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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.

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 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 pain, ocular pruritus, subconjunctival hemorrhage, and tearing. These events occurred in approximately 1%–6% of patients.

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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
Citrobacter 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.

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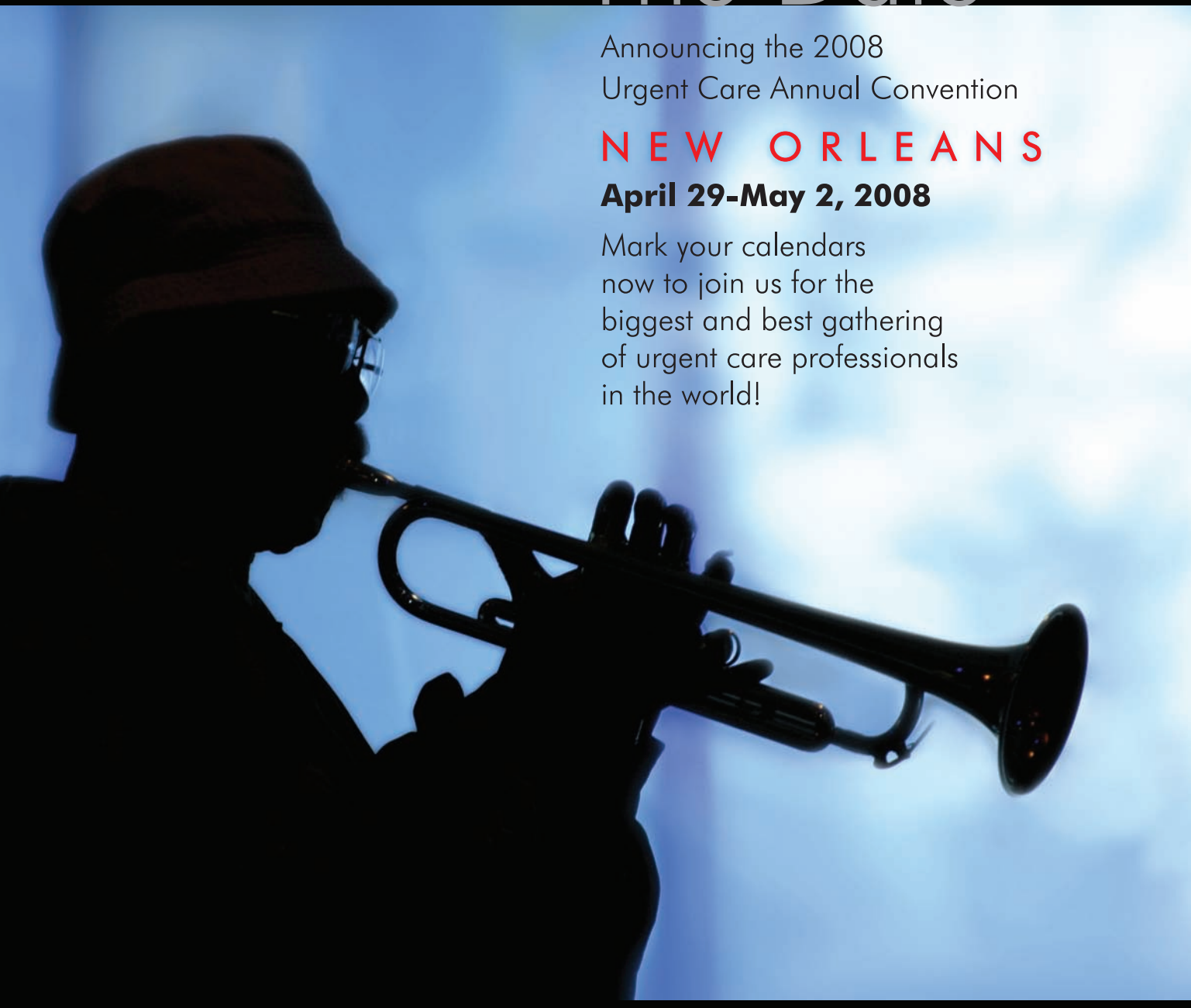

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Urgent Care
ANNUAL CONVENTION

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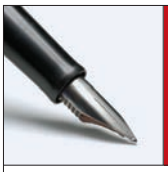


LETTER FROM THE EDITOR-IN-CHIEF

Quantifying Urgent Care, Defining Our Industry

Have you ever wondered how many urgent care centers there are in the U.S.? So did UCAOA.

Partnering with researchers at Harvard University and Massachusetts General Hospital, UCAOA has completed the first-ever sampling frame of urgent care centers across the country.

Our goal was to produce an objective, scientifically valid assessment of the size of the urgent care industry. Estimates have flown around the industry for years, but until now no one has committed the resources to ensure an accurate count, making this truly an historic project.

Robin Weinick, PhD, along with her colleagues Catherine Desroches, DrPH, Steffanie Bristol, and Jessica Marder used comprehensive search strategies and extensive data cleaning to produce the most scientifically valid accounting of the urgent care industry ever.

They identified 9,135 unique urgent care centers around the country. Of these, 8,113 are freestanding, and 1,022 are hospital-affiliated.

While there is no way to be certain they found every urgent care center in the country, we're confident that we've identified the large majority of them.

One limitation of the sampling frame is represented in the number of "health system" urgent care centers. The data source identified all hospitals that had at least one urgent care center as part of their network. However, no source is available to identify exactly how many centers each hospital has.

Future surveys will identify the average number of urgent care centers per hospital, allowing us to better estimate the total. This is important, given that we identified over 1,000 hospital-based urgent cares. Survey data may reveal that a multiple of this number is more accurate.

So what does all this mean?

A scientifically valid sampling frame like this clearly identifies urgent care as a major player in the healthcare delivery system.

By comparison, in 2004 the American Hospital Association said there were less than 4,500 emergency departments in the U.S.—less than half the number of urgent care centers.

We suspect that future surveys will reveal at least as many urgent care visits annually as emergency department visits.

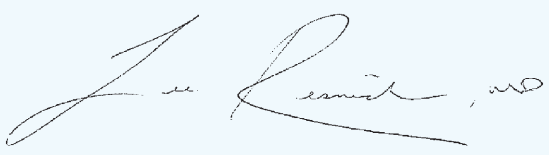
All of this puts urgent care solidly on the map as a critical provider of acute care services.

"This clearly identifies urgent care as a major player in the healthcare delivery system."

So where do we go from here? Along with this research team, UCAOA is about to launch the first scientifically rigorous national survey of urgent care centers. This will help us understand how centers like yours work and what their needs are—so we can serve you better.

The survey will also provide some much needed industry benchmarks. Many of you who are reading this letter will be selected to participate in the survey. If you receive a survey, please help us out by answering the questions and returning it to us quickly.

Welcome to a new era. UCAOA is committed to being the leader by defining the industry, establishing educational competencies and programs, and representing the discipline as an essential part of the healthcare delivery system. ■



Lee A. Resnick, MD
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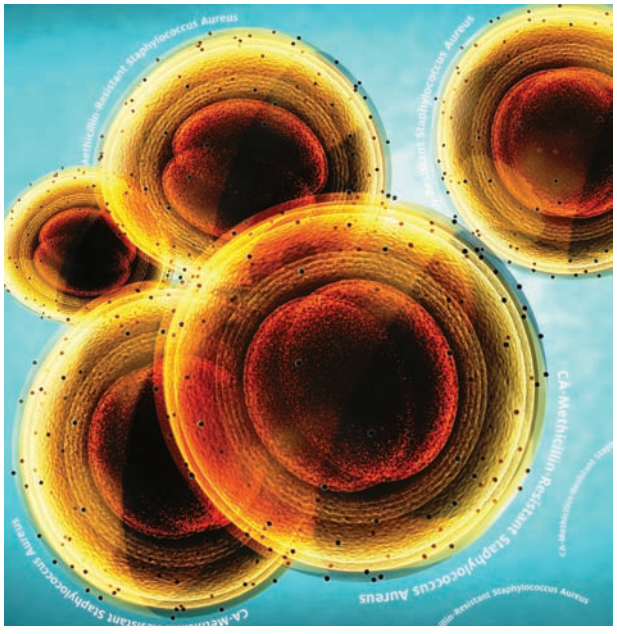

CLINICAL

11 CA-MRSA Abscess Care and Treatment Guidelines in Urgent Care Practice

Failed outpatient therapy is a significant problem in the management of community-acquired MRSA. In lieu of controlled research on the subject, the author proposes guidelines for management in the urgent care setting.

By Michael Dickey, MD

BOUNCEBACKS

21 The Case of a 17-Year-Old Male with Fever and Headache

Overlooking abnormal vital signs on an initial visit can hold serious consequences for seemingly healthy patients. Would you have missed the key clues?

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

PRACTICE MANAGEMENT

31 Urgent Care Occupational Medicine Defined

Refining the definition of occupational medicine as it applies to urgent care medicine is the key to maximizing its potential in your practice.

By Donna Lee Gardner, RN, MS, MBA

***Next month in* JUCM:**

Enhancing clinical care for children and families when performing minor pediatric procedures such as blood draws, IV placements, local wound care, and suturing.

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BRAVEHEART PUBLISHING

2 Split Rock Road, Mahwah NJ 07430

PUBLISHERS

Peter Murphy
pmurphy@braveheart-group.com
(201) 847-1934

Stuart Williams
swilliams@braveheart-group.com
(201) 529-4004

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.

Bright, Shiny, and New

LOU ELLEN HORWITZ, MA

Ah, the dawning of the New Year.

As I write this, December is drawing to a close. It's the season we find ourselves repeating the same phrase, almost like a mantra: "...after the first of the year..." "...after the first of the year..." "...after the first of the year....

In case you haven't noticed, "after the first of the year" has arrived! Time to make good on all those promises we made to ourselves and to others.

One promise UCAOA made to all of you was for a new website, and I am pleased to tell you it is well underway.

Here are some of the changes you can look forward to:

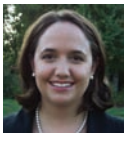
- **Easier to find what you look for most often.** As UCAOA and urgent care have grown, the website has struggled to keep up. Our new design will make it easier to access the pages you look for regularly, and will be more flexible for the future.
- **Easier to find new content.** We'll be adding a Search box, plus changing the front page so you can see what's new with less scrolling.
- **Improved statistics.** With the research behind the new Benchmarking Survey, we'll be able to provide better data on the industry.
- **Simplicity.** Less on-screen reading required to navigate through the pages to get to what you really want.

We will also continue to add new content in the Members Only section. Recent additions include samples of:

- job descriptions
- timeline for opening a new center
- equipment lists
- physician coding cheat sheets
- promotional calendars
- forms for intake, discharge, transfers, referrals, and refusal of care.

If you aren't currently a member, of course we recommend that you become one to access these resources!

We plan to launch the new website in late February, so look for it and enjoy all the upgrades we have in store for you.



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

New National Urgent Care Data to be Announced

We also plan to reveal new benchmarking data—but we can't ensure it reflects the perspective of our membership if you don't complete your survey.

If you received one of the Benchmarking Surveys recently, ***please make it a priority to fill it out and mail it in***. The input of your urgent care center is critical.

Annual Convention 2008

By now, the brochure for the 2008 Urgent Care Convention, April 29–May 2 in New Orleans, should be in your hands. (And if it isn't in your hands, it's probably because you're not a member of UCAOA—another reason to join the association. You can also download the brochure on our website—*www.ucaoa.org*.)

As we hope you'll agree, the convention looks better than ever. As I've shared with you before, we've expanded our Clinic Start-up Program into two days, kept the popular one-day pre-conference programs on Clinical Procedures, Billing, and Occupational Medicine, and almost doubled the amount of clinical and business sessions in the main convention.

We look forward to sharing all of the great speakers—many of whom have contributed to *JUCM*—plus just the pleasure of getting together with you to share ideas and to chart the future of UCAOA.

The early registration period has already begun; the deadline is February 1. Early registration is the best deal in town—a potential $200 savings off regular tuition prices—so we encourage you to take advantage of it. Operators (also known as our friendly UCAOA staff) are standing by!

We look forward to seeing you in New Orleans, but we love to hear from you any time so keep those cards and letters coming; e-mail me at *lhorwitz@ucaoa.org* and let's see what we can do together in 2008. ■

JUCM CONTRIBUTORS

Mainstream media outlets have flooded the airwaves and newspaper pages with reports on methicillin-resistant *Staphylococcus aureus*. And failed outpatient therapy is indeed a significant problem, compounded by a dearth of large controlled trials on treatment options.

In response to that void, we present a review of community-acquired MRSA and treatment recommendations by **Michael Dickey, MD** (CA-MRSA Abscess Care and Treatment Guidelines in Urgent Care Practice, page 11).

Dr. Dickey practices urgent care medicine at Marble Falls Minor Emergency Center in Marble Falls, TX and is a member of the Texas Medical Association, the American College of Occupational and Environmental Medicine, and the American Academy of Family Medicine.

Another challenge—albeit a less deadly one—facing the urgent care community is defining occupational medicine in the context of an urgent care practice. What are the essential elements of a successful program?

For answers, we turned to a nationally recognized authority on occupational health standards and protocols, **Donna Lee Gardner, RN, MS, MBA**. Her article, Urgent Care Occupational Medicine Defined (page 31) is the first in what will be a series of articles whose intent is to help you maximize the potential in offering occupational medicine services in your practice.

Ms. Gardner is senior principal with RYAN Associates; you may recognize her from presentations she's made at UCAOA conferences.

We also continue another important series in this issue; the latest installment of Bouncebacks (page 21) by **Michael B. Weinstock, MD** and **Ryan Longstreth, MD, FACEP** analyzes the dangers of overlooking abnormal vital signs in a relatively healthy 17-year-old boy. As revealed in this original article, the consequences can be devastating to the patient.

Also in this issue:

- **Drs. David Boyd** and **Ronald Billips** contribute a graphic case report on herpes zoster (AKA shingles) in Derm Diagnoses.
- **Nahum Kovalski, BSc, MDCM** reviews abstracts of high relevance to urgent care.
- **John Shufeldt, MD, JD, MBA, FACEP** counsels us on the ins and outs of pre-dispute binding arbitration agreements.
- **Frank Leone, MBA, MPH** discusses the role of the clinician in efforts to market occupational medicine services in the community.

If you have an idea for an article or new feature, please describe it in an e-mail to Editor-in-Chief **Lee A. Resnick, MD**, at *editor@jucm.com*. For an overview of our submission process, visit our website (*www.jucm.com*) and click on the Urgent Care Authors tab.

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*.

To Subscribe to *JUCM*

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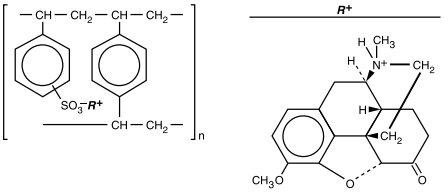
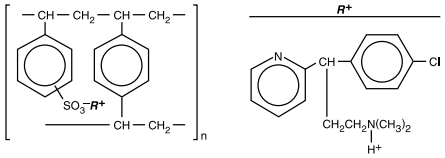
Hydrocodone Polistirex: Sulfonated styrene-divinylbenzene copolymer complex with 4,5α-epoxy-3-methoxy-17-methylmorphinan-6-one.



Chlorpheniramine Polistirex: Sulfonated styrene-divinylbenzene copolymer complex with 2-[p-chloro-α-[2-(dimethylamino)ethyl]-benzyl]pyridine.



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CLINICAL PHARMACOLOGY: Hydrocodone is a semisynthetic narcotic antitussive and analgesic with multiple actions qualitatively similar to those of codeine. The precise mechanism of action of hydrocodone and other opiates is not known; however, hydrocodone is believed to act directly on the cough center. In excessive doses, hydrocodone, like other opium derivatives, will depress respiration. The effects of hydrocodone in therapeutic doses on the cardiovascular system are insignificant. Hydrocodone can produce miosis, euphoria, and physical and psychological dependence.

Chlorpheniramine is an antihistamine drug (H_1 receptor antagonist) that also possesses anticholinergic and sedative activity. It prevents released histamine from dilating capillaries and causing edema of the respiratory mucosa.

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INDICATIONS AND USAGE: TUSSIONEX Pennkinetic Extended-Release Suspension is indicated for relief of cough and upper respiratory symptoms associated with allergy or a cold in adults and children 6 years of age and older.

CONTRAINDICATIONS: TUSSIONEX Pennkinetic Extended-Release Suspension is contraindicated in patients with a known allergy or sensitivity to hydrocodone or chlorpheniramine.

The use of TUSSIONEX Pennkinetic Extended-Release Suspension is contraindicated in children less than 6 years of age.

WARNINGS: Respiratory Depression: As with all narcotics, TUSSIONEX Pennkinetic Extended-Release Suspension produces dose-related respiratory depression by directly acting on brain stem respiratory centers. Hydrocodone affects the center that controls respiratory rhythm and may produce irregular and periodic breathing. Caution should be exercised when TUSSIONEX Pennkinetic Extended-Release Suspension is used postoperatively and in patients with pulmonary disease, or whenever ventilatory function is depressed. If respiratory depression occurs, it may be antagonized by the use of naloxone hydrochloride and other supportive measures when indicated (see OVERDOSAGE).

Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a pre-existing increase in intracranial pressure. Furthermore, narcotics produce adverse reactions, which may obscure the clinical course of patients with head injuries.

Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.

Obstructive Bowel Disease: Chronic use of narcotics may result in obstructive bowel disease especially in patients with underlying intestinal motility disorder.

Pediatric Use: In pediatric patients, as well as adults, the respiratory center is sensitive to the depressant action of narcotic cough suppressants in a dose-dependent manner. Benefit to risk ratio should be carefully considered, especially in pediatric patients with respiratory embarrassment (e.g., croup) (see PRECAUTIONS).

PRECAUTIONS: General: Caution is advised when prescribing this drug to patients with narrow-angle glaucoma, asthma, or prostatic hypertrophy.

Special Risk Patients: As with any narcotic agent, TUSSIONEX Pennkinetic Extended-Release Suspension should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy, or urethral stricture. The usual precautions should be observed and the possibility of respiratory depression should be kept in mind.

Information for Patients: As with all narcotics, TUSSIONEX Pennkinetic Extended-Release Suspension may produce marked drowsiness and impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery; patients should be cautioned accordingly. TUSSIONEX Pennkinetic Extended-Release Suspension must not be diluted with fluids or mixed with other drugs as this may alter the resin-binding and change the absorption rate, possibly increasing the toxicity.

Keep out of the reach of children.

Cough Reflex: Hydrocodone suppresses the cough reflex; as with all narcotics, caution should be exercised when TUSSIONEX Pennkinetic Extended-Release Suspension is used postoperatively, and in patients with pulmonary disease.

Drug Interactions: Patients receiving narcotics, antihistaminics, antipsychotics, antianxiety agents, or other CNS depressants (including alcohol) concomitantly with TUSSIONEX Pennkinetic Extended-Release Suspension may exhibit an additive CNS depression. When combined therapy is contemplated, the dose of one or both agents should be reduced.

The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone.

The concurrent use of other anticholinergics with hydrocodone may produce paralytic ileus.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenicity, mutagenicity, and reproductive studies have not been conducted with TUSSIONEX Pennkinetic Extended-Release Suspension.

Pregnancy: Teratogenic Effects – Pregnancy Category C
Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. TUSSIONEX Pennkinetic Extended-Release Suspension should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nonteratogenic Effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The withdrawal signs include irritability and excessive crying, tremors, hyperactive reflexes, increased respiratory rate, increased stools, sneezing, yawning, vomiting, and fever. The intensity of the syndrome does not always correlate with the duration of maternal opioid use or dose.

Labor and Delivery: As with all narcotics, administration of TUSSIONEX Pennkinetic Extended-Release Suspension to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from TUSSIONEX Pennkinetic Extended-Release Suspension, 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: Safety and effectiveness of TUSSIONEX Pennkinetic Extended-Release Suspension in pediatric patients under six have not been established (see WARNINGS).

Geriatric Use: Clinical studies of TUSSIONEX did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients. In general, dose selection for an elderly patient should be cautious, usually starting at the low end of the dosing range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

This drug is known to be substantially excreted by the kidney, and the risk of toxic reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function.

ADVERSE REACTIONS: Central Nervous System: Sedation, drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, euphoria, dizziness, psychic dependence, mood changes.

Dermatologic System: Rash, pruritus.

Gastrointestinal System: Nausea and vomiting may occur; they are more frequent in ambulatory than in recumbent patients. Prolonged administration of TUSSIONEX Pennkinetic Extended-Release Suspension may produce constipation.

Genitourinary System: Ureteral spasm, spasm of vesical sphincters, and urinary retention have been reported with opiates.

Respiratory Depression: TUSSIONEX Pennkinetic Extended-Release Suspension may produce dose-related respiratory depression by acting directly on brain stem respiratory centers (see OVERDOSAGE).

Respiratory System: Dryness of the pharynx, occasional tightness of the chest.

DRUG ABUSE AND DEPENDENCE: TUSSIONEX Pennkinetic Extended-Release Suspension is a Schedule III narcotic. Psychic dependence, physical dependence and tolerance may develop upon repeated administration of narcotics; therefore, TUSSIONEX Pennkinetic Extended-Release Suspension should be prescribed and administered with caution. However, psychic dependence is unlikely to develop when TUSSIONEX Pennkinetic Extended-Release Suspension is used for a short time for the treatment of cough. Physical dependence, the condition in which continued administration of the drug is required to prevent the appearance of a withdrawal syndrome, assumes clinically significant proportions only after several weeks of continued oral narcotic use, although some mild degree of physical dependence may develop after a few days of narcotic therapy.

OVERDOSAGE: Signs and Symptoms: Serious overdosage with hydrocodone is characterized by respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. Although miosis is characteristic of narcotic overdose, mydriasis may occur in terminal narcosis or severe hypoxia. In severe overdosage apnea, circulatory collapse, cardiac arrest and death may occur. The manifestations of chlorpheniramine overdosage may vary from central nervous system depression to stimulation.

Treatment: Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and the institution of assisted or controlled ventilation. The narcotic antagonist naloxone hydrochloride is a specific antidote for respiratory depression which may result from overdosage or unusual sensitivity to narcotics including hydrocodone. Therefore, an appropriate dose of naloxone hydrochloride should be administered, preferably by the intravenous route, simultaneously with efforts at respiratory resuscitation. Since the duration of action of hydrocodone in this formulation may exceed that of the antagonist, the patient should be kept under continued surveillance and repeated doses of the antagonist should be administered as needed to maintain adequate respiration. For further information, see full prescribing information for naloxone hydrochloride. An antagonist should not be administered in the absence of clinically significant respiratory depression. Oxygen, intravenous fluids, vasopressors and other supportive measures should be employed as indicated. Gastric emptying may be useful in removing unabsorbed drug.

DOSAGE AND ADMINISTRATION

Shake well before using.

Adults and Adolescents ≥ 13 Years of Age
5 mL (1 teaspoonful) every 12 hours; do not exceed 10 mL (2 teaspoonfuls) in 24 hours.

Children 6-12 Years of Age
2.5 mL (1/2 teaspoonful) every 12 hours; do not exceed 5 mL (1 teaspoonful) in 24 hours.

It is important that TUSSIONEX be measured accurately. A household teaspoonful is not an accurate measuring device and could lead to overdosage, especially when half a teaspoon is to be measured. It is strongly recommended that an accurate measuring device be used. A pharmacist can provide an appropriate measuring device and can provide instructions for measuring the correct dose. Please ask a pharmacist for advice.

This medicine is not intended for children under 6 years of age (see CONTRAINDICATIONS).

HOW SUPPLIED: TUSSIONEX Pennkinetic (hydrocodone polistirex and chlorpheniramine polistirex) Extended-Release Suspension is a gold-colored suspension.

NDC 53014-548-67 473 mL bottle

For Medical Information

Contact: Medical Affairs Department
Phone: (866) 822-0068
Fax: (770) 970-8859

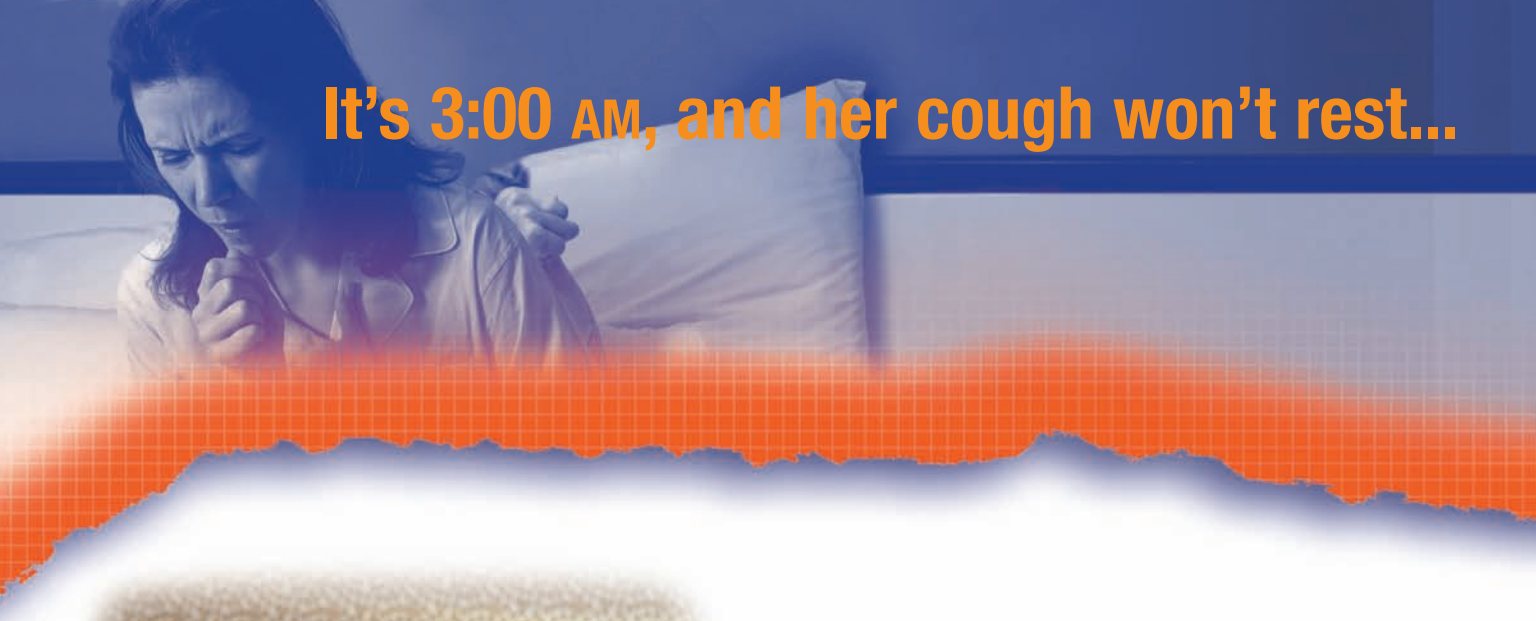
Storage:

Shake well. Dispense in a well-closed container.

Store at 20-25°C (68-77°F); excursions permitted to 15-30°C (59-86°F)
[see USP Controlled Room Temperature].

TUSSIONEX Pennkinetic Extended-Release Suspension
Manufactured for:
UCB, Inc.
Smyrna, GA 30080

TU1186-0807



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Tussionex® CIII
Pennkinetic®
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Extended-Release Suspension

Cough relieved. Rest assured.™

IMPORTANT SAFETY INFORMATION

TUSSIONEX® is indicated for the relief of cough and upper respiratory symptoms associated with allergy or a cold in adults and children 6 years of age and older. Each teaspoonful (5 mL) of TUSSIONEX® contains hydrocodone polistirex equivalent to 10 mg hydrocodone bitartrate and chlorpheniramine polistirex equivalent to 8 mg chlorpheniramine maleate. TUSSIONEX® is contraindicated in the presence of known allergy or sensitivity to hydrocodone or chlorpheniramine and in children less than 6 years of age. The most common adverse reactions associated with TUSSIONEX® are sedation, drowsiness, and mental clouding, which may impair the mental and/or physical abilities required for potentially hazardous tasks. As with any other drugs in this class, the possibility of tolerance and/or dependence, particularly in patients with a history of drug dependence, should be considered.

Please see full Prescribing Information on reverse.

*Based on pharmacokinetic data. Data on file. UCB, Inc.

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Manufactured by UCB Manufacturing, Inc.

CA-MRSA Abscess Care and Treatment Guidelines *in Urgent Care Practice*

Urgent message: In the absence of controlled outpatient trials, the author proposes urgent-care specific guidelines for treatment of community-acquired MRSA, informed by clinical experience and local and regional case reports.

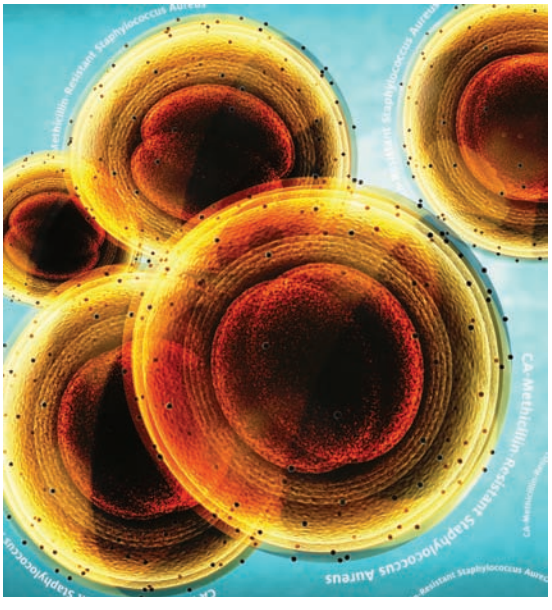
Michael Dickey, MD

PURPOSE

The goal of any treatment is to maximize the chance of a positive outcome for a patient. The purpose of a treatment *guideline* is to maximize the chance of positive outcomes in groups of patients that present with a similar disease states.

While there remain "many ways to skin a cat," the theory behind the use of treatment guidelines in the primary care specialties and subspecialties—including urgent care—is not necessarily complete uniformity of treatment, but to assure that treatment is consistent with available evidence from the medical literature.

The best treatment plan utilizes those treatment options that appear to show higher cure rates and shorter treatment intervals.



BACKGROUND

Ideally, we would have multiple large, controlled, community-based outpatient trials comparing various treatment options and combinations of treatments for community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA).

In the imperfect world of clinical medical practice, however, we do not always have perfect evidence to rely on.

The reality is that, to date, there is little controlled research on the treatment of CA-MRSA, probably owing much to the recent genesis of this problem, but also due to the difficulty of controlled trials on such a genetically diverse disease agent as CA-MRSA. Some of the most useful clinical information available at present comes from case reports.

This proposed treatment guideline is also influenced by the author's observations during treatment of approximately 1,200 cases of skin and soft tissue infections (SSTIs), of which approximately 85% were CA-MRSA, during a five-year interval (2002-2007).

A review of available literature reveals diversity of opinion on the treatment of CA-MRSA SSTIs, particularly when it comes to appropriate use of antibiotics. The diversity is so great that it leaves the impression that many regions of the country may well be dealing with less virulent strains of CA-MRSA or are just now beginning to see the problem. A literature review confirms that there is significant diversity of CA-MRSA phenotypes, and widely different prevalence rates of CA-MRSA depending on region of the U.S.[1-3]

Some have even advocated against the routine use of antibiotics to treat most cases of CA-MRSA SSTIs, arguing that incision and drainage is usually adequate therapy.[4,5] Others have been more cautious and note that even when abscesses are treated with antibiotics showing in-vitro resistance, they usually get better.[6]

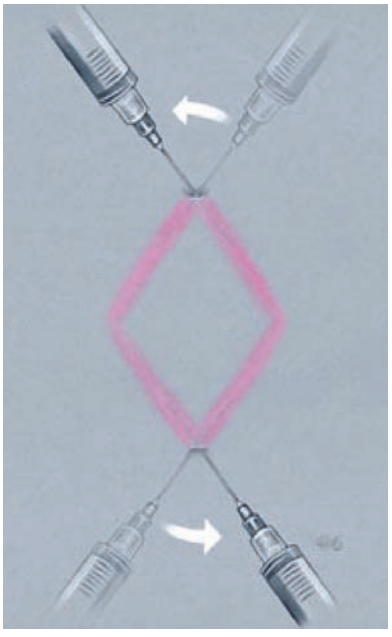


Figure 1. Field infiltration.

Illustration used courtesy of Gohar Salam, MD, FACS.

The increased virulence of CA-MRSA strains appears linked to factors such as a shorter doubling times and the Panton-Valentine leukocidin (PVL) toxin, rarely identified in healthcare-associated MRSA (HA-MRSA) isolates.[7,8] This increased virulence of CA-MRSA sets it apart clinically from methicillin-sensitive *S aureus* and the primarily opportunistic HA-MRSA.

These distinguishing clinical features are:

- rapid or explosive growth
- large cellulitis area
- associated fever
- increased malaise, myalgia, and/or arthralgias
- toxic appearance or lethargy.

However, the clinical presentation of a CA-MRSA infection is often indistinguishable from other causes of SSTI.[7]

While it is important for providers in endemic areas to be aware that the vast majority of the SSTIs that we see today are MRSA, we also must be cautious to remember that SSTIs can still be caused by other organisms, as well.

Other organisms responsible for SSTIs include the relatively common Group A *Streptococcus* (GAS) (including more severe necrotizing fascitis), as well as *Haemophilus influenza*, *Aeromonas hydrophilia* (fresh water-exposed wounds), *Pasteurella multocida* (from animal bites), Group B, C, G *Streptococcus*, and, rarely, pneumococci and *Escherichia coli*.

In addition, patients who are immunocompromised with granulocytopenia (e.g., transplant recipients and chemotherapy patients) may develop cellulitis due to gram-negative bacilli such as *Citrobacter*, *Enterobacter, Pseudomonas*, *Proteus*, and *Serratia*. Thus, providers should continue to culture wounds for confirmation of pathogen identification whenever possible.[4]

PRIMARY TREATMENT PRINCIPLES FOR SSTIs AT RISK FOR CA-MRSA

In essence, there are three primary principles for treatment of SSTIs at risk for CA-MRSA:

1. Thorough and complete wound debridement and maintenance of debrided state
2. Aggressive multi-drug antibiotic treatment
3. Treatment of underlying comorbid factors, e.g., diabetes and edema states affecting venous return

We will break down each of these principles further.

Wound Debridement

Anesthesia

Good wound debridement begins (and ends) with adequate anesthesia. In general, this is a matter of a good field infiltration (**Figure 1)**. A good infiltration over a large abscess can take several minutes to obtain. The use of multiple drugs (e.g., bupivacaine, lidocaine, and epinephrine) often makes for more complete and durable anesthesia.

If adequate anesthesia cannot be obtained in the outpatient setting, the patient should be immediately referred for operating room surgical debridement under regional or general anesthesia.

For pediatric cases or very apprehensive patients, a mixture of lidocaine and prilocaine or an occlusive dressing of viscous lidocaine for 30 minutes to one hour prior to field infiltration may be beneficial.

Also, topical viscous lidocaine used to moisten packing and placed inside abscess cavities prior to subsequent wound care appears to be a useful adjunct for reducing discomfort and allowing for adequate wound irrigation and/or cleaning.

Incision and Drainage

Adequate exposure of the abscess cavity is likely the

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Plan B® is indicated to prevent pregnancy following unprotected intercourse or contraceptive failure.

Plan B® is contraindicated in women with known or suspected pregnancy or hypersensitivity to any component of the product. **Plan B® is not recommended for routine use as a contraceptive. Plan B® is not effective in terminating an existing pregnancy**. Plan B® does not protect against HIV infection and other sexually transmitted infections (STIs). Menstrual bleeding may be heavier or lighter, earlier or later after taking Plan B®. If menses is delayed beyond one week, pregnancy should be considered. Severe abdominal pain may signal a tubal (ectopic) pregnancy. Common side effects associated with the use of Plan B® include nausea, abdominal pain, fatigue, headache, menstrual changes, dizziness, breast tenderness, vomiting, and diarrhea.

Please see adjacent page for brief summary of Prescribing Information.

Reference: 1. Task Force on Postovulatory Methods of Fertility Regulation. Randomised controlled trial of levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception. *Lancet*. 1998;352:428-433.

Plan B® (Levonorgestrel) Tablets, 0.75 mg

Brief Summary (See Package Brochure For Full Prescribing Information)

Rx only for women age 17 and younger

For women age 17 and younger, Plan B® is a prescription-only emergency contraceptive. Plan B® is intended to prevent pregnancy after known or suspected contraceptive failure or unprotected intercourse. Emergency contraceptive pills (like all oral contraceptives) do not protect against infection with HIV (the virus that causes AIDS) and other sexually transmitted diseases.

CONTRAINDICATIONS

Progestin-only contraceptive pills (POPs) are used as a routine method of birth control over longer periods of time, and are contraindicated in some conditions. It is not known whether these same conditions apply to the Plan B® regimen consisting of the emergency use of two progestin pills. POPs however, are not recommended for use in the following conditions:

- Known or suspected pregnancy
- Hypersensitivity to any component of the product

WARNINGS

Plan B® is not recommended for routine use as a contraceptive.
Plan B® is not effective in terminating an existing pregnancy.

Effects on Menses

Menstrual bleeding patterns are often irregular among women using progestin-only oral contraceptives and in clinical studies of levonorgestrel for postcoital and emergency contraceptive use. Some women may experience spotting a few days after taking Plan B®. At the time of expected menses, approximately 75% of women using Plan B® had vaginal bleeding similar to their normal menses, 12-13% bled more than usual, and 12% bled less than usual. The majority of women (87%) had their next menstrual period at the expected time or within ± 7 days, while 13% had a delay of more than 7 days beyond the anticipated onset of menses. If there is a delay in the onset of menses beyond 1 week, the possibility of pregnancy should be considered.

Ectopic Pregnancy

Ectopic pregnancies account for approximately 2% of reported pregnancies (19.7 per 1,000 reported pregnancies). Up to 10% of pregnancies reported in clinical studies of routine use of progestin-only contraceptives are ectopic. A history of ectopic pregnancy need not be considered a contraindication to use of this emergency contraceptive method. Health providers, however, should be alert to the possibility of an ectopic pregnancy in women who become pregnant or complain of lower abdominal pain after taking Plan B®.

PRECAUTIONS

Pregnancy

Many studies have found no effects on fetal development associated with long-term use of contraceptive doses of oral progestins (POPs). The few studies of infant growth and development that have been conducted with POPs have not demonstrated significant adverse effects.

STD/HIV

Plan B®, like progestin-only contraceptives, does not protect against HIV infection (AIDS) and other sexually transmitted diseases.

Physical Examination and Follow-up

A physical examination is not required prior to prescribing Plan B®. A follow-up physical or pelvic examination, however, is recommended if there is any doubt concerning the general health or pregnancy status of any woman after taking Plan B®.

Carbohydrate Metabolism

The effects of Plan B® on carbohydrate metabolism are unknown. Some users of progestin-only oral contraceptives (POPs) may experience slight deterioration in glucose tolerance, with increases in plasma insulin; however, women with diabetes mellitus who use POPs do not generally experience changes in their insulin requirements. Nonetheless, diabetic women should be monitored while taking Plan B®.

Drug Interactions

Theoretically, the effectiveness of low-dose progestin-only pills is reduced by hepatic enzyme-inducing drugs such as the anticonvulsants phenytoin, carbamazepine, and barbiturates, and the antituberculosis drug rifampin. No significant interaction has been found with broad-spectrum antibiotics. It is not known whether the efficacy of Plan B® would be affected by these or any other medications.

Nursing Mothers

Small amounts of progestin pass into the breast milk in women taking progestin-only pills for long-term contraception resulting in steroid levels in infant plasma of 1-6% of the levels of maternal plasma. However, no adverse effects due to progestin-only pills have been found on breastfeeding performance, either in the quality or quantity of the milk, or on the health, growth or development of the infant.

Pediatric Use

Safety and efficacy of progestin-only pills have been established in women of reproductive age for long-term contraception. Safety and efficacy are expected to be the same for postpubertal adolescents under the age of 16 and for users 16 years and older. Use of Plan B® emergency contraception before menarche is not indicated.

Fertility Following Discontinuation

The limited available data indicate a rapid return of normal ovulation and fertility following discontinuation of progestin-only pills for emergency contraception and long-term contraception.

ADVERSE REACTIONS

The most common adverse events in the clinical trial for women receiving Plan B® included nausea (23%), abdominal pain (18%), fatigue (17%), headache (17%), and menstrual changes. The table below shows those adverse events that occurred in ≥ 5% of Plan B® users.

Table 3: Adverse Events in ≥ 5% of Women, by % Frequency

Most Common Adverse Events	Plan B® Levonorgestrel N=977 (%)
Nausea	23.1
Abdominal Pain	17.6
Fatigue	16.9
Headache	16.8
Heavier Menstrual Bleeding	13.8
Lighter Menstrual Bleeding	12.5
Dizziness	11.2
Breast Tenderness	10.7
Other complaints	9.7
Vomiting	5.6
Diarrhea	5.0

Plan B® demonstrated a superior safety profile over the Yuzpe regimen for the following adverse events:

- Nausea: Occurred in 23% of women taking Plan B® (compared to 50% with Yuzpe)
- Vomiting: Occurred in 6% of women taking Plan B® (compared to 19% with Yuzpe)

DRUG ABUSE AND DEPENDENCE

There is no information about dependence associated with the use of Plan B®.

OVERDOSAGE

There are no data on overdosage of Plan B®, although the common adverse event of nausea and its associated vomiting may be anticipated.

Mfg. by Gedeon Richter, Ltd., Budapest, Hungary
for Duramed Pharmaceuticals, Inc.
Subsidiary of Barr Pharmaceuticals, Inc.
Pomona, New York 10970
Phone: 1-800-330-1271
Website: www.go2planb.com

Revised AUGUST 2006
BR-0038/11001136

PLB-A71016R February 2007

most critical aspect of good drainage and continued care of an abscess.

One of the greatest obstacles to clearing an infection is reformation of abscess and/or tunneling of the infection through subcutaneous tissue or into deeper structures. The primary wound incision must be large enough to allow adequate wound care and inspection to prevent formation of additional abscesses.

The primary incision length over an abscess should in most cases approach one half the diameter of the abscess (e.g., a 2 cm abscess should have a 1 cm incision).

In the author's experience, the vast majority of abscesses can be treated adequately through incisions measuring 1 cm to 3 cm. No incision into an abscess should be smaller than 8 mm to 10 mm. Incisions any smaller than this do not allow for adequate wound care and drainage. Deep abscesses need a proportionately larger incision in order to maintain adequate drainage.

Abscesses that are beneath 3 cm to 4 cm of subcutaneous tissue do best with incisions that approach their full diameter. Wounds should be thoroughly probed with a hemostat or similar instrument with an effort to coalesce the abscess into a single well confluent cavity.

The wound cavity should then be irrigated copiously with sterile saline or water. Either a drain or packing must be placed for the initial 24 hours following drainage. Plain packing, normal saline wet to dry, iodoform gauze or Penrose drain are all suitable. Strong consideration should be given to using a drain instead of packing in fistulous tracks.

Often, a more expedited sterilization of a wound can be obtained by making a second incision into the distal end of a subcutaneous track and running the drain out of both ends of the tract.

These wounds should be treated twice daily with normal saline wet-to-dry dressing changes or cleanings twice daily with saline or hydrogen peroxide and cotton swabs in order to maintain adequate wound debridement.

Wound packing *should not* be left in a wound for an extended period of time. Packing left as long as 48 hours in the wound appears to foster formation of second abscesses.

This does not apply to drains, however; usually, drains should be left until drainage is minimal and the cellulitis component of the infection is significantly improved. The area around the drain should be cleared of debris with saline or peroxide at least once daily to maintain adequate drain function as long as the drain is in place.

With certainty, inadequate drainage of the CA-MRSA SSTI(s) appears to be a significant cause for treatment resistance and treatment failure. However, as large SSTIs with a significant cellulitis component are the rule and these areas of cellulitis routinely produce satellite abscesses, it seems unlikely that drainage of the abscess alone is an appropriate empiric treatment of any but the smallest and most superficial lesions.

The Centers for Disease Control and Prevention continues to recommend the routine culture of *all* abscesses, even in areas with epidemic outbreaks of CA-MRSA. The CDC's Summary of Experts Meeting on MRSA in March of 2006 rationalized this by stating that "obtaining cultures of purulent skin and soft tissue infections is still important to monitor trends in susceptibility of *S aureus* to non beta-lactam agents."[4]

Antibiotic Treatment

The area of greatest disagreement in the treatment of SSTI is the use of antibiotics. Possible causes for such divergent opinions include geographic variations in frequency of CA-MRSA isolation, susceptibility patterns, and variations in virulence, as well as deep-seated disagreements on the use of certain classes of antibiotics in infections that are viewed by some as less serious or non life-threatening. It is possible that recent national press coverage of this disease may have an impact on those biases.

While some sources have recently advocated a "trial of incision and drainage" for CA-MRSA abscesses "smaller than 5 cm,"[9] this approach does not appear to take into account the geographic variability of the prevalence of MRSA (20% to 90%), the increased virulence of CA-MRSA in certain endemic areas, and unpredictable patient follow-up in urgent care and emergency medicine settings.

Often, in these endemic areas, many (if not most) patients present with a rapidly progressive cellulitis and/or explosive growth in abscess size. The common observation of significant growth of the area of cellulitis 24 to 48 hours after appropriate incision and drainage argues strongly for routine use of antibiotics.

The author speculates that those who argue against the routine use of antibiotics are from regions that are still seeing virulence more akin to HA-MRSA infections or less virulent strains of CA-MRSA.

The principles of CA-MRSA antibiotic treatment being proposed here include:

- frequent use of antibiotic combinations from the onset of treatment
- aggressive dosing of certain antibiotics (e.g., TMP-SMX)

Table 1. Antibiotic Therapy for CA-MRSA SSTIs

Trimethoprim-sulfamethoxazole	• Combination therapy with rifampin appears superior • Not active against GAS; consider adding B-lactam or clindamycin • Don't use in last trimester and infants under 2 months • Consider "high-dose therapy" (2 DS tablets BID)
Clindamycin	• D-test important, significant inducible resistance • May inhibit PVL and other exotoxins • Combination therapy with Rifampin appears superior • Dose 450 mg TID or 300 QID
Linezolid	• Expensive • Myelosuppression • Single drug oral or IV therapy for more severe infections • Dose 600 mg BID
Vancomycin	• Drug of choice for severe infections • Preliminary analysis shows once-a-day IV regimens effective and safe • 30 mg/kg divided q 12 hours (peak: 30-40 mg/L; trough 5-10 mg/L) • 30 mg/kg q 24 hours (peak: n/a; trough <10 mg/L)[12] • Infusion rate: Over 1 hour in BID regimen, over 2 hour in q day regimen[12]
Doxycycline, minocycline	• Combination with rifampin appears superior • Limited activity against GAS (consider adding B-lactam or clindamycin) • Minocycline may be slightly superior to doxycycline • Tetracycline not as effective • Dose 100 mg BID
Moxifloxacin	• Single-drug therapy with coverage that includes GAS • Some concerns about eventual resistance • Inducible resistance appears unlikely • Unique structure sets apart from older quinolones (ciprofloxacin, levofloxacin) which are less effective and more likely to experience inducible resistance • Dose 400 mg q day
Rifampin	• Not for monotherapy • Appropriate to combine with TMP-SMX, clindamycin, vancomycin, doxycycline, and minocycline • Potential for drug-to-drug interactions
Resistant antibiotics	• Macrolides (erythromycin, clarithromycin, azithromycin, telithromycin) • All penicillins and cephalosporins (penicillin, amoxicillinoxacillin, nafacillin, ticarcillin disodium + clavulanate potassium, ampicillin + sulbactam, amoxicillin + clavulanate, cloxacillin, dicloxacillin, ceftriaxone, cephalexin)

- early consideration of "second-line drugs," including intravenous vancomycin
- avoidance of drugs likely to have resistance or that are prone to develop resistance during treatment (i.e. avoidance of B-lactams, macrolides and older quinolones, D disk testing for inducible clindamycin resistance).

Following is a brief overview of the currently available classes of antibiotics for treatment of CA-MRSA SSTIs **(Table 1)**.

Vancomycin has been used to treat serious MRSA infections for the last 15 to 20 years and remains the gold standard for treating MRSA. However, despite a high in vitro sensitivity, treatment failure rates in the 40% range with single-drug therapy of serious infections are reported.[10,11,12]

Combination therapy with rifampin improves response rates. Once-daily intravenous therapy, while not currently in widespread use, makes for more feasible outpatient therapy in the urgent care setting.[12] Further studies into the efficacy of once-daily vancomycin are warranted.

Clindamycin is FDA-approved for the treatment of serious infections due to *S aureus* and has been used successfully to treat CA-MRSA. However, inducible clindamycin resistance is an issue in erythromycin-resistant, clindamycin-sensitive *S aureus* isolates.[13] Inducible clindamycin resistance can be detected through a specialized laboratory test called the D-zone test.[14]

Clindamycin appears to exhibit a unique inhibition of the PVL toxin, which may be of significant benefit in the inhibition of further cellulitis and abscess spread.[15] Another very important benefit to adding clindamycin to any regimen for treatment of SSTI is the addition of good-to-excellent coverage for GAS. Neither SMP-TMP nor doxycycline has adequate coverage for GAS.

Clostridium difficile-associated diarrhea (CDAD) may occur more frequently with clindamycin compared with other antibiotics commonly used to treat CA-MRSA; however, it is still a relatively rare complication of treatment or CA-MRSA, even with the use of clindamycin.

Tetracycline (specifically, doxycycline) is also FDA-approved for the treatment of *S aureus* skin infections. The prevalence of tetracycline resistance in CA-MRSA remains low.[16]

Further, much of the reported resistance to tetracycline is due to the tetK gene, which only confers resistance to tetracycline specifically; it does not confer resist-

Table 2. Proposed Decision Tree for Empiric Antibiotic Therapy for CA-MRSA

Severity	Presentation	Treatment
Mild SSTI	**Fever:** None **Cellulitis:** Area <2 cm **Severe signs:** None **Significant comorbidity*:** None, if present treat as moderate SSTI	**Aspiration negative:** Monotherapy or combination antibiotic therapy; consider possibility of GAS **Aspiration positive or obvious abscess:** I & D abscess immediately; strongly consider combination antibiotic therapy **Assess response to therapy:** Daily until infection clearly improving; reassess antibiotic therapy if any additional spread of cellulitis or if not improved appearance within 36 hours
Moderate SSTI	**Fever:** None **Cellulitis area:** 2-4 cm **Severe signs:** None **Significant comorbidity*:** None, if present treat as severe SSTI	**Aspiration and I&D:** As above **Antibiotics therapy:** Frequently used combinations: 1) Trimethoprim-sulfamethoxazole DS 1-2 BID and clindamycin 450 mg TID or 2) Minocycline (or doxycycline) 100 mg BID and clindamycin 450 mg BID; may additionally use rifampin with either regimen **Assess response to therapy:** Daily until infection clearly resolving; reassess antibiotic therapy if any additional spread of cellulitis or if not improved appearance within 36 hours; consider vancomycin if cellulitis area increasing at 36 hours or any rapid deterioration
Severe SSTI	**Fever:** If present, consider severe SSTI **Cellulitis area:** >4 cm **Severe signs:** If lethargy, toxicity, or myalgia present, consider severe **Significant comorbidity*:** If present, treat as severe and potentially life- or limb-threatening.	**Aspiration and I&D:** As above, use drain in any fistulous tracts to maintain drainage; refer for inability to obtain adequate anesthesia (rarely required) **Antibiotics therapy:** Intravenous antibiotics indicated; if aspiration is negative, may consider IV ceftriaxone in addition to oral coverage specific for MRSA as above; if aspiration positive, strong consideration must be given to IV vancomycin, may be used in combination with rifampin or other oral antibiotics; in particular, the additional use of oral or IV clindamycin in serious infections is prudent.

*Diabetes, immunosuppressive therapy, chemotherapy, organ transplant, granulocytopenia, venous insufficiency.

ance to doxycycline or minocycline. Replacement of tetracycline with doxycycline or minocycline on susceptibility testing may be desirable in the future, particularly if the prevalence of tetracycline resistance increases.

In a recent case series, the long-acting tetracyclines (doxycycline and minocycline) performed well for the treatment of MRSA SSTIs caused by tetracycline-susceptible isolates.[16]

The tetracyclines are not recommended during pregnancy or for children under the age of 8. In addition, as group A *Streptococcus* infections are also an important cause of SSTIs, it is important to remember that significant resistance to tetracycline is common in group A *Streptococcus* isolates.

Trimethoprim-sulfamethoxazole (TMP-SMX) is not FDA-approved for the treatment of any form of staphylococcal infection. However, TMP-SMX is "rapidly bactericidal against MRSA in vitro compared with most other orally available antimicrobials."[17] There are also a number of case reports reporting successful use of TMP-SMX in the treatment of *S aureus* infections, including MRSA. One case report describes the use of "high dose" (oral TMP 20 mg/kg/day SMX 100mg/kg/day) for the treatment multi-drug resistant *S aureus* infected orthopedic implants. Treatment periods were six to nine months, with overall success rate of 66.7%.[18]

Nonetheless, in clinical practice drug treatment failure remains an issue for TMP-SMX. Combination with rifampin appears to improve responses to treatment.[19-21] Also, it is clinically important to remember that GAS is another common cause of SSTIs, and GAS is usually resistant to TMP-SMX.

Additional coverage, such as clindamycin, should be considered to cover any SSTI until cultures have shown that GAS is not responsible for the infection.[4]

In Central Texas, TMP-SMX is often given as a preferred choice to treat SSTI abscesses by lecturers giving presentations to emergency medicine, urgent care, and primary care physicians. Antibiograms would seem to support this recommendation.

However, in clinical practice, we have found an extraordinarily high failure rate with standard doses of TMP-SMX alone. The addition of rifampin +/- clindamycin appears to substantially improve success rates.

Granted, this is vague and only anecdotal information, but our experience would speak strongly against TMP-SMX monotherapy in any abscess with significant overlying cellulitis, near joints, in the perineal area, and near facial structures. Also of concern is that GAS infections are another important cause of SSTIs and

are resistant to TMP-SMX therapy.

TMP-SMX should not be used in children under 2 months of age or in women in the last trimester of pregnancy.

Quinolones: Conversely, the CDC notes that fluoroquinolones and macrolides "are not optimal choices for empiric treatment of community-associated SSTI(s) possibly caused by *S aureus*…because of a relatively high prevalence of resistance among *S aureus* isolates in the community or the potential for rapid development of resistance."[4]

This statement bears further analysis, however.

Because of frequent resistance, macrolides are clearly not an appropriate therapeutic choice for treating SSTIs due to MRSA. However, in reviewing the literature, it would seem that the CDC—with input from the "expert panel"—may be overstating the case against the use of certain fluoroquinolones.

Currently, in many regions of the United States, the rates of CA-MRSA resistance to quinolones remain low. There is concern that this rate appears to be increasing, however.

While it is also true that older quinolones, such as ciprofloxacin, are prone to inducible resistance—particularly with *S aureus*[22,23]—this does not appear to be the case with newer C8 modified quinolones such as moxifloxacin and garenoxacin, which has yet to be approved in the U.S.[24-26] Because the minimum inhibitory concentrations of the newer quinolones are lower than those of the older quinolones (ciprofloxacin and levofloxacin), there is less chance for inducible resistance to develop.

However, it should be remembered that quinolone resistance is primarily class specific. As CA-MRSA quinolone resistance increases, the newer modified quinolones may become less effective. In spite of these theoretical concerns, it is far from a foregone conclusion that the use of moxifloxacin now to treat SSTIs will result in a more rapid antibiotic resistance than the use of any of the other treatment options currently available.

Linezolid, first released in 2000, is active against both HA-MRSA and CA-MRSA and has recently found increased use in the treatment of endemic outbreaks of CA-MRSA infections.

Some studies have shown the effectiveness of linezolid to approach that of vancomycin in the treatment of MRSA.[27,28] Linezolid, like clindamycin, has an inhibitory effect on the production of PVL toxin by *S aureus*.[15] The main limiting factor for the use of linezolid is the cost of $130/day.

Adverse effects of linezolid include myelosuppression, neuropathy, and a particularly high risk of drug interaction with selective serotonin reuptake inhibitors resulting in serotonin syndrome.

Rifampin has long been used as to treat tuberculosis in combination with other medications and is most familiar to clinicians for this use. Although rifampin shows high sensitivities for CA-MRSA, effective cure rates are low when it is used as single-drug therapy. This is at least partially due to the fact that when rifampin is used as a single agent, *S aureus* appears to develop resistance rapidly.[29]

However, numerous studies have shown that when rifampin is used in combination with certain other antimicrobials, cure rates are improved substantially.[19,21,27] In particular, combinations with vancomycin, trimethoprim-sulfamethoxazole (trimeth/sulfa), and minocycline appear to improve clinical outcomes.

Studies of the combined use of linezolid and rifampin showed significant disagreement, but as a whole tended to indicate a lack of antagonism between the two antibiotics, while showing evidence of less induced resistance to rifampin; several studies indicated synergy when using these antibiotics in combination.[27,30]

Rifampin does appear to exhibit synergy with the older quinolones, particularly in reducing inducible resistant. However, we are unaware of any studies addressing possible combination with the newer quinolones in the treatment of CA-MRSA.

Because of the high observed failure rate of single-drug therapy at our facility, we have instituted the following policy:

Mandatory Use of Combination Therapy for CA-MRSA

All patients being treated empirically or with a clinical diagnosis or SSTI due or possibly due to CA-MRSA are to be placed on combination therapy using rifampin and/or clindamycin in addition to one or more of the following: vancomycin, linezolid, trimeth-sulfa, or tetracycline (minocycline, doxycycline). If, in the physician's judgment, there is contraindication to this combination therapy, the rationale for withholding combination therapy must be documented in the patient chart. Alternative appropriate monotherapy includes linezolid or possibly moxifloxacin. Vancomycin should be considered appropriate as either monotherapy or in combination in most serious SSTI.

IN CONSIDERATION OF GAS

Group A *Streptococcus* (GAS) is also an important cause of SSTI. In particular, wounds with predominantly cel-

lulitis or impetigo appearance should be considered possibly due to GAS. Tetracyclines and TMP-SMX are not adequate treatments for suspected GAS infections. Appropriate coverage for GAS includes B-lactams, macrolides or clindamycin.

COMMUNITY RESISTANCE PATTERNS

As the prevalence, virulence, and sensitivities of CA-MRSA vary significantly from region to region, it can be helpful to obtain local antibiogram data. Unfortunately, lab antibiograms routinely combine data from CA-MRSA and HA-MRSA.

Some useful information can still be gleaned by studying community resistance patterns. The diverse phenotypes of these two broad classifications of *S aureus* make it difficult to distinguish them definitively in the laboratory.

In **Table 3**, note the low sensitivities to clindamycin in the only laboratory doing the D-Test for inducible clindamycin resistance. Certainly, without that information, clindamycin would appear to be much more effective than it actually is likely to be in this particular geographic region.

Also, note the falling sensitivities to TMP-SMX when progressing from rural to more urban hospitals. This may reflect a higher percentage of HA-MRSA isolates.

TREATMENT OF UNDERLYING COMORBID FACTORS

Factors regarding certain comorbid conditions bear mention.

Diabetic patients require close monitoring of their glucose measurements during treatment. Infection can predispose these patients to worsening hyperglycemia, making treatment more difficult. Ketosis-prone diabetics are at risk for developing diabetic ketosis. Many, if not most, diabetic patients will require additional insulin, modification of oral regimen, or initiation of temporary insulin therapy during treatment.

Edema states affecting the area of infection can make for very difficult eradication of infection. Therapies including elevation, sequential compression, or graduated compression to affected edematous areas are needed to improve venous return.

CONCLUSION

Failed outpatient therapy is a significant problem in the management of CA-MRSA. Inadequate initial incision and drainage, inadequate wound management after initial I & D, and inadequate antibiotic coverage are potential causes of failed outpatient therapy.

Increased provider attention to these critical aspects of treatment should result in reduced numbers of prolonged outpatient treatment and reduced numbers of outpatient treatment failure.

Currently, the medical literature is very confused on the subject of antibiotic therapy for CA-MRSA SSTIs. Those of us on the front line must continue to assess the literature carefully and with critical thought. Hopefully, as new case series are evaluated, improved evidence and consensus will result.

Continued on page 20.

Table 3. Combined Central Texas Hospital Lab Antibiogram

	Isolates	Oxacillin	Gentamicin	Ciprofloxacin	Levofloxacin	TMP-SMX	Erythromycin	Clindamycin	Vancomycin	Minocycline	Doxycycline	Linezolid
Hospital A (rural)	249	0	98	53	43	100	3	82	100	99	99	100
Hospital B (suburban)	153	0	100	61	50	100	6	93	100	100	97	100
Hospital C (urban)	422	0	99	49	31	99	8	91	100	99	95	NA
Hospital D (urban)	745	0	96	28	23	98	7	66	100	98	95	100
Hospital E (urban-public)	1359	0	98	46	37	66	7	87	100	98	93	100
Hospital F (urban-private)	NA	NA	NA	NA	NA	98	5	17 *D-test	100	NA	NA	NA

(Source: Seton Medical System, Saint David's Medical System; Austin, TX)
*This lab performs D-Test and only reports as sensitive those cultures that do not show inducible clindamycin resistant.

REFERENCES

1. Styers D, Sheehan DJ, Hogan P, et al. Laboratory-based surveillance of current antimicrobial resistance patterns and trends among *Staphylococcus aureus*: 2005 status in the United States. *Ann Clin Microbiol Antimicrob*. 2006;5:2.
2. Johnson LB, Saravolatz LD. Community-acquired MRSA: Current epidemiology and management issues. *Infect Med*. 2005;22(1):16-20.
3. Fridkin SK, Hageman JC, Morrison M, et al for the Active Bacterial Core Surveillance Program of the Emerging Infections Program Network. Methicillin-resistant *Staphylococcus aureus* disease in three communities. *N Engl J Med*. 2005;7;352(14):1436-1444. Erratum in: *N Engl J Med*. 2005;352(22):2362.
4. CDC—Strategies for clinical Management of MRSA in the Community: Summary of an Experts Meeting Convened by the Centers for Disease Control and Prevention, March 2006.
5. Hankin A, Everett WW. Are antibiotics necessary after incision and drainage of a cutaneous abscess? (From the Department of Emergency Medicine, Hospital of the University of Pennsylvania.) *Ann Emerg Med*. 2007;50(1):49-51.
6. Paydar KZ, Hansen SL, Charlebois ED, et al. Inappropriate antibiotic use in soft tissue infections. *Arch Surg*. 2006;141(9):850-854; discussion 855-856.
7. Naimi TS, LeDell KH, Como-Sabetti K, et al. Comparison of community- and health care–associated methicillin-resistant *Staphylococcus aureus* infection. *JAMA*. 2003;290:2976-2984.
8. Vandenesch F, Naimi T, Enright MC, et al. Community-acquired methicillin-resistant *Staphylococcus aureus* carrying Panton-Valentine leukocidin genes: Worldwide emergence. *Emerg Infect Dis*. 2003:9(8):878-984.
9. Lee MC, Rios AM, Aten MF, et al. Management and outcome of children with skin and soft tissue abscesses caused by community-acquired methicillin-resistant *Staphylococcus aureus*. *Pediatr Infect Dis J*. 2004;23:123-127.
10. Sakoulas G, Moise-Broder PA, Schentag J, et al. Relationship of MIC and bactericidal activity to efficacy of vancomycin for treatment of methicillin-resistant *Staphylococcus aureus* bacteremia. *J Clin Microbiol*. 2004;42:2398-2402.
11. Moise PA, Schentag JJ. Vancomycin treatment failures in *Staphylococcus aureus* lower respiratory tract infections. *Int J Antimicrob Agents*. 2000;16 (Suppl 1):S31-S34.
12. Cohen E, Dadashev A, Drucker M, et al. Once-daily versus twice-daily intravenous administration of vancomycin for infections in hospitalized patients. *J Antimicrob Chemother*. 2002:49:155-160.
13. Drinkovic E, Fuller ER, Shore KP, et al. Clindamycin treatment of *Staphylococcus aureus* expressing inducible clindamycin resistance. *J Antimicrob Chemother*. 2001;48: 315-316.
14. CDC—Online publication APPENDIX (to routine disk diffusion test)
Clindamycin disk induction test for *Staphylococcus* spp. *wwwn.cdc.gov/nltn/pdf/2004/2_Hindler_D-Test.pdf*
15. Dumitrescu O, Boisset S, Badiou C, et al. Effect of antibiotics on *Staphylococcus aureus* producing Panton-Valentine leukocidin. *Antimicrob Agents Chemother*. 2007;51(4):1515-1519.
16. Ruhe JJ, Monson T, Bradsher RW, et al. Tetracyclines for MRSA infections. *Clin Infect Dis*. 2005;40:1429-1434.
17. Kaka AS, Rueda AM, Shelburne III SA, et al. Bactericidal activity of orally available agents against methicillin-resistant *Staphylococcus aureus*. *J Antimicrob Chemother*. 2006;58:680–683.
18. Stein A Bataille JF, Drancourt M, et al. Ambulatory treatment of multidrug-resistant *Staphylococcus*-infected orthopedic implants with high-dose oral co-trimoxazole (trimethoprim-sulfamethoxazole). *Antimicrob Agents Chemother.* 1998;42(12):3086-3091.
19. Varaldo PE, Debbia E, Schito GC. In vitro activities of rifapentine and rifampin, alone and in combination with six other antibiotics, against methicillin-susceptible and methicillin-resistant staphylococci of different species. *Antimicrob Agents Chemother*. 1985;27(4):615–618.
20. Hackbarth CJ, Chambers HF, Sande MA. Serum bactericidal activity of rifampin in combination with other antimicrobial agents against *Staphylococcus aureus*. *Antimicrob Agents Chemother*. 1986;29(4):611-613.
21. Iyer S, Jones DH. Community-acquired methicillin-resistant *Staphylococcus aureus* skin infection: A retrospective analysis of clinical presentation and treatment of a local outbreak. *J Am Acad Dermatol*. 2004;50(6):854-858.
22. Blumberg HM, Rimland D, Carroll DJ, et al. Rapid development of ciprofloxacin resistance in methicillin-susceptible and –resistant *Staphylococcus aureus*. *J Infect Dis*. 1991;163(6):1279-1285.
23. Piercy EA, Barbaro D, Luby JP, et al. Ciprofloxacin for methicillin-resistant *Staphylococcus aureus* infections. *Antimicrob Agents Chemother*. 1989;33(1):128-130.
24. Dajcs JJ, Thibodeaux BA, Marquart ME, et al. Effectiveness of ciprofloxacin, levofloxacin, or moxifloxacin for treatment of experimental *Staphylococcus aureus* keratitis. *Antimicrob Agents Chemother.* 2004;48(6):1948-52.
25. Shopsin B, Zhaob X, Kreiswirth BN, et al. Are the new quinolones appropriate treatment for community-acquired methicillin-resistant *Staphylococcus aureus*? *Int J Antimicrob Agents*. 2004;24:32–34.
26. Noviello S, Ianniello F, Leone S, et al. Comparative activity of garenoxacin and other agents by susceptibility and time-kill testing against *Staphylococcus aureus*, *Streptococcus pyogenes* and respiratory pathogens *J Antimicrob Chemother*. 2003;52: 869–872.
27. Jacqueline C, Caillon J, Le Mabecque V, et al. In vitro activity of linezolid alone and in combination with gentamicin, vancomycin or rifampicin against methicillin-resistant *Staphylococcus aureus* by time–kill curve methods. *J Antimicrob Chemother*. 2003;51(4):857-864. Epub 2003 Mar 13.
28. Weigelt J, Itani K, Stevens D, et al. Linezolid versus vancomycin in treatment of complicated skin and soft tissue infections. *Antimicrob Agents* Chemother. 2005;49(6):2260-2266.
29. Strausbaugh LJ, Jacobson C, Sewell DL, et al. Antimicrobial therapy for methicillin-resistant *Staphylococcus aureus* colonization in residents and staff of a Veterans Affairs nursing home care unit. *Infect Control HospEpidemiol*. 1992;13(3):151-159.
30. Grohs P, Kitzis M-D, Gutmann L. In vitro bactericidal activities of linezolid in combination with vancomycin, gentamicin, ciprofloxacin, fusidic acid, and rifampin against *Staphylococcus aureus*. *Antimicrob Agents Chemother*. 2003;47(1):418-420. ■

The Case of a 17-Year-Old Male with Fever and Headache

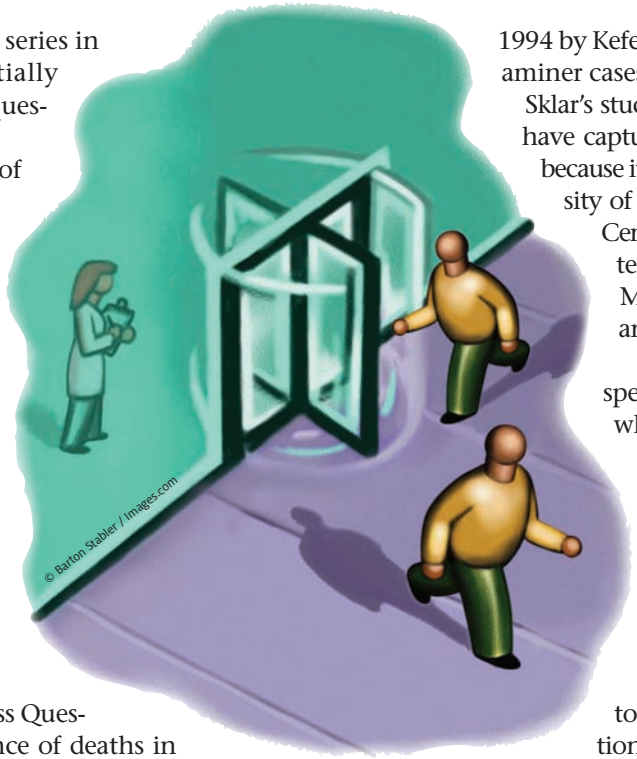
Bouncebacks, ***in which we recount scenarios of actual patients who were evaluated in and discharged from an emergency department or urgent care facility and then "bounced back" for further treatment, appears semimonthly in*** **JUCM.**

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).]** ***Also available at*** **www.amazon.com** ***and*** **www.acep.org.**

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

This article is the third in a series in which we will sequentially answering the following questions:

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



This month, we will discuss Question III: What is the incidence of deaths in patients recently discharged from the ED?

In May 2007, Sklar et al performed a very interesting study concerning deaths that occurred within seven days of ED discharge. A similar study had been done in 1994 by Kefer et al, looking at medical examiner cases.

Sklar's study, however, is more likely to have captured all unanticipated deaths because it was performed at the University of New Mexico Health Sciences Center, an urban tertiary care center and the University of New Mexico's only medical school and Level I trauma center.

The Sklar study was a retrospective cohort of ED patients who were discharged to home. Ten-year data review of 387,334 ED visits identified 117 patients who died within seven days of being discharged from the ED, equating to a death rate of 30/100,000.

Of the 117 patients, 50% (58 total patients) died of complications related to the initial visit; 60% of those 58 patients died due to a possible medical error (35 of the total 117 patients).

Frequent initial complaints included CNS symptoms (i.e., seizure, headache, dizziness), abdominal pain,

chest pain, shortness of breath, or weakness.

Common characteristics of the possible medical error cases include:

- atypical presentation of an unusual problem
- chronic disease with decompensation. (e.g., congestive heart failure)
- abnormal vital signs (tachycardia occurred in 25 of the 35 "possible error" cases)
- mental disability, psychiatric problems, or substance abuse, making it less likely the patient would return for worsening of symptoms

Bringing it Home (to Your Home!)

Three percent of patients will return to the site of initial care within three days, 0.6% will bounce back and be admitted, 30 out of 100,000 will die within seven days, and nine out of 100,000 will die within seven days of ED discharge secondary to a possible medical error.

Looking at 2005, we can estimate that 34,500 patients representing 115 million ED visits died within seven days of their initial ED visit, including 10,350 unexpected deaths related to an initial ED visit in which a possible medical error occurred.

Though this study was performed in an emergency department and not an urgent care setting, the numbers are still scary.

(In some ways it may be even scarier, considering that 20% to 30% of ED patients are admitted, while nearly all urgent care patients are sent home.)

If you work 30 hours per week and see three patients per hour, you will see about 4,500 patients per year. Using the formula mentioned previously, 135 of these patients will bounce back each year, which is nearly one patient per shift; 24 to 40 of the 135 patients will bounce back because of a possible medical error.

At this rate, if your career spans 30 years, you will see a total of 135,000 patients. Using the ED ratios as a guide, we can deduce that during the course of your career you will send home 17 patients who will die within seven days of ED discharge due to a possible medical error.

This month's case looks at a 17-year-old patient who presented with a complaint of fever and headache, as well as a slew of other problems.

What bad could possibly come to a healthy 17-year-old? And could knowledge of the Sklar study have helped this physician with his medical decision-making process?

A 17-Year-Old Male with Fever and Headache

Initial Visit

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

CHIEF COMPLAINT (at 23:39): Fever

Time	Temp	Pulse	Resp
23:55	98.1	114	18
01:21	99.0		
Syst	**Diast**	**O2 Sat**	**Pain**
72	38	97%	5

HISTORY OF PRESENT ILLNESS (at 00:19):

Pt c/o headache and neck being sore. He c/o weakness in the arms and legs "like I have no energy in them" as described by the pt. He states they were numb earlier. He c/o a sore throat since yesterday and fever. He took Nyquil for the symptoms and temp at 7 pm was 104. He c/o bilateral ear pain. He vomited once today. He denies ill contacts.

PAST MEDICAL HISTORY/TRIAGE:

Chief complaint/quote (per triage RN): "fever headache legs and arms are numb" Pt. states he has had numbness in both arms and legs intermittently with stiff neck. Bilateral ear pain.

Medication, common allergies: None

PMH: Asthma

PSH: None

EXAM (at 00:33)

General: Well-appearing; well-nourished; in no apparent distress.

Head: Normocephalic; atraumatic.

Eyes: PERLA; EOM intact.

ENT: TM's normal; normal nose; no rhinorrhea; Throat is red, and mild exudates.. Moist mucus membranes.

Neck: Supple; nontender; no cervical lymphadenopathy. No meningeal signs.

Cardiovascular: Normal S1, S2; no murmurs, rubs, or gallops.

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

Abdomen: Normal bowel sounds; non-distended; nontender; no palpable organomegaly.

Extremities: Normal ROM in all four extremities; nontender to palpation; distal pulses are normal and equal.

Skin: Normal for age and race; warm; dry; good turgor; no apparent lesions or exudate.

ORDERS/RESULTS (at 01:17):
Rapid strep - Negative

DIAGNOSIS (at 01:31):
Unspecified viral infection

DISPOSITION:
Disposition - Discharged: The patient was discharged to Home ambulatory. Follow-up with primary physician if not improved in 3 days.

Discussion of Documentation and Risk Management Issues at Initial Visit

Error 1

Error: The history is really just a list of review of symptoms. Most of the symptoms listed (headache, fever, ear pain, vomiting, weakness) are just thrown into the HOPI, but not described further.

Discussion: Each symptom needs to be explored; for example, how long ago the headache started, acuity of onset, location, similarity to past headaches, sick contacts, any relationship to concerning symptoms such as rash, confusion, weight loss.

Just because the front desk decides the chief complaint is chest pain, for example, don't assume that all the other complaints are just associated symptoms (e.g., shortness of breath, diaphoresis, etc.)

Teaching point: The HOPI should be an *exploration* of the chief complaint(s), not *a re-listing* of the chief complaints.

Error 2

Error: Abnormal vital signs not addressed.

Discussion: Recheck abnormal vital signs and discuss further in a progress note. This patient had a blood pressure of 72/38 and was tachycardic—huge red flags waving for recognition.

When a test is done and there is an abnormal result, it needs to be explained.

Teaching point: They are called *vital* signs for a reason!

Error 3

Error: No neurologic exam.

Discussion: The physician note and the nurses' note both indicate a potentially major neurologic complaint: numb arms and legs.

These are not typical symptoms for a healthy 17-year-old boy. It would be a huge stretch to attribute this to hyperventilation with a temp of 104 degrees and other complaints.

Teaching point: The physical exam needs to correlate with the history. If there are neuro complaints, there should be a neuro exam.

"Address life-threatening etiologies of symptoms first and then rule them out with H&P and further testing."

Error 4

Error: Poor medical decision-making process.

Discussion: While not every patient with a fever and headache needs a lumbar puncture, the responsibility is on the physician/provider to prove (with H&P, testing, or progress note) why they do not think the patient has meningitis.

This admittedly "guilty until proven innocent" approach is inherent in the nature of urgent care medicine.

Just as every young woman with lower abdominal pain is presumed to have an ectopic until proven otherwise, we need to look at the serious illnesses first, and work from there.

Teaching point: Address life-threatening etiologies of symptoms first and then rule them out with H&P and, possibly, further testing.

Error 5

Error: Inappropriate discharge program follow-up time.

Discussion: Some illnesses cannot be diagnosed with the patient's current complaints.

For example, a patient with four hours of nausea may develop right lower quadrant pain six hours after leaving the urgent care center. At that point the diagnosis is easy—but only if the patient returns!

Our patient had multiple general symptoms (and some very abnormal vital signs). If he was discharged, a more reasonable follow-up time—return to the urgent care, primary care doctor, or to ED if not improved or worse—would be six to 12 hours.

With an unclear diagnosis and concerning symptoms, the patient and family should be informed that a definitive diagnosis has not been reached and that if symptoms worsen or do not improve, then they need further evaluation.

Teaching point: The follow-up time needs to relate to the patient's symptoms and correlate with the potential seriousness of the diagnosis.

17-Year-Old Male with Fever and Headache Return Visit—12 Hours Later

CHIEF COMPLAINT: Unresponsive

17:55 Triage note: Pt. to ED per EMS after being found unresponsive on a couch

18:00 Vital signs: Temp 102.1, pulse 73, resp 20, BP 137/75, sat 97%

18:03 History and physical exam: Pt. obtunded, moaning. Has nuchal rigidity. Heart, lungs and abdomen normal. Skin—petechial rash on upper and lower extremities. Neuro: Does withdraw to pain, normal gag reflex, pupils react to light

18:08 Treatment: Rocephin 2 g IVBP, Decadron 10 mg IV

18:48 Labs: CBC 12.4, Hb 15.3, plt. 143, Lytes WNL except potassium 3.0, BUN/creat - 18/1.4

18:59 Testing: CT brain results; sinusitis, no mass

19:14 LP: 4cc cloudy return. WBC count 11,194 and gram negative diplococci on gram stain

OUTCOME: The patient did improve, was discharged to long-term rehab and was left with permanent neurological deficits.

Discussion of Visit and Risk Management Issues

In retrospect, it appears obvious that something was seriously wrong at the initial visit. However, we have an unfair advantage; we are reading about a patient in an article entitled Bouncebacks, and are not evaluating another 12 patients concurrently.

A healthy-looking 17-year-old boy with multiple viral-seeming symptoms could be easily discharged.

Consider this: How many patients with similar complaints do we see during cold and flu season?

This case is an excellent example of how to use the results of the Sklar study to improve patient safety. Abnormal vital signs was one of the four characteristics of "possible medical error" cases.

Our patient had two very abnormal vital signs—a pulse of 114 and a BP of 72/38—neither of which were rechecked before he was discharged, nor addressed in a progress note or further testing.

Recognition of these abnormalities could have resulted in patient reassessment before discharge. The provider could have performed a more complete history and explored an extended differential diagnosis for fever. He could have discussed, with the patient and family, the concern over serious etiologies of fever and headache, including meningitis, as well as the risks and benefits of lumbar puncture.

"If meningitis is suspected, a lumbar puncture should be performed."

The provider could have also arranged a specific follow up-plan so if the patient did not improve or worsened, he would be seen quickly.

Finally, the provider could have documented the discussion and his concern in a progress note. As currently documented, the chart would be hard to defend in court.

Discussion of Meningitis

The incidence of bacterial meningitis in the U.S. is between two and three per 100,000. *S pneumoniae* is the most common cause with the highest mortality rate (26% to 30%), while *N meningitides* has the lowest mortality rate (3% to 10%).

A peripheral white blood cell count should not be used to rule out meningitis, as it is normal in about 1/3 of patients with meningitis. When our patient returned to the ED unresponsive, his WBC count was only 12.4 K/uL.

If meningitis is suspected, a lumbar puncture should be performed.

With a normal neurologic exam, a head CT is not required before performing a lumbar puncture. Indications for head CT before LP include head trauma, altered mental status, focal neurologic findings, papilledema, or inability to complete a fundoscopic or complete neurologic exam.

Antibiotics should be initiated when meningitis is suspected, ideally within 30 minutes of evaluation (another reason to *not* include WBC in the evaluation of headache). The antibiotics should not be delayed to perform a LP, as many pathogens can be detected using cerebrospinal fluid antigen testing.

Initial antibiotic coverage should be broad spectrum; if the patient is being sent from the urgent care to the ED for LP, an IM dose of ceftriaxone (Rocephin) should be strongly considered.

Summary

Our patient was clearly high risk; with several concerning symptoms (HA and fever, numbness) and abnormal vital signs. He had a cursory history, an incomplete exam, and was not appropriately diagnosed, likely resulting in permanent neurologic deficits.

Recognition of high risk features during the initial visit would likely have resulted in a better outcome.■

Suggested Readings

- Sklar DP, Crandall CS, Loeliger E, et al. Unanticipated death after discharge home from the emergency department. *Ann Emerg Med*. 2007;49:735-745
- Aronin SI, Peduzzi P, Quagliarello VJ. Community acquired bacterial meningitis. *Ann Internal Med*. 1998;129(11):862-869.
- Feigin RD, Watson JT, Gerber SI. The use of corticosteroids in bacterial meningitis. *Pediatr Infec Dis J*. 2004;23(4): 355-357
- de Gans J, van de beck D, European dexamethasone in adulthood bacterial meningitis Study Investigators. Dexamethasone in adults with bacterial meningitis. *N Engl J Med*. 2002;347;1549-1556.
- Pickering LK,ed. *Red Book: 2003 Report of the Committee on Infectious Diseases*. 26th ed. Elk Grove Village, IL: American Academy of Pediatrics. 2003:293,493.
- American Academy of Pediatrics, Committee on Infectious Disease Therapy for Children with Invasive Pneumococcal Infections. *Pediatrics*. 1997;99:289-299.
- Hasbun R, Abrahams J, Jekel J, et al. Computed tomography of the head before lumbar puncture in adults with suspected meningitis. *New Engl J Med*. 2001;345(24):1727-33.
- Baker MD, Bell LM, Avner JR. Outpatient management without antibiotics of fever in selected infants. *N Engl J Med*. 1993;329:1437-1441.
- Schuchat A, Robinson K, Wenger JD, et al. Bacterial meningitis in the United States in 1995. *N Engl J Med*. 1997;337:970-976.
- Sinkinson CA, Pichichero ME. Occult bacteremia in children: what are the odds? *Emerg Med Rep*. 1991;12:1-10.

DERM DIAGNOSES

JOHN PHILIP SHERROD, MD, DAVID BOYD, MD AND RONALD BILLIPS, MD

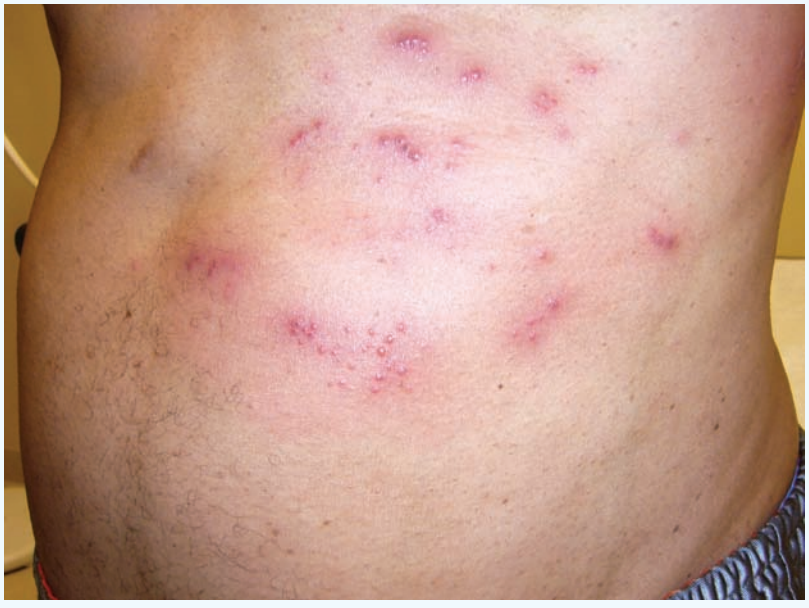


Figure 1. Left anterior abdomen.

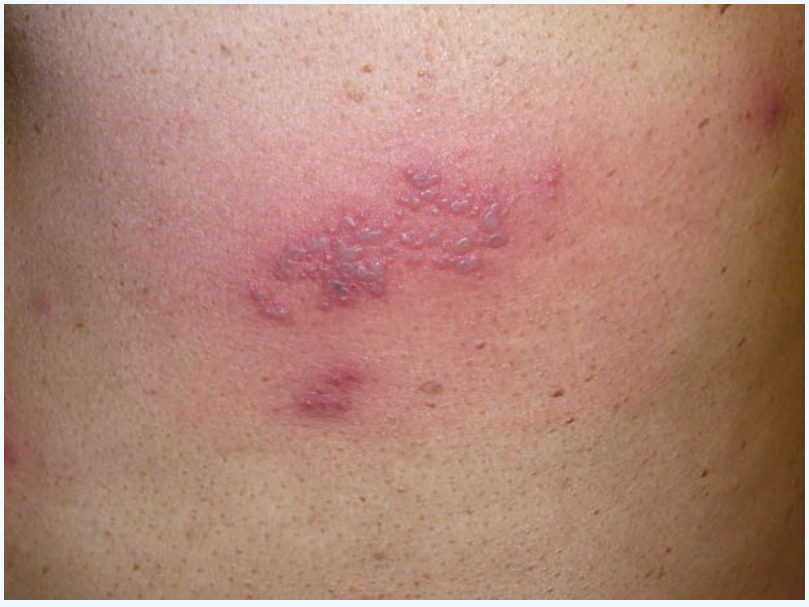


Figure 2. Circumferential rash of the T3 dermatome, left lateral chest.

The patient in the photographs is a 51-year-old male with uncontrolled type 2 diabetes who presented with a painful, raised, pruritic rash that began after an afternoon of gardening eight days prior.

In the interim, he self-treated with over-the-counter topical hydrocortisone 1% without relief.

Ultimately, the patient was diagnosed with herpes zoster (shingles) with superficial cellulitis.

We prescribed gabapentin & topical capsaicin for treatment of the resultant pain, and cephalexin for treatment of the superficial cellulitis.

It is notable that we opted not to prescribe acyclovir.

While oral acyclovir 800 mg/day has been shown to decrease incidence of post-herpetic neuralgia at six months by almost 50%, its use is clinically most beneficial 48-72 hours after onset[1]—far earlier than our patient presented. ■

REFERENCE

1. The effect of treating herpes zoster with oral acyclovir in preventing postherpetic neuralgia. A meta-analysis. Jackson JL, Gibbons R, Meyer G, et al. *Arch Intern Med.* 1997;157(8):909-912.

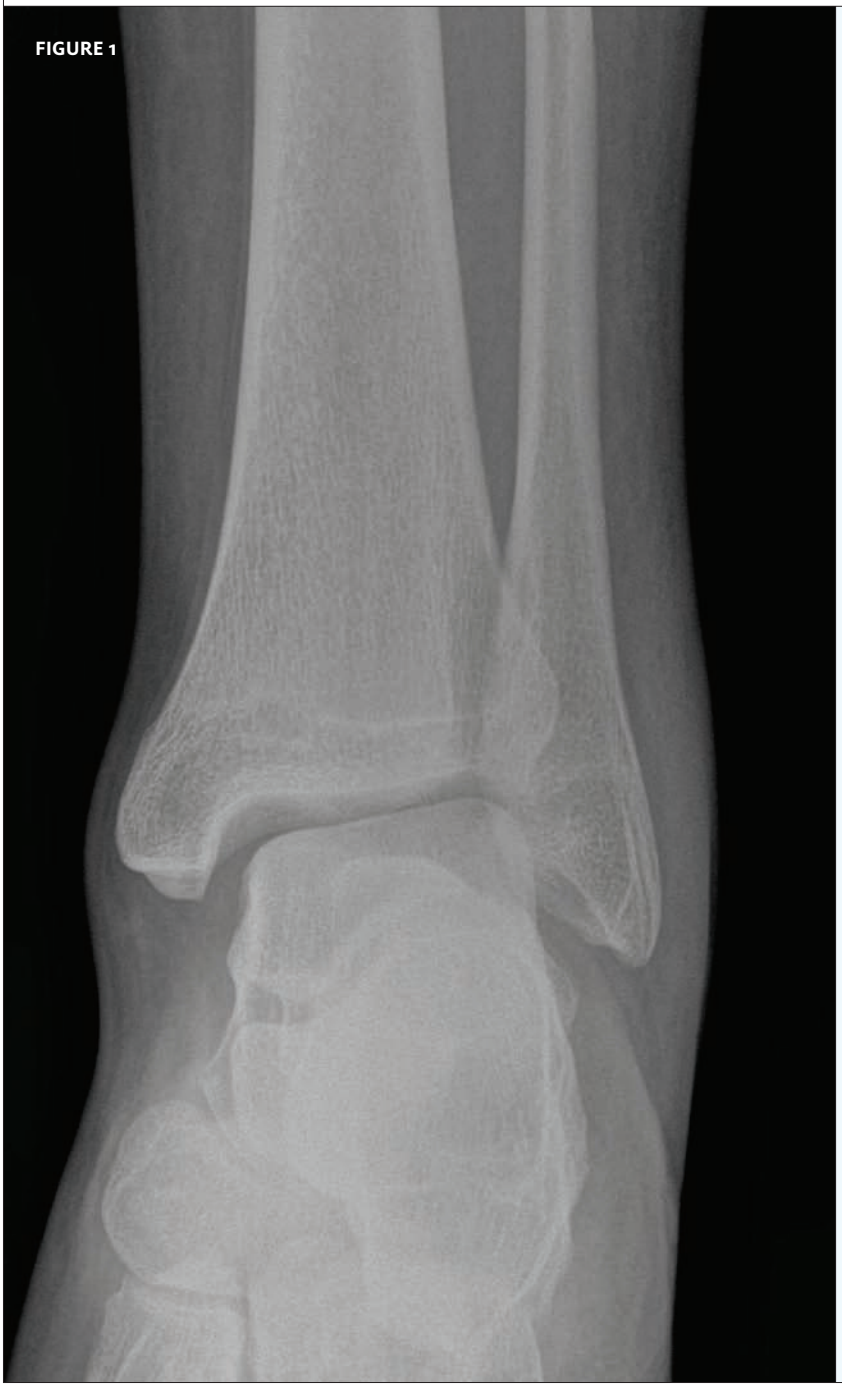
INSIGHTS IN IMAGES

CLINICAL CHALLENGE

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

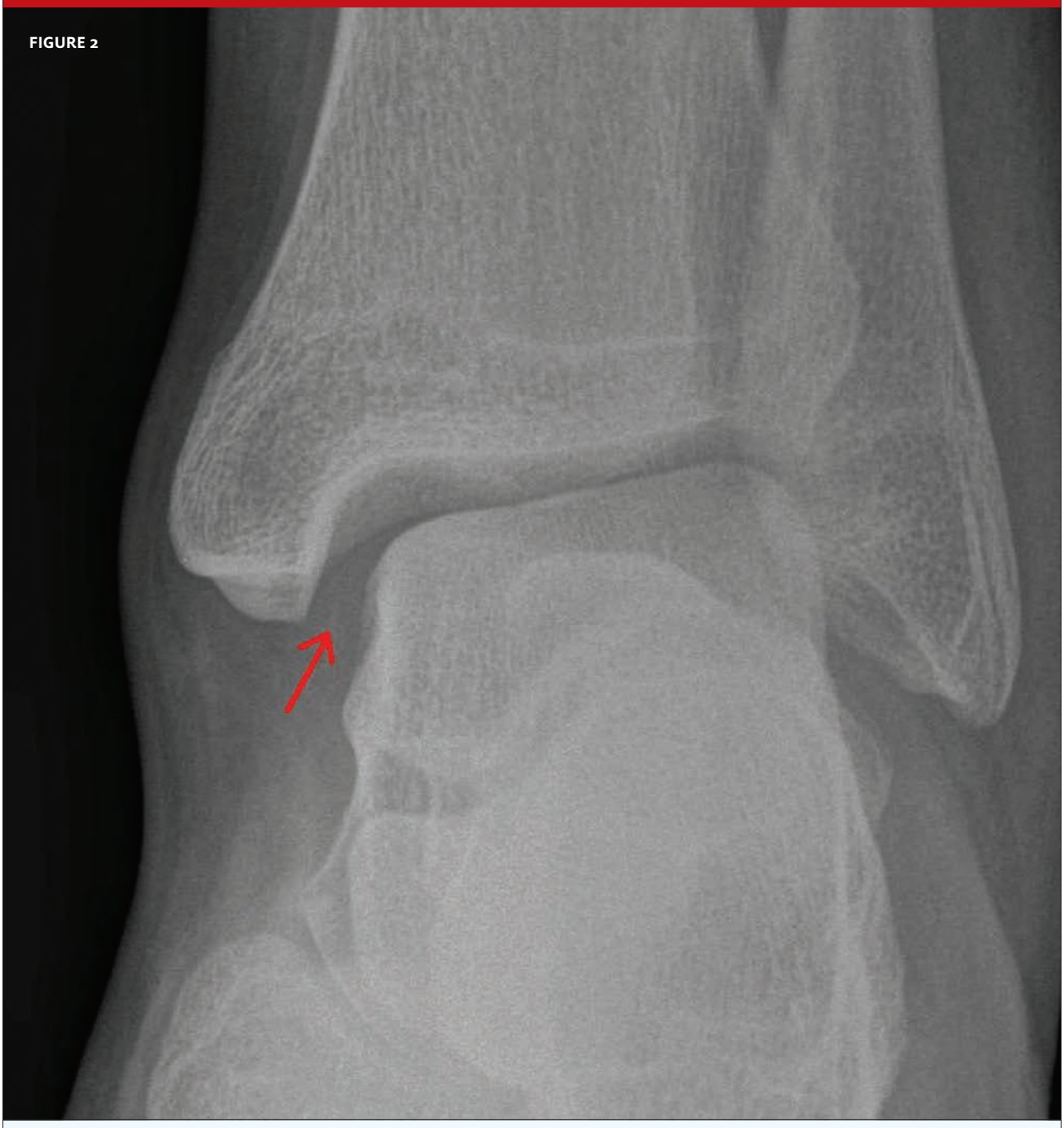


The patient is a 26-year-old male who slipped and twisted his left ankle. He is unable to bear weight on the ankle and there is marked local swelling circumferentially around the ankle. Otherwise, he is generally healthy.

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 x-ray shows a widening that is consistent with a severe sprain or deltoid ligament tear. This is a subtle but clinically very important finding; a cast splint, elevation, and ice along with early orthopedic follow-up are indicated.

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

On CT-Related Radiation, Linking TIA and Major Stroke, Ruptured Renal Artery Aneurism, and Three-View Abdominal Radiographs

NAHUM KOVALSKI, BSc, MDCM

Each month, Dr. Nahum Kovalski reviews 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.

NEJM Article Blames CT-Related Radiation for Up to 2% of Cancers in U.S.

Key point: The growth of medical CT utilization may be responsible for 1.5% to 2% of cancer cases in the U.S.
Citation: Brenner DJ, Hall EJ. *N Engl J Med*. 2007;357:2277-2284.

A *New England Journal of Medicine* review article published recently targets the cancer risks of CT at the same time that hundreds of scientific presentations and new products at the 2007 Radiological Society of North America meeting are fueling multislice CT's continued growth.

There has been a rapid growth of CT utilization—from 3 million procedures in 1980 to 62 million per year in the mid-2000s.

It was stated that the growth of medical CT utilization may be responsible for 1.5% to 2% of cancer cases in the U.S. The estimate is that perhaps 20 million adults and more than 1 million children per year in the U.S. are irradiated unnecessarily from medical CT.

The authors of the *NEJM* article express concern about the growing popularity of CT for presurgical diagnosis of appendicitis in children, for example, because diagnostic ultrasound, a modality that involves no ionizing radiation, is probably equally effective for the same procedure. They cite estimates indicating that between 6% and 11% of CT studies are performed on children.

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

Screening is also an important motivation for increased CT use in asymptomatic adults, according to the authors. They predict that future utilization growth will be fueled by virtual CT colonoscopy, CT lung cancer screening, cardiac screening, and whole-body screening.

The authors recommend better equipment and techniques to lower radiation exposure and the alternative use of MRI and ultrasound, especially for infants and children.

They also urge physicians to avoid inappropriate CT utilization. It is presumed that about one-third of diagnostic imaging is medically unnecessary. Many radiologists agree that inappropriate CT scans are performed because of medicolegal concerns and exploitation by profit-driven referring physicians and commercial imaging providers. ■

TIA Linked to Substantial Risk for Major Stroke Within a Week

Key point: Further evidence that a TIA constitutes a medical emergency and requires immediate management.
Citation: Giles MF, Rothwell PM. *Lancet Neurol*. Published online November 12, 2007.

New research suggests that patients who experience a transient ischemic attack (TIA) are at substantial increased risk of having a major stroke within one week, a finding that researchers say warrants treating TIA as a medical emergency; specifically, the risk for major stroke after a TIA is 5.2% at seven days and 3.2% at two days.

This is the first meta-analysis to examine stroke risk in the early period after TIA. Results from previous individual studies that have looked at this issue yielded inconsistent results. To gain a reliable estimation of early stroke risk, the inves-

tigators identified all studies examining stroke risk within seven days of a TIA. This amounted to a total of 18 cohort studies, all of which had been published since 2000, and included 10,126 patients who had a TIA.

Of note is the fact that the lowest risk for subsequent stroke was seen in studies in which subjects received emergency treatment in a specialist stroke service, whereas the highest risk was seen in population-based studies in which individuals did not receive urgent treatment.

Seven-Day Stroke Risk After TIA by Treatment Type

Setting/Treatment	Patients with Subsequent Stroke (%)
Nonurgent	11
Urgent	0.9

The Early Use of Existing Preventive Strategies for Stroke study and the SOS-TIA study from researchers at Bichat-Claude Bernard University Hospital and Denis Diderot University and Medical School in Paris were published in *The Lancet* and *The Lancet Neurology*, respectively, in October 2007.

However, despite this growing evidence that early, aggressive management of TIA significantly reduces major stroke risk, national audits reveal that management of TIA in the United Kingdom is "patchy" and ranges from full-immediate emergency inpatient treatment and monitoring for up to seven days to significant delays in initial assessment of two days or more. [Published in *Medscape Medical News* November 12, 2007—Caroline Cassels.] ■

Rupture of Renal Artery Aneurysm into the Renal Pelvis, Clinically Mimicking Renal Colic: Diagnosis with Multidetector CT

Key point: Older patients with "classic" renal colic have a higher likelihood of critical alternate diagnoses that must be ruled out.

Citation: De Wilde V, Devue K, Vandenbroucke F, et al. *British J Radiology*. 2007;80: e262-e264.

The authors report on a 60-year-old man, seen at the emergency department because of severe left flank pain. Clinical diagnosis was that of renal colic. Overnight, he became hemodynamically unstable and hematuria became massive, so multidetector CT (MDCT) was performed.

Rupture of a renal artery aneurysm into the left pelvis was seen on coronal reconstructed CT images. Nephrectomy was performed.

Rupture of a renal artery aneurysm into the pelvis is unusual and death is likely if diagnosis and treatment are delayed. The initial clinical presentation may be very similar to renal colic. MDCT allows timely and correct diagnosis of this unusual condition. ■

Test Characteristics of the Three-View Abdominal Radiograph Series in the Diagnosis of Intussusception

Key point: Air in the ascending colon on two or three abdominal films substantially decreases the likelihood of intussusception.

Citation: Roskind CG, Ruzal-Shapiro CB, Dowd EK, et al. *Pediatr Emerg Care*. 23(11):785-789.

The authors performed a single-center retrospective review of children for whom supine, prone, and lateral decubitus abdominal radiographs were done as part of our standard diagnostic evaluation for intussusception. The criterion evaluated was whether air was visualized in the ascending colon on each of the three radiograph views.

The authors analyzed 179 patients, of whom 27 (15.1%) were diagnosed with intussusception.

"Air in the ascending colon on 2 or 3 abdominal radiograph views has the potential to substantially decrease the likelihood of or exclude intussusception."

The test characteristics of the three-view radiograph series in the diagnosis of intussusception when all three views had air in the ascending colon were sensitivity of 100%, specificity of 18.4%, likelihood ratio for a negative test of 0, and negative predictive value (NPV) of 100%.

When at least two views had air in the ascending colon, the test characteristics were sensitivity of 96.3%, specificity of 41.4%, likelihood ratio for a negative test of 0.09, and NPV of 98.4.

Using specific criteria, the presence of air in the ascending colon on two or three abdominal radiograph views has the potential to substantially decrease the likelihood of or exclude intussusception. ■

Urgent Care Occupational Medicine Defined

Urgent message: Offering occupational medicine services can broaden the reach and increase revenue opportunities for an urgent care practice.

Donna Lee Gardner, RN, MS, MBA

A joint International Labor Organization/World Health Organization committee defines occupational health as the "promotion and maintenance of the highest degree of physical, mental, and social well-being of workers in all occupations."

This article will refine that definition as it applies to urgent care occupational medicine (UCOM) and explore the rationale for incorporating products and services of value to employers within an urgent care clinic.

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Scope of Practice

Clinics that offer occupational medicine services are uniquely positioned to help employers manage worker health, injury, illness, and disability in a time of rising medical costs—and increase their own chance for economic survival in an increasingly competitive healthcare marketplace.

It is estimated that only about 1,000 board-certified occupational and environmental physicians are practicing in the United States, which reveals the need for physicians who are skilled in urgent care, emergency medicine, internal medicine, and family practice to step in and work with cost- and quality-conscious local employers who are looking for alternatives.

The path to board certification in occupational medicine is via the American Board of Preventive Medicine. One of 24 medical specialties recognized by the American Board of Specialties, preventive medicine encompasses multiple population-based and clinical approaches to health care, including occupational and environmental health. Another organization, the National Association of Occupational Health Professionals, was created in 1990 to support the advancement of the field of occupational medicine.

Urgent Care Occupational Medicine

The UCOM delivery model requires the clinician to build not only a high level of confidence with patients, but also a rapport with each employer client.

Typical occupational health services that can be readily incorporated into an urgent care clinic include work-

related injury treatment and care management; drug and alcohol testing; pre-placement and other types of screening exams; and immunizations.

In some markets, expertise in issues as diverse as bioterrorism, ergonomics, toxic exposures, indoor air quality, workplace violence, stress-related complaints, and pain management may also serve the practitioner well.

Wellness-oriented products such as health risk appraisals, smoking cessation, and nutritional counseling/weight loss also may be part of the UCOM product line.

Beyond these core services, urgent care clinicians seeking to offer occupational health services should be well versed in federal and state issues that affect employers, such as workers' compensation, Occupational Health and Safety Administration and Department of Transportation rules, family and medical leave policies, and patient privacy, to name a few.

Employers—the "customer" in the UCOM model—have a wide range of expectations that the urgent care practitioner should bear in mind when deciding whether to offer occupational health services. Among them:

- convenient location, extended hours, comprehensive care, and short turnaround times
- return-to-work orientation that helps reduce lost work time
- cost-effective, quality healthcare provided by a multidisciplinary team
- services that can be customized according to a client's needs
- emphasis on prevention of injury and illness, as well as root causes of workplace incidents
- referrals to appropriate specialists and rehabilitation professionals
- prompt verbal and written communication with employers on patient status and treatment plans

Low Risk, High Potential Return

An occupational health component has the potential to expand an urgent care clinic's revenue on two fundamental levels:

1. Work-related injury care has the potential to attract new business; satisfied patients and family members often return for non work-related care at a later date (and tell their friends to do the same).
2. Typically, the occupational health payor mix is more lucrative than a traditional payor mix; many times, occupational health programs receive compensation based on employer-paid or workers' compensation fee schedules.

Often, adding an occupational health component equates to the expansion of established services and clinical skills—as opposed to intensive training and the expense of new equipment or construction—meaning such a move can be relatively low-cost and low risk. Incremental costs involve additional staff and cross training of existing personnel.

To be successful, a UCOM program must have a designated medical director and dedicated medical personnel who will be available to provide direct patient care, accept patient referrals in a timely fashion, and serve in an advisory capacity, as needed.

Future articles in *JUCM* will discuss the role of the medical director and various staff members.

Delivery Models

Beyond the workplace itself and growth within the urgent care setting, occupational medicine is well established in hospitals as an outpatient service and/or in emergency departments, usually as part of a "fast track." Occupational health providers also can be found in multispecialty clinics, freestanding clinic networks, and private, physician-owned practices.

Nonetheless, many urgent care practices have yet to formalize their occupational health offerings. Degrees of integration may vary depending on workers' compensation reimbursement in the state of practice, employer demographics, and the nature of the competition, among other factors.

Like urgent care, occupational and environmental medicine is an evolving field. The scope of practice has changed dramatically in response to market forces and changing federal and state regulations, as reflected in transitions from the term "industrial medicine" to "occupational medicine" to the current preferred term, "occupational and environmental health."

Today, emphasis is moving toward "total health management" (i.e., the overall health and well being of the worker both on and off the job), which allows for provision of services to employers, employees, and their families.

The key to success with this model of care is the education, health screening, and referral of employees and their families for appropriate healthcare and disease management, thus reducing both group health and workers' compensation costs.

Overall, urgent care occupational medicine provides a grassroots delivery model that can offer significant benefits to clinic operators, employers, employees, and their families. ■

In Consideration of Binding Arbitration Agreements

JOHN SHUFELDT, MD, JD, MBA, FACEP

Who can forget the following erudite exchange that forever and irrevocably links medicine and the law?

Otter: Point of parliamentary procedure!
Hoover: Don't screw around, they're serious this time!
Otter: Take it easy, I'm pre-law.
Boon: I thought you were pre-med.
Otter: What's the difference?
Otter: Ladies and gentlemen, I'll be brief. The issue here is not whether we broke a few rules, or took a few liberties with our female party guests—we did.

In contrast to the dispute resolution procedure regarding the Delta house's double-secret probation status, pre-dispute binding arbitration agreements are legal contracts in which both patients and physicians waive access to a jury trial and irrevocably commit to an arbitration process before either party has been harmed or any dispute has arisen.

As opposed to a trial by jury, one arbitrator or a panel of arbitrators decides the disputed matter. These agreements are irrevocable because the arbitration agreement precedes the actual conflict.

Arbitration has been defined as "an affirmative risk management [tool] that anticipates sources of conflict and puts in place systems to control costs and exposure to liability."[1] This process is very different from mediated settlements and other forms or alternative dispute resolution.

Despite the fact that only approximately 9% of physicians in the United States currently use pre-dispute arbitration agreements, their use is expected to increase dramatically, particularly given the litigious climate in which we practice.

And despite their increasing popularity, these agreements are not necessarily guaranteed to prevent substantial medical malpractice judgments.

For example, juries find in favor of the physician in approximately 70% to 80% of the suits. However, in the 20% to 30% of cases that physicians lose, the average plaintiff's award continues to increase.

Data from the Kaiser system is particularly illuminating. In 2005, Kaiser plaintiffs who arbitrated claims won 42.5% of the time, far greater than the 20% to 30% of the time juries award damages to plaintiffs in traditional civil litigation.

However, according to some estimates, arbitrator awards tend to average 40% to 50% less than the awards given by a panel of jurors.

One commonly accepted explanation is that juries are typically biased in favor of physicians but tend to be irrationally punitive once they are convinced of the physician's negligence.

There are a number of strategies used by plaintiff's lawyers to attack pre-dispute binding arbitration agreements. Despite the veracity of these attacks, pre-dispute binding arbitration agreements will most likely be upheld if the legal status quo is maintained.

Repeated, consistent losses by litigants employing a wide range of theories challenging binding arbitration agreements will certainly have an impact on those who must decide whether to accept or challenge the document.

If you decide to use a pre-dispute binding arbitration agreement, ask your counsel to consider the following when drafting the arbitration agreement:

- Present a clear, non-legalese, and unambiguous arbitration agreement.

  The agreement should define the mechanics of the arbitration process, selection of arbitrators, the waiver of the parties' right to a jury trial, and the areas or subjects to which arbitration will apply.
- Offer the agreement upon patient presentation to your clinic.

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*.

The agreement must take place before the dispute arises. Nearly all banks, real estate companies, and healthcare providers ask their potential customers or patients to sign an arbitration agreement before the purchase, healthcare, or loan is provided.

- Generally speaking, few litigants will sign an arbitration agreement after they are "injured"— since their lawyers will invariably tell them they will get a larger recovery from a jury than from an arbitrator.
- Do not use overtly one-sided contracts (for example, an agreement presented as "take it or leave it). Moreover, do not attempt to limit the amount of damages.
- In the past, some non-healthcare companies placed limits on the total amount or kind of damages that could be awarded against them during arbitration.

  Arbitration is not a contractual method to limit damages; it is simply a lower-cost and more expedient substitute for court proceedings.
- Clearly define which jurisdiction and which venue will be utilized for the hearing.

  In general, the law of the state where your practice is located should apply. Also, specify a convenient venue or location for the arbitration hearing, such as a law office in a city where your center is located. This helps reinforce the notion that the procedure will be fair.
- Generally, most states do not mandate the number of arbitrators needed for a valid process.

  Although technically you need only one neutral arbitrator for an arbitration proceeding, many successful arbitration programs use three arbitrators: one selected by each party, and a third (neutral) arbitrator, who is selected by the other two arbitrators. Although the presence of three-party arbitration will add to the expense, their additional expertise and viewpoints may make the difference between winning and losing.

One question remains: If a prospective patient refuses to sign the agreement, should the urgent care clinic treat him?

If the patient has an emergency condition, the answer is obvious: treat the patient regardless of whether or not he signs the agreement.

However, if the patient answers "no" when asked if he has an emergency, then the clinician can decide whether to enter into a relationship with that patient.

If a new patient with no emergent issues refuses to sign the agreement, you can legally refuse to see him—unless of course you are a hospital-based urgent care clinic on a hospital campus.

In that particular case, the Emergency Medical Treatment and Active Labor Act applies and the hospital-owned, on-campus urgent care has to determine if the patient has an emergency medical condition.

If the patient is an existing patient and is continuing in a course of treatment, the center should continue with the patient's ongoing care even if the patient refuses to sign the document.

"One caveat: A court may interpret a 'take it or leave it' policy as so one-sided that your agreement is judged to be non-binding."

Conversely, if the patient is an existing patient with a new complaint, the center does have the right to refuse care.

For example, if the center has been treating the patient for a sprained knee and then the patient returns with complaints of a URI, the center could refuse to treat since follow-up is only mandated during a patient's "spell of illness."

One caveat is that a court may interpret this "take it or leave it" policy as so one-sided that your agreement is judged to be non-binding in a future proceeding.

In the end, the safest course of action is to treat all patients regardless of whether or not they sign the agreement (although, at this juncture, some providers *are* refusing to accept new patients who refuse to sign the agreement, provided they are not having an emergency).

Arbitration agreements are not a panacea to reduce potential liability. They are, however, a way to lower the cost and expedite the process which has risks and benefits for both parties.

Ask your malpractice carrier if they will reduce your deductible or lower your premium if your center begins asking patients to sign a pre-dispute binding arbitration agreement during the check-in process. ■

Reference

1. Sands JE. Alternative Dispute Resolution and Risk Management: Controlling Conflict and its Costs. 338 Litig. 7, 23 (1987)

TAKE-HOME POINTS

- Pre-dispute binding arbitration agreements are growing in popularity, but are not guaranteed to prevent substantial malpractice judgments.
- Such agreements are *binding*—i.e., irrevocable—and are likely to be upheld if the legal status quo is maintained.
- Juries tend to be biased in favor of physicians but irrationally punitive when convinced the provider has been negligent.
- The safest course of action is to treat all patients, whether they have signed an agreement or not.

The Physician's Role in Occupational Health Sales and Marketing

FRANK H. LEONE, MBA, MPH

When it comes to sales and marketing, the involvement of a physician can make or break an occupational health initiative.

Physicians project credibility and can easily win the respect of employers and employees. In many cases, a sales effort can go "over the top" simply by bringing a physician into play.

I know many physicians who exude charm and would be an asset in virtually any sales scenario.

On the other hand, a physician who lacks "people skills" or who comes across as a know-it-all can easily alienate prospects and clients.

Consider these strategies:

- **Know your market.** A market with unique workplace exposures suggests a need for greater physician presence. Likewise, a new program or one that is not the market leader may wish to use its physicians to win market share and play catch-up.

  Many smaller markets are high-touch, person-to-person markets. For example, physician visibility is likely to have a greater impact in Pocatello (where everybody knows everybody) than in a metropolitan market like Chicago.
- **Evaluate your sales strengths.** The effectiveness of your sales team impacts the role of the physician. Programs with a strong sales presence may find there is less need to use a physician in a sales role.
- **Consider personality.** Physicians run the personality type gamut. If a physician is outgoing and an effective communicator, a program should encourage frequent trips to the workplace.

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*.

On the other hand, many physicians are technically gifted but may be shy or lacking in people skills. In this instance, it is prudent to promote their technical expertise but keep their sales activity to a minimum.

- **Define time commitment.** The desired degree of physician involvement should be spelled out in advance. A physician might participate in two worksite visits a week, for example. A dilemma for many programs involves using a physician in sales without simultaneously eroding their physician's finite clinical time.

Planning Physician Participation			
Activity	**Weekly**	**Yearly**	**Hours**
Workplace walkthrough	1	50	75
Sit in on weekly sales call	1	50	75
Check-in calls to current clients	2	100	25
Call "hot prospects"	2	100	25
Participate in quarterly telephone blitz	1 per quarter	4	1
Sign 1 set of letters	n/a	1	1
Annual Commitment: 205 hours or 4 hours per week			

- **Establish parameters.** Most physicians know little about handling objections, articulating features and benefits, or how to close. The tendency is for a physician to go too far rather than not far enough in these areas, potentially jeopardizing a virtually completed sale.

  A physician should visit the workplace to learn about working conditions and offer preliminary recommendations, not to sell.

  The breadth of the physician's role in any given type of activity should be clearly defined.
- **Hand pick prospects.** When scheduling a physician for a joint sales call, target those employers with high injury incidence rates, hazardous conditions, complex or unusual job functions, and/or a large workforce.
- **Plan ahead.** Appropriate clinic personnel should call or

visit a company prior to the physician's visit in order to obtain a preliminary sketch of special problems, critical job tasks, and current health and safety practices.

- **Have the physician meet senior management.** Physician presence at the worksite provides an excellent opportunity to meet senior company management—if only briefly. Such a meeting may go a long way toward solidifying a sense of management commitment toward your program.
- **Emphasize planning.** The clinic–employer relationship is enhanced if it includes a long-term game plan. Physician involvement is an excellent opportunity to gauge the quality of a company's current plan and offer suggestions for developing a more appropriate plan.
- **Offer further contact.** The physician should conclude his visit with an invitation for the employer prospect to contact the physician as necessary. A clearly stated availability of physician time is a compelling feature to most employers.
- **Follow-up.** The physician should send a follow-up e-mail immediately after the visit. The e-mail should summarize key issues and recommendations, and provide a sense of commitment to the employer.
- **Hire smart.** Many programs are so eager to hire an experienced occupational medicine physician that they overlook or minimize the "personality issue." Place as much emphasis on personality, commitment, and heart, as technical credentials during the hiring process.
- **Market at the patient level**. Marketing to the individual worker is a crucial marketing strategy. The physician's proverbial "bedside manner" is a subtle yet crucial aspect of a program's image.
- **Consider the broader plan**. The physician should have input into, thoroughly understand, and embrace the occupational health program's broader marketing plan. ■

What's your story?

If you've experienced success with an occupational medicine program, tell us about it in an e-mail to *editor@jucm.com*. We'll share it with your colleagues in an upcoming issue.

Career Opportunities

NEW YORK—URGENT CARE PHYSICIAN NEEDED IN NEW YORK CITY! Use your family practice experience in a lifestyle setting. Join a large, well-established multi-specialty group with two locations. Monday through Friday schedule, no call. Income guarantee plus production bonus. Full benefits package includes paid malpractice and relocation. This prime, upscale location has it all! Enjoy beaches, parks and amenities, just minutes from Manhattan. Ref. #659762

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FAMILY PRACTICE #1131 & 1163 FAMILY PRACTICE. Seek a BE/BC family practitioner to join busy, growing family practice group of eight physicians. This position includes a full scope of family practice services, including both inpatient and outpatient care. Call is equally shared among the physicians. Excellent salary and benefits. Contact Carol Murrow at cmurrow@hortonsmithassociates.com or call (866) 774-8460.

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. "MultiCareHealth System is a drug-free workplace".

South Carolina

MD and/or PA to join new growing Urgent care/Family Practice near Charleston, South Carolina. Excellent quality of life. Shifts: 8-10 hours, 7-days a week on a rotating basis. Benefits: health insurance, dental insurance, license and CME expenses, 401(k) and profit sharing, paid time off for full-time.
Fax CV to 843-884-1528

GENERAL MEDICINE DIVISION

Louis B. Stokes Cleveland VA Medical Center, a teaching affiliate of Case Western Reserve University (CWRU) is seeking quality applicants for full-time staff physicians in the Emergency Department, a 24-hour facility serving the needs of Veterans. Responsibilities focus on patient care in the Emergency Department during night and weekend shifts with limited administrative and teaching opportunities. Candidates should include internal medicine, family medicine, and emergency board-eligible physicians. Competitive salary and comprehensive benefits package. No J-1 opportunities.

Mail, fax, or email CV to:
Anne Tomolo, MD
MPH, Emergency Department Director,
111(W), 10701 E. Blvd.,
Cleveland, OH 44106
Fax: 216-707-5993
Email: anne.tomolo@med.va.gov EOE.

HOUSTON METRO–The Woodlands. Urgent Care. As printed in the 5/07 issue of *Medical Economics*, Sadler Clinic is one of "America's best places to practice." Block scheduling and 3-day work week. New clinic with lab, CT, MRI, and full compliment of specialists. Partnership after 1-year. Contact Michelle Kraft at (800) 678-7858, x63705 or mkraft@cejkasearch.com; www.cejkasearch.com. ID#29070C14.

DENVER – ESTABLISHED MEDICAL GROUP seeks a BE/BC Family Practitioner. Cases include a full range of family medicine (no OB) and urgent care. The practice was voted "Best of the Best" in the area for 2007. Four day work week and no hospital responsibilities. The practice offers a competitive salary, incentive bonus, sign-on bonus, relocation allowance and full benefits. Contact: Bob Bregant at bbregant@hortonsmithassociates.com or call 1-800-398-2923.

FULL-TIME PHYSICIANS NEEDED for a growing Urgent Care Center located in downtown Denver, Colorado. 2 years previous urgent care experience is required. Must be willing to work in a fast-paced environment and be a team player. Please fax CV to (303) 455-6343 or mail to: 1 Broadway, #A100, Denver, CO 80203.

COLORADO - EXPANDING URGENT CARE. No Nights. Outstanding opportunity in a growing practice with five locations. Residency trained and board-certified Emergency/Occupational/Family or Surgery. Excellent salary and benefits package $175,000 - $220,000 plus. Email rshamilton2@earthlink.net or fax 719-577-4088.

WELLSTAR

WellStar Physicians Group is seeking full-time and part-time BC/BE Emergency Medicine or Family Practice Physicians to join Urgent Care facility in Smyrna. This office is located 15 miles northwest of downtown Atlanta.

Candidates must have excellent interpersonal and communication skills. Malpractice coverage, no call, flexible schedule, excellent benefits and competitive compensation!
Send CV to:
provider.positions@wellstar.org
or fax to 770-792-1738.

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
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916-643-6677 fax
develops@sutterhealth.org
www.sutterhealth.org

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Email: lrhines@freemanhealth.com, or fax CV to 417-347-9972

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Premier Medical Center, Urgent Care
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Phone: 336-625-1285 ext. 206
Fax: 336-625-3984
Email: annettecagle@embarqmail.com

Centra Care

FLORIDA HOSPITAL URGENT CARE

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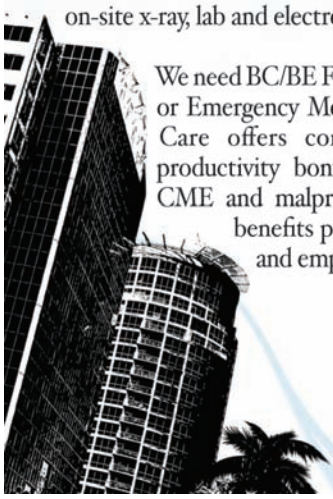

We need BC/BE Family Practice, Urgent Care or Emergency Medicine Physicians. Centra Care offers competitive compensation, productivity bonuses, paid vacations, paid CME and malpractice insurance, excellent benefits package including health, life and employer matched 403B.

www.centracare.org
407.200.2833

Career Opportunities

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WISCONSIN

Marshfield Clinic is directed by over 750 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:

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• Rice Lake - Emergency Dept./Urgent Care
• Ladysmith – Emergency Dept./Urgent Care
• Marshfield - Urgent Care • Minocqua - Urgent Care
• Wausau - Urgent Care • Eau Claire - Urgent Care

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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.

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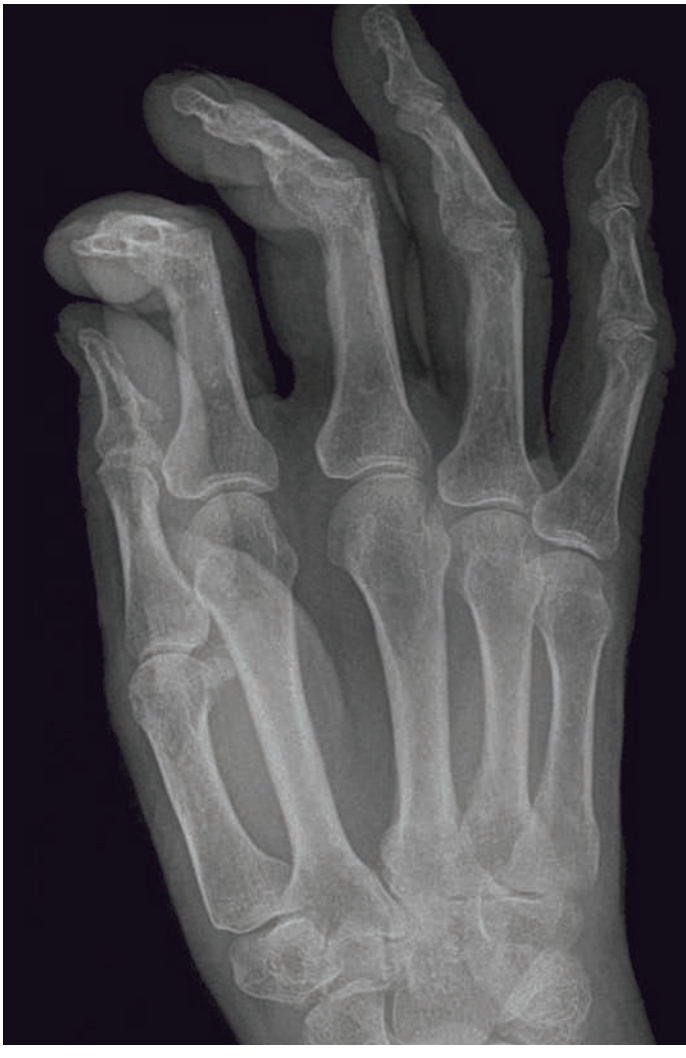
Contact: Trish O'Brien
The Journal of Urgent Care Medicine
(800) 237-9851 • Fax (727) 445-9380
Email: jucm@rja-ads.com



Share Your Insights

At its core, ***JUCM***, *The Journal of Urgent Care Medicine* is a forum for the exchange of ideas and a vehicle to expand on the core competencies of urgent care medicine.

Nothing supports this goal more than **Insights in Images**, where urgent care practitioners can share the details of actual cases, as well as their expertise in resolving those cases. After all, in the words of UCAOA Executive Director Lou Ellen Horwitz, everyday clinical practice is where "the rubber meets the road."

Physicians, physician assistants, and nurse practitioners are invited to submit cases, including x-rays, EKGs, or photographic displays relating to an interesting case encountered in the urgent care environment. Submissions should follow the format presented on the preceding pages.

If you have an interesting case to share, please e-mail the relevant images and clinical information to *editor@jucm.com*. We will credit all whose submissions are accepted for publication.

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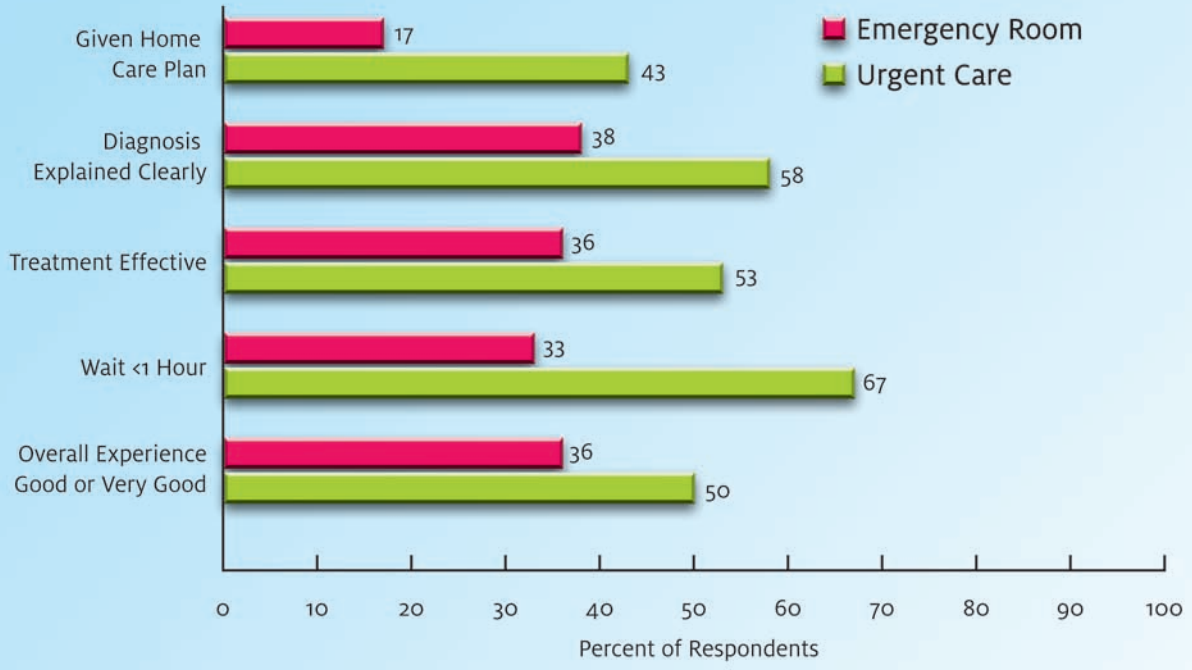
DEVELOPING DATA

As an emerging distinct practice environment, urgent care is in the early stages of building a data set specific to its norms and practices.

In Developing Data, *JUCM* will offer results not only from UCAOA's annual benchmarking surveys, but also from research conducted elsewhere to present an expansive view of the healthcare marketplace in which urgent care seeks to strengthen its presence.

In this issue: How do the experiences of patients who sought treatment for headache in an emergency room compare with those of patients who visited an urgent care center?

HEADACHE TREATMENT IN THE EMERGENCY ROOM VS. URGENT CARE



Source of data: Online patient satisfaction survey conducted by the National Headache Foundation (*www.headaches.org*).

Note that wait times, a clear explanation of the diagnosis, and provision of a home care plan accounted for the greatest disparity between urgent care and the ER in these data—perhaps another reminder that a patient's satisfaction is heavily influenced by factors beyond relief from the presenting complaint.

The survey by the National Headache Foundation also asked participants to assess how polite and respectful a provider was, how well staff explained what to do if the headache returned, whether they were made to feel like a drug seeker, and if they were placed in a quiet area to wait.

For each question, more respondents gave favorable responses regarding urgent care than the ER.

Are you aware of new data that highlight how urgent care is helping to fill gaps in patient satisfaction, or healthcare in general? Let us know in an e-mail to *editor@jucm.com*. We'll include them in an upcoming issue and on our website.

What Are You Looking For From Your Urgent Care Association?

I Want "to expand our center's services – ultrasound, maybe even weight management. How can I talk to other urgent care leaders – swap tips and learn what not to do?"

I Want "to get the latest information from experts – both national speakers and fellow colleagues – and at a nice location!"

I Want "a connection to vendors who can get me what I need – from clinical devices to software to claims processing."

I Want "to distinguish my centers and services from the competition – can anyone help me do that?"

UCAOA Member to Member Connections

UCAOA Fall Conference and National Urgent Care Convention

UCAOA Vendor Connections and Buyer's Guide

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