fact, automation helps practices do better charge capture, speeds up patient visits (after the normal 3- to 6-month learning curve for the switch from paper to paperless) and may even automate coding. It does not, however, compute the true cost per patient.

The other obstacle is the accounting program. Virtually every transaction in every category can be seen in an urgent care practice’s Chart of Accounts, but calculating the cost of each transaction is not as easy as you might think. For example, if your practice has a 401(k) plan or your employees pay a portion of their health insurance, is that a true “cost” that needs to be factored into the computation of average cost?

Finally, an urgent care practice must be able to differentiate types of payors and services. For example, if your practice is a hybrid that provides both primary care and urgent care services, payors typically pay the same amount regardless of the type of visit. The main differentiators for most states and payors are factors such as the type of provider (some payors discount a physician extender visit by as much as 15%), use of “S” codes for a particular facility (fee-for-service or global fee) and whether a service was rendered “after hours” compared with the hours of an average practice. All of these factors affect reimbursement and cost, assuming that physician extenders are paid less than MDs and DOs. Even the place of service can affect reimbursement, but it usually does not impact cost. The same is true for treating Workers’ Compensation cases or providing occupational medicine services. The reimbursement levels may be higher or lower than those for a non-work-related injury, but the cost should be relatively similar for treating a 10-cm laceration, an aggravated left ankle sprain, or carpal tunnel syndrome, which is now becoming more and more common outside of the workplace because of the advent of home computers, pads, tablets, and even smartphones.

Thus we need to focus on cost only and in this case we will look across the board. Table 1 is a typical chart of accounts for an urgent care practice by category.

Your urgent care practice may have more or less accounts, but the ones listed are typical whether you have one office or 50.

For simplicity, let’s assume that for June 2011, the total for the accounts shown in Table 1 was $100,000. In a very unsophisticated model, we would simply take the number of patients for the month and divide that

### Table 1: Chart of Accounts for an Urgent Care Practice by Category

<table>
<thead>
<tr>
<th>ALL EXPENSES</th>
<th>Journals</th>
<th>Physicians’ other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ancillary provider benefits</td>
<td>Lease payments: Equipment</td>
<td>Physicians’ retirement plan</td>
</tr>
<tr>
<td>Ancillary provider continuing education</td>
<td>Legal, accounting and consultants</td>
<td>Physicians’ wages/draws</td>
</tr>
<tr>
<td>Ancillary provider retirement plan</td>
<td>Loan payments: Interest</td>
<td>Postage</td>
</tr>
<tr>
<td>Ancillary provider wages</td>
<td>Loan payments: Principal</td>
<td>Rent and utilities</td>
</tr>
<tr>
<td>Capital (IRS section 179) purchases</td>
<td>Marketing: Ads, promotion and yellow pages</td>
<td>Repairs and maintenance: Building</td>
</tr>
<tr>
<td>Doctor associate benefits</td>
<td>Marketing: Meals and entertainment</td>
<td>Repairs and maintenance: Contracts</td>
</tr>
<tr>
<td>Doctor associate continuing education</td>
<td>Meals: Business/staff meetings</td>
<td>Staff benefits</td>
</tr>
<tr>
<td>Doctor associate retirement plan</td>
<td>Miscellaneous</td>
<td>Staff continuing education</td>
</tr>
<tr>
<td>Doctor associate wages</td>
<td>Outside services</td>
<td>Staff retirement plan</td>
</tr>
<tr>
<td>Doctor-owner net income (practice profit)</td>
<td>Physicians’ auto</td>
<td>Staff wages</td>
</tr>
<tr>
<td>Donations and contributions</td>
<td>Physicians’ benefits</td>
<td>Supplies: Clinical</td>
</tr>
<tr>
<td>Dues</td>
<td>Physicians’ dues</td>
<td>Supplies: Office</td>
</tr>
<tr>
<td>Fees: Lab</td>
<td>Physicians’ individual and student loans</td>
<td>Taxes and licenses</td>
</tr>
<tr>
<td>Fees: Retirement plan</td>
<td>Physicians’ insurances</td>
<td>Telephone/answering service/pager</td>
</tr>
<tr>
<td>Insurance: Business</td>
<td>Physicians’ journals</td>
<td>Travel and professional meetings</td>
</tr>
<tr>
<td>Insurance: Malpractice</td>
<td>Physicians’ marketing: Meals and entertainment</td>
<td>Uniforms and laundry</td>
</tr>
<tr>
<td>Janitorial/maintenance</td>
<td></td>
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</tbody>
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into $100,000 to get the cost per patient. If the practice saw 50 patients per day for 30 days in June, the total number of patients seen that month would have been 1,500. The cost per patient, then, would be $66.66 ($100,000 divided by 1,500). Net revenue of $120,000 from the 1,500 patients (understanding that most billings would be collected in June, some in July, and the remainder in August) would result in net profit of $20,000. The collected amount per patient would be $80 and the profit per patient, in our simplistic model, would be $14.34.

Continuing with our simplistic example, if a payor were to offer the practice a global fee of $90 per patient, which would typically encompass all services, including on-site laboratory, x-ray, electrocardiography (ECG), spirometry and most other patient costs, the practice would then receive a profit of $24.34 per patient. That is one reason that practices receiving global fees use digital technology for x-rays, ECG, and spirometry and send most laboratory work out to be processed. There are also savings to be had on the billing and collection side because global fees don’t get rejected, don’t have to be re-filed, and co-pays are received at the time of service, so there is little patient follow-up in terms of collections.

Real-World Complications

Why, then, do simple cost-per-patient calculations not work in the real world? The factors involved are myriad, some of which we’ve already discussed. One issue is how payroll is processed. In a traditional medical model, employees and clinicians are paid every 2 weeks. Some urgent care practices pay employees weekly, whereas others pay twice a month, and others even pay clinicians daily.

Clearly, when employees are paid every 2 weeks, there will be three pay periods in several months every year, which skews costs tremendously. Also, many insurance premiums are paid quarterly, semi-annually or even annually. That, too, affects month-to-month costs. Other factors include benefits payments, such as 401(k) or retirement contributions, which may happen every pay period, monthly, or annually. Utility, water, sewer, and other costs also fluctuate from month to month. In Maine and Oregon, heating costs may skyrocket in mid-winter, whereas Arizona and Florida may have high cooling costs from mid-spring to mid-fall. Water and sewer costs tend to fluctuate less, but even they can go up and down. Therefore, it might make sense to do computations for your urgent care practice using quarterly, semi-annual, or even annual numbers.

If our model urgent care center had $1.2 million in true costs and 18,000 patients, the cost per patient would be the same: $66.66. But what if the center’s costs were actually $1.4 million and it had only 17,000 patients? Now the cost zooms to $82.35 per patient. Conversely, if the center only had $1 million in costs and 20,000 patients, the cost per patient would be only $50. Again, ANY additional revenues above this would be profits (or surplus for non-profit urgent care centers).
Now, let’s do some addition and subtraction from revenues for your urgent care center. Do you sell products for weight loss or durable medical equipment, or do your physicians dispense drugs? If so, those services usually are not paid by fee-for-service or global contracts. Laboratory services and x-rays typically are included in a global fee, but they usually are separate fees for a payor. Do you bill separately for them? The same question applies to Healthcare Common Procedure Coding System items, which are reimbursed and may be a “carve out” paid in addition to a global fee, depending on the individual contract. Cash-only services such as allergy testing, home sleep studies (elective), Holter or event monitoring are revenue. But their costs should be separated from the equation to compare fee-for-service and global fees and truly understand your actual cost per patient.

**Understanding a Cost Benefit Analysis Spreadsheet**

Next, let’s look at how a cost benefit analysis spreadsheet works. A typical one that includes all costs is available in the Resources section of UCAOA’s Members Only portal, UConnect (http://uconnect.ucaoa.org), and can be downloaded for free. A screenshot of what typical data entry looks like is shown in Figure 1.

Please note that annualized numbers were used in our example for the reasons we previously mentioned. There are too many expenses that are not paid on a monthly basis, and payroll can skew the numbers from month to month.

What is key is to understand that each provider uses different resources, some of which are reimbursed and some are not. Once again, x-rays could be a profitable venture, but you have to understand the true cost of each x-ray. What is the cost of the unit? Is it leased or purchased? How
much developer or fixer does it take if you use plain film for 100 or 1,000 x-rays? Is there a maintenance contract on the development unit? How about on the x-ray tube and collimator?

What cost benefit analysis does is permit the operator of an urgent care center operator to know the exact cost per x-ray, based on ALL costs against ALL revenues. In fact, I have worked with owners of urgent care centers who insisted they made money with a particular payor on a three-view ankle x-ray. But when we looked at all costs, including the cost for the room (rented or owned facility), personnel and over-reads if required, many times those x-rays were costing money not producing revenue. Even digital units have costs associated with them other than just the lease or amortized purchase price, such as the price of replacement cassettes, DVDs, maintenance, and replacement tubes.

**The Impact of Variations in Reimbursement**

The hardest part of determining cost per patient is factoring into the equation varying reimbursements. Unless your urgent care center accepts cash only, you may be receiving 100 different reimbursements for a three-view ankle x-ray. Medicare, Medicaid, Indian Health Service, Tri-Care and some Federally Qualified Health Center fees are all under the Centers for Medicare & Medicaid Services (CMS) umbrella, but each will have a different reimbursement level. And even that number can be affected by the clinician on duty and whether that individual was a physician extender or a physician, for whom discounts of between 10% and 15% might apply. Figure 2 illustrates this computation, focusing on one insurance company.

For our example, we used fictitious numbers and a fictitious payor and chose an arbitrary reimbursement of $35 for a three-view ankle x-ray for a Delta employee. From there, we included all costs involved with taking three x-rays. Note that we added every possible cost. Most are inputted as an annual cost and then we worked backward to the cost per x-ray. We can do this working off the annual number or the monthly number. The spreadsheet includes ALL costs for the facility and takes into consideration the total amount of space for x-rays, including the development room, x-ray storage, x-ray room, and operator area. If you pay for over-reads and they are not reimbursed separately or directly by a payor, then that needs to be included. We added all costs associated with the x-ray unit (assuming a lease, in this case), such as maintenance, fixer, developer, film, and any other direct costs. We also added in 15% (every center will be different) for billing and administration to collect and bill for the service. So, after looking at our sample $35 payment and subtracting these expenses, we came out with a profit of $1.64 per three-view ankle x-ray for this particular insurance company.

The same cost can be used when negotiating global fees. You simply need to look at the total number of x-rays you do for that particular payor over a period of time (1 year is safe) and interpolate the same costs minus some administration and billing, because they will be lower. If you receive a global fee of $150, for example, and one out of three patients has an x-ray and the average cost of that x-ray is $33.36, that equals a cost of $11.12 per
patient under the global fee. This same calculation can be done for all payors and all x-rays your center offers and for which it bills. This is true of in-house laboratories.

A lot of work? Absolutely! There is no easy way to do a cost benefit analysis. It takes time and effort and requires a complete knowledge of true costs and actual reimbursements net of any write-offs, charge-offs, collection fees, and any other factors that will affect the actual cash that goes into the center’s bank account.

Understanding RBRVS
Now we turn to Resource-Based Relative Value Units (RBRVS). Why are these helpful to your practice, if your practice management system allows you to use them? This is a neutral system used by CMS, HMOs, and many payors to determine how much money providers should be paid. All procedures (CPTs) are assigned a base value, which is influenced by three factors: physician work (52%), practice expense (44%), and malpractice expense (4%). The value for a particular CPT code is then further adjusted by a geographic factor because it clearly costs more to deliver services in New York and San Francisco than it would in small towns where there are no physician shortages. And finally, there is an annual conversion factor.

A debate about the issue of payment for effort-based medicine versus outcomes-based medicine is beyond the scope of this article. Reimbursement for urgent care services traditionally has been done based on our efforts and not the actual outcomes because urgent care providers usually do little follow up and are the largest referral source in all of medicine, save the emergency department. An argument can be made for reimbursing hybrid urgent care centers for outcomes-based medicine, but the focus of this article is understanding costs. And costs based on RBRVS can be a helpful indicator of what it should cost to provide a particular procedure coded via CPT for conditions from urinary tract infection, to ankle sprain, to upper respiratory infection.

Weighing Fee-for-Service Versus Global Fees
Once you understand the cost per patient for your urgent care center, you can start evaluating whether fee-for-service is better than global fees on a payor-by-payor basis. In other words, the center will have to absorb the cost per x-ray, which will ONLY be affected on the global fee basis (because it is part of the global fee), but the actual cost per x-ray to the center should be a bit lower because there is less administration and the payment is stable from patient to patient. Yes, the comparison between fee-for-service and global fees is apples to oranges, but in the end, the issue is which generates more profit or surplus (for non-profits). This article has not addressed hospital-based centers that have a facility fee and professional component, because a global fee for both typically is precluded by regulatory issues at the state and federal level. Physicians employed by a hospital-owned center may want to consider comparing global fees with fee for service. Again, such calculations can take a lot of time and one center may have a global fee with Medicaid but a fee-for-service arrangement with Blue Cross Blue Shield, for example. However, without calculating the true cost per patient, no urgent care center can be in a position to properly to make a case that an insurance company or CMS is underpaying for its providers’ services.

This primer offers basic tools for starting the process of identifying your urgent care center’s cost per patient. More information is available from the following resources to help providers further refine the process:

- http://www.sjsu.edu/faculty/watkins/cba.htm
- http://management.about.com/cs/money/a/CostBenefit.htm
- http://www.physicianspractice.com/rvu/content/article/1462168/1867117

There is no easy way to do a cost benefit analysis. It takes time and effort and requires a complete knowledge of true costs and actual reimbursements.
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, a 45-year-old man, presented with vomiting and chest pain.

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

Resolution of the case is described on the next page.
Diagnosis: Tension pneumothorax.

A follow-up contrast-enhanced computed tomography scan (Figure 2) revealed a ruptured esophagus (Boerhaave’s Syndrome).

Acknowledgement: Case presented by Sian C. Hughes, MBBCh, and Elmari Janssen, MB ChB. Dr. Hughes is a Trust Grade Doctor in Intensive Care Medicine, Department of Critical Care Medicine and Anaesthesia, Cheltenham District General Hospital, Cheltenham, England and Dr. Janssen is a Staff Grade Physician in Emergency Medicine at the University Hospital of Wales, Cardiff.
INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 2

The patient, a 14-year-old male, presented with a limp following trauma to his left leg.

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

Resolution of the case is described on the next page.
This x-ray shows a fracture of the distal tibia (arrows). A cast splint and follow-up with an orthopedist are appropriate for this patient.

Acknowledgement: Case presented by Nahum Kovalski, BSc, MDCM, Terem Emergency Medical Centers, Jerusalem, Israel.
Curing ‘Cancer’

JOHN SHUFELDT, MD, JD, MBA, FACEP

So you missed the “cancer.” Maybe you still don’t even know you missed it. At this point the patient (your business) is dying and you plod along unaware of the impending doom, like a smoker with a chronic cough. Your business is losing weight, its cheeks are sunken, skin sallow, as it grows weaker each passing month. One day soon it will start coughing up blood, and then it will be too late.

Now what?
There is a cure. In fact, the cure is not all that hard. Unlike treatment for real cancer, it probably won’t cause you to lose much hair, vomit often, or be susceptible to infections. You will, however, have to critically appraise your team. If you are going in for treatment, don’t just cure the obvious tumor, do the positron emission tomography (PET) scan and go after all of the cancer.

What is the PET scan for eradicating the cancers in your company? It is called the People Performance Culture Model (Figure 1). It is a simple tool, variations of which have been around for a long time. Some credit Jack “From the Gut” Welch (Former CEO and Chairman of GE) with its wide application. Basically, it helps leaders categorize employees into four groups.

The model is simply an X-Y graph where the four quadrants represent the four possible combinations of performance and culture. The vertical axis represents performance graded from high to low. The horizontal axis represents conformity to the values of the organization.

Quadrant 1
No brainer. These are the “rock stars.” They look for the challenges, lead by example, and are willing to stretch and want to be rewarded for success. Invest in this group. Give them progressively harder assignments, coach, mentor and groom them for future leadership positions by paying for graduate education.

This is the group you want to hire before someone else and reward and praise them. These are the rising stars on which your company’s future depends.

Quadrant 2
This group is more challenging. They will test your mettle as a leader. This group “lives the culture.” They are enthusiastic, hard working, and truly want to please. For whatever reason, they are just not quite up to snuff. The quality of their work is average, yet they keep coming back for more challenging assignments because they honestly want to grow. Their enthusiasm allowed them to breeze through the interview process but the complexity of the role may have simply caught up with them.

This is the group you want to work with to determine if they are on the right seat on the bus. It may be that easy; simply change the seating assignments. If these employees were average in a revenue cycle management role, try them in sales or marketing. Their infectious enthusiasm may win clients.

John Shufeldt is principal of Shufeldt Consulting and sits on the Editorial Board of JUCM. He may be contacted at jshufeldt@shufeldtconsulting.com.
These employees require the most work. If you can work with them to figure out where they belong, you will have employees who will go to the wall with you. You may even grow them from a 2 to a 1.

**Quadrant 3**
No brainer. This is the big lesion in the colon that needs to come out. You should not have hired these employees in the first place. They were someone you once trusted’s brother, son, daughter, husband, etc., and they screwed you. They have neither the skill set, nor the desire, to conform to the culture or quality espoused by your organization.

They will last for a bit, but pretty soon, you will be forced to resect them. They will threaten you on the way out, call you names, and swear they will bring down the company. Get rid of them nonetheless. Despite what these employees may promise, they will never move to Quadrant 2 because they are incompetent and unaware; a lethal combination.

**Quadrant 4**
These “Q4’ers” are the most challenging individuals. They are smart and may even work hard. Their work is solid and they turn it in on time. These employees may be department leaders and even hold positions on your executive team. Despite their work output, they are cultural misfits. They are ego-driven, manage up, and belittling to others. They may be sexists or racists. They could be much more insidious by quietly undermining (possibly inadvertently) the goals of the organization. You would never have them for close friends, yet you can’t argue about the quality of their work.

You speak with them, befriend them, encourage them, yet they make no lasting changes. They get better for a short time and then revert back to their recalcitrant ways. They either don’t get the importance of values and culture or truly do get it but believe by performing well they are above it. I have seen this challenge a number of times. Sometimes these people have been in the organization for years. Everyone knows they are a pain to interact with yet they seem to be ensconced.

These people are akin to the lung nodule on the chest x-ray and the polyp in the colon. Their cancer slowly spreads throughout the organization. They look for and attract others to join their cause and then continue to spread their discontent among even the most motivated people. It becomes hard day after day to not listen to them. Their slow, constant de-motivational ideas and mantra slowly start to erode the very fabric of the once-solid culture.

This is the rub. Despite their above-average work output, they will bring down your organization by running off the rock stars in quadrant 1 who will learn through observation that “culture” is nothing more than a catch phrase at the organization.

**Quadrant 4** individuals have to go, and go immediately. Jack Welch said that GE did not make its rapid transformation until his leadership team went through the entire organization and sought out and eradicated this group. After they accomplished this very difficult task, they stood up in front of their team and said, “We had to make a very difficult decision today. We let someone go who has been here for years and whose work product was solid. However, they did not live the culture that we here at GE espouse and thus, they have no place in our organization.” The ability to accomplish these challenging tasks sets the good leaders apart from the great ones and is one of the primary reasons that some companies seem to consistently outperform others within the same sector or space. After ridding your organization of the Q4s, you may not see the results overnight; however, I guarantee that others will thank you both in their words and in their work and your company will achieve results well beyond your expectations.
Normalization of Vital Signs Does Not Reduce Risk for Acute Pulmonary Embolism

Key point: Up to one-third of patients whose abnormal triage vital signs reverted to normal values had PE.


In a prospective single-center study, researchers evaluated whether normalization of vital signs in patients who present with symptoms of pulmonary embolism (PE) reduces the probability of the disease. Patients at an urban academic emergency department (ED) in North Carolina were enrolled if they were older than 17 years and had at least one predefined sign or symptom and one risk factor for PE. Of 192 patients, 35 (18%) were diagnosed with PE by computed tomography in the ED. In patients whose abnormal triage vital signs normalized at any time during their ED visit, incidence of PE was not lower than for patients whose vital signs did not normalize. The incidence of PE for patients with abnormal pulse rate, respiratory rate, shock index, or pulse oximetry at triage that subsequently normalized was 18%, 14%, 19%, and 33%, respectively.

Published in J Watch Emerg Med. February 17, 2012 — Diane M. Birnbaumer, MD, FACEP.

Imaging Trends for Pediatric Appendicitis: Use of Ultrasound Is Up and Use of CT Is Down

Key point: Ultrasound alone or with CT, but not CT alone, was associated with lower negative appendectomy rates


Use of computed tomography (CT) and ultrasound (US) imaging have improved the preoperative diagnosis of appendicitis in children with equivocal clinical findings. To exam-
Amoxicillin Has No Effect on Acute, Uncomplicated Bacterial Rhinosinusitis

Key point: Amoxicillin doesn't ameliorate the severity of acute, uncomplicated bacterial rhinosinusitis any better than placebo.

Citation: Garbutt JM, Banister C, Spitznagel E, Piccirillo JF. Amoxicillin for acute rhinosinusitis: a randomized controlled trial. JAMA. 2012;307(7):685-692.

Some 160 patients with clinically confirmed disease (purulent nasal discharge and maxillary pain or facial tenderness) were randomized to receive either 1500 mg/day of amoxicillin or placebo for 10 days. In addition, all received a supply of symptomatic treatments (such as acetaminophen) for use as needed.

Patients’ assessment of improvement in 16 sinus-related symptoms did not differ between groups at day 3 or at day 10. (While symptom scores did favor antibiotics at day 7, the authors judge the difference to be “too small to represent any clinically important change.”)

Rate of Physician Referrals On The Rise

Key point: The increase was particularly large for cardiac, gastrointestinal, orthopedic, dermatologic, and ear/nose/throat symptoms.


Despite increased attention to the cost and quality of healthcare delivery, little is known about physician-to-physician referrals. Two major national databases were used to assess referrals in about 850,000 ambulatory care visits, with a focus on referrals from primary care physicians from 1999 to 2009.

The rate of visits resulting in a referral to another physician nearly doubled, from 4.8% to 9.3%, during the decade. Referrals from primary care physicians varied with the nature of the problem. Referral rates rose significantly for the following symptoms: cardiac (8.5% to 14.9%), dermatologic (10.1% to 15.4%), ear/nose/throat (4.5% to 8.5%), gastrointestinal (12.3% to 17.7%), and orthopedic (12.4% to 16.5%). Referral rates for other categories of symptoms, such as gynecologic, pulmonary, or urologic, did not change.

Neurologists Sometimes Disagree with Emergency Physicians’ Diagnoses of TIA

**Key point:** Features associated with discordant TIA diagnoses between neurologists were headache, involuntary movement, and dizziness.


Patients who present with symptoms consistent with transient ischemic attack (TIA) require emergent evaluation, including imaging and specialty consultation, to confirm the diagnosis and initiate management. In a retrospective review of 429 adult patients who received emergency department (ED) diagnoses of TIA at a single academic center during a 4-year period, the authors evaluated how often neurologists disagreed with emergency physicians’ diagnoses and whether ABCD² score ≥4 or atypical presenting features (headache, tingling, involuntary movement, seeing flashing lights or wavy lines, dizziness, confusion, incontinence) were associated with discordant diagnoses. The neurologists’ diagnosis was the gold standard.

Overall, 156 patients (36%) received discordant diagnoses. Features associated with discordant diagnosis were headache, involuntary movement, and dizziness. Features associated with concordant diagnoses were tingling and ABCD² score ≥4.

Published in *J Watch Emerg Med.* February 3, 2012 — Richard D. Zane, MD, FAAEM.

How fast does oral dexamethasone work in mild to moderately severe croup? A randomized double-blinded clinical trial

**Key point:** For children with croup, an oral dose of 0.15 mg/kg dexamethasone offers benefit by 30 minutes.


For children with croup controversy remains over dosage and time to onset of action of oral steroids. The Cochrane Collaboration and other reviews have suggested 0.6 mg/kg dexamethasone be used (despite some evidence that 0.15 mg/kg is effective) with no expectation of benefit before 4-6 hours.

This randomized double-blinded clinical trial examined whether 0.15 mg/kg dexamethasone works by 30 minutes. Children with croup older than 6 months presenting to a tertiary paediatric ED with a Westley croup score of mild to moderate range (scores 1-6 out of 17) were randomized to receive either 0.15 mg/kg dexamethasone or oral placebo solution.

Each group contained 35 children. There was a growing trend to a lower croup score in the dexamethasone group, evident from 10 minutes and statistically significant from 30 minutes.

For children with croup an oral dose of 0.15 mg/kg dexamethasone offers benefit by 30 minutes, much earlier than the 4 hours suggested by the Cochrane Collaboration. This result might encourage doctors to treat more children with all severities of croup being less worried about potential side-effects and delayed benefit.

Recording Pain Score at Triage Improves Time to Analgesia

**Key point:** Median time to analgesia dropped from 123 minutes at baseline to 78 minutes 1 year after triage pain scoring became mandatory at an emergency department in Australia.


In a prospective study at an emergency department in Australia, researchers evaluated the effect on time to analgesia of requiring triage nurses to record a numeric pain score in the electronic medical record for all patients and, separately, of a focused educational program for staff (1-hour didactic presentation on the need to improve time to analgesia).

During the 8 weeks before the scoring intervention, pain scores were recorded for 73% of patients; median time from patient arrival to administration of analgesia was 123 minutes. Eight weeks after the intervention, scores were recorded for 93% of patients (exceptions were critically ill patients who bypassed usual triage), and median time to analgesia decreased to 95 minutes. At 1 year, median time to analgesia was further reduced to 78 minutes. The focused educational program, which was initiated after the scoring intervention, did not have any additional effect on time to analgesia.

Published in *J Watch Emerg Med.* February 10, 2012 — Richard D. Zane, MD, FAAEM.

Antibiotics and Severe Bleeding Among Older Adults on Warfarin

**Key point:** In a case-control study, all concomitant antibiotics were associated with increased risk for bleeding.


Warfarin—the most commonly prescribed oral anticoagulant worldwide—has a narrow therapeutic range. Many drugs, including antibiotics, have been linked to bleeding in warfarin users. Patients receiving anticoagulants generally are older and have more comorbidities than the general population and may be at increased risk for this complication.
To assess the bleeding risk associated with concomitant warfarin and antibiotic use in older patients, researchers performed a case-control study involving a cohort of Medicare beneficiaries who were using warfarin continuously in 2007–2008. Within this group of 38,762 patients, 798 (2.1%) were hospitalized in 2008 for bleeding and met the study criteria. Each case patient was matched with three control patients from the cohort, based on age, sex, race/ethnicity, and indication for warfarin use. Controls were assigned an index month corresponding to the event date of the matched case.

Concomitant exposure to any antibiotic doubled the risk for a bleeding episode, compared with no such exposure (adjusted odds ratio, 2.0; 95% confidence interval, 1.6–2.5). The risk was further increased among individuals whose antibiotic prescriptions began ≤15 days before the index event (AOR, 2.4; 95% CI, 1.8–3.2). The six antibiotic categories examined were all associated with a significant risk for bleeding, but azole antifungals were associated with the greatest risk (AOR, 4.6; 95% CI, 1.9–11.0).


Standard-dose and high-dose daily antiviral therapy for short episodes of genital HSV-2 reactivation: three randomised, open-label, cross-over trials

Key point: Short episodes of subclinical shedding of HSV occurred frequently, even during high-dose regimens of antivirals.


HSV-2-seropositive, HIV-seronegative people were enrolled at the University of Washington Virology Research Clinic (WA, USA). The authors did three separate but complementary open-label cross-over studies comparing no medication with aciclovir 400 mg twice daily (standard-dose aciclovir), valaciclovir 500 mg daily (standard-dose valaciclovir) with aciclovir 800 mg three times daily (high-dose aciclovir), and standard-dose valaciclovir with valaciclovir 1 g three times daily (high-dose valaciclovir).

Of 113 participants randomised, 90 were eligible. Participants collected 23,605 swabs; 1,272 (5.4%) were HSV-positive. The frequency of HSV shedding was significantly higher in the no medication group (n=384, 18.1% of swabs) than in the standard-dose aciclovir group (25, 1.2%; incidence rate ratio [IRR] 0.05, 95% CI 0.03—0.08). High-dose aciclovir was associated with less shedding than standard-dose aciclovir (198 [4.2%] vs 209 [4.5%]; IRR 0.79, 95% CI 0.63—1.00). Shedding was less frequent in the high-dose valaciclovir group than in the standard-dose valaciclovir group (164 [3.3%] vs 292 [5.8%]; 0.54, 0.44—0.66). The number of episodes per person-year did not differ significantly for standard-dose valaciclovir (22.6) versus high-dose aciclovir (20.2; P=0.54), and standard-dose valaciclovir (14.9) versus high-dose aciclovir (16.5; P=0.34), but did for no medication (28.7) and standard-dose aciclovir (10.0; P=0.001).

Median episode duration was longer for no medication than for standard-dose aciclovir (13 h vs 7 h; P=0.01) and for standard-dose valaciclovir than for high-dose valaciclovir (10 h vs 7 h; P=0.03), but did not differ significantly between standard-dose valaciclovir and high-dose aciclovir (8 h vs 8 h; P=0.23). Likewise, maximum log10 copies of HSV detected per mL was higher for no medication than for standard-dose aciclovir (3.3 vs 2.9; P=0.02), and for standard-dose valaciclovir than for high-dose aciclovir (2.5 vs 3.0; P=0.001), but no significant difference was recorded for standard-dose valaciclovir versus high-dose aciclovir (2.7 vs 2.8; P=0.66). 80% of episodes were subclinical in all study groups. Except for a higher frequency of headaches with high-dose valaciclovir (n=13, 30%) than with other regimens, all regimens were well tolerated.

Short bursts of subclinical genital HSV reactivation are frequent, even during high-dose antiviral therapy, and probably account for continued transmission of HSV during suppressive antiviral therapy. More potent antiviral therapy is needed to eliminate HSV transmission.

Accuracy of Rapid Influenza Diagnostic Tests A Meta-analysis

Key point: Two meta-analyses offer cautionary notes about the diagnosis and treatment of influenza.


One analyzed the accuracy of rapid diagnostic tests for influenza. The analysis was based on 159 studies that compared rapid testing with a reference standard of either viral culture or reverse-transcriptase polymerase chain reaction. The authors found that the rapid tests had a specificity of 98% but a sensitivity of only 54% in adults and 67% in children. Thus, they write, a positive test is unlikely to be a false-positive, but a negative test “has a reasonable likelihood of being false negative.”

The authors of the other meta-analysis—on the benefits and harms from available antiviral drugs—point to the low quality of evidence from the 74 available studies. On the basis of that evidence, they conclude that “oral oseltamivir and inhaled zanamivir may provide a net benefit over no treatment.” The benefits identified included lower mortality and shorter duration of symptoms.
CODING Q & A

Medicare Modifier PD, Fracture Visit Coding, Coding for Emergent Transport, ‘Big Ticket’ Reimbursement Codes, Medicare CLIA-Waived Codes

DAVID STERN, MD, CPC

Q. What is the new modifier PD?

A. If your urgent care center is owned by a hospital or health system, then Medicare has a new modifier for your center. The new HCPCS Level II Modifier PD is defined as a “diagnostic or related non-diagnostic item or service provided in a wholly owned or wholly operated entity to a patient who is admitted as an inpatient within 3 days, or 1 day.” The modifier expands the Center for Medicare & Medicaid Services (CMS) “three-day payment window” for outpatient services provided within 72 hours of an inpatient admission by applying it to both diagnostic and non-diagnostic services. Medicare pays a reduced fee for services that are clinically related to an inpatient admission; occur within 72 hours of the admission; and are furnished by a facility owned by a hospital.

The modifier applies only to hospital-run urgent care centers and went into effect January 1, 2012. Even though compliance with the Final Rule is delayed until July 1, 2012, entities should begin using modifier PD on applicable claims as soon as possible. It is recommended that hospital-run urgent cares hold claims for 3 days before submitting them to ensure that patients are not admitted within 72 hours, thus requiring modifier PD to be added to the claim. Urgent care centers should be reimbursed the full amounts when services are for visits that are “unrelated” to the hospital admission. However, CMS has refused to identify all non-diagnostic services that should be considered “clinically related.” CMS reasons that these determinations should be made on a case-by-case basis. Thus, consultants are encouraging facilities to document the reasoning for why the clinic visit is “not clinically related” so the clinic can “receive full payment.” In the urgent care center, however, a manual appeal for each individual exception is rarely likely to be cost effective, so the center will likely just lose the income on these cases. ■

Q. How should I code for a visit when a patient presents with a fracture, and the physician performs x-ray and splinting and then refers the patient to an orthopedic physician?

A. Use CPT codes 29000-29550 (initial application of cast, splint or strapping). Don’t forget to code for splint supplies (such as Q4017 and following). Make sure you have a separate, identifiable procedure note. Add the code for the appropriate radiologic study. You should also document and code the appropriate E/M code for assessing the injuries related to the accident and add modifier 25 (significant, separately identifiable E/M service by the same physician on the same day of the procedure or other service). ■
Q. I heard about the “Y” code at the 2008 urgent care conference in Memphis. We were told if a patient is transported out of our urgent care center to the emergency department (ED) via ambulance, then we should do the following: start the protocol; document the visit appropriately; contact the ED; mark the superbill as level 5; and mark or write down the “Y” code, which I thought represented an emergent transport. Is this code still valid? My billing office says this code can only be used for ED, not urgent care centers. I cannot find any information online about the “Y” code.

A. I am not aware of a “Y” code. Perhaps they were referring to 99058, which is for service(s) provided on an emergency basis in the office (in addition to basic service) that disrupt other scheduled office services. CPT Assistant has recommended that this code not be used in clinics that routinely offer services on a walk-in basis. However, CPT Assistant opinions are not official rulings, and some urgent care coders object to this limitation, noting that emergency disruptions in an urgent care center can be just as disruptive to staffing and to care for other patients as they are in a primary care center.

In addition, if you code a level 5 E/M code, make sure that your documentation supports that code. For the history, it is compliant to take credit for a comprehensive history and simply note that a full history was not obtained because of the emergency nature of the visit. The physical exam and the complexity of medical decision-making, however, do not follow this rule, and appropriate levels of documentation for these sections are required to support a level 5 E/M.

Q. What is the most common highest reimbursement code for urgent care center billing?

A. That is an interesting question. However, it is like asking, “What is the most common big ticket item at the Dollar Store?” Urgent care revenue cycle management is not about collecting on big ticket items. The vast majority of visits (more than 95%) do not have any so-called “big ticket” items. Thus, urgent care revenue cycle management is not about cherry picking big ticket codes; rather, it is all about intense, punctilious accounting for every detail in the revenue cycle.

Q. My urgent care center uses Clinical Laboratory Improvement Amendments-waived (or CLIA-waived) laboratory tests to perform drug test screening for multiple drug classes. We bill CPT code 80104 (drug screen, qualitative; multiple drug classes other than chromatographic method, each procedure) for non-Medicare payors. What code should we use for Medicare claims?

A. For Medicare, use code G0434 (drug screen, other than chromatographic, any number of drug classes, by CLIA-waived test or moderate complexity test, per patient encounter). Add modifier QW if you have a CLIA certificate of waiver.

Note: CPT codes, descriptions, and other data only are copyright 2011, 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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A message from Lee Resnick, MD, Editor in Chief, JUCM, The Journal of Urgent Care Medicine/Chief Medical Officer, WellStreet Urgent Care.

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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: Is your center using computerized systems for practice management?

The 2008 survey revealed that utilization of computerized systems was fairly heavy for certain aspects of operations, such as billing and claims management, and less so for other aspects, such as prescription ordering. The 2010 survey looked at this data a little differently, examining also time in use. Where computerized systems were not in use, respondents were asked about plans for the center’s future use.

Of the urgent cancer centers that responded to the survey, 92.9% use computerized systems for practice management. Most of them were implemented several years ago. For those that do not use the systems, the majority do not have plans to start.

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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