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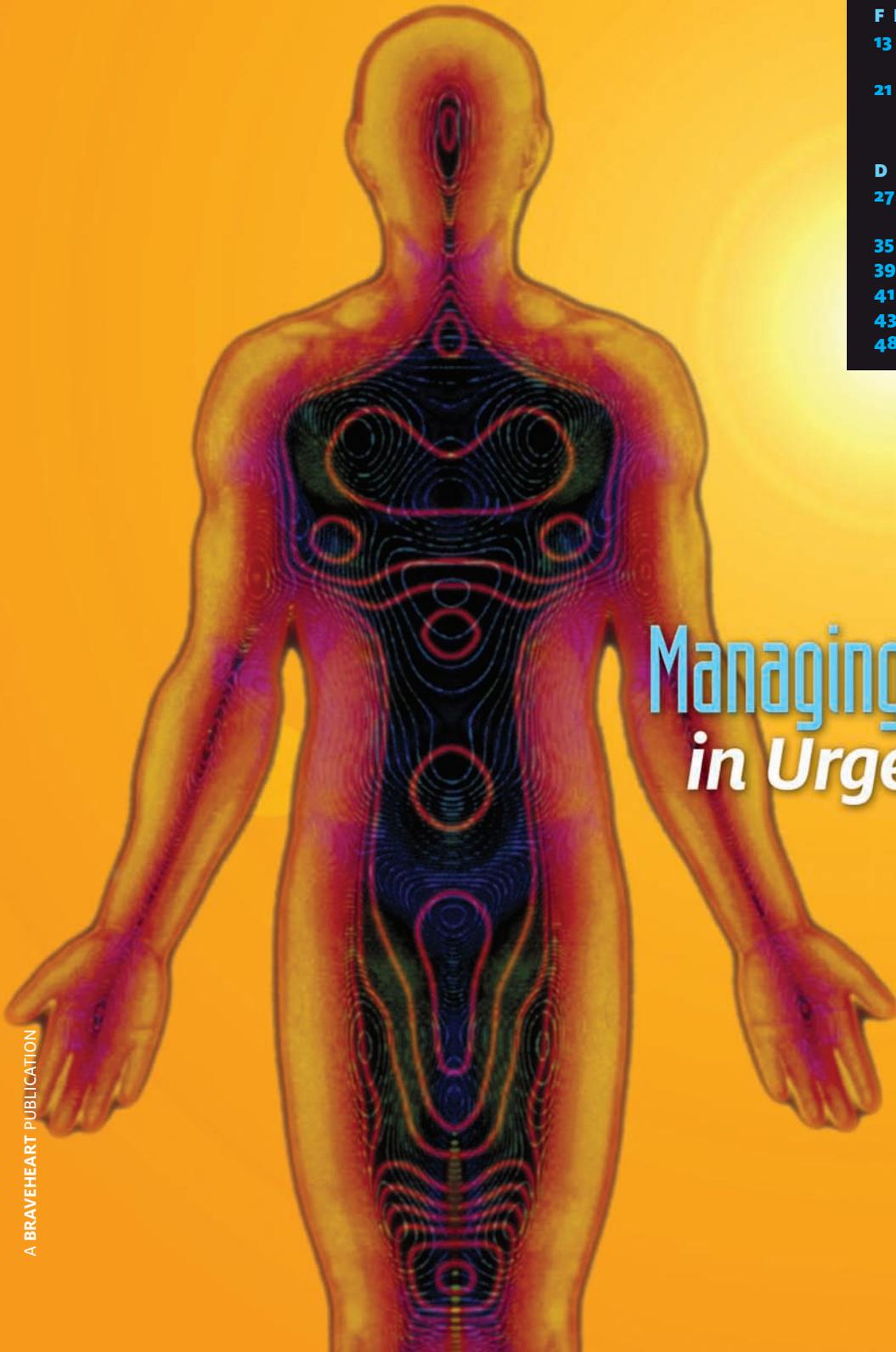
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Managing Heat Illness in Urgent Care





IMPORTANT SAFETY INFORMATION

VIGAMOX® solution is indicated for the treatment of bacterial conjunctivitis caused by susceptible strains of the following organisms: *Corynebacterium* species[†], *Micrococcus luteus*[†], *Staphylococcus aureus*, *S. epidermidis*, *S. haemolyticus*, *S. hominis*, *S. warneri*[†], *Streptococcus pneumoniae*, *Streptococcus viridans* group, *Acinetobacter lwoffii*[†], *Haemophilus influenzae*, *Haemophilus parainfluenzae*[†], *Chlamydia trachomatis* ([†]efficacy for this organism was studied in fewer than 10 infections). VIGAMOX® solution is contraindicated in patients with a history of hypersensitivity to moxifloxacin, to other fluoroquinolones, or to any of

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Get rid of the **pink** in a blink.*

VIGAMOX® solution erases 99% of *Streptococcus pneumoniae* pathogens *in vitro* in as little as an hour.¹ *†

†*In vitro* data are not always indicative of clinical success or microbiological eradication in a clinical setting.

Vigamox®
(moxifloxacin HCl ophthalmic solution) 0.5% as base

***The dosing of VIGAMOX® solution is one drop in the affected eye(s) 3 times daily for 7 days.**

the components in this medication. NOT FOR INJECTION. VIGAMOX® solution should not be injected subconjunctivally, nor should it be introduced directly into the anterior chamber of the eye. In patients receiving systemically administered quinolones, including moxifloxacin, serious and occasionally fatal hypersensitivity (anaphylactic) reactions have been reported, some following the first dose. As with other anti-infectives, prolonged use of VIGAMOX® solution may result in overgrowth of non-susceptible organisms, including fungi. The safety and effectiveness of VIGAMOX® solution in infants below 1 year of age have not been established. The most frequently reported ocular adverse events were conjunctivitis, decreased visual acuity, dry eye, keratitis, ocular discomfort, ocular hyperemia, ocular pruritus, subconjunctival hemorrhage, and tearing. These events occurred in approximately 1%–6% of patients.

Please see brief summary of prescribing information on adjacent page.

Vigamox®

(moxifloxacin hydrochloride ophthalmic solution) 0.5% as base

DESCRIPTION: VIGAMOX® (moxifloxacin HCl ophthalmic solution) 0.5% is a sterile ophthalmic solution. It is an 8-methoxy fluoroquinolone anti-infective for topical ophthalmic use.

CLINICAL PHARMACOLOGY:

Microbiology:

The following *in vitro* data are also available, but their clinical significance in ophthalmic infections is unknown. The safety and effectiveness of VIGAMOX® solution in treating ophthalmological infections due to these microorganisms have not been established in adequate and well-controlled trials.

The following organisms are considered susceptible when evaluated using systemic breakpoints. However, a correlation between the *in vitro* systemic breakpoint and ophthalmological efficacy has not been established. The list of organisms is provided as guidance only in assessing the potential treatment of conjunctival infections. Moxifloxacin exhibits *in vitro* minimal inhibitory concentrations (MICs) of 2 µg/ml or less (systemic susceptible breakpoint) against most (≥ 90%) of strains of the following ocular pathogens.

Aerobic Gram-positive microorganisms:

Listeria monocytogenes
Staphylococcus saprophyticus
Streptococcus agalactiae
Streptococcus mitis
Streptococcus pyogenes
Streptococcus Group C, G and F

Aerobic Gram-negative microorganisms:

Acinetobacter baumannii
Acinetobacter calcoaceticus
Acinetobacter freundii
Citrobacter koseri
Enterobacter aerogenes
Enterobacter cloacae
Escherichia coli
Klebsiella oxytoca
Klebsiella pneumoniae
Moraxella catarrhalis
Morganella morganii
Neisseria gonorrhoeae
Proteus mirabilis
Proteus vulgaris
Pseudomonas stutzeri

Anaerobic microorganisms:

Clostridium perfringens
Fusobacterium species
Prevotella species
Propionibacterium acnes

Other microorganisms:

Chlamydia pneumoniae
Legionella pneumophila
Mycobacterium avium
Mycobacterium marinum
Mycoplasma pneumoniae

Clinical Studies:

In two randomized, double-masked, multicenter, controlled clinical trials in which patients were dosed 3 times a day for 4 days, VIGAMOX® solution produced clinical cures on day 5-6 in 66% to 69% of patients treated for bacterial conjunctivitis. Microbiological success rates for the eradication of the baseline pathogens ranged from 84% to 94%. Please note that microbiologic eradication does not always correlate with clinical outcome in anti-infective trials.

INDICATIONS AND USAGE: VIGAMOX® solution is indicated for the treatment of bacterial conjunctivitis caused by susceptible strains of the following organisms:

Aerobic Gram-positive microorganisms:

Corynebacterium species*
*Micrococcus luteus**
Staphylococcus aureus
Staphylococcus epidermidis
Staphylococcus haemolyticus
Staphylococcus hominis
*Staphylococcus warneri**
Streptococcus pneumoniae
Streptococcus viridans group

Aerobic Gram-negative microorganisms:

*Acinetobacter lwoffii**
Haemophilus influenzae
*Haemophilus parainfluenzae**

Other microorganisms:

Chlamydia trachomatis

*Efficacy for this organism was studied in fewer than 10 infections.

CONTRAINDICATIONS: VIGAMOX® solution is contraindicated in patients with a history of hypersensitivity to moxifloxacin, to other quinolones, or to any of the components in this medication.

WARNINGS:
NOT FOR INJECTION.

VIGAMOX® solution should not be injected subconjunctivally, nor should it be introduced directly into the anterior chamber of the eye.

In patients receiving systemically administered quinolones, including moxifloxacin, serious and occasionally fatal hypersensitivity (anaphylactic) reactions have been reported, some following the first dose. Some reactions were accompanied by cardiovascular collapse, loss of consciousness, angioedema (including laryngeal, pharyngeal or facial edema), airway obstruction, dyspnea, urticaria, and itching. If an allergic reaction to moxifloxacin occurs, discontinue use of the drug. Serious acute hypersensitivity reactions may require immediate emergency treatment. Oxygen and airway management should be administered as clinically indicated.

PRECAUTIONS:

General: As with other anti-infectives, prolonged use may result in overgrowth of non-susceptible organisms, including fungi. If superinfection occurs, discontinue use and institute alternative therapy. Whenever clinical judgment dictates, the patient should be examined with the aid of magnification, such as slit-lamp biomicroscopy,

and, where appropriate, fluorescein staining. Patients should be advised not to wear contact lenses if they have signs and symptoms of bacterial conjunctivitis.

Information for Patients: Avoid contaminating the applicator tip with material from the eye, fingers or other source.

Systemically administered quinolones including moxifloxacin have been associated with hypersensitivity reactions, even following a single dose. Discontinue use immediately and contact your physician at the first sign of a rash or allergic reaction.

Drug Interactions: Drug-drug interaction studies have not been conducted with VIGAMOX® solution. *In vitro* studies indicate that moxifloxacin does not inhibit CYP3A4, CYP2D6, CYP2C9, CYP2C19, or CYP1A2 indicating that moxifloxacin is unlikely to alter the pharmacokinetics of drugs metabolized by these cytochrome P450 isozymes.

Carcinogenesis, Mutagenesis, Impairment of Fertility:

Long term studies in animals to determine the carcinogenic potential of moxifloxacin have not been performed. However, in an accelerated study with initiators and promoters, moxifloxacin was not carcinogenic in rats following up to 38 weeks of oral dosing at 500 mg/kg/day (approximately 21,700 times the highest recommended total daily human ophthalmic dose for a 50 kg person, on a mg/kg basis).

Moxifloxacin was not mutagenic in four bacterial strains used in the Ames *Salmonella* reversion assay. As with other quinolones, the positive response observed with moxifloxacin in strain TA 102 using the same assay may be due to the inhibition of DNA gyrase. Moxifloxacin was not mutagenic in the CHO/HGPRT mammalian cell gene mutation assay. An equivocal result was obtained in the same assay when v79 cells were used. Moxifloxacin was clastogenic in the v79 chromosome aberration assay, but it did not induce unscheduled DNA synthesis in cultured rat hepatocytes. There was no evidence of genotoxicity *in vivo* in a micronucleus test or a dominant lethal test in mice.

Moxifloxacin had no effect on fertility in male and female rats at oral doses as high as 500 mg/kg/day, approximately 21,700 times the highest recommended total daily human ophthalmic dose. At 500 mg/kg orally there were slight effects on sperm morphology (head-tail separation) in male rats and on the estrous cycle in female rats.

Pregnancy: Teratogenic Effects.

Pregnancy Category C: Moxifloxacin was not teratogenic when administered to pregnant rats during organogenesis at oral doses as high as 500 mg/kg/day (approximately 21,700 times the highest recommended total daily human ophthalmic dose); however, decreased fetal body weights and slightly delayed fetal skeletal development were observed. There was no evidence of teratogenicity when pregnant Cynomolgus monkeys were given oral doses as high as 100 mg/kg/day (approximately 4,300 times the highest recommended total daily human ophthalmic dose). An increased incidence of smaller fetuses was observed at 100 mg/kg/day. Since there are no adequate and well-controlled studies in pregnant women, VIGAMOX® solution should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Moxifloxacin has not been measured in human milk, although it can be presumed to be excreted in human milk. Caution should be exercised when VIGAMOX® solution is administered to a nursing mother.

Pediatric Use: The safety and effectiveness of VIGAMOX® solution in infants below 1 year of age have not been established.

There is no evidence that the ophthalmic administration of VIGAMOX® solution has any effect on weight bearing joints, even though oral administration of some quinolones has been shown to cause arthropathy in immature animals.

Geriatric Use: No overall differences in safety and effectiveness have been observed between elderly and younger patients.

ADVERSE REACTIONS:

The most frequently reported ocular adverse events were conjunctivitis, decreased visual acuity, dry eye, keratitis, ocular discomfort, ocular hyperemia, ocular pain, ocular pruritus, subconjunctival hemorrhage, and tearing. These events occurred in approximately 1-6% of patients.

Nonocular adverse events reported at a rate of 1-4% were fever, increased cough, infection, otitis media, pharyngitis, rash, and rhinitis.

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1. Data on file. Alcon Laboratories, Inc.



Call for Articles

The *Journal of Urgent Care Medicine (JUCM)*, the Official Publication of the Urgent Care Association of America, is looking for a few good authors.

Physicians, physician assistants, and nurse practitioners, whether practicing in an urgent care, primary care, hospital, or office environment, are invited to submit a review article or original research for publication in a forthcoming issue.

Submissions on clinical or practice management topics, ranging in length from 2,500 to 3,500 words are welcome. The key requirement is that the article address a topic relevant to the real-world practice of medicine in the urgent care setting.

Please e-mail your idea to
JUCM Editor-in-Chief
Lee Resnick, MD at
editor@jucom.com.

He will be happy to discuss it
with you.



Lessons Learned



Between sticky ribs and spicy BBQ sauce, I mingled with the future generation of doctors at the annual AAFP Residents and Students Conference in Kansas City. I was reminded of several very important things:

- I am old
 - I *didn't* just finish my residency
 - I need to get a "MySpace" account and learn how to "IM."
- In addition to my mini-mid-life crisis, my booth was dead. I was sure there would be crowds of people interested in urgent care and options for additional training. What was I doing wrong?

I decided to leave my booth and walk around a bit to see what other exhibitors were doing to attract people to their booth. The tricks of the trade: free food and other seemingly "worthless" giveaways. Everything from kielbasa and roasted almonds to stopwatches, stuffed animals, and mini lava lamps. There was even a booth that brought their own "Wii" video game for the students to play.

How could a crowd of "academics" stoop so low just to dupe some "unsuspecting" students to visit their booth?

Know Your Audience

Knowing there must be a lesson in all this, I retreated to my lonely booth, barren of popcorn, a dartboard or gleaming Harley Davidson (yes, a family medicine residency from Wisconsin shipped one in—and yes, they had a very busy booth).

What I realized is a lesson I have preached to the students, residents, and fellows repeatedly: Know your audience.

Whether you are giving a lecture or talking with a patient, the first key to success is to know your audience. Understand their needs, their agenda, their language, and their cultural background.

The two features of daily life most lacking for a resident or med student are fun and money. Hence the free stuff and video games. Merely a simple technique to attract visitors to your booth. Everyone knows it and everyone accepts it. A cultural norm with no apologies necessary.

You give me food and a free neck massage and I'll listen about your program.

In the end, an exchange of real information takes place, and you get several grateful, interested candidates.

The rest of the show, I hung out at the "cool" booths and met dozens of residents interested in urgent care and fellowship training.

Please submit your ideas for booth attractions for next year's conference to editor@jujm.com.

BFN (bye for now).

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

Join the Discussion

You'll note on page 8 of this month's issue of *JUCM* that we've begun publishing Letters to the Editor. If you have questions on an article you've read here, thoughts about the state of urgent care in general—or, as Dr. Resnick suggested, ideas on how to draw attention to the UCAOA booth at conferences—share them with us (and, by extension, with your colleagues) in an e-mail to editor@jujm.com.

Whenever possible and appropriate, we will reply or seek out a reply from an authoritative party—in this case Dr. Kent Knauer, author of the lead clinical article in our July/August issue.

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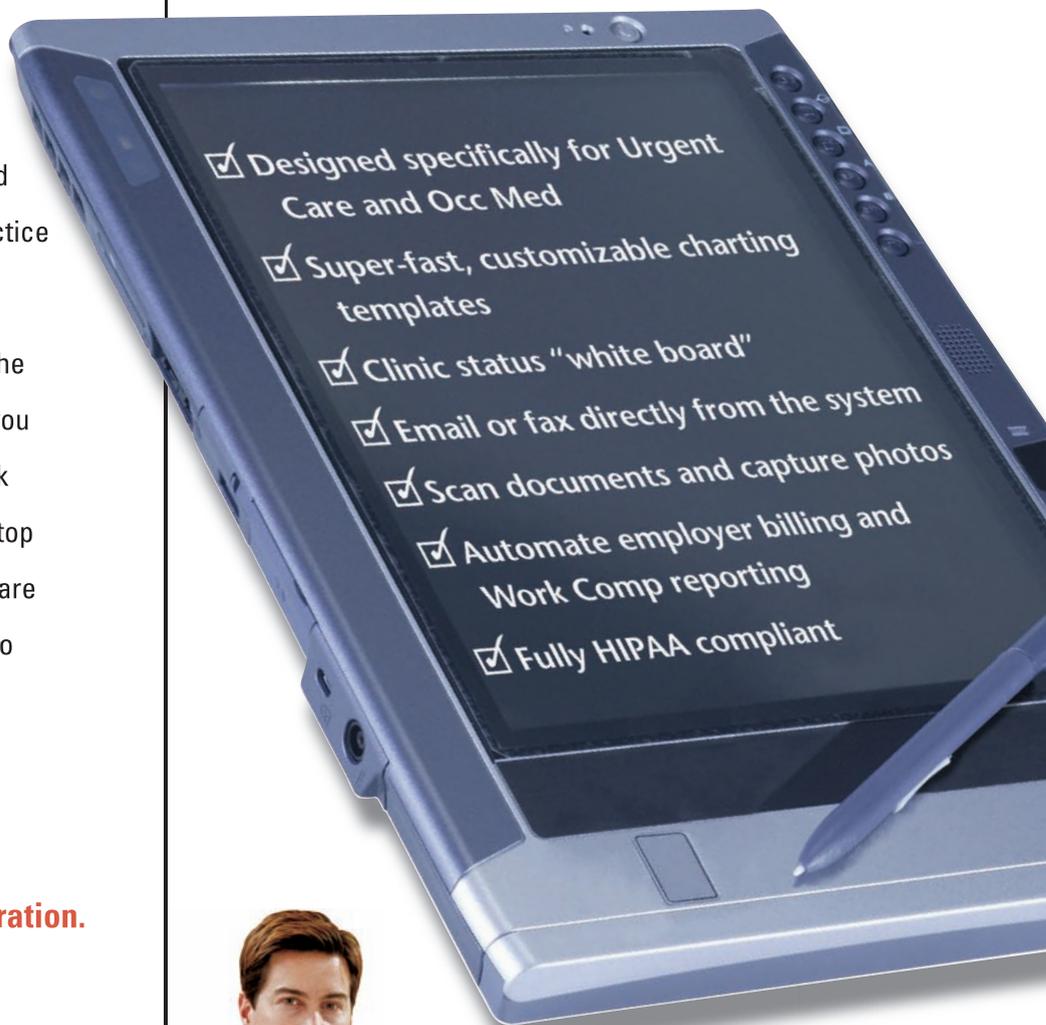
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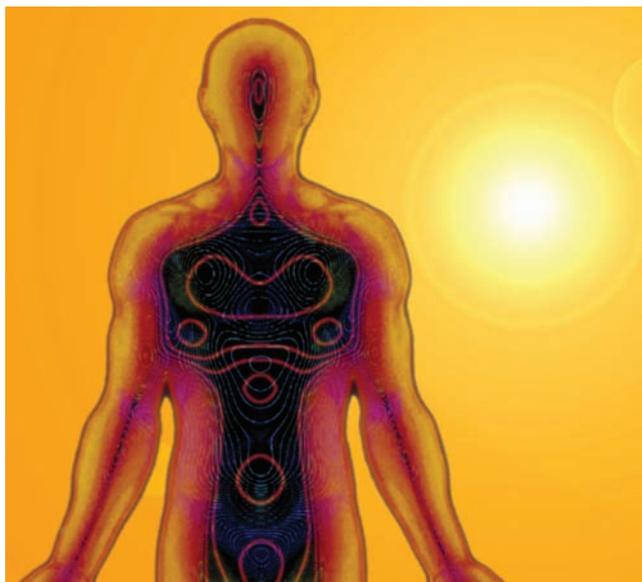
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CLINICAL

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The advent of September means increased risk of heat illness in many—not just the elderly or those with specific risk factors, but younger athletes, as well. Are you prepared to differentiate among the various diagnoses and to treat accordingly?

By Bridget Dyer, MD, Samuel Keim, MD, and Peter Rosen, MD

BOUNCEBACKS



21 The Case of a 33-Year-Old Male with Abdominal Pain

A 33-year-old man presents with abdominal pain and is discharged without a definitive diagnosis. Would your treatment and advice

regarding follow-up ensure the best possible outcome—and minimize your malpractice exposure?

By Ryan Longstreth, MD, FACEP and Michal B. Weinstock, MD

Next month in JUCM: An original article on evaluation and treatment of urinary tract infections and pyelonephritis, as well as a look at Derm Diagnoses from actual urgent care case files.

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Mission Statement

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

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LETTERS TO THE EDITOR

Regarding Insect Bites and Stings



To the Editor:

After reading the article on how rare cellulitis is after a wasp sting (Challenges in Assessing and Treating Insect Bites and Stings, Kent A. Knauer, MD, *JUCM*, July/August 2007), I wonder if there are any cases where cellulitis happened only seven hours after the sting (swelling was 8 cm beyond sting site and first signs of cellulitis appeared as red patches with little red streaks two hours after occurrence) and was spreading at a rate of about 1 cm an hour along the lymphatic system and the veins.

(This is actually a scenario that just happened to me personally on August 3, 2007 after five wasp stings.)

Beatrice Sirakaya

Instructor, Department of Biochemistry and

Molecular Biology

Pennsylvania State University

Dr. Knauer responds: In my 20 years of practice, I have seen only one case of an infectious complication from a sting.

It happened to be the husband of a nurse from our organization. I saw him the next day after a honeybee sting on the forearm. He had no allergic response, but had increased pain and swelling at the site. What seemed unusual to me was the extreme tenderness and pain apparent on exam.

Ultrasound proved an abscess, and it was drained by a surgeon an hour later. He recovered completely within a few days on a cephalosporin.

I guess this is an example of "never say never."

The take-home message is that the rare presence of severe pain or tenderness, or systemic symptoms such as fever or chills, suggests the complication of infection.

To the Editor:

Thank you for your timely journal.

I read with interest the article on bites and stings by Dr. Knauer. It was very informative and reviewed all of the important tips on caring for bites and stings except one: Brown recluse spiders have a very well demarcated geographical area and there have been no documented bites outside of that area.

I have seen many of my colleagues here in North Carolina misdiagnose serious methicillin-resistant *Staph aureus* infections as brown recluse bites. Brown recluse spiders do not live in North Carolina. I have testified to such in a case in Florida and read some articles about people in Michigan who tried to sue their family doctor for diagnosing cellulitis and then having the emergency physician erroneously call it brown recluse spider bites. There are no brown recluse spiders in Michigan, either.

Please remind your readers to be very careful not to miss the diagnosis of cellulitis, especially MRSA cellulitis, by thinking the symptoms are the result of a brown recluse bite outside of the geographic domain of that spider.

Christian Madsen, MD, FAADEP

ProMed Minor Emergency Center

Charlotte, NC

Dr. Knauer responds: I believe that it is true that the number of reported recluse bites in North America exceeds the estimated population. Unfortunately, rare things do happen.



If you have thoughts on an article that appeared in JUCM, The Journal of Urgent Care Medicine (or on issues relevant to urgent care in general), please express them in a Letter to the Editor via e-mail to editor@jucm.com or by "snail mail" to: Editor, JUCM, 2 Split Rock Road, Mahwah NJ 07430.

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July 2007



02R07109A



JUCM CONTRIBUTORS

With school back in session and the calendar already flipped from August to September, summer is over in many ways. Climatically speaking, however, we're still in the midst of the proverbial "dog days;" temperatures and humidity may creep well past comfortable for another month or so, just as football season and cross country races kick into high gear.

What better time, then, to take a look at optimal treatment of patients presenting to urgent care with symptoms of heat syndromes, which can range in severity from mild discomfort to life-threatening?

We're pleased to publish an original article on that topic (Managing Heat Illness in Urgent Care, page 13) by **Bridget Dyer, MD**, **Samuel Keim, MD**, and **Peter Rosen, MD**, all of the Department of Emergency Medicine at the University of Arizona College of Medicine. Dr. Dyer's areas of clinical interest include international emergency medicine, heat illness, medical education, and undocumented border crossers. Dr. Keim, whose clinical practice includes work in both the ED and urgent care settings, is associate head and residency director of the department. Dr. Rosen is clinical professor and a member of the *JUCM* Advisory Board.



In addition, we bring you the third installment of the Bouncebacks series (page 21), contributed by **Ryan Longstreth, MD, FACEP** and **Michael B. Weinstock, MD**—also co-authors, along with Gregory L. Henry, MD, FACEP, of the book *Bouncebacks! Emergency*



Department Cases: ED Returns (2006, Anadem Publishing, www.anadem.com). In this issue, the authors begin an analysis of how data from studies of patients who "bounced back" for additional care after discharge might best be used to identify high-risk patients. Drs. Weinstock and Longstreth work together at Mt. Carmel St. Ann's Emergency Department in Columbus, OH as attending physicians. Dr. Weinstock is also clinical assistant professor of emergency medicine at The Ohio State University College of Medicine and has authored *The Resident's Guide to Ambulatory Care*, the sixth edition of which is due out later this year.

Finally, we continue to be indebted to contributing editors **Nahum Kovalski, BSc, MDCM**; **Frank Leone, MBA, MPH**; **John Shufeldt, MD, JD, MBA, FACEP**; and **David Stern, MD** for sharing their expertise in administering quality care in the urgent care setting, in the marketing of occupational medicine services, health law, and coding.

If you would like to submit an article or you have something to say about an article you read in this or any other issue of *JUCM*, we invite you to contact our editor-in-chief, **Lee Resnick, MD** via e-mail at editor@jucm.com. Share what's on your mind! ■

To Submit an Article to *JUCM*

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

Manuscripts on clinical or practice management topics should be 2,600–3,200 words in length, plus tables, figures, pictures, and references. Articles that are longer than this will, in most cases, need to be cut during editing.

We prefer submissions by e-mail, sent as Word file attachments (with tables created in Word, in multicolumn format) to editor@jucm.com. The first page should include the title of the article, author names in the order they are to appear, and

the name, address, and contact information (mailing address, phone, fax, e-mail) for each author.

Before submitting, we recommend reading "Instructions for Authors," available at www.jucm.com.

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'Quality' and Urgent Care's Hierarchy of Needs

■ LOU ELLEN HORWITZ, MA

I've been visiting some urgent care centers lately, and—paradoxical as it may be—one thing they all have in common is that they are all very different from one another.

Some are large, glamorous affairs with fireplaces and tropical fish; some are in older buildings in need of renovation; some have the feel of a solo physician practice; some have virtually all of their medical equipment tucked invisibly (and silently) away; and then some have an array of equipment and paperwork center stage, in bustling work areas.

The wide variety made me think of the choices that patients must make when deciding where to go for episodic healthcare needs. When I talk with the average member of the public, one of the main concerns over opting to visit an urgent care center is whether they will receive quality care at "one of those centers."

Whether a giant fish tank equals quality healthcare is certainly not up for debate. But that's not to say that it doesn't matter; patients' perception can affect what they choose to disclose when you take their history, whether they will even stick around to see someone, whether they will return in the future—and what they will tell their friends (aka your potential patients).

If you aren't paying attention to what your center feels like when patients walk in the door, you should ask an honest friend to come in and give you a candid opinion.

Appearances Can Be Expensive

The most impressive centers had one thing in common: money.

In any business, there seems to be a definite ordering of basic necessities, similar to Maslow's hierarchy of needs.

If you are at the top level of the hierarchy—if the more basic needs have been met, in other words—you're thinking, "our

lobby would be so much nicer if we could rip out that wall and add a plasma TV screen and have fresh flowers delivered", or, "It's time we got our staff into some effective communication training."

On the other hand, if your needs are aligned along the bottom row of the hierarchy because you're still struggling to break even every month, you are probably focusing only on getting patients in the door and keeping your costs down so you can afford to make the payroll and keep up with the payments to the bank.

Most of you are probably somewhere in between.

The 'Q' Factor

So where does that leave quality of care? At what point in the hierarchy does that become your primary focus? With so little regulation of urgent care centers and very few centers going through any kind of accreditation process, where does our industry stand on the quality curve?

As we all know, in the seven years since the release of the Institute of Medicine's *To Err is Human: Building A Safer Health System*^{*}, hospitals have been blanketed with quality programs; new associations, consultants, training programs, books, task forces, job functions, and news stories have been created solely to focus on quality healthcare delivery in the hospital setting.

With the public so well-educated now on the risks associated with healthcare errors, is it any wonder they have concerns about the quality of healthcare they will receive in your center, regardless of how different the environment is from the local ED?

The question then falls squarely on all of our shoulders: What are we doing about that concern?

For our part, UCAOA is forming a select committee to address this issue. That committee will be chaired by Dr. Donald F. Dillahunty, president of PrimaCare Medical Centers. We will share our plans with you in an upcoming issue of *JUCM*.

In the meantime, I encourage UCAOA members to use the Forums section of the association website (www.ucaoa.org/forum/index.php) to share your own efforts with all of us. ■



Lou Ellen Horwitz is executive director of the Urgent Care Association of America. She may be contacted at lorwitz@ucaoa.org.

^{*} The Executive Summary of *To Err is Human: Building a Safer Health System* is available at no charge on the National Academies Press website at www.nap.edu/catalog/9728.html.



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Managing Heat Illness in Urgent Care

Urgent message: The urgent care provider's most critical role in heat illness is to identify risk factors and the cause, to cool and hydrate the patient, assess for complications, and educate the patient in the hope of preventing a more serious exposure.

Bridget Dyer, MD, Samuel Keim, MD, and Peter Rosen, MD

Introduction

Heat illness occurs when external heat conditions and internal heat production overwhelm the ability of the body to dissipate heat. Evaporation of sweat is the most effective way to dissipate heat; when the humidity is high, evaporation is compromised. Calculations that are based on both temperature and humidity, such as the heat index, are a more robust way of determining heat stress than ambient temperature alone.¹ Elevated humidity can cause even moderate temperatures to be dangerous, especially to persons at high risk.

Internal heat production depends on both the level of exertion and the physiologic characteristics of the patient. In the average adult, exertion can raise the basal metabolic rate from 100 kcal/hr to more than 1000 kcal/hr, 70% to 100% of which is released as heat.²



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Physiology

As the core temperature exceeds the hypothalamic set point, heat avoidance behavior is induced, and both sympathetic and parasympathetic tones are augmented.

Increased sympathetic tone increases cardiac output, supporting cutaneous and skeletal muscle vasodilation, allowing for radiation of heat, delivering plasma for sweat and oxygen for exertion, with contraction of splanchnic circulation.

Parasympathetic tone modulates sweating, increasing to 2.5 liters per hour in an acclimated person during strenuous exercise.³ Heat shock

proteins (HSP) act as molecular chaperones that prevent denaturing of other proteins at higher temperatures. Initial heat stress triggers increase HSP expression, which protects cells from a second heat exposure.⁴ Any process or comorbidity that interferes with cardiac output, va-

TABLE 1.
Key Risk Factors for Heat Illness or Heat-Related Death^{9,10}

<p>Age</p> <ul style="list-style-type: none"> ■ Elderly (>65 years old) or very young (<5 years old) <p>Chronic disease</p> <ul style="list-style-type: none"> ■ Cardiac ■ Mental illness ■ Endocrine ■ Nutrition ■ Infection <p>Drugs</p> <ul style="list-style-type: none"> ■ Sympathomimetics ■ Neuroleptics ■ Cardiovascular ■ Diuretics ■ Alcohol ■ Anticholinergics 	<p>Behavior</p> <ul style="list-style-type: none"> ■ Failure or inability to seek cool environment ■ Left unattended in car ■ Low fluid intake ■ Drugs and alcohol ■ Lack of acclimatization <p>Living conditions</p> <ul style="list-style-type: none"> ■ Lack of access to air conditioning ■ Urban ■ Low income ■ Social isolation <p>Prolonged outdoor activities</p> <ul style="list-style-type: none"> ■ Agricultural workers ■ Runners ■ Child/adolescent athletes ■ Laborers ■ Undocumented border crossers
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Increased TBW allows increased cardiac output. Dehydration causes a reduction in available cardiac output, and greatly reduces the benefits of acclimatization.³

Epidemiology

Heat illnesses are a growing concern. It is estimated that there are 60,000 presentations for heat-related illness a year in the U.S., with an average of 688 deaths per year.^{6,7} This figure does not include the deaths of undocumented migrants crossing the border between the U.S. and Mexico, which between 2002 and 2003 was estimated to be 409 persons, just for the border section between Yuma, AZ and El Paso, TX.⁸

Several populations have increased risk of heat illness (**Table 1**). The elderly and the very young, patients with comorbidities, patients taking medications or drugs that interfere with heat homeostasis (**Table 2**), and persons with limited cognitive ability, low socioeconomic status, and mental illness are at elevated risk. Relatively young adults such as athletes, laborers, and border crossers are susceptible during high exertional states, even in moderate temperatures.

Diagnosis and Management

Key elements of the history include exposure, acclimatization status, comorbidities, drug and alcohol history, and a medication history (**Table 3**). Knowledge of

TABLE 2.
Therapeutic and Recreational Drugs That May Contribute to Heat Illness—and Their Mechanisms^{9,10}

Drug category	Relevant mechanism
Diuretic (e.g., alcohol [ADH suppression], furosemide, HCTZ)	Deplete intravascular volume
Cardiovascular (e.g., beta blockers, calcium channel blockers)	Decreased cardiac output and vascular resistance impairs cutaneous vasodilation
Anticholinergic (e.g., antihistamines, Parkinsonian medications, atropine/scopolamine, tricyclic antidepressants, neuroleptics)	Inhibit sweating
Sympathomimetic (e.g., cocaine, amphetamines, ephedrine/pseudoephedrine)	Vasoconstriction, increased muscle activity, increased metabolic rate
Neuroleptic (e.g., phenothiazines, thioxanthenes, butyrophenones)	Inhibit sweating (anticholinergic); inhibit hypothalamus-directed vasodilation

sodilatation, sweating or sweat evaporation, electrolyte balance, or normal behavioral response can impair temperature homeostasis.

Acclimatization requires one hour daily of moderate exercise for 10 to 14 days in conditions of heat stress.⁵ Acclimatized persons have increased sweat gland numbers, sweat volume, and salt reabsorption, leading to enhanced ability to dissipate heat by evaporation, reduced hyponatremia, and increased total body water (TBW).

patients' social resources is crucial for disposition decisions and preventative counseling.

The physical examination should focus on vital signs, general appearance and mental status, hydration status, skin condition, and the cardiovascular and nervous systems.

Vital signs, including orthostatics to assess volume status, help sort patients into those with relatively minor versus major heat illnesses.

Skin conditions, including heat rash and sunburn, interfere with sweating and evaporative heat losses.¹¹

Anhidrosis should be assessed in the axilla, as forehead sweating is an unreliable marker.⁵

Hydration can be assessed from pulse and blood pressure, fontanel, oropharynx mucous membranes, lacrimation, sweating, active vomiting or diarrhea, and urine color and output.

Cardiovascular examination should focus on murmurs, especially in exertion-related syncope, and heart failure signs. In exertional heat illness, it is important to assess for muscle tenderness, considering rhabdomyolysis.

Altered mental status or an abnormal neurologic examination should prompt immediate transfer to a higher level of care, even if the patient's temperature is normal (**Table 4**).

Heat Syndromes

There are several common entities seen in urgent care centers related to heat exposure, ranging from minor annoyances to higher risk for significant morbidity. These include heat rash, heat edema and heat syncope, heat cramps, and heat exhaustion (**Table 5**).

Heat Rash

Heat rash, also known as prickly heat, lichen tropicus, and miliaria rubra, occurs when sweat ducts are blocked by dead skin. Tiny vesicles form as sweat accumulates under the skin, resulting in pruritis. Chronic vesicles can rupture into the surrounding tissue, causing skin thickening and scarring. Secondary *Staphylococcus* and *Streptococcus* infections can occur.

Treatment includes antihistamines for pruritis, cool baths, and time in a cool environment. Chronic heat rash will need dermatologic follow-up for treatment with salicylate gels to avoid scarring.⁷

TABLE 3.
Key Elements of History

HPI	Chief complaint, length of exposure to heat stress, exertion, hydration
PMH	Comorbidities, especially cardiac and mental health, acclimatization status, mobility, medications, drugs and alcohol, social support, access to air conditioning
Associated symptoms and ROS	Fainting, weakness, lightheadedness, thirst, nausea, vomiting, diarrhea, urine output and color, muscle cramps and myalgias, headache, seizure, behavior change, rash, sunburn, sweating

TABLE 4.
Key Elements of Physical Examination

Vital signs	Temperature (preferably rectal) Pulse Respiratory rate Blood pressure and orthostatics Pulse oximetry Random fingerstick blood glucose – Diabetics – Suspected altered mental status
General	Mental status, body habitus, ill or not ill, motor activity level
Skin	Color and perfusion, pallor, cyanosis Diaphoresis, axillary anhidrosis miliary rash, sunburn
HEENT	Fontanel level, tears, oropharynx hydration
Pulmonary	Tachypnea, apnea
Cardiovascular	Tachycardia, bradycardia, dysrhythmias, murmur, heart sounds
Abdomen	Ability to tolerate oral fluids, vomiting, diarrhea
GU	Urine color, output
Musculoskeletal	Muscle tenderness or spasm, edema
Neurological	Cognitive ability, focal neurological deficits
Psychiatric	Reality testing, bizarre affect

Heat Edema

Heat edema occurs mostly in older individuals who are adjusting to an increased heat strain. Vasodilatation, in combination with relative venous stasis, causes blood pooling. No dehydration or salt imbalance is usually present, and diuretics are not warranted. This must be distinguished from more worrisome causes, including deep vein thrombosis (DVT), nephrotic syndrome, liver failure, and congestive heart failure. Heat edema is a be-

TABLE 5.
Heat Stress Syndromes^{7,10,12}

	Heat rash	Heat edema	Heat syncope	Heat cramps	Heat exhaustion	Heat stroke
Mechanism	Macerated skin blocks sweat glands, vesicles form Chronic rash when vesicles rupture deep	Pooling of blood with vasodilatation, venous stasis	Vasodilatation and lack of venous return from posture cause transient hypotension	Unclear: Loss of sodium in sweat Dehydration Plain water hydration Spinal reflex ¹⁴	Prolonged exposure over hours or days to heat stress, dehydration Exacerbated by exertion	Heat stress from internal and external sources overwhelms ability of body to dissipate heat; leads to shock
History	Lack of rest in cool environment, sweating	Elderly, not acclimatized	Prolonged standing in heat Responds immediately to lowered posture, cooling	Painful spasm in exerted muscle groups, during or hours after exercise Previous history, not acclimatized, drinking water only, anorexia	Lack of access to cooling Exertion Nonspecific: Headache, malaise, dizziness, nausea, vomiting, irritability	Risk factors AMS Similar to heat exhaustion
Signs	Vesicles Erythematous Pruritic Chronic lichenification scarring	Pitting or nonpitting edema of lower extremities, usually not beyond ankles Hands may be edematous	Transient hypotension Responds rapidly to rest, cooling	Spasm, fasciculation in large muscle groups, usually flexor	Diaphoresis Tachycardia, tachypnea Normal or elevated core temperature	AMS Core temperature >39.5 C Hypotension
Laboratory tests	None	None	None routinely Elderly/comorbid/ exerting need EKG, labs, imaging appropriate for syncope work-up	Electrolytes often normal Hyponatremia Hypokalemia Creatinine kinase	Electrolytes Renal function Creatinine kinase Liver function Coagulation studies	Transfer to higher level of care for extensive laboratory tests
Treatment	Antihistamines Cool environment	Elevation Compression stockings	Fluids Rest Cool environment Acclimatization	Fluids Pain control	Fluids Rest Cool environment Acclimatization Protect from re-exposure	ABCs Begin cooling/hydrating, air conditioning, fan water spray
Concerning differential diagnosis	Secondary infection Heat exhaustion	CHF DVT Liver disease Nephrotic syndrome	Hypertrophic heart ACS Dysrhythmias Stroke Seizure Heat stroke	Rhabdomyolysis Heat exhaustion	Heat stroke: AMS Hypotension Core temperature >39.5° C Rhabdomyolysis Septic shock	Neuroleptic malignant syndrome Serotonin syndrome
Red flags	Inhibits sweating	Should not extend above ankles		Ask about eating disorders	Altered mental status	
Disposition	<i>Discharge:</i> Follow up dermatology if chronic	Discharge	<i>Admit:</i> Any concern for serious cause <i>Discharge:</i> Simple heat syncope <i>Follow-up:</i> Cardiology for IHC	<i>Discharge</i> Avoid exertion for 1-3days Must re-acclimate	<i>Admit:</i> Risk factors No access to air conditioning Not responding to treatment <i>Discharge:</i> Responds to cooling and fluids	Medical emergency Transfer to a higher level of care immediately

nign condition that is self-limiting, and may be treated with elevation and compression stockings. Follow-up with a primary care provider is recommended in seven to 10 days (or sooner if the condition does not improve with conservative measures).

Heat Syncope

Heat syncope occurs when peripheral vasodilatation and impedance to venous return caused by posture combine to lower the blood pressure enough to interrupt cerebral blood flow. Classically, military personnel

standing at attention with locked knees are at risk.

Persons usually recover promptly with lowered head, elevated lower extremities, and a cooler environment.

Differential diagnosis for syncope includes concerning entities such as idiopathic hypertrophic cardiomyopathy, dysrhythmias, acute coronary syndrome, and cerebral vascular accident.

In a young, non-exerting, otherwise healthy individual who responds to appropriate therapy, disposition may include discharge home. However, advanced age, comorbidities, and a history of exertion at time of syncope re-

quire further testing. In young patients with exertional syncope, restriction on activity level pending a referral to a cardiologist for further work-up is appropriate. Aggressive search for serious disease must be made in older patients and patients with comorbidities, and admission or transfer to a higher level of care is appropriate.

Heat Cramps

Heat cramps are defined as motor unit hyperactivity in major muscle groups, usually thigh or leg, during or several hours after prolonged exertion under heat stress.

The exact mechanism is not clear. It was originally thought that hyponatremia due to excess sweating and hydrating with water caused heat cramps. However, heat cramps can occur before any rehydration has taken place, and many patients with heat cramps have no electrolyte or serum osmolarity derangements. A spinal reflex caused by overexertion has also been proposed as a mechanism.¹³

The two most useful prophylactic steps to prevent heat cramps are heat acclimatization and consuming adequate water during exercise. Relative muscle dehydration appears before the subject experiences thirst, so the advice should be to consume water at regular intervals during exercise even if the athlete does not feel thirsty.

Treatment for heat cramps includes rehydration with an oral salt solution or IV normal saline, as well as pain control, which may require narcotics. Electrolytes should be checked and replaced as needed, and creatinine kinase levels measured to rule out rhabdomyolysis. Typically, heat cramps respond rapidly to treatment, rarely lasting for more than 15 minutes during a flare-up. They can produce agonizing spasms during a flare-up, and can recur several times over the next 24 to 48 hours. During the recovery period, the patient should avoid exertion since the spasms can be triggered by a normal muscular contraction. Unfortunately, they can be triggered during sleep, and awaken the patient with severe pain. The painful contractions are usually in the flexor muscles, and hyperextension of the involved muscle may overcome the spasm. When they involve the hamstring flexors, extension of the hip and knee are useful, as is standing up, and slow mild pacing.

Icing the involved muscles may provide the patient with pain relief, and mild analgesics are useful when the cramps subside.

In the elderly patient who is perhaps already on a diuretic agent for hypertension, the cramps are worsened

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by any potassium imbalance. Many of these patients will obtain relief from potassium oral supplementation even when the serum electrolyte level of potassium is normal.

Heat Exhaustion

Heat exhaustion is generally a result of prolonged exertion or prolonged exposure to a higher heat index than normal. Symptoms are nonspecific, and can include any of the above syndromes, as well as lightheadedness, malaise, fatigue, headache, nausea, vomiting, decreased urine output, and thirst. Dehydration and electrolyte abnormalities are common but not necessary to the diagnosis, and patients with a history of exertion need to have rhabdomyolysis excluded.

Patients with heat exhaustion need to be in a cool, air conditioned environment, and inappropriate extra clothing should be removed. Hydration can usually be accomplished with oral salt solution or normal saline, with electrolyte correction as necessary. Patients should respond to cooling and hydration; any patient with persistent symptoms or comorbidities should be admitted to the hospital.

Prudent discharge requires that the patient have access to a cool, air conditioned environment for the next 48 to 72 hours, especially for those with risk factors for heat illness.

Elderly patients, patients with limited mobility, and mentally ill or retarded patients need a caretaker or family member to check on them at least twice a day during periods of higher than normal heat or humidity. Close follow-up should be arranged. Workers and athletes likewise require 48 to 72 hours of decreased activity in a cool environment, and must re-acclimate.

Heat Stroke

Heat stroke needs to be considered in patients with core temperatures above 39.5 °C, anhidrosis, or any alteration in mental status. These patients must be immediately transferred to a higher level of care. This is a true life-threatening emergency.

Prevention

All patients with heat illness are at higher risk for relapse in the short term and for recurrence in the long term. It is important to avoid re-exposure for two to three days, as heat shock proteins and body water composition take time to equilibrate. Athletes and laborers will need to re-acclimatize after a period of rest, and cannot immediately resume their previous level of exertion.

It is appropriate to counsel *all* patients regarding heat illnesses during the summer months, regardless of their presenting complaint.

During the course of weather episodes in which the daily high temperature might exceed 90° F, or 80° F (32 °C or 27°C, respectively) with high humidity, urgent care physicians can reduce the burden of heat illness with brief counseling, educational handouts, and posters. Excellent patient information sources are available.^{14,15}

Patients should be counseled to hydrate liberally, unless specifically contraindicated. Inactive individuals need four liters of fluids or more daily during heat waves, and the exerting adult may need up to 10 liters daily. Thirst is an unreliable indication of hydration status, as it is mainly stimulated by hypernatremia, and hydration must often be scheduled.

Exerting adults should drink 250 mL of fluid every 15 to 20 minutes during exercise, and children should drink 150 mL. It is often impossible to hydrate enough during exercise, and hydration must begin before activity and continue afterwards.

Thirst is stimulated by eating; hydration at meals in addition to during activities is necessary. Electrolyte solution is generally unnecessary for people consuming a normal diet, and has only been shown to increase exercise tolerance during the first three days of acclimatization.³ However, if the taste is more tolerable, especially to children, this may encourage hydration. Patients not consuming a normal diet, exerting heavily for prolonged periods of time, or with gastroenteritis will benefit from electrolyte solutions, and there should be no hesitation to use intravenous fluids.

Air conditioning for as little as three hours per day is the only intervention known to be protective against heat stroke during heat waves.¹⁶ For this reason, some

urban areas have heat wave response plans that include heat shelters, such as malls. Fans have not been shown to be protective.¹⁷

Exertion should, if possible, occur in the early morning or late afternoon or evening, avoiding activity during the heat of the day. Outdoor laborers should be given regular rest and hydration breaks; an air conditioned rest area is protective against heat illness and maximizes exercise tolerance.

Summary

Heat illness has an unknown incidence, but heat stroke is the second largest cause of environmental or weather-caused mortality—more than hurricanes, tornados, and lightning combined, second only to hypothermia.¹⁸ It is preventable through public health measures, education, and early intervention.

Most presentations of heat illness can be quickly and adequately treated by the urgent care provider, and serious morbidity and mortality can be avoided by attending to risk factors, excluding serious diagnoses, preventing complications, and promptly recognizing severe disease. Preventative education remains an important part of the urgent care provider's role. ■

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Bouncebacks

The Case of a 33-Year-Old Male with Abdominal Pain

Bouncebacks, in which we recount scenarios of actual patients who were evaluated in and discharged from an emergency department or urgent care facility and then “bounced back” for further treatment, appears semimonthly in JUCM.

Case presentations on each patient, along with case-by-case risk management commentary by Gregory L. Henry, past president of The American College of Emergency Physicians, and discussions by other nationally recognized experts are detailed in the book *Bouncebacks! Emergency Department Cases: ED returns* (2006, Anadem Publishing, www.anadem.com).

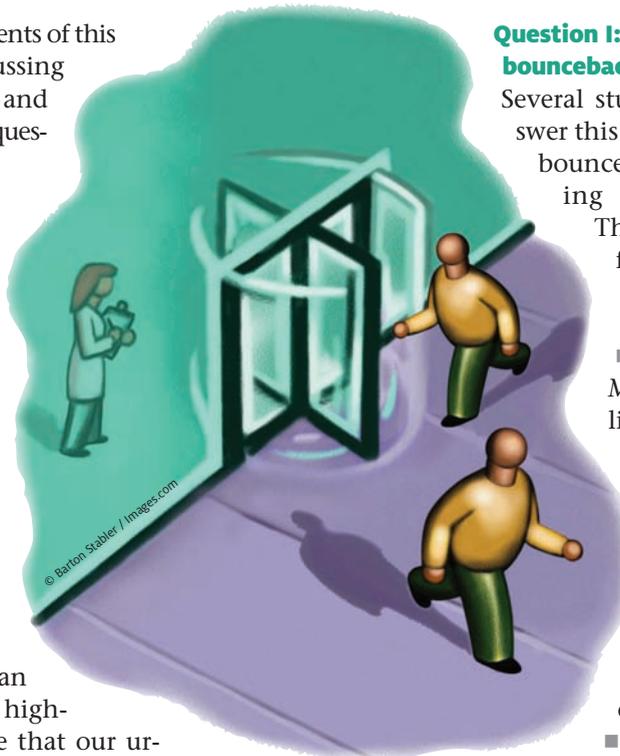
Ryan Longstreth, MD, FACEP and Michael B. Weinstock, MD

Over the next few installments of this series, we will be discussing “bounceback” studies, and answering the following questions, in sequence:

- What is the incidence of bouncebacks?
- What is the incidence of bounceback admissions?
- What is the incidence of deaths in patients recently discharged from the ED?
- What percent of bouncebacks occur because of medical errors?
- How can we use this information to improve patient safety?

Our feeling is that if we can use these data to identify high-risk patients, we can assure that our urgent care evaluation was appropriate.

If we can identify patients who are more likely to bounce back, we can revisit their evaluation *before* they leave the urgent care center.



Question 1: What is the incidence of bouncebacks?

Several studies have attempted to answer this question, using 72 hours as a bounceback “window” and producing strikingly similar results.

Though the data were gathered from emergency departments, they may also be applied to the urgent care setting.

- 1998, *Annals of Emergency Medicine*: Gordon, et al published a study of 52,553 ED visits during a 12-month period and found a return rate of 2.7%.
- 1992, *Archives of Emergency Medicine*: Wilkins and Beckett’s audit of 5,811 ED visits found 102 unscheduled returns, a rate of 1.9%.

■ 1991, *Archives of Emergency Medicine*: O’Dwyer and Bodiwala

published a study encompassing more than 8,000 ED visits; they found a bounceback rate of 2.9%.

- 1990, *Annals of Emergency Medicine*: Pierce, et al published a study of 17,214 visits and found a 3% bounceback rate.

So, the incidence of ED bouncebacks is felt to be roughly 3%; this translated into 3.3 million return visits in 2005 (of 115 million ED visits total).

Which patients are most likely to return?

Pierce found that 18% of bouncebacks were due to physician-related factors, and that 30% required hospitalization upon their return. Reasons for the bounceback visits included:

- misdiagnosis
- treatment error
- admission indicated at initial visit
- psychiatric illness with admission indications
- radiology call-back
- no pain medication given

This month's *JUCM* case reinforces several general risk management principles, primarily the kind of "misdiagnosis" cited by Pierce, above.

The patient is a 33-year-old man who presents with abdominal pain and is discharged without a definitive diagnosis. In this case, stronger documentation and timelier follow-up may have ensured a better outcome, decreased patient morbidity, and minimized the practitioner's malpractice exposure in a clearly high-risk patient.

As with previous cases we have presented, this case illustrates the utility of our two-step approach:

1. Identify high-risk patients (i.e., patients with a high-risk complaint and without a definitive diagnosis).
2. Review the patients' evaluations *before* they leave the urgent care clinic.

See how many "red flags" you can spot, and consider if you would have done anything differently.

A 33-Year-Old Male with Abdominal Pain

Initial Visit

(Note: The following is the actual documentation of the providers, including punctuation and spelling errors.)

CHIEF COMPLAINT (at 20:50): Abdominal pain

Time	Temp	Pulse	Resp	Syst	Diast	Pain
21:16	98.0	72	18	128	60	10
23:33		76	16	104	64	2

HISTORY OF PRESENT ILLNESS (at 21:06): He is a 33 year old male who states that at 7pm, after having

normal BM, he developed gradual onset of RLQ and lower abdominal pain. He describes it as a bloating, spasm pain. After BM, pt noted urinary stream cut off and was no longer able to urinate. Gradually pain got worse, intermittent RLQ pain radiated into the right groin and testicles. Pain is 8/10 with spasms, mild nausea with pain. No dysuria, hematuria, testicular swelling, flank pain, chest pain, or fever/chills. Pt has no history of kidney stones but grandfather had many kidney stones.

PAST MEDICAL HISTORY/TRIAGE:

Medications: Claritin D

Allergies: No known allergies

PMH: None

PSH: None

EXAM (at 21:15):

General: Well-appearing; well-nourished; A&O X 3, in no apparent distress

Head: Normocephalic; atraumatic.

Eyes: PERRL

Nose: The nose is normal in appearance without rhinorrhea

Resp: Normal chest excursion with respiration; breath sounds clear and equal bilaterally; no wheezes, rhonchi, or rales

Card: Regular rhythm, without murmurs, rub or gallop

Abd: Non-distended; Tender RLQ but no rebound. Mild right flank/side pain. No rigidity, rebound or guarding

Skin: Normal for age and race; warm and dry; no apparent lesions

GU Exam: External genitalia normal, no urethral discharge, testes descended bilaterally. No lesions noted on penis or scrotum. Epididymus normal bilaterally.

ORDERS (at 21:25): Dilaudid 1 mg IVP, Toradol 30 mg IVP, Phenergan 12.5 mg IVP, .9NS-500cc bolus then 125cc/hr.

RESULTS (at 22:09):

Urine dip: WNL except: Bilirubin-1 mg/dL

Noncontrast helical CT of the abdomen/pelvis (at 22:29)-Unremarkable helical CT of the abdomen and pelvis.

PROGRESS NOTE (at 23:23): Pt felt much better but

still had pain into the lower abd. bilaterally with sitting up.

DIAGNOSIS: Abdominal pain, unspecified site, suspect bladder spasms.

DISPOSITION (at 23:41): The patient was discharged to Home ambulatory. Follow-up with primary care physician in 2 days. Prescription for Vicodin 5mg. Aftercare instructions for abdominal pain and kidney stone/renal colic.

Discussion of Documentation and Risk Management Issues at Initial Visit

Error 1

Error: Failure to maintain a thorough differential diagnosis.

Intervention: The history seems to have led the physician down a ureteral calculus/spasm pathway. This was appropriate, given the patient’s symptoms. Although it is not uncommon to see ureterolithiasis without hematuria, a CT that fails to show a ureteral stone or hydronephrosis combined with a normal urine should suggest another cause for the pain, and should prompt the provider to move further down the

differential. RLQ tenderness and pain radiating to the testicles may be due to acute appendicitis, incarcerated hernia or testicular torsion, yet it does not appear the practitioner considered these diagnoses. Perform additional evaluation (H&P and/or further testing) when things just don’t add up.

Teaching point: Start with a broad differential diagnosis when evaluating undifferentiated abdominal pain, focusing on high-risk/surgical diagnosis and use ancillary testing to hone in on your diagnosis. Understand the limitations of your tests.

Error 2

Error: Failure to perform serial abdominal examinations.

Intervention: There is only one abdominal exam documented on this chart. Abdominal pain is a high-risk complaint and serial exams may discover an acute appendicitis or another surgical process that was not evident on initial assessment. Some clinicians seem to feel the best use for labs is that the patient spends more time in the ED/urgent care clinic, which allows his disease to progress to the point where it is easier to make an accurate diagnosis. A more responsible



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course of action, if it is not possible for the patient to wait in the urgent care clinic, is to send him to an ED.

Teaching point: The workup for abdominal pain is often a time-intensive process; use this to your advantage and be sure to perform and document serial exams.

Error 3

Error: Failure to document medical decision making in a potentially high-risk patient.

Intervention: Not all high-risk complaints require a “million dollar workup,” but good documentation is essential. It is not clear from this chart which diagnoses were considered, as the progress note simply states “...still had pain into the lower abd. bilaterally with sitting up.” It is wise to involve the patient and family in this discussion.

Teaching point: Document a progress note regarding medical decision making when dealing with high-risk patients, such as undifferentiated, ongoing abdominal pain.

Error 4

Error: Failure to provide appropriate time for follow-up.

Intervention: An unremarkable helical CT scan of the abdomen makes appendicitis less likely, but does not exclude the diagnosis. The patient was instructed to follow up with his primary care physician in two days—a timeframe in which the appendix would be likely to rupture. In light of the fact that the patient was documented to have ongoing lower pain, and because appendicitis was still a distinct possibility, the patient should have been reexamined within eight to 12 hours. In such a case, if the patient can't get in to see his primary care physician, then tell him to return to the urgent care for a repeat exam or to go to an ED.

Teaching point: If you are concerned about acute appendicitis, prompt repeat examination within eight to 12 hours (not two days) will improve patient safety and minimize your malpractice exposure.

33-Year-Old Male with Abdominal Pain Return Visit—Less Than 24 Hours Later

The patient returned 21 hours later with ongoing abdominal pain, now with associated vomiting and fever. In addition, he was now tachycardic, appeared quite ill,

“If appendicitis is a consideration, reexamine the patient within eight to 12 hours.”

and had right lower quadrant tenderness with a (+) Rovsing's sign and guarding.

White blood count was 16K.

The patient was given meperidine and cefotetan and taken to the operating room, where he was found to have a retrocecal appendicitis, with rupture. He went

on to develop a post-operative ileus and went home five days later without further complications.

Summary of Case and Risk-Management Principles

Our patient described RLQ pain and difficulty urinating, which ultimately led the practitioner down the kidney stone pathway. However, when the imaging did not demonstrate a urinary obstruction, the workup stopped. The patient had unexplained, ongoing abdominal pain—clearly a high-risk patient, warranting early and aggressive follow-up.

Unfortunately, it does not appear that appendicitis was in the differential because the patient was told to follow up in two days, a time span in which it was likely that the appendix would rupture.

If appendicitis is a consideration, the patient should be reexamined within eight to 12 hours.

Practitioners must develop a broad differential diagnosis for any chief complaint and then use the history, physical exam, and ancillary testing to rule in or out a specific disease. While there was a strong workup here for renal colic, the workup was aborted when the scan was negative. The practitioner would have been best served to go back, obtain additional history, perform a repeat exam, discuss the possibility of appendicitis with the patient, and develop a time-appropriate follow-up.

Application of our two-step approach may have improved patient outcome. The practitioner would have recognized this to be a high-risk patient due to ongoing abdominal pain without a definitive diagnosis. He/she would have then obtained additional pertinent history, re-examined the patient, and documented serial abdominal exam. This would have enabled the practitioner to consider additional diagnoses and then document a thorough progress note and discuss the time-appropriate follow-up with the patient and his family. ■

For suggested readings associated with this article, please log on to www.jucm.com

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STERILE OTIC SUSPENSION

CIPRODEX[®] Otic is indicated in patients 6 months and older for acute otitis externa due to *Staphylococcus aureus* and *Pseudomonas aeruginosa*. CIPRODEX[®] Otic is contraindicated in patients with a history of hypersensitivity to ciprofloxacin, to other quinolones, or to any of the components in this medication. Use of this product is contraindicated in viral infections of the external canal including herpes simplex infections. CIPRODEX[®] Otic should be discontinued at the first appearance of a skin rash or any other sign of hypersensitivity. Serious and occasionally fatal hypersensitivity (anaphylactic) reactions, some following the first dose, have been reported in patients receiving systemic quinolones. Serious acute hypersensitivity reactions may require immediate emergency treatment. If the infection is not improved after one week of treatment, cultures should be obtained to guide further treatment. Most commonly reported adverse reactions in clinical trials in AOE patients: pruritus (1.5%), ear debris (0.6%), superimposed ear infection (0.6%), ear congestion (0.4%), ear pain (0.4%) and erythema (0.4%).

CIPRODEX[®]

(ciprofloxacin 0.3% and dexamethasone 0.1%)
STERILE OTIC SUSPENSION

DESCRIPTION

CIPRODEX[®] (ciprofloxacin 0.3% and dexamethasone 0.1%) Sterile Otic Suspension contains the synthetic broad-spectrum antibacterial agent, ciprofloxacin hydrochloride, combined with the anti-inflammatory corticosteroid, dexamethasone, in a sterile, preserved suspension for otic use. Each mL of CIPRODEX[®] Otic contains ciprofloxacin hydrochloride (equivalent to 3 mg ciprofloxacin base), 1 mg dexamethasone, and 0.1 mg benzalkonium chloride as a preservative. The inactive ingredients are boric acid, sodium chloride, hydroxyethyl cellulose, tyloxapol, acetic acid, sodium acetate, edetate disodium, and purified water. Sodium hydroxide or hydrochloric acid may be added for adjustment of pH.

Ciprofloxacin, a fluoroquinolone is available as the monohydrochloride monohydrate salt of 1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)-3-quinolonecarboxylic acid. The empirical formula is C₁₇H₁₈FN₃O₃·HCl·H₂O. Dexamethasone, 9-fluoro-11(β),17,21-trihydroxy-16(α)-methylpregna-1,4-diene-3,20-dione, is an anti-inflammatory corticosteroid. The empirical formula is C₂₂H₂₉FO₅.

CLINICAL PHARMACOLOGY

Pharmacokinetics: Following a single bilateral 4-drop (total dose = 0.28 mL, 0.84 mg ciprofloxacin, 0.28 mg dexamethasone) topical otic dose of CIPRODEX[®] Otic to pediatric patients after tympanostomy tube insertion, measurable plasma concentrations of ciprofloxacin and dexamethasone were observed at 6 hours following administration in 2 of 9 patients and 5 of 9 patients, respectively.

Mean ± SD peak plasma concentrations of ciprofloxacin were 1.39 ± 0.880 ng/mL (n=9). Peak plasma concentrations ranged from 0.543 ng/mL to 3.45 ng/mL and were on average approximately 0.1% of peak plasma concentrations achieved with an oral dose of 250-mg^[3]. Peak plasma concentrations of ciprofloxacin were observed within 15 minutes to 2 hours post dose application. Mean ± SD peak plasma concentrations of dexamethasone were 1.14 ± 1.54 ng/mL (n=9). Peak plasma concentrations ranged from 0.135 ng/mL to 5.10 ng/mL and were on average approximately 14% of peak concentrations reported in the literature following an oral 0.5-mg tablet dose^[4]. Peak plasma concentrations of dexamethasone were observed within 15 minutes to 2 hours post dose application. Dexamethasone has been added to aid in the resolution of the inflammatory response accompanying bacterial infection (such as otorrhea in pediatric patients with AOM with tympanostomy tubes).

Microbiology: Ciprofloxacin has *in vitro* activity against a wide range of gram-positive and gram-negative microorganisms. The bactericidal action of ciprofloxacin results from interference with the enzyme, DNA gyrase, which is needed for the synthesis of bacterial DNA. Cross-resistance has been observed between ciprofloxacin and other fluoroquinolones. There is generally no cross-resistance between ciprofloxacin and other classes of antibacterial agents such as beta-lactams or aminoglycosides.

Ciprofloxacin has been shown to be active against most isolates of the following microorganisms, both *in vitro* and clinically in otic infections as described in the **INDICATIONS AND USAGE** section.

Aerobic and facultative gram-positive microorganisms: *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis*, *Pseudomonas aeruginosa*.

INDICATIONS AND USAGE: CIPRODEX[®] Otic is indicated for the treatment of infections caused by susceptible isolates of the designated microorganisms in the specific conditions listed below: **Acute Otitis Media** in pediatric patients (age 6 months and older) with tympanostomy tubes due to *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis*, and *Pseudomonas aeruginosa*. **Acute Otitis Externa** in pediatric (age 6 months and older), adult and elderly patients due to *Staphylococcus aureus* and *Pseudomonas aeruginosa*.

CONTRAINDICATIONS

CIPRODEX[®] Otic is contraindicated in patients with a history of hypersensitivity to ciprofloxacin, to other quinolones, or to any of the components in this medication. Use of this product is contraindicated in viral infections of the external canal including herpes simplex infections.

WARNINGS

FOR OTIC USE ONLY (This product is not approved for ophthalmic use.) **NOT FOR INJECTION**

CIPRODEX[®] Otic should be discontinued at the first appearance of a skin rash or any other sign of hypersensitivity. Serious and occasionally fatal hypersensitivity (anaphylactic) reactions, some following the first dose, have been reported in patients receiving systemic quinolones. Serious acute hypersensitivity reactions may require immediate emergency treatment.

PRECAUTIONS

General: As with other antibacterial preparations, use of this product may result in overgrowth of nonsusceptible organisms, including yeast and fungi. If the infection is not improved after one week of treatment, cultures should be obtained to guide further treatment. If otorrhea persists after a full course of therapy, or if two or more episodes of otorrhea occur within six months, further evaluation is recommended to exclude an underlying condition such as cholesteatoma, foreign body, or a tumor. The systemic administration of quinolones, including ciprofloxacin at doses much higher than given or absorbed by the otic route, has led to lesions or erosions of the cartilage in weight-bearing joints and other signs of arthropathy in immature animals of various species. Guinea pigs dosed in the middle ear with CIPRODEX[®] Otic for one month exhibited no drug-related structural or functional changes of the cochlear hair cells and no lesions in the ossicles. CIPRODEX[®] Otic was also shown to lack dermal sensitizing potential in the guinea pig when tested according to the method of Buehler. No signs of local irritation were found when CIPRODEX[®] Otic was applied topically in the rabbit eye. **Information for Patients:** For otic use only. (This product is not approved for use in the eye.) Warm the bottle in your hand for one to two minutes prior to use and shake well immediately before using. Avoid contaminating the tip with material from the ear, fingers, or other sources. Protect from light. If rash or allergic reaction occurs, discontinue use immediately and contact your physician. It is very important to use the ear drops for as long as the doctor has instructed, even if the symptoms improve. Discard unused portion after therapy is completed. **Acute Otitis Media in pediatric patients with tympanostomy tubes:** Prior to administration of CIPRODEX[®] Otic in patients (6 months and older) with acute otitis media through tympanostomy tubes, the solution should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness which may result from the instillation of a cold solution. The patient should lie with the affected ear upward, and then the drops should be instilled. The tragus should then be pumped 5 times by pushing inward to facilitate penetration of the drops into the middle ear. This position should be maintained for 60 seconds. Repeat, if necessary, for the opposite ear (see **DOSAGE AND ADMINISTRATION**). **Acute Otitis Externa:** Prior to administration of CIPRODEX[®] Otic in patients with acute otitis externa, the solution should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness which may result from the instillation of a cold solution. The patient should lie with the affected ear upward, and then the drops should be instilled. This position should be maintained for 60 seconds to facilitate penetration of the drops into the ear canal. Repeat, if necessary, for the opposite ear (see **DOSAGE AND ADMINISTRATION**).

Drug Interactions: Specific drug interaction studies have not been conducted with CIPRODEX[®] Otic. **Carcinogenesis, Mutagenesis, Impairment of Fertility:** Long-term carcinogenicity studies in mice and rats have been completed for ciprofloxacin. After daily oral doses of 750 mg/kg (mice) and 250 mg/kg (rats) were administered for up to 2 years, there was no evidence that ciprofloxacin had any carcinogenic or tumorigenic effects in these species. No long term studies of CIPRODEX[®] Otic have been performed to evaluate carcinogenic potential. Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin, and the test results are listed below: *Salmonella*/Microsome Test (Negative), *E. coli* DNA Repair Assay (Negative), Mouse Lymphoma Cell Forward Mutation Assay (Positive), Chinese Hamster V79 Cell HGPRT Test (Negative), Syrian Hamster Embryo Cell Transformation Assay (Negative), *Saccharomyces cerevisiae* Point Mutation Assay (Negative), *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative), Rat Hepatocyte DNA Repair Assay (Positive). Thus, 2 of the 8 tests were positive, but results of the following 3 *in vivo* test systems gave negative results: Rat Hepatocyte DNA Repair Assay, Micronucleus Test (Mice), Dominant Lethal Test (Mice). Fertility studies performed in rats at oral doses of ciprofloxacin up to 100 mg/kg/day revealed no evidence of impairment. This would be over 100 times the maximum recommended clinical dose of otological ciprofloxacin based upon body surface area, assuming total absorption of ciprofloxacin from the ear of a patient treated with CIPRODEX[®] Otic twice per day according to label directions. Long term studies have not been performed to evaluate the carcinogenic potential of topical otic dexamethasone. Dexamethasone has been tested for *in vitro* and *in vivo* genotoxic potential and shown to be positive in the following assays: chromosomal aberrations, sister-chromatid exchange in human lymphocytes and micronuclei and sister-chromatid exchanges in mouse bone marrow. However, the Ames/Salmonella assay, both with and without S9 mix, did not show any increase in His⁺ revertants. The effect of dexamethasone on fertility has not been investigated following topical otic application. However, the lowest toxic dose of dexamethasone identified following topical dermal application was 1,802 mg/kg in a 26-week study in male rats and resulted in changes to the testes, epididymis, sperm duct, prostate, seminal vesicle, Cowper's gland and accessory glands. The relevance of this study for short term topical otic use is unknown.

Pregnancy

Teratogenic Effects. Pregnancy Category C: Reproduction studies have been performed in rats and mice using oral doses of up to 100 mg/kg and IV doses up to 30 mg/kg and have revealed no evidence of harm to the fetus as a result of ciprofloxacin. In rabbits, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion, but no teratogenicity was observed at either dose. After intravenous administration of doses up to 20 mg/kg, no maternal toxicity was produced in the rabbit, and no embryotoxicity or teratogenicity was observed. Corticosteroids are generally teratogenic in laboratory animals when administered systemically at relatively low dosage levels. The more potent corticosteroids have been shown to be teratogenic after dermal application in laboratory animals. Animal reproduction studies have not been conducted with CIPRODEX[®] Otic. No adequate and well controlled studies have been performed in pregnant women. Caution should be exercised when CIPRODEX[®] Otic is used by a pregnant woman.

Nursing Mothers: Ciprofloxacin and corticosteroids, as a class, appear in milk following oral administration. Dexamethasone in breast milk could suppress growth, interfere with endogenous corticosteroid production, or cause other untoward effects. It is not known whether topical otic administration of ciprofloxacin or dexamethasone could result in sufficient systemic absorption to produce detectable quantities in human milk. Because of the potential for unwanted effects in nursing infants, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: The safety and efficacy of CIPRODEX[®] Otic have been established in pediatric patients 6 months and older (937 patients) in adequate and well-controlled clinical trials. Although no data are available on patients less than age 6 months, there are no known safety concerns or differences in the disease process in this population that would preclude use of this product. (See **DOSAGE AND ADMINISTRATION**.) No clinically relevant changes in hearing function were observed in 69 pediatric patients (age 4 to 12 years) treated with CIPRODEX[®] Otic and tested for audiometric parameters.

ADVERSE REACTIONS

In Phases II and III clinical trials, a total of 937 patients were treated with CIPRODEX[®] Otic. This included 400 patients with acute otitis media with tympanostomy tubes and 537 patients with acute otitis externa. The reported treatment-related adverse events are listed below:

Acute Otitis Media in pediatric patients with tympanostomy tubes: The following treatment-related adverse events occurred in 0.5% or more of the patients with non-intact tympanic membranes.

Adverse Event	Incidence (N=400)
Ear discomfort	3.0%
Ear pain	2.3%
Ear precipitate (residue)	0.5%
Irritability	0.5%
Taste perversion	0.5%

The following treatment-related adverse events were each reported in a single patient: tympanostomy tube blockage; ear pruritus; tinnitus; oral moniliasis; crying; dizziness; and erythema. **Acute Otitis Externa:** The following treatment-related adverse events occurred in 0.4% or more of the patients with intact tympanic membranes.

Adverse Event	Incidence (N=537)
Ear pruritus	1.5%
Ear debris	0.6%
Superimposed ear infection	0.6%
Ear congestion	0.4%
Ear pain	0.4%
Erythema	0.4%

The following treatment-related adverse events were each reported in a single patient: ear discomfort; decreased hearing; and ear disorder (tingling).

DOSAGE AND ADMINISTRATION

CIPRODEX[®] OTIC SHOULD BE SHAKEN WELL IMMEDIATELY BEFORE USE

CIPRODEX[®] Otic contains 3 mg/mL (3000 µg/mL) ciprofloxacin and 1 mg/mL dexamethasone.

Acute Otitis Media in pediatric patients with tympanostomy tubes: The recommended dosage regimen for the treatment of acute otitis media in pediatric patients (age 6 months and older) through tympanostomy tubes is: Four drops (0.14 mL, 0.42 mg ciprofloxacin, 0.14 mg dexamethasone) instilled into the affected ear twice daily for seven days. The solution should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness, which may result from the instillation of a cold solution. The patient should lie with the affected ear upward, and then the drops should be instilled. The tragus should then be pumped 5 times by pushing inward to facilitate penetration of the drops into the middle ear. This position should be maintained for 60 seconds. Repeat, if necessary, for the opposite ear. Discard unused portion after therapy is completed. **Acute Otitis Externa:** The recommended dosage regimen for the treatment of acute otitis externa is: For patients (age 6 months and older): Four drops (0.14 mL, 0.42 mg ciprofloxacin, 0.14 mg dexamethasone) instilled into the affected ear twice daily for seven days. The solution should be warmed by holding the bottle in the hand for one or two minutes to avoid dizziness, which may result from the instillation of a cold solution. The patient should lie with the affected ear upward, and then the drops should be instilled. This position should be maintained for 60 seconds to facilitate penetration of the drops into the ear canal. Repeat, if necessary, for the opposite ear. Discard unused portion after therapy is completed.

HOW SUPPLIED

CIPRODEX[®] (ciprofloxacin 0.3% and dexamethasone 0.1%) Sterile Otic Suspension is supplied as follows: 5 mL fill and 7.5 mL fill in a DROP-TAINER[®] system. The DROP-TAINER[®] system consists of a natural polyethylene bottle and natural plug, with a white polypropylene closure. Tamper evidence is provided with a shrink band around the closure and neck area of the package. NDC 0065-8533-01, 5 mL fill; NDC 0065-8533-02, 7.5 mL fill. **Storage:** Store at controlled room temperature, 15°C to 30°C (59°F to 86°F). Avoid freezing. Protect from light.

Clinical Studies: In a randomized, multicenter, controlled clinical trial, CIPRODEX[®] Otic dosed 2 times per day for 7 days demonstrated clinical cures in the per protocol analysis in 86% of AOMT patients compared to 79% for ofloxacin solution, 0.3%, dosed 2 times per day for 10 days. Among culture positive patients, clinical cures were 90% for CIPRODEX[®] Otic compared to 79% for ofloxacin solution, 0.3%. Microbiological eradication rates for these patients in the same clinical trial were 91% for CIPRODEX[®] Otic compared to 82% for ofloxacin solution, 0.3%. In 2 randomized multicenter, controlled clinical trials, CIPRODEX[®] Otic dosed 2 times per day for 7 days demonstrated clinical cures in 87% and 94% of per protocol evaluable AOE patients, respectively, compared to 84% and 89%, respectively, for otic suspension containing neomycin 0.35%, polymyxin B 10,000 IU/mL, and hydrocortisone 1.0% (neo/poly/Hc). Among culture positive patients clinical cures were 86% and 92% for CIPRODEX[®] Otic compared to 84% and 89%, respectively, for neo/poly/Hc. Microbiological eradication rates for these patients in the same clinical trials were 86% and 92% for CIPRODEX[®] Otic compared to 85% and 85%, respectively, for neo/poly/Hc.

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U.S. Patent Nos. 4,844,902; 6,284,804; 6,359,016

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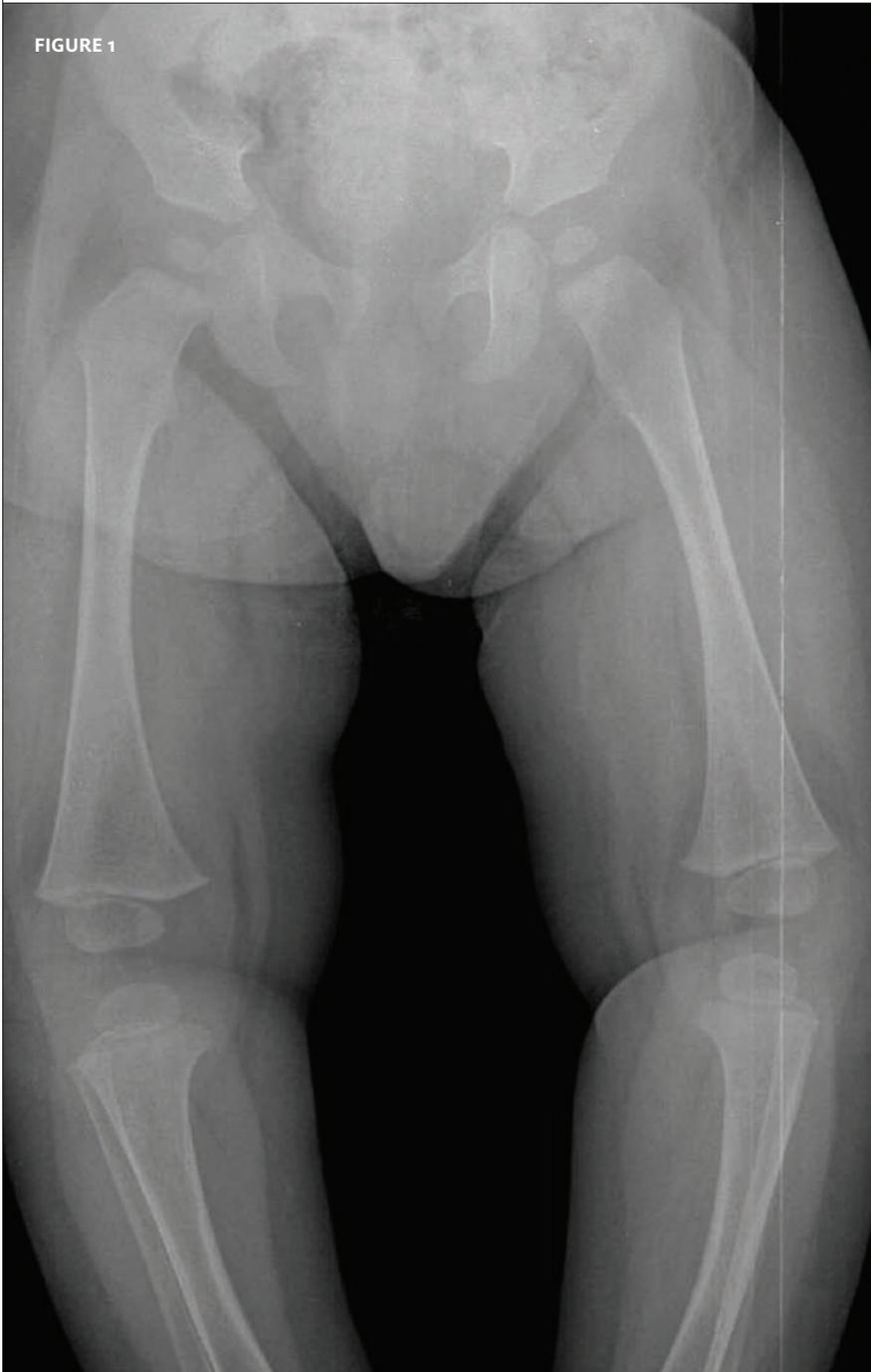
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In each issue, *JUCM* will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of dermatologic conditions that real urgent care patients have presented with.

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

FIGURE 1

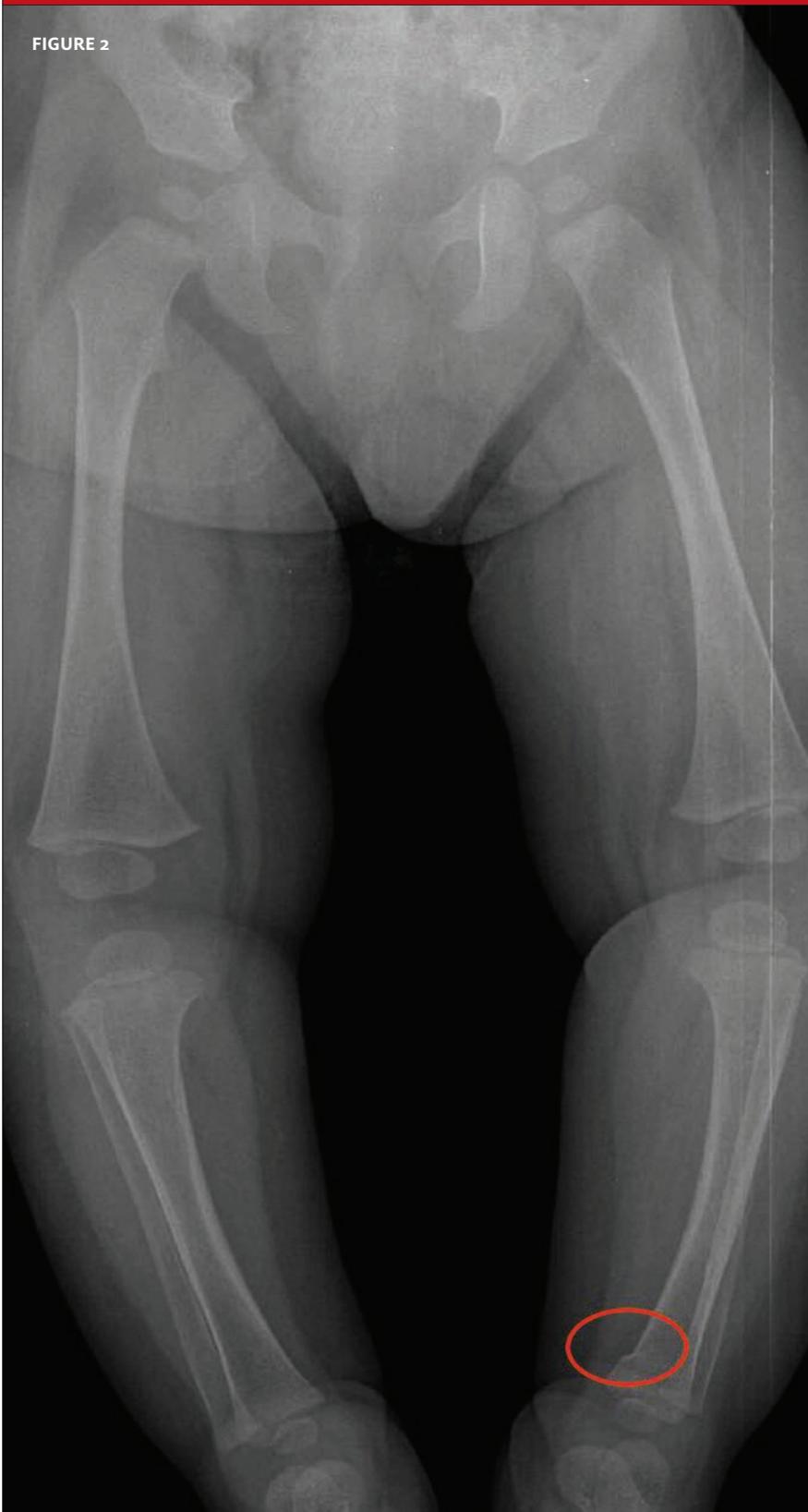


The patient is a 10-month-old child who presents, with the parents upon referral by the pediatrician, with a history of three days of pain, but no history of trauma. The child refuses to stand, presumably due to pain, and resists crawling.

View the x-ray taken (**Figure 1**) and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

FIGURE 2



The correct reading of the x-ray is: greenstick fracture of the distal tibia.

The x-ray was taken and the fracture identified by the urgent care physician. However, the child was placed in a cast splint after referral to hospital, with advice to follow up with an orthopedist.

While the patient could have been casted in the urgent care clinic, tibial fractures in such young children are considered higher risk for abuse; as a matter of policy such cases are typically referred to the hospital so social services staff can get involved immediately.

Acknowledgment: Case presented by Nahum Kovalski, BSc, MDCM.

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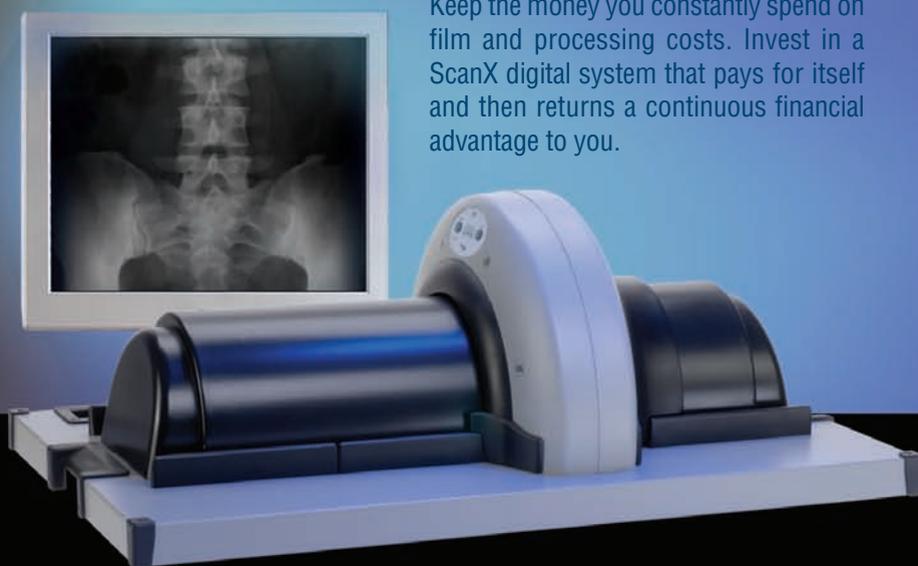
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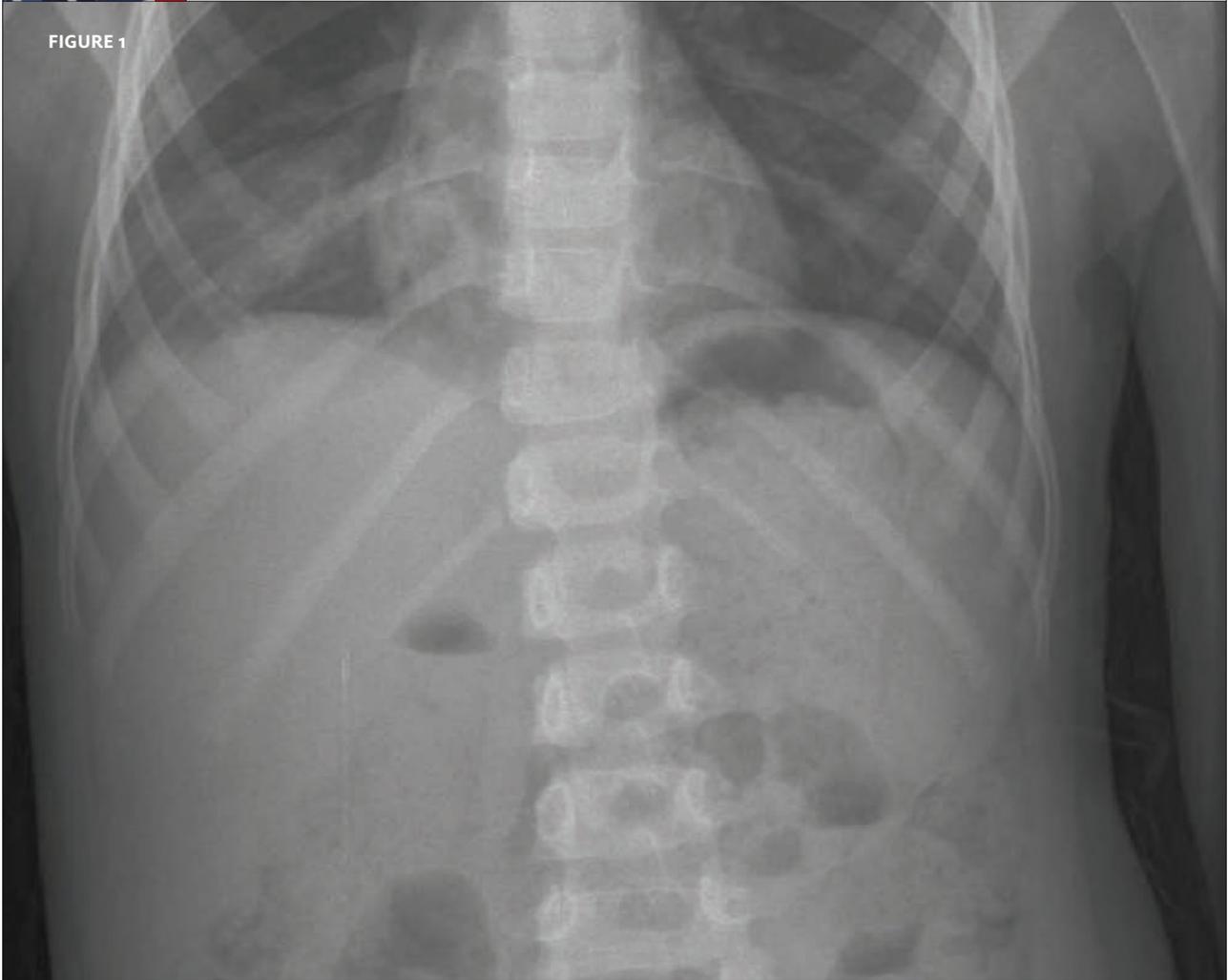
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FIGURE 1



The patient is a 5-year-old girl who presents with vomiting and abdominal tenderness. However, she first presented a few days earlier for a wound check following a laceration.

The mother also states that the child was coughing and had intermittent fever for five days. Additional history includes:

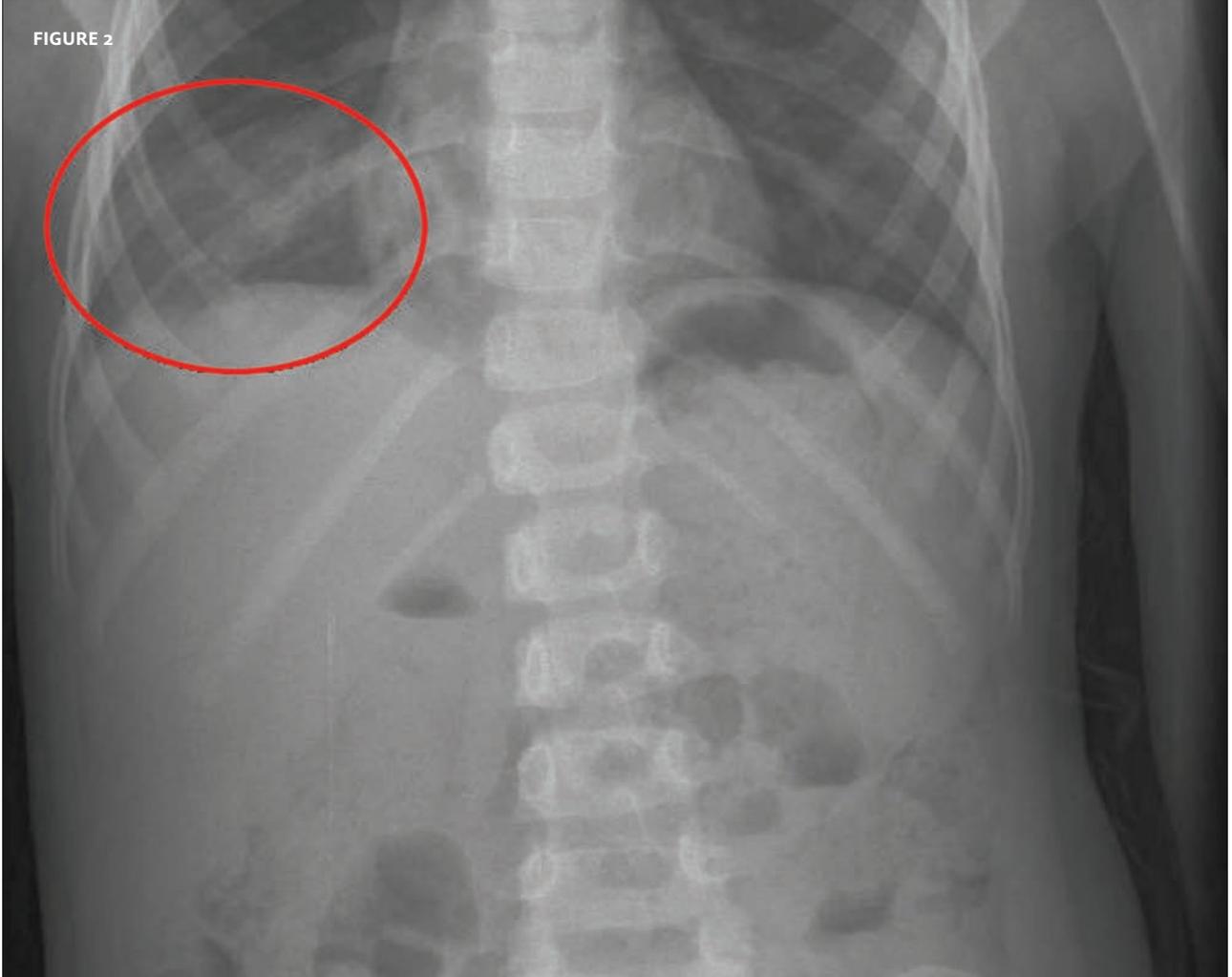
- intermittent abdominal pain for a couple of weeks
- significant constipation
- occasional vomiting, which has grown more frequent in the last couple of days.

Further examination is unremarkable, though you note “fullness” upon abdominal exam.

View the x-ray taken (**Figure 1**) and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

THE RESOLUTION

FIGURE 2



This case is an interesting example of an unexpected finding—specifically, pneumonia.

The x-ray was done on the basis of “fullness” on the abdominal exam. The abdominal film is normal, but it reveals a consolidation in the RLL quadrant of the lung.

As noted previously, further examination turned up no abnormal findings; the child’s temperature was slightly elevated at 37.8°C, SAT is 98%, pulse is 113, and there is no respiratory distress. WBC is 8.5 with 40.8% lymphocyte and MONOs of 9.8%. Urinalysis is normal.

Acknowledgment: Case presented by Nahum Kovalski, BSc, MDCM.

The clinical picture presented is far from a classical pneumonia case. Nevertheless, given the significant finding of the chest part of the x-ray, the child was treated with antibiotics.

This case is notable for several reasons:

- The significant medical history was not the presenting problem.
- The WBC was consistent with a viral picture.
- The x-ray finding was incidental and significant.

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On Unexplained Fever in Young Children, Removable Brace vs. Casting, and Contamination in Mid-Stream Urine Collection

■ NAHUM KOVALSKI, BSc, MDCM

Each month, Dr. Nahum Kovalski will review a handful of abstracts from, or relevant to, urgent care practices and practitioners. For the full reports, go to the source cited under each title.

Evaluating Fever of Unidentifiable Source in Young Children

Key point: An excellent review of the approach to the febrile child.

Citation: Sur DK, Bukont EL. *Am Fam Physician*. 2007;75:1805-1811.

Even with a thorough history and a complete physical examination, one in five acutely ill, nontoxic-appearing children had an unidentifiable source of fever. Physicians should be cautious in their approach because of the potential for unrecognized and untreated serious bacterial infections (SBI).

The review notes that most children will have been evaluated for a febrile illness by 36 months of age and that most of these children have a self-limited viral illness.

However, studies from the 1980s and 1990s showed that 7% to 13% of children younger than 36 months without apparent sources of fever had occult bacteremia and SBI. These infections may include bacterial gastroenteritis, cellulitis, meningitis, osteomyelitis, pneumonia, septic arthritis, and urinary tract infections.

Since the introduction of *Haemophilus influenzae* type B and *Streptococcus pneumoniae* vaccines, there has been a sig-

nificant decrease in the number of cases of occult bacteremia and SBI in febrile children, with occult bacteremia rates of 1.6% to 1.8%. Similarly, epidemiologic data reflect a decrease in the rates of *S. pneumoniae* infections since the introduction of a pneumococcal conjugate vaccine.

Typically, fever that is clinically significant is defined as a rectal temperature higher than 100.4°F (38°C). Further evaluation is required for previously healthy, well-appearing children 3 to 36 months of age with a rectal temperature of 102.2°F (39°C) or higher. Several studies have shown that axillary and tympanic temperatures are unreliable in young children.

Specific recommendations are as follows:

- Any infant younger than 29 days, and any child who appears toxic, regardless of age, should undergo a complete sepsis work-up and be admitted for observation and administration of intravenous antibiotics after completion of a sepsis work-up until the source of the fever is found and treated.
- Work-up should include a complete blood cell (CBC) count with manual differential; blood cultures; lumbar puncture for cell counts, glucose, protein, and culture; and urinalysis with culture.

Laboratory evaluations for neonatal herpes simplex virus infection also should be considered in patients with risk factors for infection—particularly maternal infection at the time of delivery; the use of fetal scalp electrodes; vaginal delivery; cerebrospinal fluid pleocytosis; and skin, eye, or mouth lesions.



Nahum Kovalski is an urgent care practitioner and assistant medical director/CIO at Terem Immediate Medical Care in Jerusalem, Israel.

However, there should be a low clinical threshold to test for and treat neonatal herpes simplex virus infection; if the infant is not improving while receiving antibiotic therapy, herpes simplex virus infection should be considered.

For low-risk infants aged 29 to 90 days who appear nontoxic, have an unremarkable history, and are under the care of a reliable adult, there are two management options:

Option 1: Perform a laboratory evaluation including a CBC count with manual differential, cerebrospinal fluid analysis, and urinalysis with urine culture. If the white blood cell count is less than 15,000 cells/mm³ with an absolute neutrophil count less than 10,000 cells/mm³ and cerebrospinal fluid and urinalysis are normal, ceftriaxone (Rocephin), 50 mg/kg intramuscularly, may be given, with a follow-up appointment in 24 hours for repeat history and examination and review of results.

Option 2: Perform a CBC count and urinalysis with urine culture without obtaining blood cultures, doing cerebrospinal fluid studies, or giving antibiotics, provided the infant is carefully observed and followed up with a re-examination within 24 hours. If laboratory testing is positive, appropriate action is needed.

For well-appearing infants and children aged 3 to 36 months with a fever less than 102.2°F (39°C) without an apparent source, observation only is adequate without any laboratory testing or antibiotics needed, but a follow-up visit should occur if symptoms worsen or fever continues for longer than 48 hours.

Well-appearing infants and children 3 to 36 months of age with fever of 102.2°F (39°C) or higher with no apparent source may receive observation only, with close follow-up. A second option if there is no apparent source for the fever and if the child has received the appropriate vaccinations is to order screening laboratory analysis and send the child home with close follow-up.

Recent developments, including the dramatic decrease in the incidence of *H. influenzae* type B infection, mandate re-evaluation of the recommended protocols for evaluating and treating febrile children ages ≥36 months. ■

A Randomized, Controlled Trial of a Removable Brace Versus Casting in Children with Low-Risk Ankle Fractures

Key point: The removable ankle brace is more effective than the cast for isolated distal fibular ankle fractures.

Citation: Boutis K, Willan AR, Babyn P, et al. *Pediatrics*. 2007; 119:e1256-e1263.

Isolated distal fibular ankle fractures in children are very common and carry very low risk for future complications. Nevertheless, standard therapy for these fractures still consists of casting, a practice that does carry risk, inconvenience, and use of subspecialty healthcare resources.

This was a non-inferiority, randomized, single-blind trial in which children who were 5 to 18 years of age and treated in a

pediatric emergency department for low-risk ankle fractures were randomly assigned to a removable ankle brace or a below-knee walking cast. The primary outcome at four weeks was physical function, measured by using the modified Activities Scale for Kids. Additional outcomes included patient preferences and costs.

The mean activity score at four weeks was 91.3% in the brace group (*n*=54)—considerably higher than the mean of 85.3% in the cast group (*n*=50).

Further, more children who were treated with a brace had returned to baseline activities by four weeks compared with those who were casted (80.8% vs 59.5%).

The removable ankle brace is more effective than the cast with respect to recovery of physical function, is associated with a faster return to baseline activities, is superior with respect to patient preferences, and is also cost-effective. ■

To Clean or Not to Clean: Effect on Contamination Rates in Mid-Stream Urine Collections in Toilet-Trained Children

Key point: Cleaning may reduce the risk for returning for repeat cultures and for receiving unnecessary antibiotic treatment and investigations.

Citation: Vallancourt S, McGillivray D, Zhang X, et al. *Pediatrics*. 2004;119:e1288-e1293.

Urinary tract infection is one of the most common bacterial infections among children. Difficulty in specimen collection and interpretation of inadequately collected specimens may contribute to misdiagnosis of urinary tract infection. The objective was to assess the effect of perineal/genital cleaning on bacterial contamination rates of mid-stream urine collections in toilet-trained children.

The authors conducted a randomized trial in toilet-trained children who presented to a tertiary care pediatric emergency department between November 1, 2004 and October 1, 2005.

All toilet-trained children who were between the ages of 2 and 18 years and had a mid-stream urine sample requested were eligible. Those whose parents consented were cluster-randomized by week to either cleaning or not cleaning the perineum with soap. The risk for a contaminated urine culture and the risk for a positive urinalysis were analyzed by intention to treat.

In all, 350 children were enrolled. The rate of contamination in the cleaning group was 14 (7.8%) of 179 vs. 41 (23.9%) of 171 in the non-cleaning group. Children who were randomly assigned to cleaning were less likely to have a positive urinalysis (37 of 179 [20.6%]) than those in the non-cleaning group (63 of 171 [36.8%]).

Urine contamination rates are higher in mid-stream urine that is collected from toilet-trained children when obtained without perineal/genital cleaning. ■

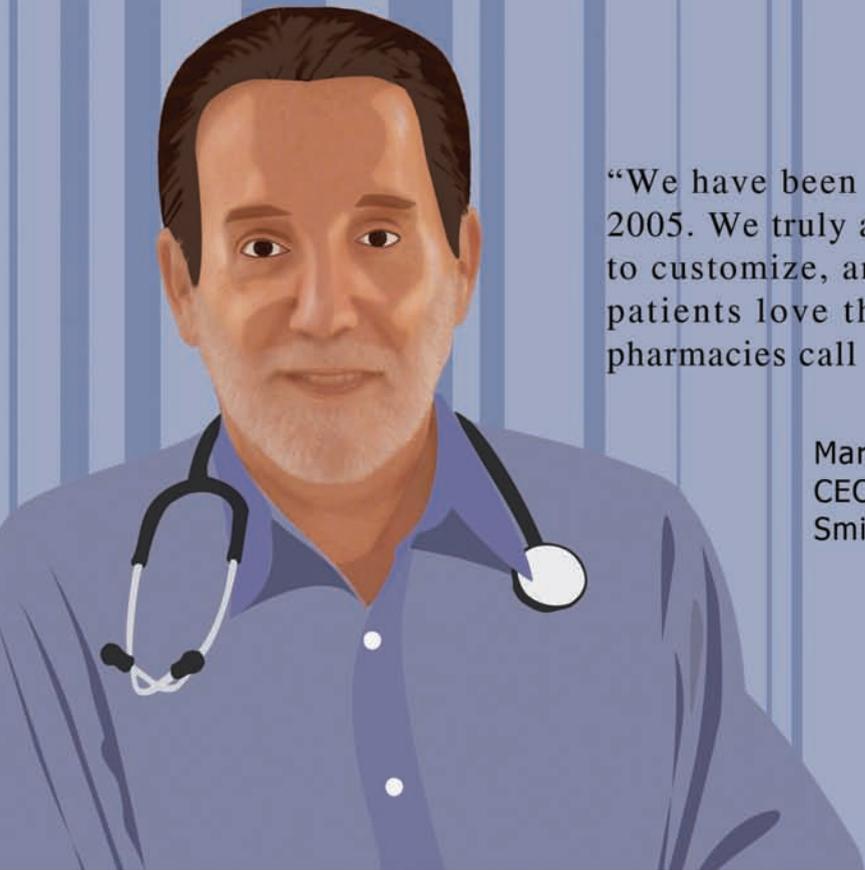
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Employment Contracts Part 2: Troublesome Clauses

■ JOHN SHUFELDT, MD, JD, MBA, FACEP

Congratulations, you have found the perfect job! The chemistry is right, the pay is adequate, and the working environment is somewhat better than a sweatshop. So what's missing?

Ah yes, the contract—that little document designed to protect both parties in the event of a disagreement. Although that description sounds innocuous, employment contracts are usually written by employers and tend to be slanted to their needs, as opposed to those of the employee or contractor. Therefore, it is incumbent upon the physician to thoroughly understand the contract provisions prior to signing the agreement.

For example, a recent client of mine who was right out of residency signed a contract with a large office-based practice. At the time, she did not want to spend the money to have the contract reviewed by an attorney; nor did she negotiate any clauses which she found confusing or ambiguous.

Not surprisingly, the job did not turn out to be what was described in her initial interview. She was treating 60+ patients per day without a break, the clinic was staffed to bare bones minimum, and consequently, results were not being communicated to the patients nor entered into the chart.

All in all, the practice was a disaster and she was afraid that the set-up of the office was a malpractice event waiting to happen. When she approached her employer, his response was basically the same one Flounder received in *Animal House*: “You screwed up, you trusted us.”

She wanted out as soon as possible. To her chagrin, however, the contract did not provide an out clause for the physician except in the event of breach of contract by the employer. No examples of what would constitute such a breach were illustrated.

In addition, the contract had a restrictive covenant of one year and 10 miles around each office practice. In effect, this radius locked her out of the metropolitan area where she lived.

Finally, the contract did not mention responsibility for the tail or extended reporting provision. Unfortunately, her religious persuasion did not allow her to “start drinking heavily” (more sage advice from the Delta Tau Chi house); thus, she was forced to seek legal guidance.

Preventive Medicine, Legally Speaking

Remember the phrase “an ounce of prevention is worth a pound of cure”? Reviewing a contract is one of those times it's more than just a catchy saying. Take the time and spend the money to have your contract reviewed. It is money very well spent.

Following are some things to consider:

- Assume the contract will be enforced as written. Too often, physicians assume that the person who negotiates the contract will be the one who ultimately has to enforce the contract, and that the enforcement will be tempered by what was orally agreed to. The typical phrase that a physician hears is, “Don't worry about that, we would never hold you to it.”

People change jobs, however, and the person with whom you have a great relationship may be long gone when it comes time to interpret the contract language.

The take home point is this: Assume the contract will be strictly enforced as written.

- A corollary to the preceding point is to never rely on oral promises not reflected in the written contract.

For example, you may have been told during your interview that you will only be required to work one weekend per month. However, when you get the contract it is silent on this issue, or it states, “The physician's work responsibilities shall include weekends in accordance with the rotation schedule established by the practice.”

Since the written contract controls, make sure before you sign that what was promised during the interview is contained in the written contract.

- Be very wary of covenants not to compete. Most physician employment contracts contain a provision that if the physician leaves the practice, he or she will not compete with the practice for a specific period of time in a specific geographical area.



John Shufeldt is the founder of the Shufeldt Law Firm, as well as the chief executive officer of NextCare, Inc., and sits on the Editorial Board of *JUCM*. He may be contacted at JJS@shufeldtlaw.com.

Therefore, when a physician tries to set up a new practice or join another practice, he or she may be open to suit.

It is much easier to negotiate this clause prospectively than it is to defend your actions after the fact. Most states do allow a noncompetition clause, provided that it is reasonable in scope and time. Consult with an attorney on whether your state's law permits such covenants and what terms are reasonable and enforceable.

- Malpractice clauses can often be very difficult to understand. It is critical that you have a clear understanding of the employer's obligations before signing a contract.

Make sure the contract spells out who is responsible for paying for malpractice insurance. The contract should specify the amount of insurance provided, as well as the tail or extended reporting provisions. The cost of the tail provision is often 150% to 200% of the last year's premium; consequently, the cost of this coverage can be quite substantial. Do not sign a contract that is silent on the terms of the tail provision, since the cost of the tail or extended reporting provision is typically absorbed by the employer. That should be spelled out.

- I have heard a number of physicians comment that they signed a three-year agreement containing annual cost-of-living increases. While this clause is very useful, the length of the agreement is defined by the out clause.

Thus, if you sign a three-year agreement with a 30-day out, you have a 30-day contract. There is no "preferred" duration of an out clause. The only caveat is that it should be bilateral. In other words, the same terms should apply to both parties.

Your employment contract may include every possible clause which benefits you. However, if your employer can terminate you at their discretion, your contract is not worth much. Make sure you completely understand what events can trigger termination. If the clause is vague, insist that it be clarified in writing. If the prospective employer refuses to negotiate, give serious thought as to whether or not you will sign the contract.

Here are some typical termination provisions:

- Sixty or 90 days' notice by either party
- Loss of medical license
- Accusation of impropriety (fraudulent billing, sexual harassment, conviction of a felony, etc.)
- Material breach of the contract with a failure to cure
- Illness or disability

In summary, you can protect yourself during contract negotiations by following three basic principles:

- Research your prospective employer's history and understand their practice environment.
- Get everything promised in writing.
- Consult a knowledgeable attorney. ■

Afraid you missed something?



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Coding for Removal of Impacted Cerumen (69210)

■ DAVID STERN, MD, CPC

Q. What is the correct use of CPT code 69210 (removal impacted cerumen [separate procedure], one or both ears)?

- Question submitted by Kathy Partenheimer, Medical of Dubois

A. In the July 2005 issue of *CPT Assistant*, the AMA clearly indicates that you should report 69210 only when the following two criteria are both met:

- “the patient had cerumen impaction”
- “the removal required physician work using at least an otoscope and instrumentation *rather than simple lavage*” [emphasis added].

Q. How does one determine that the cerumen is actually impacted so that code 69210 may be used for removal of the cerumen?

A. For the purpose of accurate coding, the AMA defines “impacted cerumen” in the July 2005 *CPT Assistant* as follows:

- “If any one or more of the following are present, cerumen should be considered ‘impacted’ clinically:
 - **Visual considerations:** *Cerumen impairs exam of clinically significant portions of the external auditory canal, tympanic membrane, or middle ear condition.*
 - **Qualitative considerations:** *Extremely hard, dry, irritative cerumen causing symptoms such as pain, itching, hearing loss, etc.*
 - **Inflammatory considerations:** *Associated with foul odor, infection, or dermatitis.*
 - **Quantitative considerations:** *Obstructive, copious cerumen that cannot be removed without magnification*



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and multiple instrumentations requiring physician skills.”

Q. If the physician removes cerumen as part of the exam but the cerumen is not impacted, what code would be appropriate?

A. A simplistic answer is that removing the wax is simply included in the emergency and management (E/M) code. The actual situation, however, is not quite so straightforward.

Since real-life medical coding is governed by multiple entities—including the AMA, CMS, and multiple private-sector payors—there are many areas of coding where conflicting interpretations exist. Such ambiguity exists in the application of the code 69210.

In this example, coders may make at least two interpretations:

- If you ask the physician if the wax was “impacted,” he or she may indicate that, because the cerumen was not stuck tightly and filling the entire ear canal, the wax was not “clinically impacted.”

But be careful; you may be asking the wrong question. Before you give up too easily, ask the physician this question: “Why did you decide to remove the wax?”

Chances are that the physician will tell you that the wax was getting in the way of performing an adequate otoscopic exam of the ear. If so, then the wax actually *does* meet the strict AMA coding definition (listed above) for impacted cerumen.

Since the removal of this “required physician work using at least an otoscope and instrumentation,” the procedure could be billable with code 69210.

- In some situations, however, using this code according to the strict AMA definition may still not be appropriate. As CMS cautioned in the *Federal Register* of June 29, 2006 (page 37233), “It is our understanding that CPT code 69210 is to be used when there is a substantial amount

“It [is] not appropriate to use code 69210 unless the procedure required physician work.”

of cerumen in the external ear canal that is very difficult to remove and that impairs the patient’s auditory function. We will continue to monitor the use of this code for the appropriate circumstances.”

To stay within the spirit of this definition, it seems best to avoid using this code for situations that only take a minute of the physician’s time to scoop out the wax. Rather, most coders would recommend that code 69210 be reserved for use in situations where the cerumen removal takes significant effort by the physician.

This is a situation where many individual payors have set different policies for application of this code, so it is best to check with individual payors for their policy.

Q. As an urgent care center, can we also bill an office visit with a 25 modifier and a 69210 on the same day of service, especially if the doc examines the patient first and then determines that he needs an ear wash?

- Question submitted by Kathy Partenheimer, Medical of Dubois

A. An E/M code may be eligible for reimbursement in addition to code 69210 if *all* of the following criteria are met:

1. The patient’s condition required a significantly, separately identifiable E/M service above and beyond the usual pre-service and post-service care associated with the removal of the impacted wax
2. The documentation requirements for use of that E/M code have been met
3. Modifier -25 is attached to the E/M code

When you are using 69210 for ear wax impaction, it is appropriate to use an E/M code (with modifier -25) if the patient received a true evaluation and management for a separate problem (such as bronchitis or pharyngitis) or for complicating problems (such as dizziness or otitis media). It is generally a good idea to include patient records with billings (or at least with appeals) to substantiate the medical necessity for a separate E/M.

On the other hand, if the patient comes in with a complaint of a “stuffy ear” and the physician determines that the patient has a cerumen impaction, removes the wax and there is no medical necessity for a separate evaluation and management, then one would code only the 69210.

A few payors require the coder to attach modifier -59 (distinct procedural service) to the procedure code (69210) and

will not reimburse for the E/M when combined with modifier -25. Although this idiosyncratic coding requirement is truly frustrating, it may be the only way to get paid.

As always, check with your payor.

Q. At times, the nurses do an ear wash, and the physician does not perform any portion of the work involved in the cerumen removal. Is it appropriate to bill the 99211 with the 69210?

- Question submitted by Kathy Partenheimer, Medical of Dubois

A. Since no physician work was required, you should not use code 69210. Instead, you would only bill 99211. Because of the liability inherent in an ear wax removal (especially in the urgent care setting where the patient is not well known to the physician), I would personally advise against performing this procedure without a physician evaluating and documenting the condition of the ear(s) both before and after the ear lavage.

In this case, the correct E/M code would be a 99212 (or higher if indicated by medical necessity and documented appropriately), but it would not be appropriate to use code 69210 unless the procedure required physician work.

Q. If the patient requires removal of impacted cerumen from both ears, is it appropriate to add modifier -50 to the code 69210 to indicate that a bilateral procedure was performed?

A. No. Code 69210 is defined as “removal impacted cerumen (separate procedure), one or both ears.” Use this same code only once to indicate that the procedure was performed, whether it involved removal of impacted cerumen from one or both ears.

Q. What are the appropriate ICD-9 diagnosis codes to justify billing for 69210?

A. Medicare accepts many different ICD-9 codes as “supporting medical necessity.” By definition, however, 69210 always involves the diagnosis of impacted cerumen, so it seems reasonable to always attach the code for *impacted cerumen* (380.4) to the code 69210.

Of course, the physician documentation should clearly demonstrate the presence of impacted cerumen, as defined above. If you are attempting to code an E/M code in addition to code 69210, appropriate coding of an additional diagnosis is often helpful to reduce denials. ■

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Top Communicators Apply These Principles

■ FRANK H. LEONE, MBA, MPH

Who among your network of colleagues and friends do you consider to be “great communicators?” What characteristics do they have in common that make them great?

Consider the following principles underlying one’s ability to communicate effectively:

Keep it simple. Break every message down to a simple, easy-to-digest concept. Avoid too much detail or trying to jam too many concepts into a single interchange. Use basic, short words. Assume your subject has a minimal attention span.

Be brief. The more you say, the more likely it is that your essential message is lost or muddled amid a sea of extraneous verbiage. Know when to stop talking. Leave thoroughness to your attorney friends who get paid by the hour.

Identify a clear objective. Consider the objective of your comments before you utter a word, then state your objective in just those words (as in, “My goal is...,” etc.). When you state a feature (e.g., your hours of operation), advise the prospect why it is of value to them. Constantly associate a “why” with a “what.”

Focus on your message. Stay “on message.” Continually return to your basic objective. Be wary of diversions, whether they are initiated by you or by the object of your communication.

Master pace. Conduct every communication like a fine symphony orchestra. Vary pace, volume and emphasis in a well-crafted and confident manner. Pause frequently (and usually right after key points) and don’t be afraid of silent moments. Above all, avoid droning on in a monotone.

Maintain eye contact. One’s eyes say as much as the words they are speaking. Concentrate on eye contact and learn to interpret signals from your subject’s eyes as a guide to alter, maintain, or cease your communication.



Frank Leone is president and CEO of RYAN Associates and executive director of the National Association of Occupational Health Professionals. Mr. Leone is the author of numerous sales and marketing texts and periodicals, and has considerable experience training medical professionals on sales and marketing techniques. E-mail him at fleone@naohp.com.

Ask questions. Listen more than you speak, but maintain control of the conversation by leading the subject where you want to through artful and effective questioning. Broad, open-ended questions are invariably more effective; e.g., “In a perfect world, what type of relationship do you envision between your company and our clinic?”

Articulate a win-win. Fashion a win-win scenario prior to a meeting or conversation and then focus on articulating the win-win early, often, and convincingly. Get to the heart of the matter by using the phrase “win-win.” A statement such as, “It seems to me that our clinic’s relationship with your company is likely to be a ‘win-win’...” sets things out in clear terms.

Probe. Constantly probe in order to obtain more specific and insightful information. Classic probes such as, “Tell me more...,” “Exactly what do you mean by...,” or “Why do feel that way?” provide greater clarification and more specifics.

Repeat key points. Pause often and repeat key points. If an idea or point is twice as important as everything else you are saying, say it twice. Ensure that the most important thing you have to say is the one thing that the subject remembers.

Involve your subject. Involve your subject continuously throughout your discourse. In addition to asking numerous questions, pepper your comments with frequent “mini-closes” (e.g., “Do you agree?”), and make the subject think and act throughout the conversation. Keep the message fluid and active rather than static and stiff.

Summarize. The first and last things you say are likely to become your most impactful comments. Hence, your opening comment should clearly articulate your objective and your last statement should provide a summary of key points.

Becoming a great communicator is not complex. Indeed, just the opposite is true: the more simple, controlled, and focused the process, the more effective the communication stream. Yet even the most dedicated sales professional frequently assumes a defeatist manner when it comes to being a strong communicator. With adherence to a relatively short and simple array of principles, your communication skills will improve multifold. ■

Career Opportunities

URGENT CARE CENTER – Salem Clinic, P.C., a 40-physician multi-specialty group located in Salem, Oregon, has an opening for a part-time or full-time family practice at our Urgent Care Center. Please forward, email or fax your CV to: Connie Finicle, Salem Clinic, P.C., 2020 Capitol St., NE, Salem, OR 97301. Fax: 503-375-7429 or email: conniefinicle@salemclinic.org.

Urgent Care Physician Opportunity in Lehigh Acres, Florida! Lehigh Regional Medical Center: 5-bed ED and 30,000 annual volume. Criteria: BC/BP EM, IM or FP. Benefits: 10-hour shifts, full- and part-time available and located in the beautiful Ft. Myers area. Contact Mary Langenstein at mary_langenstein@emcare.com.



Carolinash Healthcare System

BC Physicians needed for our expanding network of existing and new Urgent Care facilities throughout the Charlotte, North Carolina area. All facilities are out-patient only, open 8am-8pm, 7 days/week and have no-call. Openings are employed positions with attractive compensation and benefits.

For more information about opportunities, please contact:
Sarah Foster, Physician Recruiter
 800-847-5084 • Fax: 704-355-5033
 sarah.foster@carolinashhealthcare.org
 www.carolinashhealthcare.org/careers/physicians

www.rja-ads.com/jucm • jucm@rja-ads.com

MICHIGAN – Family or Med/Peds Physician sought for clinical and medical director position with an urgent care center. 32 hours/week clinical, 8 hours/week medical director duties. Currently the clinic sees about 25 patients/day but with expanded hours the expectation is that should increase to 35 a day. ACLS certification is mandatory within 6 months of hire. Beautiful western Michigan resort community nestled on the shores of Lake Michigan and numerous inland lakes. Salary of \$150,000-\$170,000 plus benefits and malpractice insurance. Contact Todd Dillon at 800-883-7345 or e-mail tdillon@cejkasearch.com. ID#28924C14. For more opportunities, visit www.cejkasearch.com.

SEATTLE, WASHINGTON – URGENT CARE Live the good life! As a MultiCare Urgent Care physician, you will benefit from a flexible, rotational, and "tailor-made" shift schedule with awesome work-life balance. Multi-specialty medical group seeks B/C FP, IM/Peds or ER physician for a full- and part-time positions. All urgent care clinics are located within 40 minutes of downtown Seattle. Integrated Inpt/Outpt EMR, excellent comp/benefits, flexible shifts, and system-wide support. Take a look at one of the Northwest's most progressive health systems. Year round temperate climate affords outdoor enthusiasts endless recreational opportunities, such as biking, hiking, climbing, skiing, and golfing. For more information call (800) 621-0301 or email your CV to MultiCare Health System Provider Services at blazenewtrails@multicare.org or fax to 866-264-2818. Website: www.multicare.org. Refer to opportunity #513-623. "Multi-Care Health System is a drug free workplace"

MT. WEST HEALTH CENTER, P.A. is currently seeking physicians to join practices in EL Paso, Texas for Urgent Care Center. Excellent opportunity to work with a large, established private family/urgent care practice in an autonomous manner with other physicians and physician assistants. We offer a competitive salary and benefits package. Please contact Brisa Newberry, MBA. Phone: 915-217-2809; email: brisabn@gmail.com; fax 915-850-0546.

SOUTHERN CALIFORNIA URGENT CARE

Experienced Urgent Care Physicians, Physician Assistants, Nurse Practitioners needed to increase staffing for premier, 23 year highly regarded, free standing 11,000-square foot Urgent Care facility located near the foothills of Glendale, California. Minimum 2 years experience. Very strong clinical and interpersonal skills a must. Full benefits package, professional liability coverage, competitive productivity based compensation plan.

Please contact and forward CV to Bill Wilkie at:
Bill@vhma.com
(818) 241-4331 Ext. 113



EPMG
 Emergency Physicians
 Medical Group, PC

Wheelerburg, Ohio

"Pursuing the Heart and Head of Emergency Medicine"

BC/BP PC or IM physician needed for 22,000 visit freestanding urgent care. No nights! Mid-level coverage daily. Back-up provided by Southern Ohio Medical Center's main campus.

EPMG offers paid family medical benefits, incentive bonuses, flexible scheduling, paid malpractice, and more. Please contact Kim Senda at **800-466-3764, x338** or **ksenda@epmgpc.com**

URGENT CARE

New York, Mid-Hudson Valley

Immediate and July 2008 openings for BC/BE Family Practice & Emergency Medicine physicians.

60 miles from Manhattan. Outstanding opportunity for personal and professional growth in the fastest growing practice in New York State, located in one of the fastest growing regions in New York State!!

- Unique Urgent Care facility integrated with premier multi-specialty group medical practice.
 - State-of-the-art facility.
 - Electronic medical records. In-house digital imaging.
- Excellent compensation/partnership track.

Please Write, Fax or Email to:

Hal Teitelbaum, MD, MBA, Managing Partner
 155 Crystal Run Road, Middletown, NY 10941
 Fax: 845. 703. 6201
 Email: hteitelbaum@crystalrunhealthcare.com



CRYSTALRUNHEALTHCARE.COM



Urgent Care Physicians Needed in North Central Wisconsin

Our newly opened primary care clinic in Stevens Point is adding a walk-in department and we are seeking 3 full-time **Urgent Care physicians** to join our growing practice! Candidates must be Board Eligible or Board-Certified.

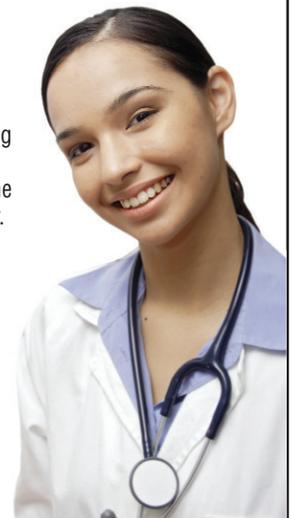
Our busy, established walk-in clinics in **Wausau** and **Weston** are adding an Urgent Care physician due to growth of their program.

North Central Wisconsin offers 4 seasons of recreation including all water sports, biking, hiking, golf, downhill and cross-country skiing. You'll enjoy all the amenities of a big city without the hassles. Excellent schools, shopping and fine dining right outside your back door.

For more information concerning this **outstanding** opportunity, contact **Karen Lindstrum** at: **(800) 792-8728**

Fax your CV to **(715) 847-2742** or e-mail Karen at **karenl@aspirus.org**

www.aspirus.org



Excellent Internal Medicine Family Practice Opportunities URGENT CARE CLINIC

Southern California's leading physician-owned multi-specialty medical group has opportunities for full-time Internal Medicine/Family Practice physicians in our Long Beach and Los Angeles regions. Candidates must be Board Certified, have a current California medical license, DEA current, BLS/ACLS/PALS, suture experience preferred. We are a large, dynamic and well-established group and offer a balanced professional and personal lifestyle, as well as excellent compensation with Partnership Track and benefits.

We have immediate openings for per diem and full-time physicians for a variety of shifts. Our busy Urgent Care Clinic treats patients for anything from a common office visit to an emergency room visit. Our patient population includes children, adults and seniors. We will consider 3rd year/senior residents with letters from residency program chief resident or director approving moonlighting.



Apply on line:

<http://www.healthcarepartners.com/careers/careers.asp>

Sdeming@healthcarepartners.com

Reference: ACP

Headquarters is located in
Torrance, CA 90502

COLORADO

Excellent **Partnership/Medical Director** opportunity available with a new Urgent Care opening in Colorado Springs. We are seeking an experienced board-certified ER/FP/UC physician. Competitive compensation, productivity, bonuses, paid vacations, paid CME and malpractice insurance. Excellent benefits package.
For more information, please contact Ashley Wiechman at 719-596-6110.

Urgent Care Plus in Austin, Texas

is seeking board-certified/board-eligible Family Medicine Physicians or Emergency Medicine Physicians. Residents too! Immediate openings available. Two locations both open 9:00 - 9:00 ~ 7 days a week.

**\$75.00 per hour for
Family Medicine;**

\$85.00 for Emergency Medicine

Shift differentials offered for weekends. Bonus pay for high census days.

For more information, call:
Valerie Gibbs,
Director of Operations

(512) 963-2209

Email: vgibbsconsulting@yahoo.com

Next available issue is
November with a closing of October 1st

STATCLINIX

URGENT CARE

StatClinix Urgent Care, a growing Urgent Care organization in Arizona is seeking experienced Board-Certified UC/FP/ER physicians for current and upcoming Urgent Care Clinics.

Currently recruiting for Payson and Show Low locations. Excellent opportunity for employment with a competitive compensation package.

Contact Information:

Mary McGuire at 480-682-4111
or fax CV to 602-926-2628 or
email: mary.mcguire@statclinix.com
www.statclinix.com

JUCM

THE JOURNAL OF URGENT CARE MEDICINE

Visit us online and reach an unlimited internet audience of Family Practice Internal Medicine, and Emergency Medicine physicians who look to this site for employment opportunities.

www.jucm.com



URGENT CARE MEDICAL DIRECTOR South Bend, Indiana

Memorial Medical Group is seeking an experienced **Urgent Care physician** to oversee its three South Bend area "Med-Point", walk-in clinics. This position is responsible for 10 physician FTEs, and consists of approximately 25% administrative time, with the remainder being clinical.

- Extremely manageable work rotation
- Academic involvement available
- All three locations within 20 minutes of one another
- Excellent opportunity for seasoned clinician to step into administrative role

To learn more, contact:

Pam Buckalew

Telephone: (800) 528-8286, ext. 4102

E-mail: pam.buckalew@stratummed.com

Full-time or Part-time Positions For Emergency Medicine and Urgent Care Physicians



Immediate Health Associates (IHA) provides emergency services at Mount Carmel St. Ann's Hospital and operates 6 urgent cares in the Central Ohio market. IHA is an employee owned company, known for innovation and patient satisfaction. IHA provides care to over 150,000 patients annually.

IHA offers a competitive salary and benefit package including:

Company-sponsored health, life, dental & vision insurance
80 hours of PTO in first year • 401(k) plan with employer match • Paid malpractice insurance • CME reimbursement
• Flexible spending • Basic life, AD&D, short-term and long-term disability insurances

Resumes are currently being accepted for
Emergency Department and Urgent Care positions.

Interested individuals may contact:

Arlene Kent, Business Manager

Immediate Health Associates

575 Copeland Mill Road Suite 1D

Westerville, Ohio 43081

Office: 614.794.0481 ext. 100 / Fax: 614.794.3711

akent@ihainc.org

Career Opportunities

WELCOME BACK TO YOUR LIFE!!



Join Freeman's BEST!!

- TWO NEW free-standing Urgent Care Facilities
- Minor injuries and illnesses
- Walk in patients only
- Lab and x-ray on site
- Must be BC/BE, Residency Trained Physician
- Hospital based, FP or Urgent Care experience preferred
- Schedule is 4 days on and 4 days off
- EXCELLENT salary and benefits

JOPLIN, MISSOURI

- Metro area of 160,000 provides metro city amenities while maintaining small town atmosphere and comfort
- Ranked lowest cost of living in the Nation
- Sporting paradise with lakes, boating, fishing, and hunting, numerous golf courses and campus community wellness center
- Excellent public and private schools
- Easy access to Kansas City, Tulsa, and St. Louis
- Strong diverse, stable economic base
- Mild climate – four seasons

For more information contact: Lana Hines 800-353-6812
Email: lhines@freemanhealth.com, or fax CV to 417-347-9972

Northern California

Urgent Care & FP Opportunities



Sutter Medical Group (SMG) is seeking FP physicians to staff an urgent care clinic located in Roseville & Sacramento. SMG is a multi-specialty group of 200+ physicians.

- FT and PT opportunities are available.
- Clinic hours of operation

Mon.-Fri. 6 p.m. - 10 p.m.
Sat.-Sun. 8 a.m. - 8 p.m.

The Sacramento Sierra Region is centrally located, an hour and a half from the mountains of Lake Tahoe or the bay of San Francisco. For the wine connoisseur, scenic Napa Valley is just a short drive away.

Other Family Practice opportunities are also available throughout the surrounding Sacramento areas.

Physician Recruitment
800-650-0625
916-643-6677 fax
develops@sutterhealth.org
www.sutterhealth.org



ORLANDO URGENT CARE OPPORTUNITY

Come to sunny Orlando and enjoy a lifestyle of year-round golf, beaches, boating, theme parks, professional sports and cultural activities. Orlando is an excellent place to raise a family with strong academic institutions including the University of Central Florida and its future Medical School.

- Centra Care is an established hospital-owned urgent care system in Central Florida. It is well recognized throughout the community as the regional leader in high quality urgent care.
- 16 centers and rapidly growing with two to four new centers opening in 2007.
- Physicians enjoy working in a fast paced practice with on-site x-ray, lab and electronic medical records.
- Excellent opportunity for a BC/BE Family Practice, Urgent Care or Emergency Medicine physician.
- Competitive compensation, productivity bonuses, paid vacations, paid CME and malpractice insurance.
- Excellent benefits' package including health, life and Employer matched 403B

For more information, please call
Timothy Hendrix, MD at (407) 200-2860

EMERGENCY MEDICINE/URGENT CARE WISCONSIN

Marshfield Clinic is directed by 700+ physicians practicing in over 80 specialties at 40 locations in central, northern and western Wisconsin. We are seeking BC/BP Family Practice physicians at the following locations:

- Eau Claire - Urgent Care
- Ladysmith - Urgent Care
- Marshfield - Urgent Care
- Minocqua - Urgent Care
- Park Falls - Emergency Dept./Urgent Care
- Rice Lake - Emergency Dept./Urgent Care

We offer a competitive salary and a comprehensive benefit package including: malpractice, health, life, disability, and dental insurance; generous employer contributed retirement and 401K plans; \$5,800 education allowance with 10 days of CME time; four weeks vacation 1st year; up to \$10,000 relocation allowance; and much more.

Please contact: Sandy Heeg,
Physician Recruitment, Marshfield Clinic
1000 N Oak Ave., Marshfield, WI 54449
Phone: 800-782-8581, ext. 19781
Fax: (715) 221-9779

E-mail: heeg.sandra@marshfieldclinic.org
Website: www.marshfieldclinic.org/recruit

Marshfield Clinic is an Affirmative Action/Equal Opportunity employer that values diversity. Minorities, females, individuals with disabilities and veterans are encouraged to apply. Sorry, not a health professional shortage area.

Career Opportunities

FLORIDA

Excellent Ownership/Partnership opportunities available with a well-established Urgent Care group in Tampa Bay area.

Contact: R. Sandhu, MD
Phone: 813-655-4100
Fax: 813-655-1775

Email: rsandhu@tampabay.rr.com

PHYSICIAN MEDIQUICK URGENT CARE

MidState Medical Center, a state-of-the-art community hospital serving central Connecticut, has an opening for the right physician in our affiliated urgent care facility. MediQuick sees 19,000 patients per year and has a stable, respected nurse and physician staff and offers strong hospital and director support. Work 2-3, 12 hour shifts/week.

Candidates should be board-certified or Board-Eligible in Internal or Family Medicine.

MidState offers competitive salaries and benefits and is within easy driving distance of Boston, New York City, the mountains, the shoreline and Connecticut's stimulating arts and cultural offerings.

Interested applicants may contact

Dr. Fred Tilden,
Medical Director of Emergency Services,
at 203-694-8278.

For more information on MidState Medical Center, and to apply on-line, visit our website at www.midstatemedical.org



Services

BUSINESS BROKER SERVICES. Own a busy, clinically excellent urgent care practice? Call for a free consultation from experienced urgent care business brokers. Contact Tony Lynch or Steve Mountain at MT Consulting, 610-527-8400 or tony@mtbizbrokers.com; www.mtbizbrokers.com

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PLACE YOUR AD WHERE
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Circulation has now increased to 12,500!

With JUCM Classifieds, your ad will reach thousands of Family Practice, Internal Medicine and Emergency Medicine Physicians, Physician Assistants, and Nurse Practitioners who look to these pages for employment opportunities.

JUCM is your gateway to an in-clinic sales force and we look forward to being a resource for you and your urgent care center.

Next available issue is November, closing October 1st.

800-237-9851 • FAX: 727-445-9380
Email: jucm@rja-ads.com
www.rja-ads.com/jucm

URGENT CARE MEDICAL DIRECTOR GRAND RAPIDS, MICHIGAN

Spectrum Health, one of the nation's top integrated healthcare systems and the largest tertiary referral center in West Michigan, is looking for a **Medical Director of its Urgent Care Network** located in the Grand Rapids metropolitan area. This position is responsible for assessing and improving all aspects of patient care, implementing medical staff policies, and ensuring the delivery of safe, cost effective, high-quality, and efficient care in the Urgent Care setting.

This full-time position, directly employed by Spectrum Health, is a mix of administrative and clinical duties. Each year, the current five locations provide care for more than 130,000 patients and are open from 8:00am until 10:00pm, 7 days per week. Qualifications include Board-certification or Board-eligibility in either Emergency Medicine, Family Practice, or Urgent Care. Competitive salary/benefits package, including relocation allowance.

Grand Rapids is a prosperous and rapidly-growing city, (metropolitan population of 750,000), 45 minutes from Lake Michigan, and is known as the cultural, educational, and economic hub of West Michigan.

For further information, contact: Bob Vanderploeg,
Spectrum Health Physician Recruitment,
Phone: (800) 788-8410; Fax: (616) 774-7471
or email: bob.vanderploeg@spectrum-health.org



URGENT CARE - FAMILY PRACTICE

Seeking experienced, self-motivated, and congenial Board Certified Family Practice physician who desires an urgent care setting. Two NEW freestanding facilities located in high-traffic, highly visible locations. Provide primary care services on an express care basis including diagnostic radiology and moderate complexity lab services. Cross-trained support staff to handle front office and nursing responsibilities.

Established relationship with medical staff at a local 367-bed regional tertiary medical center with Level II trauma and med flight services offering the full spectrum of primary care, occupational medicine, and subspecialty support. Solid hourly compensation with a comprehensive benefits package; including paid malpractice insurance. Flexibility in scheduling to allow you to enjoy a busy practice AND support a quality of life.

NO CALL OR INPATIENT RESPONSIBILITIES!

Excellent quality of Life. Vibrant, family-oriented community offering safe, sophisticated living and amenities rare in a city this size. Breathtaking landscapes and wooded rolling hill terrain amongst the many area lakes and streams. Cost of living 14-15% below the national average—one of the lowest in the United States! Chose from public, private, or parochial schooling options along with a 4-year university in town and two Christian colleges. Variety of the four-seasons supporting an abundance of recreational activities for the entire family. Easy access to larger metro areas within 2 hours or less.

For more information, contact:

Alyssa Hodkin
Phone: 800-638-7021 • Fax: 417-659-6343
Email: ahodkin@stj.com • www.docopportunity.com

Practices for Sale

FOR SALE- Lansing, Michigan. Busy and very well-established urgent care. Excellent location and reputation. Consistent volume and protocols. Consistent income. Owner would like to retire. Financing is negotiable. Please contact info@edicare.net.

FOR SALE- Urgent Care shares for sale. Has been open for 2 years. Carrollton, Texas. Call 469-222-3630.

Contact: Trish O'Brien

The Journal of Urgent Care Medicine
(800) 237-9851 • Fax (727) 445-9380
Email: jucm@rja-ads.com

FOR SALE- Orlando, Florida. Urgent Care/Family Practice conveniently located near Disney, Sea World, and Universal Studios. Well-established in prime international and domestic tourist corridor. Tremendous growth potential and consistent high income. Contact Dr. Daryanani at 407-465-1110 or email Ldaryanani@aol.com.

FOR SALE- Free standing Urgent/Family Practice center seeking physician to join practice and assume ownership. Owners are planning to retire after running successful practice for 22 years. Includes practice and 3,000-sq. ft. building/land. Troy, New York. Contact 518-421-7302.



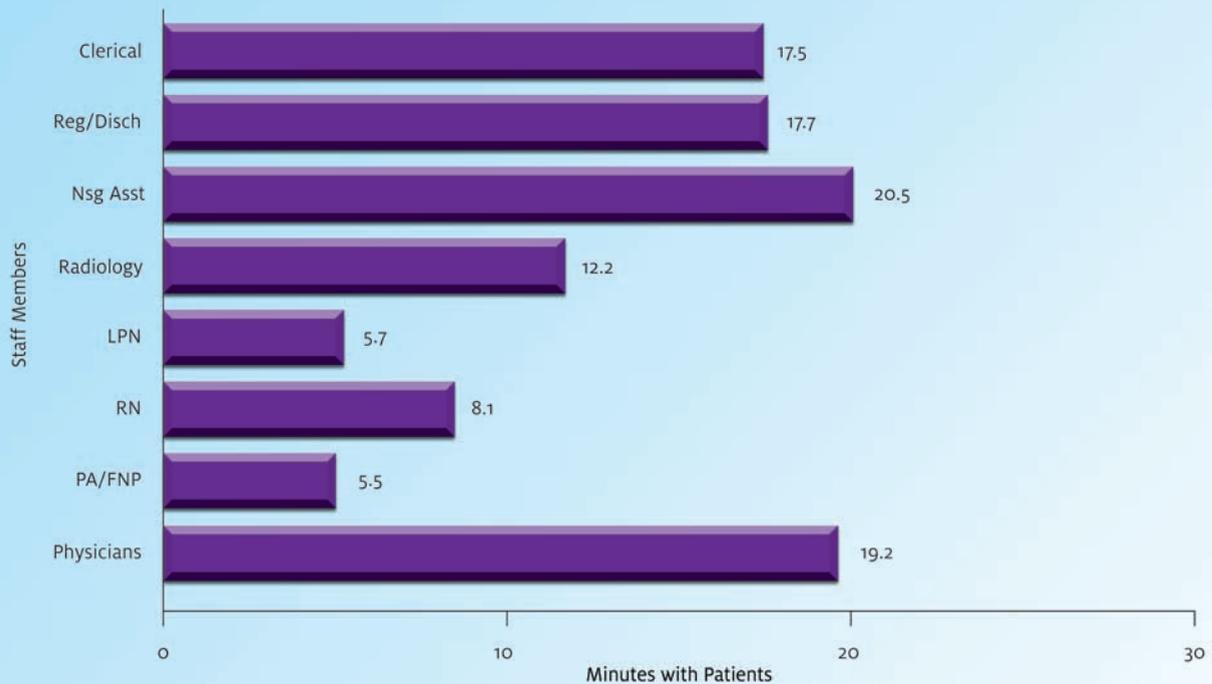
DEVELOPING DATA

UCAOA's Survey Committee has conducted two annual member surveys, to date, designed to establish benchmarks in an industry for which data have been sorely lacking. Each month in **Developing Data**, we will share one or two tidbits from the second annual survey in an effort to help readers get a sense of what their peers are doing, and what kind of trends are developing as urgent care evolves.

In this issue: How much time do various staff members spend with patients?

As you will see, time spent with the physician is likely less than that spent with some combination of other clinical personnel and clerical staff. This reinforces the obvious importance of hiring and properly training competent individuals for each position, but also highlights the more subtle opportunity each employee has to affect a patient's experience—for better for worse—during a typical visit to your urgent care center.

AVERAGE STAFF TIME WITH PATIENTS*



PA/FNP, physician assistant or family nurse practitioner; RN, registered nurse; LPN, licensed practical nurse; Nsg Asst, nursing assistant; Reg/Disch, registration and discharge personnel.

**Note: Clearly, not all patients interact with each of these staff members during an "average" visit. Rather, these data represent a comparison of how much time, on average, various personnel spend with the patient populations of responding centers.*

Areas covered in the UCAOA industry surveys included urgent care structures and organization, services offered, management of facilities and operations, patients and staffing, and financial data. UCAOA members who have ideas for future surveys should e-mail J. Dale Key, UCAOA Survey Committee chair.

Next in *Developing Data*:
Are payors reimbursing on problem-based coding—and if so, what percentage of receivables are they reimbursing?

Save The Date

Announcing the 2008
Urgent Care Annual Convention

NEW ORLEANS

April 29-May 2, 2008

Mark your calendars
now to join us for the
biggest and best gathering
of urgent care professionals
in the world!



Urgent Care
ANNUAL CONVENTION

For updates and more information
call **877-MYUCAOA** or www.ucaoa.org

New Indications



Coming Soon



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(levofloxacin) Tablets/Injection
(levofloxacin in 5% dextrose) Injection



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July 2007



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