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Urgent Care Association of America
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Also in this issue

An Urgent Care Approach to Burns

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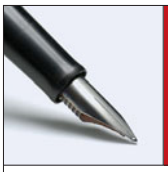

LETTER FROM THE EDITOR-IN-CHIEF

Rediscovering Your Service Mission

It comes as no surprise to anyone that health care is broken. Too many interest groups, too much regulation, too many poorly aligned incentives, too many unrealistic expectations, and too many myopic solutions. Worse, the physician voice has been weakened and handicapped by a combination of our patient-first mission and by the distraction inherent in a profoundly complicated professional discipline. Think of it this way: If your primary mission was profit and the financial engineering necessary to generate that profit, and if you could collectively bargain and lobby in defense of that profit mission with billions of dollars at your disposal, would it not be a strategic advantage? The special interests that physicians compete with are largely all advantaged in this way, and that makes us sitting ducks in the battle over limited health-care dollars.

In addition, we work under constant scrutiny from outsiders largely ignorant of or unrealistic about our competencies and the complexities of the discipline. Litigators, hospital administrators, state medical boards, governmental regulators, and even our own patients are constant reminders that we have lost control of our profession.

How can we possibly uncover the joy of practice within this mountain of misery? I have a plan, and I'm willing to share it with you. Making my plan a habit takes some practice, and it does not come easily to those who are quick to draw battle lines. Complainers and whiners will struggle too. (You know you're out there.) Paranoid, judgmental, angry, and delusional? Sorry, that won't work here. My point is that we all demonstrate these traits from time to time. But it is our ability to recognize and redirect these urges that will help us succeed. Putting my plan into action will open you up to discovery and opportunities that will change your life. Here is how it works:

As with all good journeys, start with a mission and vision. Here are mine:

- **Mission:** To provide genuine, nonjudgmental care to every patient asking me for help
- **Vision:** To celebrate the service opportunity within every encounter while tuning out internal and external negativity meant to distract me from my mission, so that I can better care for my patients, myself, and my family in a sustainable and joyful way

Next, apply your mission and vision to everything you do. Every patient presents to us in need. How they demonstrate that need is one of the wonders of human nature. When facing pain and illness, humans are not at their best. They may be afraid, feel vulnerable, or just feel uncomfortable. Layer on their overwhelming negative experiences within health care, and you have a pretty combustible and raw emotional context. Immature coping skills further complicate our patients' ability to act in ways we might consider conducive to successful care outcomes. As providers, we see anger, hysteria, and unfocused and disruptive behaviors that distract from our ability to care. Pile on all the anxieties, fears, and burdens that *we* bring to the encounter, and it is not hard to imagine why physicians burn out at worrisome rates. Yet within every encounter lies a service opportunity, should we choose to find it.

At the core of our profession, and central to the oath we all took, is finding a way to provide care for the presenting need. Sometimes the clues are clinical, sometimes they are psychosocial, but often they are hidden. Investigating and discovering the cause of a problem are what we do best, and maintaining our focus on these tasks sometimes requires a level of poise and maturity beyond our training. But if you can apply this plan to your practice in a disciplined and accountable fashion, you will rediscover the joy of practice. Though many of the rewards are emotional, you will be surprised how your clinical acumen improves. Together, these victories will reinvigorate the rationale for sacrifice and help sustain a joyful life and career. ■

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

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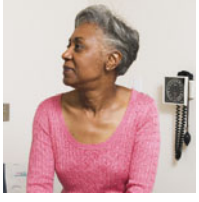
CASE REPORT



IN THE NEXT ISSUE OF *JUCM*

What effects does a pharmacist-provided medication review have in the urgent care setting? Jennifer A. Flavin, PharmD, Christopher G. Green, PharmD, Stephanie C. Cook, DO, and Stuart J. Beatty, PharmD, BCACP, conducted a prospective study to find out how to best handle medication communication during care transitions.

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

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With the constant changes in health-care regulations and mounting paperwork, health-care providers can start to feel lost. Maybe it seems hard to remember why you chose your profession. But it doesn't have to be that way. Editor-in-Chief Lee Resnick shares his plan with you for rediscovering the joy of practice. If you implement it, you just may find that your clinical acumen improves too. Wouldn't that make life better not only for your patients but also for you, and maybe even for your friends and family members? Try it.



In our cover article, Drew Long, BS, Brit Long, MD, and Alex Koyfman, MD, take you through the treatment of burns in the urgent care setting. Most often, you will see minor burns that you can treat on an outpatient basis, but you still may see more severe burns. Can you calculate burn surface area? Do you know how to determine which patients should be transferred to a burn center?

Drew Long is a senior medical student at Vanderbilt University School of Medicine in Nashville, Tennessee; Brit Long is Chief Resident in the Department of Emergency Medicine at San Antonio Military Medical Center at Fort Sam Houston, Texas; and Koyfman is an Assistant Professor in the Department of Emergency Medicine at the University of Texas Southwestern Medical Center in Dallas, Texas.

The implementation of the Patient Protection and Affordable Care Act made available health-care coverage to millions of previously uninsured Americans. But as pointed out in our *Practice Management* section by author Michael F. Boyle, MD, MBA, FACEP, these people still lack access to on-demand health care, so they often end up in an emergency department. The author describes the various forms that urgent care centers can take to help alleviate several types of access problems.

Boyle is Regional Medical Director of ECI Healthcare Partners, Inc., in Traverse City, Michigan, and coauthor of *The Healthcare Executive's Guide to Urgent Care Centers and Freestanding EDs*.


In our case report, Joshua Wilson, MS3, and Shailendra Saxena, MD, PhD, provide the details on diagnosis and treatment of palatine masses, which can be painful and can cause stress in patients who mistake them for cancer.

Wilson is a third-year medical student at Creighton University School of Medicine, Omaha, Nebraska, and Saxena is a Professor in the Department of Family Medicine there.

Also in this issue:

In *Health Law and Compliance*, **Angela T. Burnette, JD,** an attorney specializing in health-care risk management and litigation, lays out best practices for urgent care practitioners in dealing with potentially litigious patients. Using good interpersonal skills and communication, plus taking the time to get the details right, makes it much easier to prevent a lawsuit proactively than defend one that has been filed.

Sean M. McNeeley, MD, and the **Urgent Care College of Physicians** review new abstracts from the literature on hypertonic saline for bronchiolitis, cross-reactive cephalosporins, predicting intra-abdominal injury, phenylephrine for decongestion, opioids and constipation, use of the Ottawa Ankle Rules by triage nurses, and the relation between sleep quality and illness susceptibility.

In *Coding Q&A*, **David Stern, MD, CPC**, discusses coding for providing travel immunizations and advice on health precautions for travel.

Our *Developing Data* piece provides statistics on the most frequently performed rapid diagnostic tests at U.S. urgent care centers in 2014. ■

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.

To Subscribe to *JUCM*

JUCM is distributed to medical practitioners—physicians, physician assistants, and nurse practitioners—working in urgent care practice settings in the United States. To subscribe, log on to *www.jucm.com* and click on "Subscription."

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UCAOA Fall Conference Sets Record

P. JOANNE RAY

A record-high 450-plus professionals gathered in New Orleans in September for the UCAOA Urgent Care Fall Conference (see http://www.ucaoa.org/?2015FallConference). An updated education program boasted 60 business and clinical sessions and 5 hands-on workshops, providing a 360-degree view of urgent care center operations.

Extended exhibit hours, more sales and networking opportunities featuring 77 companies with more than 250 representatives, and Mardi Gras–themed festivities made for an extremely busy hall.

Keynote speaker Steven Berkowitz, MD, a national speaker and writer on healthcare management, addressed how to assist patients in the changing healthcare landscape by strategic partnerships with hospitals and systems, a focus on quality of care, and increased data transparency.

Legislative and regulatory consultant Camille S. Bonta, MHS, discussed how to stay abreast of state regulatory trends with the newly released advocacy tool, the CQ State Track, for UCAOA members (see http://www.ucaoa.org/?page=CQStateTrack).

Speaking by video, Louisiana Senator Bill Cassidy, MD, focused on urgent care cost-effectiveness through platforms such as TRICARE (http://www.ucaoa.org/?TRICARE) and Medicare Alternative Payment Models.

More highlights from the conference will be featured online (http://www.ucaoa.org/?2015FallConference) and in *UCAccess* (http://www.ucaoa.org/?UCAccessIssues), along with UCAOA education events (http://www.ucaoa.org/?FutureMeetings). The 2016 Call for Presentations will open on October 26 and will accept proposals for all 2016 education events. ■


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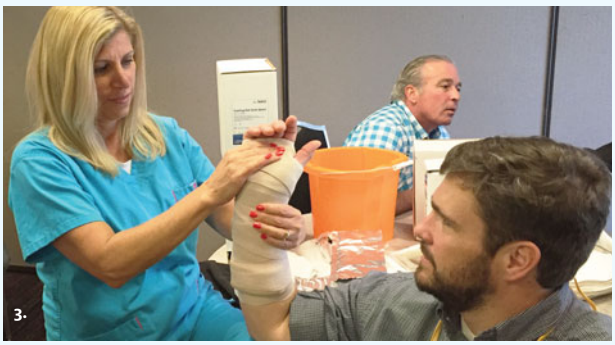
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1. UCAOA Accreditation Manager Joan Sampey (left) meets with Yasser Salem, Rama Aysola, Mohamed Salem, and Nishant Gandhi, DO, of Brooklyn Urgent Care (New York) at UCAOA Central. 2. Louisiana Senator Dr. Bill Cassidy speaks by video on cost-effectiveness and alternative payment methods. 3. Pam Sullivan, MD, instructs Brian Benson, MD, of Lake After Hours Urgent Care (Louisiana) during the Hands-On Splinting and Casting course. 4. Wade Blomgren (second from left), of DocuTAP, talks with Deana Barcus, Lena Meier, and Kallie Gordon of Kootenai Urgent Care (Idaho).

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

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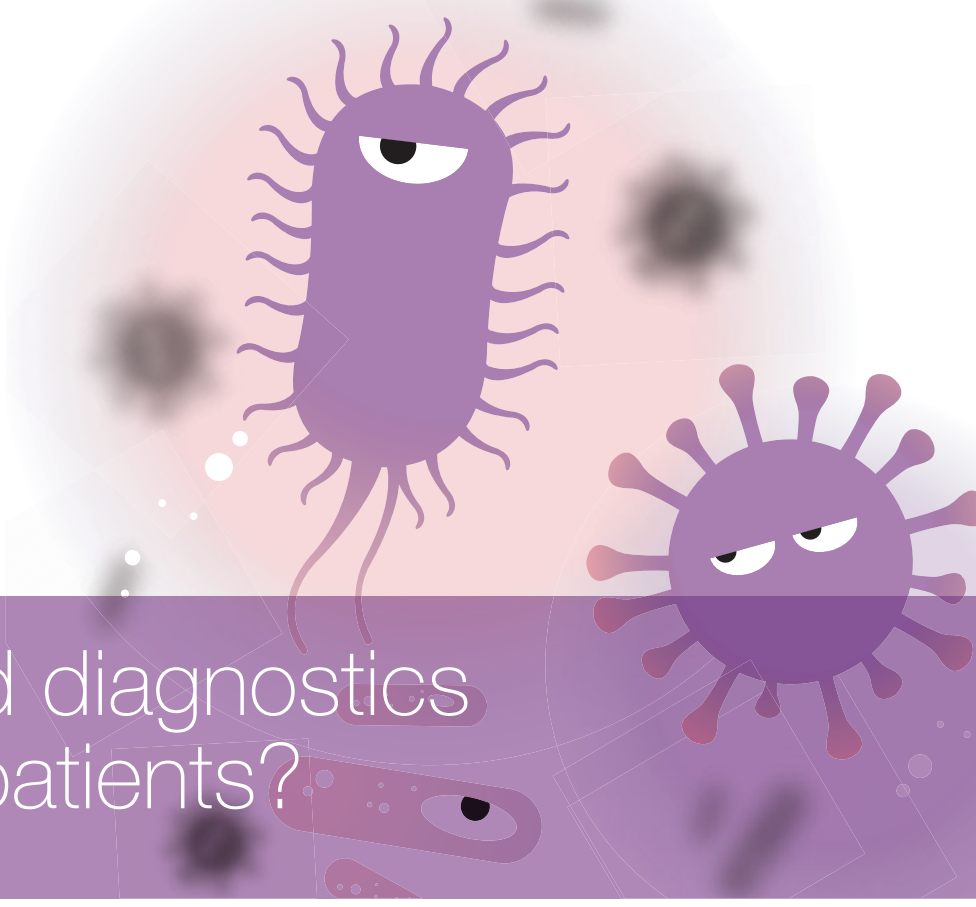

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1. Bruns AH, Oosterheert JJ, Kuijper EJ, Lammers JW, Thijsen S, Troelstra A, Hoepelman AI, J Antimicrob Chemother. 2010 Nov;65(11):2464-71.
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An Urgent Care Approach to Burns

Urgent message: Burn injuries present with varying degrees of involvement and severity. It is vital that providers in an urgent care facility understand burn classification, treatments, and, most important, which burn patients can be treated in an outpatient setting and which patients require a higher level of care.

DREW LONG, BS, BRIT LONG, MD, and ALEX KOYFMAN, MD

Introduction

Burn injuries are often devastating and are a leading cause of accidental injury and trauma in both pediatric and adult patients in the United States. Each year nearly 1 million people in the United States seek medical care for burn injuries.[1] Although most of these can be treated on an outpatient basis, severe burns can result in significant morbidity and mortality even with hospitalization and adequate treatment.

Several methods of classifying burn injuries may be used to determine burn severity, all of which involve burn size and depth. It is essential that providers in an urgent care setting understand how to classify various burns injuries and to know which patients can be treated at the urgent care center and which patients should be transferred to an emergency department or burn center.

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Case Presentation

A 62-year-old woman presents to the urgent care center with scald burns to both forearms. The patient states that she was cooking dinner when a fire erupted. In trying to extinguish the fire, she sustained partial-thickness burns to both forearms. The patient quickly doused her arms in cold water. She decided to come to the urgent care clinic because her blisters were enlarging and painful.

The nurse hands the physician a set of vital signs, all normal. What medical history is important to gather? What is important in the physical examination? How is burn surface area calculated? What areas are high risk?

Drew Long, BS, is a senior medical student at Vanderbilt University School of Medicine in Nashville, Tennessee; **Brit Long, MD**, is a chief resident in the Department of Emergency Medicine at San Antonio Military Medical Center at Fort Sam Houston, Texas; and **Alex Koyfman, MD**, is an Assistant Professor in the Department of Emergency Medicine at the University of Texas Southwestern Medical Center in Dallas, Texas.

Figure 1. Classification of burns.

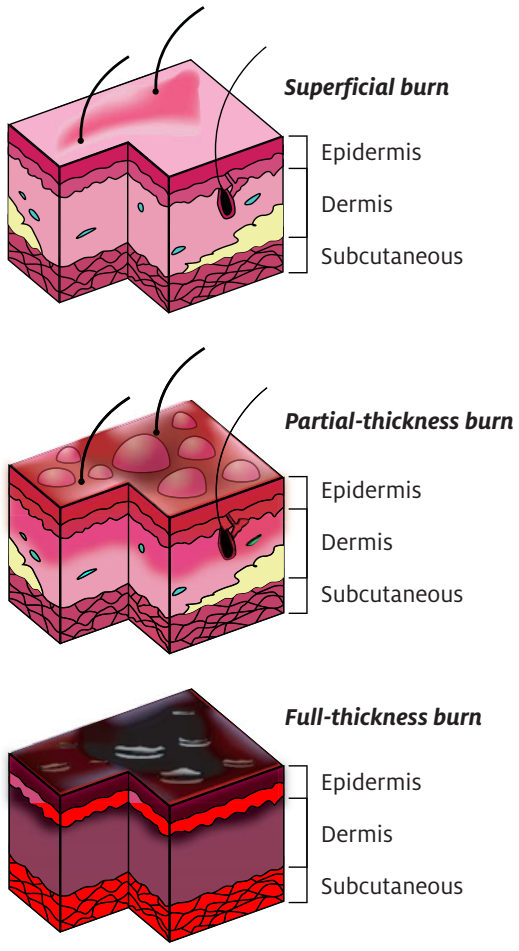

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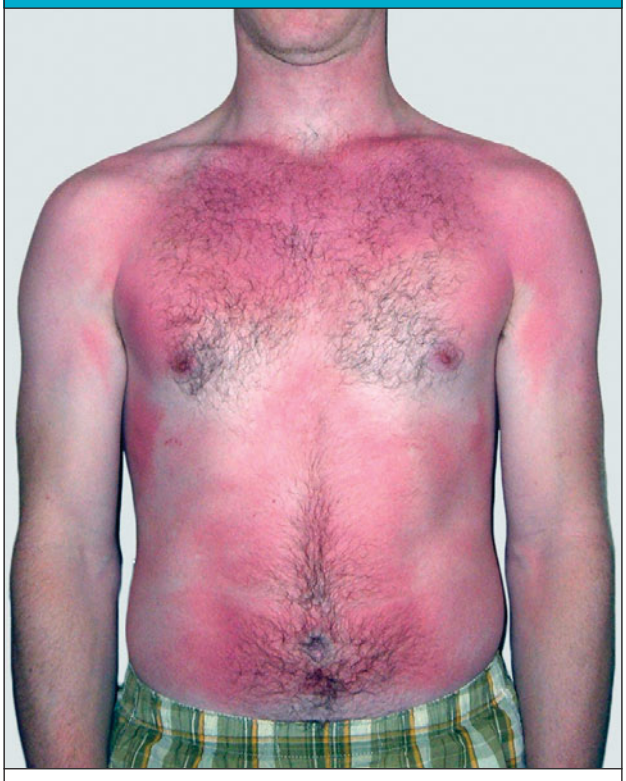
Figure 2. Superficial burn (a sunburn).



(Image available from: https://en.wikipedia.org/wiki/Burn#/media/File:Sunburn.jpg.)

What treatments are beneficial? What injuries meet transfer criteria?

Background

Burns can be devastating injuries from a physical, emotional, and social aspect. A burn is defined as an injury to the skin or other tissue caused by thermal or other exposures. Burns are classified by their depth and size and are broken into minor, moderate, and major. Most of the more than 1 million burns that occur annually in the United States are minor and can be managed in an outpatient setting.[1]

Burns involve a dynamic process and occur because of skin structural and cellular damage (e.g., from heat, electricity, radiation). Damaged layers of the skin can include the outer, superficial layer of the skin, the epidermis, and the inner layer, the dermis. The epidermis functions as a barrier to the outside world to protect the body from such things as dehydration, microbes, ultraviolet radiation, and heat. The dermis provides strength to the skin and contains blood vessels, hair follicles, sweat glands, and nerves. Injury due to a burn can be divided into three zones: **coagulation**, **stasis**, and **hyperemia**. The zone of coagulation is the point of maximal tissue damage. Decreased tissue perfusion affects the zone of stasis, but injury is potentially reversible with restored perfusion. Inadequate or delay in fluids, infection, or edema can result in complete tissue loss in this area. The outermost region is the zone of hyperemia, which is erythematous because of increased perfusion and release of vasoactive substances. This zone typically heals with no deficits.[2,3]

Classification

Classification of burns includes size and depth (**Figure 1**).

Figure 3. Superficial partial-thickness burn.

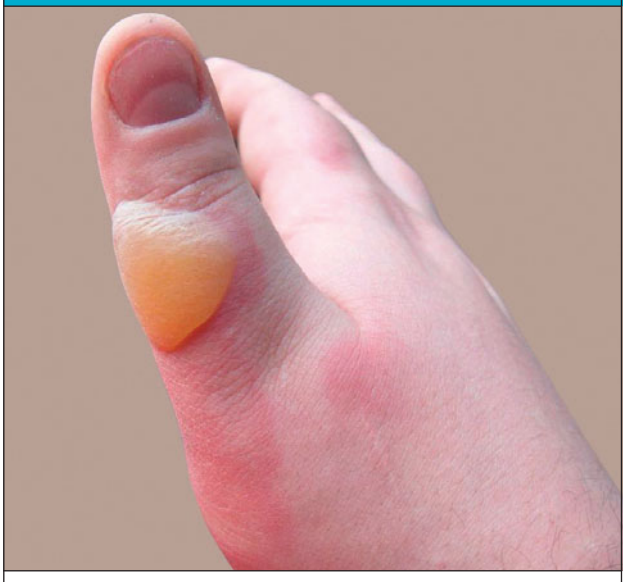


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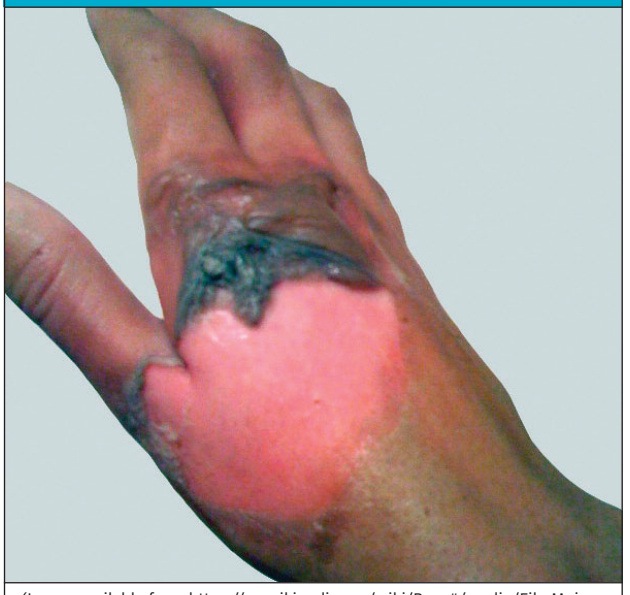
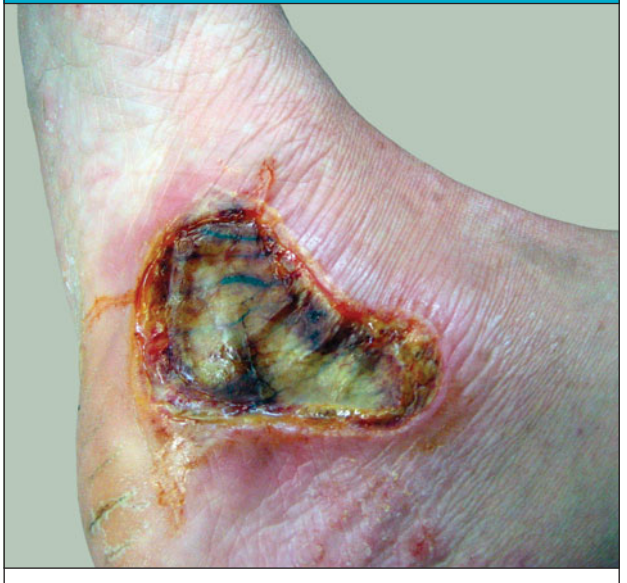
Figure 4. Deep partial-thickness burn caused by contact with boiling water.



(Image available from https://en.wikipedia.org/wiki/Burn#/media/File:Major-2nd-degree-burn.jpg.)

Figure 5. Full-thickness burn to the foot, caused by contact with a motorcycle muffler. The photograph was obtained 8 days after the burn was sustained.



(Image available from: https://en.wikipedia.org/wiki/Burn#/media/File:8-day-old-3rd-degree-burn.jpg.)

Superficial (first-degree) **burns** involve the epidermis and are red, flat, painful, and blanch with pressure (**Figure 2**). These typically heal within 2 to 3 days. **Partial-thickness** (second-degree) **burns** involve all of the epidermis and part of the dermis (**Figure 3**). These are further classified into the degree of dermal involvement. **Superficial dermal burns** involve the entire epidermis and part of the dermis, appear erythematous with clear blisters, are painful, blanch, and typically heal within 2 to 3 weeks. **Deep dermal burns** involve the entire epidermis and extend into the deep dermis (**Figure 4**). They involve blistering and appear mottled pink and white, are less painful (because of nerve injury within the deeper dermis), and do not blanch. **Full-thickness** (third-degree) **burns** involve the entire epidermis and dermis (**Figure 5**). The appearance of full-thickness burns can range from white to black. These burns are insensate and nonblanching. Fourth-degree burns extend into the underlying adipose tissue, muscle, and bone.[2,3]

Minor burns include partial-thickness burns of <10% of total body surface area (TBSA) in patients aged 10 to 50 years, partial-thickness burns of <5% of TBSA in patients aged <10 years or >50 years, and full-thickness burns of <2% of TBSA in any patient without other injury. Additionally, to be classified as minor, these burns must be the sole injury and should not include the face, hands, perineum, or feet. Minor burns must not cross major joints or be circumferential. If a burn

Table 1. Comparison of Minor, Moderate, and Major Burns

Burn Criteria and Disposition	Type of Burn		
	Minor	Moderate	Major
Criteria:	<10% TBSA burn in adult <5% TBSA burn in young or old <2% full-thickness burn	10%–20% TBSA burn in adult; 5%–10% TBSA burn in young or old; 2%–5% full-thickness burn High-voltage injury Suspected inhalation injury Circumferential burn Concomitant medical problem predisposing the patient to infection (e.g., diabetes, sickle cell disease)	>20% TBSA burn in adult >10% TBSA burn in young or old >5% full-thickness burn High-voltage burn Known inhalation injury Any significant burn to face, eyes, ears, genitalia, or joints Significant associated injuries (e.g., fracture, other major trauma)
Disposition:	Outpatient treatment	Hospital admission	Referral to burn center

Data from Hospital and prehospital resources for optimal care of patients with burn injury: guidelines for development and operation of burn centers. American Burn Association. *J Burn Care Rehabil.* 1990;11:98–104, and from Hartford CE. Care of outpatient burns. In: Herndon DN, editor. Total Burn Care. Philadelphia, PA: Saunders; 1996:71–80.
TBSA = total body surface area.

does not meet those criteria, then it is classified as either a moderate or major burn. Patients with major (severe) burns should be referred to a burn center.[3] The criteria for classification and disposition of minor, moderate, and major burns are shown in **Table 1**.

Discussion

Key Historical Factors

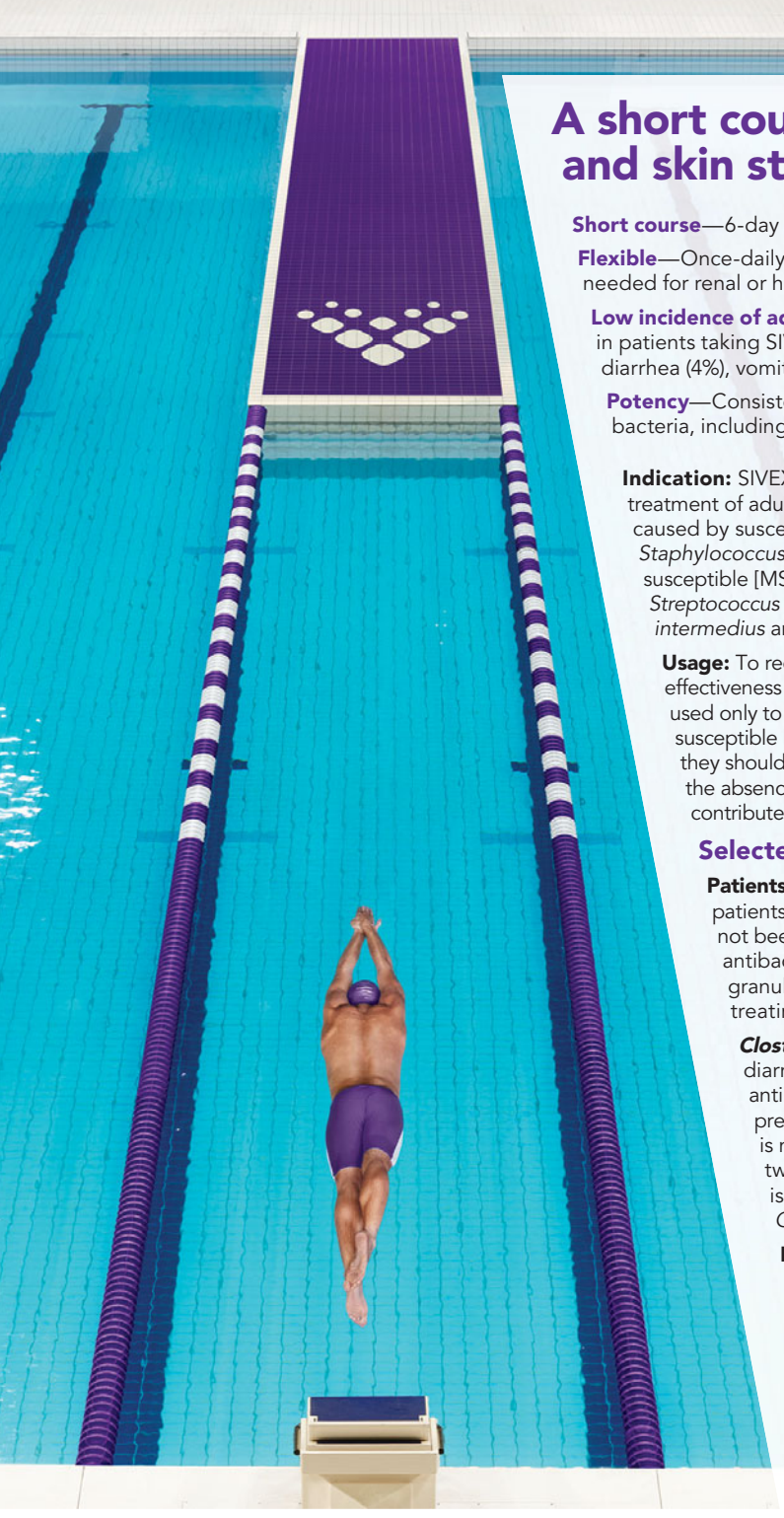
Historical factors play a key role in determining injury type and treatment. The patient, witnesses, family, and emergency medical responders can provide important historical information. The medical history should focus on exposure or cause, duration of substance exposure, estimated temperature of substance(s), comorbid medical illnesses, tetanus status, and other injuries in addition to the burn.[2] A concise method of efficient history-taking is the AMPLE method: **a**llergies, **m**edications, **p**ast medical history, **l**ast meal, **e**vents.

Several risk factors impact the prognosis and severity of burns. One retrospective review identified three risk factors associated with a higher degree of mortality: age (>60 years), nonsuperficial burns covering ≥40% of TBSA, and burns associated with inhalational injury.[6] Age of the patient is an important factor in the classification of burns and the subsequent morbidity and mortality. The most vulnerable ages for burns are <5 years and >60 years. Abuse must always be considered in children with burns. Burns account for approximately 10% of cases of child abuse.[7] For adults, socioeconomic factors that increase the risk of sustaining a burn include nonwhite ethnicity, low household income, crowded household living conditions, low maternal education, and unemployment.[8] In all groups, burns are more likely to occur during the winter, when heating appliances are more often used for cooking, heating, and lighting.[9]

Along with risk factors and socioeconomic factors, comorbid illnesses can greatly impact morbidity. A major comorbid illness associated with burns is epilepsy. Seizures are an important factor in 29% to 44% of burns.[10] Other comorbid illnesses associated with burns include blindness, deafness, arthritis, and diabetes, particularly in elderly patients.[11] In addition, patients who have congestive heart failure or renal insufficiency are at higher risk of morbidity and mortality.[3,12]

Types of Burns

The most common type of burn in children is from a scald injury, although in adults the most common burn occurs from a flame injury. The various types of burns include thermal, cold exposure, chemical burns, electrical current, inhalation, and radiation. The most common type is thermal, and the depth of the burn injury is related to the temperature of the flame or heated object, duration of contact of the skin with the heat source, and the thickness of the skin. The depth of the burn is the major determining factor in healing. Chemical burns can occur from either acid or alkaline substances. These chemicals can alter pH, disrupt cellular membranes, and lead to toxic effects on various metabolic processes. In electrical burn injuries, the degree of injury depends on the pathway of the current, the resistance to current flow



A short course in acute bacterial skin and skin structure infections (ABSSSI)

Short course—6-day course of therapy

Flexible—Once-daily, IV or oral administration with no dose adjustments needed for renal or hepatic insufficiency, weight, race, gender, or age

Low incidence of adverse events—The most common adverse reactions occurring in patients taking SIVEXTRO® (tedizolid phosphate): nausea (8%), headache (6%), diarrhea (4%), vomiting (3%), and dizziness (2%)

Potency—Consistent antimicrobial activity against susceptible Gram-positive bacteria, including MRSA

Indication: SIVEXTRO is an oxazolidinone-class antibacterial indicated for the treatment of adults with acute bacterial skin and skin structure infections (ABSSSI) caused by susceptible isolates of the following Gram-positive microorganisms: *Staphylococcus aureus* (including methicillin-resistant [MRSA] and methicillin-susceptible [MSSA] isolates), *Streptococcus pyogenes*, *Streptococcus agalactiae*, *Streptococcus anginosus* group (including *Streptococcus anginosus*, *Streptococcus intermedius* and *Streptococcus constellatus*), and *Enterococcus faecalis*.

Usage: To reduce the development of drug-resistant bacteria and maintain the effectiveness of SIVEXTRO and other antibacterial drugs, SIVEXTRO should be used only to treat ABSSSI that are proven or strongly suspected to be caused by susceptible bacteria. When culture and susceptibility information are available, they should be considered in selecting or modifying antibacterial therapy. In the absence of such data, local epidemiology and susceptibility patterns may contribute to the empiric selection of therapy.

Selected Important Safety Information

Patients with neutropenia: The safety and efficacy of SIVEXTRO in patients with neutropenia (neutrophil counts <1000 cells/mm^3) have not been adequately evaluated. In an animal model of infection, the antibacterial activity of SIVEXTRO was reduced in the absence of granulocytes. Alternative therapies should be considered when treating patients with neutropenia.

***Clostridium difficile*–associated diarrhea (CDAD)**, ranging from mild diarrhea to fatal colitis, has been reported with nearly all systemic antibacterial agents, including SIVEXTRO. Evaluate all patients who present with diarrhea following antibiotic use. Careful medical history is necessary because CDAD has been reported to occur more than two months after the administration of antibacterial agents. If CDAD is suspected or confirmed, antibacterial use not directed against *C. difficile* should be discontinued, if possible.

Development of drug-resistant bacteria: Prescribing SIVEXTRO in the absence of a proven or strongly suspected bacterial infection or prophylactic indication is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

Before prescribing SIVEXTRO, please read the accompanying Brief Summary on adjacent pages.

SIVEXTRO®
(tedizolid phosphate)
200 mg injection / 200 mg tablet

IV=intravenous.

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AINF-1151304-0000 06/15

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SIVEXTRO® (tedizolid phosphate) for injection, for intravenous use

SIVEXTRO® (tedizolid phosphate) tablet, for oral use

BRIEF SUMMARY OF PRESCRIBING INFORMATION

Please see package insert for Full Prescribing Information.

INDICATIONS AND USAGE

Acute Bacterial Skin and Skin Structure Infections SIVEXTRO® is an oxazolidinone-class antibacterial indicated for the treatment of acute bacterial skin and skin structure infections (ABSSSI) in adults caused by susceptible isolates of the following Gram-positive microorganisms: *Staphylococcus aureus* (including methicillin-resistant [MRSA] and methicillin-susceptible [MSSA] isolates), *Streptococcus pyogenes, Streptococcus agalactiae, Streptococcus anginosus* Group (including *Streptococcus anginosus, Streptococcus intermedius*, and *Streptococcus constellatus*), and *Enterococcus faecalis*.

Usage To reduce the development of drug-resistant bacteria and maintain the effectiveness of SIVEXTRO and other antibacterial drugs, SIVEXTRO should be used only to treat ABSSSI that are proven or strongly suspected to be caused by susceptible bacteria. When culture and susceptibility information are available, they should be considered in selecting or modifying antibacterial therapy. In the absence of such data, local epidemiology and susceptibility patterns may contribute to the empiric selection of therapy.

CONTRAINDICATIONS None.

WARNINGS AND PRECAUTIONS

Patients with Neutropenia The safety and efficacy of SIVEXTRO in patients with neutropenia (neutrophil counts <1000 cells/mm^3) have not been adequately evaluated. In an animal model of infection, the antibacterial activity of SIVEXTRO was reduced in the absence of granulocytes. Alternative therapies should be considered when treating patients with neutropenia and acute bacterial skin and skin structure infection.

***Clostridium difficile*-Associated Diarrhea** *Clostridium difficile*-associated diarrhea (CDAD) has been reported for nearly all systemic antibacterial agents including SIVEXTRO, with severity ranging from mild diarrhea to fatal colitis. Treatment with antibacterial agents can alter the normal flora of the colon and may permit overgrowth of *C. difficile*. *C. difficile* produces toxins A and B which contribute to the development of CDAD. Hypertoxin producing strains of *C. difficile* cause increased morbidity and mortality, as these infections can be refractory to antibacterial therapy and may require colectomy. CDAD must be considered in all patients who present with diarrhea following antibiotic use. Careful medical history is necessary because CDAD has been reported to occur more than two months after the administration of antibacterial agents. If CDAD is suspected or confirmed, antibacterial use not directed against *C. difficile* should be discontinued, if possible. Appropriate measures such as fluid and electrolyte management, protein supplementation, antibacterial treatment of *C. difficile*, and surgical evaluation should be instituted as clinically indicated.

Development of Drug-Resistant Bacteria Prescribing SIVEXTRO in the absence of a proven or strongly suspected bacterial infection or prophylactic indication is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

ADVERSE REACTIONS

Adverse Reactions in Clinical Trials Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in clinical trials of a drug cannot be compared directly to rates from clinical trials of another drug and may not reflect rates observed in practice. Adverse reactions were evaluated for 1050 patients treated with SIVEXTRO and 662 patients treated with the comparator antibacterial drug in two Phase 2 and two Phase 3 clinical trials. The median age of patients treated with SIVEXTRO in the Phase 2 and Phase 3 trials was 42 years, ranging between 17 and 86 years old. Patients treated with SIVEXTRO were predominantly male (65%) and White (82%).

Serious Adverse Reactions and Adverse Reactions Leading to Discontinuation Serious adverse reactions occurred in 12/662 (1.8%) of patients treated with SIVEXTRO and in 13/662 (2.0%) of patients treated with the comparator. SIVEXTRO was discontinued due to an adverse reaction in 3/662 (0.5%) of patients and the comparator was discontinued due to an adverse reaction in 6/662 (0.9%) of patients.

Most Common Adverse Reactions The most common adverse reactions in patients treated with SIVEXTRO were nausea (8%), headache (6%), diarrhea (4%), vomiting (3%), and dizziness (2%). The median time of onset of adverse reactions was 5 days for both SIVEXTRO and linezolid with 12% occurring on the second day of treatment in both treatment groups. The following table lists selected adverse reactions occurring in at least 2% of patients treated with SIVEXTRO in clinical trials.

Selected Adverse Reactions Occurring in ≥2% of Patients Receiving SIVEXTRO in the Pooled Phase 3 ABSSSI Clinical Trials

Adverse Reactions	Pooled Phase 3 ABSSSI Clinical Trials	
	SIVEXTRO (200 mg oral/intravenous once daily for 6 days) (N=662)	Linezolid (600 mg oral/intravenous twice daily for 10 days) (N=662)
Gastrointestinal Disorders		
Nausea	8%	12%
Diarrhea	4%	5%
Vomiting	3%	6%
Nervous System Disorder		
Headache	6%	6%
Dizziness	2%	2%

The following selected adverse reactions were reported in SIVEXTRO-treated patients at a rate of less than 2% in these clinical trials: *Blood and Lymphatic System Disorders*: anemia; *Cardiovascular*: palpitations, tachycardia; *Eye Disorders*: asthenopia, vision blurred, visual impairment, vitreous floaters; *General Disorders and Administration Site Conditions*: infusion-related reactions; *Immune System Disorders*: drug hypersensitivity; *Infections and Infestations*: *Clostridium difficile* colitis, oral candidiasis, vulvovaginal mycotic infection; *Investigations*: hepatic transaminases increased, white blood cell count decreased; *Nervous System Disorders*: hypoesthesia, paresthesia, VIIth nerve paralysis; *Psychiatric Disorders*: insomnia; *Skin and Subcutaneous Tissue Disorders*: pruritus, urticaria, dermatitis; *Vascular Disorders*: flushing, hypertension.

Laboratory Parameters Hematology laboratory abnormalities that were determined to be potentially clinically significant in the pooled Phase 3 ABSSSI clinical trials are provided in the table below.

Potentially Clinically Significant Lowest Laboratory Values in the Pooled Phase 3 ABSSSI Clinical Trials

Laboratory Assay	Potentially Clinically Significant Values*†	
	SIVEXTRO (200 mg oral/intravenous once daily for 6 days) (N=618)‡	Linezolid (600 mg oral/intravenous twice daily for 10 days) (N=617)
Hemoglobin (<10.1 g/dL [M]) (<9 g/dL [F])	3.1%	3.7%
Platelet count (<112 × 10^3/mm^3)	2.3%	4.9%
Absolute neutrophil count (<0.8 × 10^3/mm^3)	0.5%	0.6%

M = male; F = female

* <75% (<50% for absolute neutrophil count) of lower limit of normal (LLN) for values normal at baseline

† Represents lowest abnormal post-baseline value through the last dose of active drug

‡ Number of patients with non-missing laboratory values

Myelosuppression Phase 1 studies conducted in healthy adults exposed to SIVEXTRO for 21 days showed a possible dose and duration effect on hematologic parameters beyond 6 days of treatment. In the Phase 3 trials, clinically significant changes in these parameters were generally similar for both treatment arms (see the table above).

Peripheral and Optic Neuropathy Peripheral and optic neuropathy have been described in patients treated with another member of the oxazolidinone class for longer than 28 days. In Phase 3 trials, reported adverse reactions for peripheral neuropathy and optic nerve disorders were similar between both treatment arms (peripheral neuropathy 1.2% vs. 0.6% for tedizolid phosphate and linezolid, respectively; optic nerve disorders 0.3% vs. 0.2%, respectively). No data are available for patients exposed to SIVEXTRO for longer than 6 days.

USE IN SPECIFIC POPULATIONS

Pregnancy. Pregnancy Category C There are no adequate and well-controlled studies of SIVEXTRO in pregnant women. SIVEXTRO should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. In embryo-fetal studies, tedizolid phosphate was shown to produce fetal developmental toxicities in mice, rats, and rabbits. Fetal developmental effects occurring in mice in the absence of maternal toxicity included reduced fetal weights and an increased incidence of costal cartilage anomalies at the high dose of 25 mg/kg/day (4-fold the estimated human exposure level based on AUCs). In rats, decreased fetal weights and increased skeletal variations including reduced ossification of the sternebrae, vertebrae, and skull were observed at the high dose of 15 mg/kg/day (6-fold the estimated human exposure based on AUCs) and were associated with maternal toxicity (reduced maternal body weights). In rabbits, reduced fetal weights but no malformations or variations were observed at doses associated with maternal toxicity. The no observed adverse effect levels (NOAELs) for fetal toxicity in mice (5 mg/kg/day), maternal and fetal toxicity in rats (2.5 mg/kg/day), and rabbits (1 mg/kg/day) were associated with tedizolid plasma area under the curve (AUC) values approximately equivalent to (mice and rats) or 0.04-fold (rabbit) the tedizolid AUC value associated with the oral human therapeutic dose. In a pre-postnatal study, there were no adverse maternal or offspring effects when female rats were treated during pregnancy and lactation with tedizolid phosphate at the highest tested dose of 3.75 mg/kg/day, with plasma tedizolid exposure (AUC) approximately equivalent to the human plasma AUC exposure at the clinical dose of 200 mg/day.

Nursing Mothers Tedizolid is excreted in the breast milk of rats. It is not known whether tedizolid is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SIVEXTRO is administered to a nursing woman.

Pediatric Use Safety and effectiveness in pediatric patients below the age of 18 have not been established.

Geriatric Use Clinical studies of SIVEXTRO did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. No overall differences in pharmacokinetics were observed between elderly subjects and younger subjects.

OVERDOSAGE

In the event of overdosage, SIVEXTRO should be discontinued and general supportive treatment given. Hemodialysis does not result in meaningful removal of tedizolid from systemic circulation.

CLINICAL PHARMACOLOGY

Drug Interaction Studies

Drug Metabolizing Enzymes Transformation via Phase 1 hepatic oxidative metabolism is not a significant pathway for elimination of SIVEXTRO. Neither SIVEXTRO nor tedizolid detectably inhibited or induced the metabolism of selected CYP enzyme substrates. No potential drug interactions with tedizolid were identified in *in vitro* CYP inhibition or induction studies. These results suggest that drug-drug interactions based on oxidative metabolism are unlikely.

Membrane Transporters The potential for tedizolid or tedizolid phosphate to inhibit transport of probe substrates of important drug uptake (OAT1, OAT3, OATP1B1, OATP1B3, OCT1, and OCT2) and efflux transporters (P-gp and ABCG2 [also known as BCRP]) was tested *in vitro*. No clinically significant inhibition of any transporter was observed at tedizolid circulating plasma concentrations up to the C_{max}.

Monoamine Oxidase Inhibition Tedizolid is a reversible inhibitor of monoamine oxidase (MAO) *in vitro*. The interaction with MAO inhibitors could not be evaluated in Phase 2 and 3 trials, as subjects taking such medications were excluded from the trials.

Adrenergic Agents Two placebo-controlled crossover studies were conducted to assess the potential of 200 mg oral SIVEXTRO at steady state to enhance pressor responses to pseudoephedrine and tyramine in healthy individuals. No meaningful changes in blood pressure or heart rate were seen with pseudoephedrine. The median tyramine dose required to cause an increase in systolic blood pressure of ≥30 mmHg from pre-dose baseline was 325 mg with SIVEXTRO compared to 425 mg with placebo. Palpitations were reported in 21/29 (72.4%) subjects exposed to SIVEXTRO compared to 13/28 (46.4%) exposed to placebo in the tyramine challenge study.

Serotonergic Agents Serotonergic effects at doses of tedizolid phosphate up to 30-fold above the human equivalent dose did not differ from vehicle control in a mouse model that predicts serotonergic activity. In Phase 3 trials, subjects taking serotonergic agents including antidepressants such as selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants, and serotonin 5-hydroxytryptamine (5-HT1) receptor agonists (triptans), meperidine, or buspirone were excluded.

NONCLINICAL TOXICOLOGY

Carcinogenesis, Mutagenesis, Impairment of Fertility Long-term carcinogenicity studies have not been conducted with tedizolid phosphate. Tedizolid phosphate was negative for genotoxicity in all *in vitro* assays (bacterial reverse mutation (Ames), Chinese hamster lung (CHL) cell chromosomal aberration) and in all *in vivo* tests (mouse bone marrow micronucleus, rat liver unscheduled DNA synthesis). Tedizolid, generated from tedizolid phosphate after metabolic activation (*in vitro* and *in vivo*), was also tested for genotoxicity. Tedizolid was positive in an *in vitro* CHL cell chromosomal aberration assay, but negative for genotoxicity in other *in vitro* assays (Ames, mouse lymphoma mutagenicity) and *in vivo* in a mouse bone marrow micronucleus assay. In a fertility study, oral tedizolid phosphate had no adverse effects on the fertility or reproductive performance, including spermatogenesis, of male rats at the maximum tested dose (50 mg/kg/day) with a plasma tedizolid AUC approximately 5-fold greater than the plasma AUC value in humans at the oral therapeutic dose. Tedizolid phosphate also had no adverse effects on the fertility or reproductive performance of adult female rats at doses up to the maximum tested (15 mg/kg/day). Plasma tedizolid exposure (AUC) at this NOAEL in female rats was approximately 4-fold higher than that in humans at the oral therapeutic dose.

Animal Toxicity and/or Pharmacology Repeated-oral and intravenous dosing of tedizolid phosphate in rats in 1-month and 3-month toxicology studies produced dose- and time-dependent bone marrow hypocellularity (myeloid, erythroid, and megakaryocyte), with associated reduction in circulating RBCs, WBCs, and platelets. These effects showed evidence of reversibility and occurred at plasma tedizolid exposure levels (AUC) ≥6-fold greater than the plasma exposure associated with the human therapeutic dose. In a 1-month immunotoxicology study in rats, repeated oral dosing of tedizolid phosphate was shown to significantly reduce splenic B cells and T cells and reduce plasma IgG titers. These effects occurred at plasma tedizolid exposure levels (AUC) ≥3-fold greater than the expected human plasma exposure associated with the therapeutic dose.

For more detailed information, please read the Prescribing Information.

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SIV-0095

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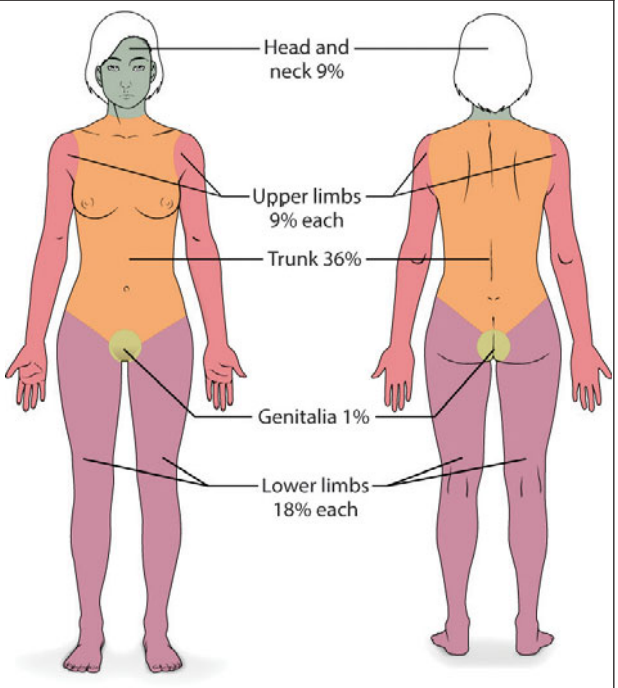
Figure 6. Burn surface area.



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through the tissues, and the strength and duration of the current flow. All high-voltage injuries (>1000 V) are considered severe burns and should be treated at a burn center. Radiation burns most commonly result from prolonged sun exposure in fair-skinned individuals. Although burns from sun exposure are often superficial, the more concerning feature is the ability of ionizing radiation to damage DNA. Inhalational injury is a dangerous complication and commonly results from steam or fire flash burns. Inhalational injuries are also associated with carbon monoxide (CO) poisoning, which result in variable complaints. Loss of consciousness, headache, nausea, vomiting, and dizziness are all common in CO poisoning. *Any concern for inhalational injury or CO intoxication warrants emergency medical care and transfer via emergency medical services.*

Examination of the Burned Individual

Thorough examination is paramount. Direct assessment of the airway is critical and must include evaluation for injury to the face and neck. Injury to the face, neck, or airway can result in edema, potentially leading to airway compromise. *Concern for airway involvement, inhalational injury, or CO poisoning warrants administration of supplemental oxygen and transfer to an emergency department.* A careful physical examination from head to toe is the next step. Clothing and jewelry should be removed from involved areas. Areas that are vital to examine in patients with burns include the face, hands, feet, genitalia, perineum, and major joints, because the condition of these is a criterion for transfer to a burn center.[2,3,12]

Estimating Total Surface Area and Use of Burn Charts

Burn size estimation guides treatment and determines the need for transfer to a burn unit. The extent of a burn is expressed as a percentage of the TBSA, which does not include superficial burns. The two most commonly used methods of determining TBSA in adults are the Lund-Browder chart and the Rule of Nines. The Lund-Browder chart is the most accurate method for determining TBSA in children and adults.[13] The Rule of Nines is the most efficient method in adults. In the Rule of Nines, each leg of the patient represents 18% of TBSA; each arm, 9% of TBSA; the anterior and posterior trunk, each 18% of TBSA; and the head, 9% of TBSA (**Figure 6**). The palm method may be more useful in burns that are irregular. With that method, the palm of the patient's hand (excluding the fingers) is 0.5% of TBSA. The entire palmar surface, including fingers, is 1% in children and adults.[3]

High-Risk Burns

High-risk burns are those that require burn specialist assessment and treatment. A burn injury is high risk and requires transfer of the patient to a burn center if it is associated with any of the following[12]:

- Extremes of age (<5 years or >60 years)
- Burns to the face, hands, perineum, feet, or major joints (partial or full thickness)
- Burns in areas of flexure (such as neck or axilla)
- Circumferential partial or full-thickness burns to the limbs, torso, or neck
- Chemical burn of >5% of TBSA
- Exposure to ionizing radiation
- High-pressure steam injury (because of risk of inhalational injury)
- High-voltage (>1000 V) electrical injury
- Hydrofluoric acid burn >1% TBSA
- Suspicion of nonaccidental injury
- Partial-thickness or full-thickness burns of >5% of TBSA in children and of >10% of TBSA in adults

- Patients with coexisting medical conditions, including a history of cardiac issues (congestive heart failure atrial fibrillation, etc.), immunosuppression, current pregnancy, and renal insufficiency

Many of these high-risk burns are also included in the Burn Center Referral Criteria described by the Committee on Trauma of the American College of Surgeons[14]:

- Partial-thickness burns of >10% of TBSA
- Burns involving the face, hands, feet, genitalia, perineum, or major joints
- Third-degree burns (in patients of any age)
- High-voltage electrical burns
- Chemical burns
- Inhalational injury
- Burn patients with preexisting medical disorders that could complicate management, prolong recovery, or affect mortality
- Any patient with burns and concomitant trauma (e.g., fractures) in which the burn injury poses the greater risk of morbidity and mortality. If the trauma presents the greater risk, then the patient can first be stabilized in a trauma center before transfer to a burn unit.
- Special requirements, such as social, emotional, or long-term rehabilitation needs
- Children who require qualified pediatric personnel and equipment

Criteria for outpatient burn care are summarized in **Table 2**.

Table 2. Criteria for Outpatient Burn Management

- No question of airway compromise
- Wounds <10% of total body surface area (fluid resuscitation not necessary)
- Patient must be able to take food by mouth
- No serious burns of the face, ears, hands, genitals, feet
- Family and friends must have resources to support an outpatient care plan
- An adult caregiver should be able to stay with a child who may not be able to attend school
- Family and friends must have resources to support an outpatient care plan
- Patient or another adult must be able to properly perform wound cleaning, inspection, and dressing changes
- Patient must have transportation to health-care provider's office or to emergency services
- No suspicion of abuse
- Wounds do not warrant surgical evaluation

Data from Landry A, Geduld H, Koyfman A, Foran M. An overview of acute burn management in the Emergency Centre. *African Journal of Emergency Medicine*. 2013;3:22–29.

Main Treatment Options

The initial treatment of minor thermal injuries consists of removing debris, cooling, cleansing, and dressing the wound. In addition, pain management and tetanus vaccination are important. Burn wounds can be cooled after any clothing, jewelry, or other debris is removed. The wound areas can be cooled with room temperature or cool tap water, which provides pain relief and limits tissue injury. One effective method of cooling is applying sterile saline-soaked gauze, cooled to around 50° to 60°F. Direct application of ice should be avoided, which leads to increased damage and pain. To clean burn wounds, a number of burn centers suggest washing minor burns with only soap and water and discourage the use of skin disinfectants, which inhibit the healing process.[12,13,15]

Debridement includes the cleaning of sloughed or necrotic skin, including ruptured blisters. Extensive debridement can be deferred until the initial follow-up visit. The management of intact blisters is controversial. Blisters that last for several weeks without resorption indicate a possible underlying deep partial-thickness or full-thickness burn, for which the patient should be referred to a burn center.[3,12,13]

Patients with superficial burns must keep the wound clean and apply nonperfumed moisturizer. These patients do not require topical antibiotic ointment.[12,13,15]

Patients with partial-thickness burns should be treated with topical antimicrobials, because burn wound surfaces are prone to rapid bacterial colonization. Topical antimicrobial agents and cytoprotective dressings are the best choices for wound coverage; however, there is no consensus on which topical agent or dressing is most effective for burn management. Commonly used topical agents for partial-thickness burns include silver sulfadiazine (SSD), combination antibiotics, mafenide, chlorhexidine, povidone-iodine, bismuth-based gauze, and Dakin's solution.[13,15,16] Of these, SSD is one of the most commonly used topical agents in treating partial-thickness burns; it is applied one to two times per day. Historically, it was thought to function by decreasing bacterial colonization of the wound, but there are no well-designed trials that demonstrate improvement in wound healing or reduction of infection, and it has multiple adverse effects.[16,17] SSD creates a pseudo-eschar around the wound, which allows microbial colonization

around the outer edges. SSD cannot be used in children younger than 2 months or in women who are pregnant or breastfeeding. Its use should also be avoided on the face and around the eyes, because it can cause significant ocular toxicity and scarring. A 2008 Cochrane Review demonstrated that SSD delays wound healing time and increases the need for dressing changes, and the authors provided evidence for other treatment options.[16]

Other Treatments

- **Combination antibiotics:** Polysporin contains bacitracin and polymyxin B, usually used for superficial burns involving the face and perineum. Polysporin is nontoxic and does not harm forming tissue. However, it is not effective for methicillin-resistant *Staphylococcus aureus* or deeper wounds.[15,16,18,19]
- **Mafenide:** This functions as a carbonic anhydrase inhibitor and is applied once or twice per day as a cream. It does present a low risk of rash and pruritus and is effective in treating infections.[16,18] However, a common adverse effect is metabolic acidosis.
- **Chlorhexidine:** This is often used in combination with a gauze dressing, and it does not interfere with wound reepithelialization. It is also long-acting.[13,16]
- **Povidone-iodine:** This combines broad-spectrum antibacterial activity with a moist environment via its liposomal preparation. However, it is cytotoxic and delays wound healing. It should be applied four times daily.[16,19]
- **Bismuth-based gauze:** This is often preferred for clean partial-thickness wounds and can prevent wound infection. It is inexpensive and relatively safe for wound care.[16]
- **Dakin's solution:** This is a broad-spectrum antimicrobial that does eliminate methicillin-resistant *S. aureus*. It is inexpensive and cytoprotective but can cause pain.[13,15,16]

Partial-thickness and full-thickness burns generally require dressing, but superficial burns do not. The dressings protect the wound from further trauma or infection, provide comfort and pain relief, and promote healing. Wounds are generally cleansed and dressed daily. There are four major types of dressing used in managing burns[3,16]:

- Compresses
- Biosynthetics
- Biologics
- Barrier dressings

During the healing process, pruritus is a common problem, but it generally diminishes and then stops after the wound is completely healed. Systemic antihistamines are the first-line therapy. A number of other topical agents, including bicarbonate of soda baths and moisturizing lotions, can also be used.[3,16,20]

Tetanus immunization should be updated for every burn patient. Tetanus immunoglobulin should be given to patients who have not received a complete primary immunization.[3]

Pain management is also an important part of treating burn patients. For smaller or less severe burn injuries, pain can be managed with acetaminophen and nonsteroidal anti-inflammatory drugs. Pain generally diminishes greatly once wound epithelialization has occurred. Many options exist for patients with larger or with moderate to severe injuries, and opioids such as morphine are often necessary for pain management.[21] [*Editor's note: See the abstract "Patients Should Be Told About Potential Constipation with Opioids" in this issue's* Abstracts in Urgent Care *section.*]

Follow-Up Care

Follow-up care in burn patients is important because signs of infection, scarring, and contracture are potential complications of any burn injury. Any patient, either at initial or follow-up presentation, with an infected wound should be hospitalized to minimize the risk of sepsis. For minor burns, follow-up can be done on a weekly basis with the primary physician until wound epithelialization occurs. More frequent follow-up is necessary if there is insufficient pain control, if the family cannot provide adequate care, or if the patient has a biologic or synthetic dressing. After epithelialization of the wound, follow-up visits can be scheduled every 4 to 6 weeks to evaluate for any evidence of hypertrophic scar or keloid formation. If wound epithelialization has not began after 2 weeks or if follow-up visits show a full-thickness burn of >2 cm, patients should be referred to a surgeon with experience in burn care.[12,13]

Case Resolution

The 62-year-old woman whose case was mentioned at the start of this article has circumferential bilateral forearm burns with blisters, comprising approximately 5% of TBSA. Her jewelry was removed from her upper extremities, and gauze soaked in room-temperature water was placed over the wounds. With her history of diabetes and congestive heart failure, in addition to the circumferential burns, she met criteria for evaluation by a burn center specialist and was referred to one.

Conclusions

The majority of burns seen in urgent care centers are minor and can be treated on an outpatient basis. Minor burns include

- Partial-thickness burns of <10% of TBSA in patients 10 to 50 years old
- Partial-thickness burns of <5% of TBSA in patients <10 years or >50 years old
- Full-thickness burns of <2% of TBSA in any patient without other injury

Burns for which the patient should be referred to a specialist include

- Partial-thickness burns of >10% of TBSA
- Burns involving the face, hands, feet, genitalia, perineum, or major joints
- Full-thickness burns
- High-voltage electrical burns; chemical burns
- Suspected inhalational injury

In addition, a physician must demonstrate sound clinical judgment in determining whether a patient should be referred to a burn center. Treatment of burn patients primarily involves initial cooling, cleansing, and debridement. Multiple regimens exist for outpatient treatment. ■

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MICHAEL F. BOYLE, MD, MBA, FACEP

Introduction

Integration of urgent care centers into large health-care systems enables improved access for patients and provides outstanding care for minor acute illness and injuries at cost-efficient prices, creating a viable alternative to emergency departments (EDs). Population health care requires patient access, integration throughout the health-care system (preventive care, primary health care, tertiary care, and return to the community), cost-effective measures for care, and quality review to ensure appropriate care provision. In shifting to population health care and bundled payments, administrators must understand the beneficial cost aspects of urgent care programs and increasing competition from for-profit vendors.

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Urgent Care Overview

Urgent care facilities provide unscheduled evaluation and treatment for minor illness or injuries. The spectrum of services provided varies based on the population served and purpose of the site. Urgent care centers often expand services to include immunizations, occupational medicine, health promotion, sports and executive physical examinations, physical therapy, and preventive medicine (smoking cessation and weight loss).[1] These sites are often distinguished by size, capability, and purpose.

This review broadens the traditional definition of urgent care services to include any location where >50% (exclusive of federally qualified health centers, or FQHCs) of medical care is unscheduled and episodic in nature, exclusive of location (telephonic, via the Internet, or in person), the method delivered, or level of the provider responsible for care:

- Cash-only clinics
- Centers in grocery stores, drugstores, and mass retailers (e.g., Walgreens, Target)
- Hospital-affiliated urgent care centers
- Private urgent care centers (physician-owned, corporate-owned, venture capital–owned)
- Community health clinics and FQHCs (because of the possibility of their ability to provide unscheduled care for episodic injury or illness, behavioral health, and dental services)

The definition excludes the following:

- Hospital-based EDs
- Freestanding EDs
- Free clinics

Lack of Access Drives Emergency Department Use

EDs have historically served as the safety net in health services for uninsured or underinsured patients. Patients with similar complaints cared for in EDs versus urgent care centers are charged far different amounts. ED charges are skewed by hospital cost-shifting and unreimbursed care. In addition, ED charges often far exceed actual collections by over 70%.[1] Urgent care clinics, on the other hand, have much lower overhead and provider costs, resulting in an overall lower cost structure. Use of EDs versus urgent care clinics varies by geographic location, social class, and payor status. Charges are far different than actual costs of care, as all hospital administrators are well aware. Though the marginal costs of ED care for patients with lower-acuity illnesses and injuries may be as low as $24, the patient charges are far higher.[2] Comparison of the cost of care (without any testing) for the patient with a simple sore throat suggests that the following are an average range for the patient or insurers:

- Cash clinic: $45–$50
- Retail clinic: $65–$75
- Urgent care: $100–$120
- Primary care: $120
- ED: >$200

Access to care is often a limiting factor causing increased use of EDs for lower-acuity conditions.[3] Even for patients who have insurance, urgent same-day or next-day appointments are difficult to obtain from primary-care providers. The reasons for this lack of access vary, but they include a lack of primary-care physicians, which is predicted to worsen, with a projected deficit of over 20,000 providers by 2020. Passage of the Patient Protection and Affordable Care Act of 2010 (PPACA) means that another 30 million patients may become insured, further straining access. As Massachusetts experienced when it mandated that all residents carry health insurance, improvements in coverage without increases in access result in volume increases for EDs of patients with lower-acuity illnesses and injuries.[3] Urgent care centers provide a solution to this challenge, but they must include extended evening and weekend hours; the most common hours of operation are from 9 a.m. to 9 p.m.

Increasing Access Requires New Care-Delivery Channels

Access to health care in 2014 occurred telephonically, via the Internet, at retail clinics staffed by nurse-practitioners and physician assistant, in urgent care centers, at primary-care offices, and in EDs. One of the fundamental flaws in the Massachusetts health-care reform program and many state Medicaid programs is the lack of access with the alternative of no care or trip to the ED.[4,5] With the advent of PPACA, new alternatives for patient access require exploration. The following section describes types of access (telephonic versus in person), followed by levels of access (retail clinic to complex-level urgent care).

Telemedicine recently gained acceptance with corporate integration, insurance carrier support, and health-care system use.[6] Communication via telephone between family physician and patient has occurred for many decades. Recent programs allow triage to be conducted via computer software, where patients are screened by a nurse or allied health-care provider and forwarded to a physician available to take the patients'

calls. Patients with higher-acuity conditions are screened out at the triage point and referred to providers of higher levels of care. Most such programs do not permit prescribing of narcotic medications, and there is very limited prescribing of psychotropic medication. Pricing ranges from $45 to $60 per call, with patients' prescriptions electronically transmitted to a preferred pharmacy. Fees are often completely covered by the patient's insurance; if not, the patient may pay out of pocket, often in the range of $49.[7] The majority of these patients use such services for the convenience and lower costs that they offer.[6,7] Diagnoses are similar to those seen in retail clinics, including a large number of cases of urinary infections (**Table 1**).

Focusing on the traditional bricks and mortar, urgent care centers are far more efficient than many EDs. Data from the most recent survey by the Urgent Care Association of America show that there are over 9000 urgent care centers in the United States, with an expansion rate of 300 to 400 new centers per year, excluding retail clinics.[4] This article describes the entire spectrum of services and several proposed models for integration, along with coordination of services within a health-care system. Strategies for these programs depend on the intent and objectives to be met.

Much of urgent care center growth was spurred by anticipated volume increases from newly insured patients after passage of the PPACA. With health reform, shifts are occurring away from a fee-for-service model toward population health care. This change relies heavily on controlling costs of care and provision in the most cost-effective environment while maintaining equal quality of care. To assist this reduction of health-care costs, it is critical to develop health-care options for a patient safety net rather than EDs. Urgent care centers provide potential solutions for rapid and unscheduled care at a cost-effective price.

Further aggravating the access challenge is that the number of nonrural EDs has decreased from 2446 in 1990 to 1779 in 2009 because of financial instability and lower profit margins.[4] At the same time, the number of ED visits continues to escalate, and now exceeds 130 million patients, producing prolonged waits and unsatisfied patients. The reasons for this are multifactorial, but congestion of patient beds and holding of patients awaiting admission to the hospital are a primary result rather than large volumes of patients with lower-acuity issues.[5] However, reduction in the volume of patients with lower-acuity issues presenting to EDs is a goal of many state Medicaid programs[8] and many insurance carriers.[9]

Table 1. Retail Clinic Use by Top 10 Discharge Diagnoses by ICD-9-CM Code

1. Upper respiratory infection (460, 465)
2. Sinusitis (461, 473)
3. Bronchitis (490, 466)
4. Pharyngitis (462, 463, 034)
5. Otitis media/externa (380,381,382)
6. Conjunctivitis (372)
7. Allergic rhinitis (477)
8. Influenza (487)
9. Unspecified viral infections (079)
10. Immunizations

Data from Ashwood JS, Reid R, Setodji CM, et al. Trends in the retail clinic use among the commercially insured. *Am J Manag Care*. 2011;17:e443–448.
ICD-9-CM = *International Classification of Diseases, Ninth Revision, Clinical Modification*.

Evolution of the Urgent Care Model

As we progress to population health management, the focus will shift from fee for service to shared risk. Hospital administrators will need to understand the models of urgent care as differentiated by purpose, target populations, access, market preservation/competition, and cost structure.

Urgent care centers vary in capability. The 10 most commonly treated conditions are listed in Table 1; routine physical examinations and immunizations are the next most common.[10] Many clinics expand services to include occupational medicine, physical therapy, laboratory draw stations, travel medicine, and aesthetic services.[1]

The first level of urgent care center has limited space and uses cost-efficient staffing models. These centers include the **cash clinic** and the **retail clinic**. Population targets are different for the two, but they share common themes. Limiting care to specific low-acuity conditions and staffing by nurse-practitioners or physician assistants make these sites the most cost-effective model for face-to-face care. Hospitals may consider either option depending on the community and intent of the clinic. Direct referrals from an ED may be done prior to treatment (after an appropriate medical screening examination) or after treatment for care of the next episodic illness or minor injury.[1]

Retail clinics provide care in the commercial environment with a presence in many retail pharmacy chains, grocery stores, and large chain stores.[11] They often encompass two-room areas with a small footprint in the local pharmacy or store. The most common staffing model uses nurse-practitioners with remote physician oversight as needed. Information

Table 2. Groups Served by Federally Qualified Health Centers

1. Underserved and low-income people
2. Migrant and seasonal agricultural workers and families
3. Homeless adults, families, and children
4. Residents of public housing

technology is maximized with the use and integration of kiosk registration, patient Internet portals (registration, medications, and treatment information), scanning of insurance and licenses for billing and demographic purposes, collection (cash, credit card, and direct insurance billing), and an integrated electronic medical record. The discharge information is computer-generated and may be efficiently delivered to primary-care providers. Utilization statistics suggest that patients often live within 20 minutes of the facility (with greatest use within 1 mile), are between 18 and 44 years old, do not have an established primary-care provider, are healthy (fewer than two chronic conditions), and have a higher household median income than the rest of the local population.[10]

Health-care systems often affiliate, partner with, or develop retail clinics to maintain a referral base for both the hospital and primary-care providers, develop a closer consumer relationship, or experiment with nontraditional health-care-delivery methods.[11] Large health-care systems that have developed retail clinic relationships include the Cleveland Clinic, Mayo Clinic, and Memorial Hermann Healthcare System.[12] Growth in retail clinics continues to increase. The findings of multiple studies show that the quality of care and satisfaction is similar to traditional options but at a lower cost.[11] When health-care systems are investigating affiliation, it must be done with care, and the relationship must be at arm's length to avoid physician referral issues under the Stark law. These programs include affiliation, co-branding, joint venture, and ownership. Systems may offer physician oversight of the nurse-practitioners and/or physician assistants providing retail clinic care. They may also provide marketing support, support for information technology, integrated electronic medical records, support for referrals to primary-care providers and specialists, and support for hospital admission. Most clinics treat only episodic illness or injury and require follow-up for a patient to establish a medical home. Research indicates that the reason use of retail clinics by the uninsured or underinsured is lower may be because the average visit cost is $60 to $70.[13]

Solutions for Improving Access for the Poor

The best alternative in the low-income population is the **cash clinic** or **community clinic** (excluding free clinics) often sponsored by hospitals, religious organizations, civic organizations, and local government. The optimum site would include three or four examination rooms located close to high-volume EDs and accessible by public transportation.[1] Some such clinics may include laboratory testing, but radiography is discouraged because of increased costs. If the goal is to reduce ED use by patients with lower-acuity conditions, then screening programs can be developed in the ED for direct referral of these patients to the clinics.[1] This option must be offered in a manner compliant with the Emergency Medical Treatment and Labor Act (EMTALA). A workable price point would be close to $45. Lower-cost staffing and a volume of more than 20 patients per day cover break-even costs.[1] This amount is a very rough estimate and depends on expenses such as staffing, rent, and supplies. Administrators should also determine the savings to the system by avoidance of a more costly ED visit.

Another area of growth under PPACA, **FQHCs** may be private (not for profit) or public entities receiving federal funding for implementation and provision of services. FQHCs are an alternative to the cash clinic for indigent populations and for patients with Medicaid coverage. Development of these programs are labor intensive, but funding occurred under both the American Recovery and Reinvestment Act and PPACA.[14] Section 330 of the Public Health Service Act covers such clinics as Indian health services, community health centers, migrant health centers, health care for the homeless programs, and public housing primary-care programs.[15] They would not be traditionally considered urgent care but have the capability to provide unscheduled services to treat minor illnesses and injuries. FQHC benefits include cost-based reimbursement for Medicare-eligible patients, steep pharmaceutical discounts, free coverage of medical malpractice insurance, and access to National Health Service Corps providers (**Table 2**). Funding availability may occur even after a clinic has been in operation. The purpose of FQHCs includes provision of patients with a medical home that includes primary care, preventive care, often dental services, mental health services, and treatment for substance abuse. These sites are nonprofit, applying for federal funding under Section 330 of the Public Health Service Act, and they serve the uninsured, underinsured, and Medicaid populations (**Table 3**). These centers require a great deal of commitment and com-

Table 3. Medically Underserved Populations

1. Low ratio of primary-care physicians to the population
2. High infant mortality rate
3. High percentage of the population living below the federal poverty level
4. High percentage of the population aged 65 years and older

"Federally qualified health center benefits include cost-based reimbursement for Medicare-eligible patients, steep pharmaceutical discounts, free coverage of medical malpractice insurance, and access to National Health Service Corps providers."

munity involvement for both application and continued management through community governance, service-delivery coalitions, and qualification as part of a Health Professional Shortage Area (HPSA). Further, centers must demonstrate accessibility, quality of care, and cost-control standards.[15] Lack of services is determined by federal designation as an HPSA, including primary care, mental health, and dental care.

Rural health clinics (RHCs) may be a different option for nonurban health systems. Staffing can include physicians, physician assistants, nurse-practitioners, and nurse-midwives. They must provide rural health-care services at least 50% of the time, accept Medicaid-eligible patients, and accept Medicare assignment payment rates. Reimbursement is cost-based for Medicare-eligible patients and prospective payment for Medicaid services. Pursuit of this structure requires determining the HPSA designation for the area and obtaining an HPSA score.[16]

Health System Considerations for Urgent Care

The majority of urgent care centers fall under the classic definition, providing episodic injury and illness care under a fee-for-service or flat-rate model. The Urgent Care Association of America determined, via a recent nationwide survey, that ownership was 32% corporate, 21% joint venture with a hospital, 14% single physician, 13% hospital, 12% multiple physicians, and 9% other.[17] Sites are often 3000 to 5000 square feet in size, include five to eight patient-care rooms, and have some type of plain radiology suite. With a 12-hour schedule, this model routinely generates a volume of two to three

Table 4. Reasons for a Hospital to Expand into Urgent Care Services

1. Prevent loss of patient population to competition
2. Off-load lower-acuity cases from the emergency department
3. Establish a geographic footprint in a new region
4. Provide overflow capacity for primary-care offices
5. Provide a lower-cost alternative for patients with low-acuity conditions
6. Population management of lower-acuity conditions in a cost-effective environment

patients per bed per hour, resulting in potential volumes of well over 50 patients per day, depending on location, marketing, and hours of operation. Productivity per provider ranges from 2.5 to 3 patients per hour, with one provider managing three to five beds. General perceptions in productivity are often far higher, exceeding 3 patients per hour. It is because of documentation challenges and other factors that this more conservative figure is suggested.

Administrators consider urgent care center expansion in that configuration for maintenance of referral base in a population with lower-acuity conditions, decongestion of an ED, or expansion into a new region[18] (**Table 4**). Geographic benefits include locations away from the central campus with ease of parking, reduced congestion, and expansion of a health-care system footprint. **Hospital-affiliated sites** are often larger and benefit from an expansion of services that include occupational medicine, imaging services, physical therapy, and laboratory draw stations. Several sites boast a medical center concept, including a full imaging center with plain radiography, ultrasound, computed tomography, and dual-energy x-ray absorptiometry scanning. The combination of imaging and urgent care provides dual marketing benefit. Use of the imaging center provides marketing for the urgent care center, and vice versa. This concept may be implemented to reduce volume loss from competitors' imaging programs, but it is an expensive alternative, and service duplication should be avoided.

Health systems may consider developing their own footprint; however, many choose a joint venture or affiliation with **private urgent care**. This option is less costly and often is of mutual benefit. Hospitals offer integrated medical records, access to information technology, potential access to capital for expansion, referral gateways for admission, and specialty care.[18] The urgent care center offers better patient access, a geographic footprint, overflow relief for the ED and primary-care practices, and an alternate treatment site in the event of a disaster.[1] Systems need to consider urgent care centers as a middle option in the patient-care spectrum outside of the ED and primary-care offices. The most critical detail to investigate is facility location. Poor location for any urgent care center, hospital-affiliated or unaffiliated, leads to failure.[1]

Conclusion

The spectrum of unscheduled injury and illness health care includes use of telemedicine, cash clinics, retail clinics, private urgent care centers, and large hospital-affiliated urgent care centers. These sites offer convenient care for lower-acuity conditions at a cost-effective price. Hospital and clinically integrated networks benefit from these types of facilities by off-loading lower-acuity cases from an ED, expanding a health-system footprint, and providing lower-cost care with concurrent patient satisfaction. Models vary, and integration depends on the intent of the clinic and population served. Facility location is critical to success. ■

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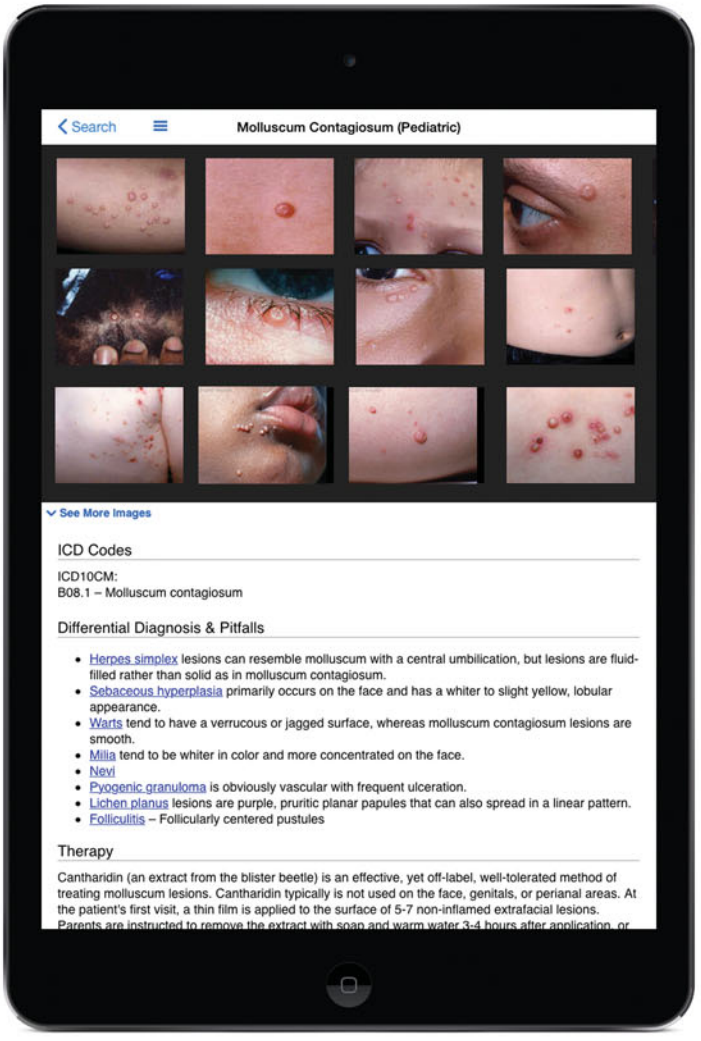
Precisely.



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Case Report

Palatine Mass: Physiologic or Pathologic?

Urgent message: Urgent care physicians often encounter patients with masses in the mouth. If they are aware of the existence of tori palatinus and know how to treat them, they can reassure patients who may mistake this benign, congenital bony growth for cancer.

JOSHUA WILSON, MS3, and SHAILENDRA SAXENA, MD, PhD

Introduction

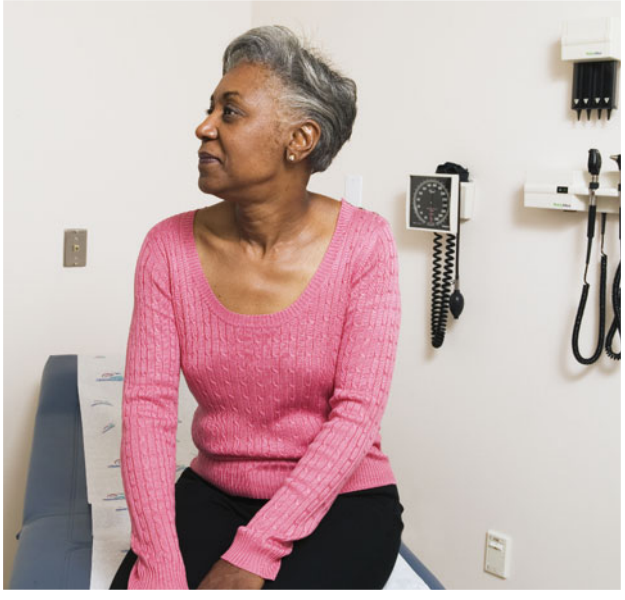
Urgent care and primary-care physicians often must evaluate masses within the mouth. These masses commonly originate from the submandibular or sublingual gland, but a frequently missed lesion is the torus palatinus, found on the hard palate. We present a case of torus palatinus, which put a patient under a lot of stress when she mistook this mass as a cancer of the mouth.

Case Presentation

A 67-year-old black woman presented to an emergency department (ED) with painful swelling of the roof of her mouth for the preceding 4 days. The patient was visibly anxious and said that she was worried about the possibility of cancer. She said that she had not eaten or drunk anything that could have caused the pain she was experiencing. Also, she reported experiencing no trauma to the hard palate. Her pain and swelling were getting progressively worse, and she rated the pain as a 10 on a scale of 1 to 10, saying that it was constant. Symptoms were unrelieved even when she took a dose of hydrocodone that she had at home.

Physical Examination

On examination, an ED physician found a 4×4-cm fluctuant lesion on the midline of the palate that was very tender to touch. There was, however, no tenderness in the surrounding teeth or of the tongue. Her speech was clear, and there was no associated drooling or stridor. In the ED, the mass was injected with a small amount (2 mL) of lidocaine and an incision was made across its surface. A small amount of fluid was released, and the lesion decreased in size but remained firm to the touch. The patient was discharged with a prescription of clindamycin.



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Joshua Wilson, MS3, is a third-year medical student at Creighton University School of Medicine, Omaha, Nebraska; **Shailendra Saxena, MD, PhD**, is a Professor in the Department of Family Medicine at Creighton University School of Medicine.

Figure 1. Infected torus palatinus 8 days after drainage in an emergency department.

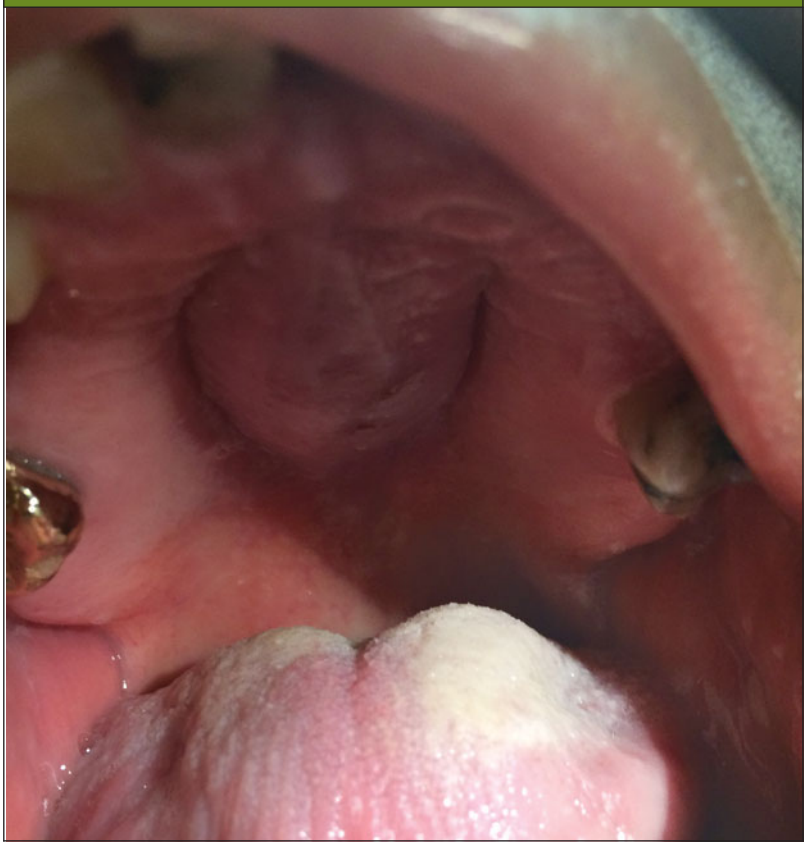
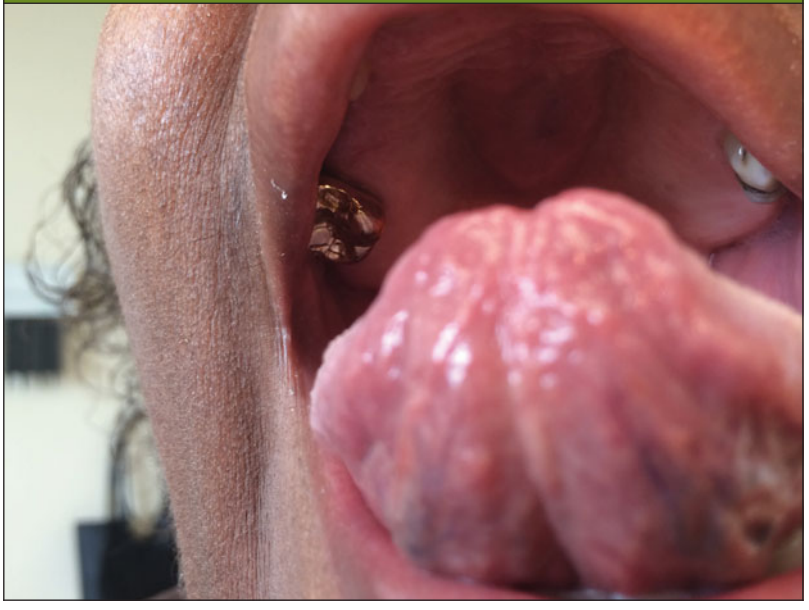


Figure 2. Torus palatinus at a follow-up evaluation after a course of amoxicillin.



Eight days later, she came to our clinic still reporting a swollen, painful mass on her hard palate and with increased anxiety that it could be a cancer. On physical examination, there was still a noticeable 4×4-cm swelling hanging from the hard palate (**Figure 1**). The patient reported that the mass had not changed in size and that the intensity of her pain had not diminished since she had visited the ED.

Diagnosis and Follow-Up

On the basis of findings from her recent medical history and physical examination, we diagnosed the mass as an infected torus palatinus. We arranged an appointment for her to see an otolaryngologist, who agreed with our diagnosis. The patient was counseled about the benign nature of this genetic condition and reassured that it presented no increased risk of cancer. Because she had a previous history of generalized anxiety disorder, we gave her Klonopin (clonazepam), 1 mg daily, to help manage her anxiety; Tylenol with codeine 3, 30 mg every 4 to 6 hours as needed, to help control her pain; and amoxicillin, 500 mg two times a day for 10 days, to treat the infection that was still present.

A follow-up examination revealed that the mass had significantly decreased in size (**Figure 2**). The patient reported that all pain associated with the mass was gone.

Discussion

Tori palatinus are bony outgrowths of the hard palate that are covered with a thin and poorly vascularized mucosa. They can be observed in approximately 15% of the general population,[1] with the most common age range for onset being 11 to 20 years.[2,3] The masses are diagnosed only through clinical examination. They have been described as "unilobular, polylobulated, flat and spindle-shaped, . . . located at the midline of the hard palate."[4] These masses usually show a very slow but pro-

gressive growth spanning many years, although growth has sometimes been observed to spontaneously stop altogether.[5]

Torus palatinus is seen more frequently in women than in men and is also more common in certain ethnic groups (e.g., Inuits) and countries (e.g., Japan, United States).[4] In a study conducted in the United States, 34% of patients presenting with a torus palatinus were black, and 23% were white.[6]

The direct cause of tori palatinus is currently unknown, but the leading theory is based in genetics. In a possibly autosomal-dominant condition, there is a malformation of the palatine shelves of the hard palate during fetal development causing one side to overlap the other. The stress this malformation puts on the hard palate leads to the increased activation of osteoblasts and subsequent bone deposition along the midline of the hard palate.[5] Other proposed causes include superficial injuries,[5] a functional response due to well-developed muscles of mastication, eating habits, states of vitamin deficiency, intake of supplements rich in calcium, or diets rich in fish.[2,4,6,7]

The finding of torus palatinus is usually incidental during an examination at a dental office. Other patients may present to an urgent care center because they have noticed a growth and are worried about cancer. The treatment or removal of most tori palatini is not indicated. Instead, education and reassurance of these patients is recommended. The most common need for removal is due to improper fitting of prosthetic dentures.[4] In these cases, the torus palatinus can be surgically removed under local anesthesia by a trained surgeon.

Tori palatinus can also become infected, as in our patient. It is not clear that drainage of the torus is beneficial or helps to speed up the recovery process. Instead, it can potentially introduce new pathogens into the area and cause more localized infection. An infected mass should instead be treated only with amoxicillin, along with an appropriate pain reliever.

Conclusion

Torus palatinus is a bony outgrowth of the hard palate that is present in 15% of the population. Urgent care physicians should be aware of the presence of these masses on the hard palate as well as of their benign nature. Patients with tori palatinus should receive education and reassurance about their condition, and amoxicillin if they have an acute infection. ■

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How to Recognize and Handle Potentially Litigious Patients

Angela T. Burnette, JD

Urgent message: *Although any urgent care center could potentially face litigation at any time, the risks of being sued can be reduced by focusing on provider behaviors that build strong relationships with patients, by recognizing patient behaviors that may increase the odds of litigation, and by having a plan for handling dissatisfied patients.*

> Avoid lawsuits beyond all things; they pervert your conscience, impair your health, and dissipate your property.
>
> —Jean de la Bruyère

Lawsuits do not discriminate. They are filed against all types of health-care providers—new or experienced, group practice or solo, employee or independent, and regardless of specialty or facility setting. Lawsuits can involve an enormous amount of stress. In cases when I have been involved on the defense side, I have seen health-care providers start to second-guess their medical opinions, lose sleep at night, and even begin to wonder why they entered the profession at all. Sometimes the provider is stunned that a lawsuit was filed, particularly if the patient had a positive outcome. In other cases, the provider realizes, in hindsight, that there were some red flags (**Table 1**) along the way.

The Best Defense Is a Good Offense

It is much easier to prevent a lawsuit proactively than defend one that has been filed. Some provider behaviors can help foster good relationships with patients and reduce the chance of lawsuits.

- **Good bedside manner and rapport matter:** Make direct, eye-to-eye contact with patients, ask them questions, listen to their answers, and do not interrupt. Most patients know that a health-care provider's time is limited, but the quality of the time matters too. In electronic medical record settings, look up at the patient instead of just typing. Focusing on the screen instead of the patient might lead you to miss some important nonverbal cues. If a patient is visibly upset or crying, acknowledge it—do not ignore it because you are uncomfortable. You could say, "I'm sorry you are worried about this. Let's get some tests done."
- **Keep it simple:** Although you have had medical training, your patient has not. Avoid using complex medical terms and abbreviations. Patients may even nod while you are talking, but they may actually be confused and too embarrassed to ask for clarification. A confused patient may not follow instructions, take medications as prescribed, or understand the consent process.
- **Take the time:** You may have done this procedure many times, but it is likely the patient's first time to undergo it. A careful explanation of the risks, benefits, potential complications, and alternatives to a proposed procedure can go a long way in minimizing confusion and managing expectations. Patients may not remember what a provider tells them verbally, but encourage them to review written information that you give them, such as a brochure or information sheet. If you delegate the consent discussion to another health-care provider, is the information provided accurate and are you notified if patients still have questions or are confused?
- **Think organic:** When you ask what medications patients are taking, be sure to ask about herbal supplements too. Some patients may consider these to be safe, but these substances may adversely interact with the patient's current medications or what you might prescribe.
- **Communicate the results:** It may be a simple or common test to you, but many patients feel worried, frustrated, and helpless waiting for the results of laboratory

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Table 1. Traits and Behaviors of a Patient Likely to Sue an Urgent Care Center

- Frequently changes health-care providers, especially within the same specialty
- Has been discharged from another provider's practice
- Openly complains about another provider
- Complains about every aspect of their visit with you (forms, copayments, the long wait,[a] parking, etc.).
- Ignores provider instructions
- Fails to keep follow-up appointments
- Has unrealistic or vague expectations, especially for elective or cosmetic procedures
- Has previously sued their provider, employer, contractor, neighbor, etc.
- Filed a complaint with a government agency such as the Equal Employment Opportunity Commission, the U.S. Office of Civil Rights (Health Insurance Portability and Accountability Act), or the state medical board, or with a health-care accreditation agency such as the Joint Commission
- Has a pending lawsuit (workers' compensation, personal injury, business dispute, etc.) or has obtained a money settlement
- Is demanding, rude, or hostile to your staff members
- Challenges or criticizes your initial diagnosis with their own layperson research
- Has requested a copy of their medical records from your office. It is possible that the patient is moving and wants to give the records to a new provider, but it is more likely that the patient is involved in a lawsuit or is obtaining the records for legal or medical review.

[a] For best practices on decreasing wait time and changing patients' attitudes about wait time, see "Improving the Patient Experience by Thinking Differently About Waiting" in the October 2015 issue of the *Journal of Urgent Care Medicine*: http://www.jucm.com/improving-the-patient-experience-by-thinking-differently-about-waiting/.

or other tests. Do not underestimate how important the result is to patients—they could be searching the Internet and imagining the worst. When communicating a result, keep in mind an abnormal result can cause great stress and anxiety—especially if it includes the name of a disease or specific words such as *cyst*, *tumor*, or *carcinoma*. Make sure your staff members are not casual or dismissive when communicating results that could upset a patient. They should also let you know if a patient is upset or has questions, so that you can follow up.

- **Do not ignore patients' messages and questions:** Do not assume that a patient's call to the office is irrelevant. For example, after an office visit, they might go home and read the actual medication name on their prescription bottle and realize that it is different than what they told you, because there are so many similarly sounding names. Call the patient back and document your attempt at clarification. Also, if you receive new or different information than previously provided, document when (date and time) it was provided to you.
- **Your staff reflects on you:** Staff members should be polite, courteous, and helpful, both in person and on the phone. They should not be texting or using social media in between patients or during a slow part of the day. Also, they should be positive and not complaining in front of patients.
- **When writing or entering prescriptions, slow down:** Try to avoid cursive handwriting. Instead, print the name of the medication and the dosage, and spell out abbreviations. Also, use trailing zeros. For example, use *0.3 mg* rather than *.3 mg*, which reduces the chance that *.3 mg* could be misread as *3 mg*. For lists of commonly confused drug names and abbreviations, visit the website of the Institute for Safe Medication Practices.[1]

Recognizing Patients Who May Be More Likely to Sue

Proactive behaviors will not prevent all lawsuits. Some patients will sue despite the provider's best efforts and despite a positive outcome. Table 1 outlines some characteristics that appear to be more common among litigious patients. Remember—these are only generalizations, and exceptions will certainly apply. (For example, a patient's prior lawsuit or complaint might have been legitimate.) Keep these potential factors in mind, though, especially if a patient presents to you with many at the same time.

Dealing with Unhappy, Complaining Patients

If a patient is unhappy and complaining, take the time to listen and see what can be done to resolve the situation. You are not only resolving a patient dispute; you are also providing good customer service to a potential referral source. It may be a minor misunderstanding or an office staff issue that you can address and move on. A quick phone call from a provider could also be meaningful and resolve the matter. For example, you could say: "I'm so sorry for your inconvenience—I agree that my staff should have called you to cancel your appointment when I was out of town. Let's get you in right away. When is convenient for you?"

Even though a patient might be complaining just to vent (or to try to have a bill reduced), do not assume that this is the case. You might learn about a legitimate issue that you should correct. Document the patient's complaint and the steps you took to investigate, even if the complaint turns out to be false, exaggerated, or unfounded. Also, document the steps you took

1. http://www.ismp.org/tools/confuseddrugnames.pdf; http://www.ismp.org/tools/errorproneabbreviations.pdf

to resolve a complaint, including follow-up calls and other support provided to the patient. If a patient is belligerent, hostile, or rude to staff members, these instances should also be documented. Use quotations when possible to capture the patient's exact words, especially for threatening statements.

If a serious adverse patient outcome occurs with a potentially litigious patient, keep in mind that *what you suspect happened might not actually have happened*. The facts are not immediately known, but they will be investigated. Do not let your gut instinct or the outcome itself move you too quickly to label something as a medical error. Sometimes an adverse outcome occurs in the absence of negligence. However, once a health-care provider admits an error to the patient or family (especially a litigious one), that admission cannot be taken back later—even if the facts or an expert review later show that no error occurred.

Depending on state law and the type of facility in which you practice, there may already be a mandate for you or the facility to self-report certain types of events. These reports can be made, within the applicable time requirements, by the proper person and when the facts are known (or at least better known). In the meantime, before you decide to communicate with a patient about an adverse outcome, consider the following:

- **Apology laws:** Many states have laws that specifically protect a provider's expression of sympathy, apology, mistake, or error to the patient or family regarding an unanticipated outcome from being used as evidence against the provider in a later lawsuit. Each state's laws differ, so be sure to confirm with legal counsel whether your state has an apology law and, if so, what it says.
- **Cooperation clauses:** Some insurance policies contain a cooperation clause. This type of clause states that the insured (the provider) cannot make a payment, admit liability, settle a claim, assume any liability, or incur any expense, unless the insurance company has provided written consent. You would not want a well-intended statement about an adverse outcome to jeopardize your insurance coverage. Discuss the incident with the insurer or the attorney assigned by the insurer. Confirm with your insurer whether it is appropriate to make such a disclosure and whether your insurer will provide you with *written* permission to make the disclosure.

Terminating the Provider–Patient Relationship

Even when there is no adverse patient outcome, there are times when it is best to part ways. Review the patient's record to confirm whether it documents facts and events, at the time they occurred, that would objectively support a proper decision to terminate, such as the patient's repeated noncompliance or rude behavior toward staff members. Check your managed-care and payor contracts to see if there are additional notice or procedural requirements you must fulfill before you can terminate the relationship. (If you are considering terminating a relationship because of nonpayment by the patient, first consider establishing a payment plan.) Comply with your state's laws and medical board regulations to avoid an allegation of patient abandonment. (Many state medical boards and insurers provide guidance on how to notify patients, plus sample letters.)

Generally, a letter to a patient terminating the relationship specifies the following:

1. Thirty days' advance written notice
2. The provider will be available for only emergency care within those 30 days
3. Objective facts as to why the relationship is being terminated
4. A publicly available way for the patient to find another provider (such as checking with a health insurer, a medical society, or a local hospital website)
5. The patient should dial 911 or go to the nearest hospital emergency department (ED) if there is a medical emergency
6. How the patient can obtain a copy of their medical records or have the records sent to a new provider, if an enclosed authorization is signed that is compliant with the Health Insurance Portability and Accountability Act

There are two final caveats:

1. If the patient is in the middle of ongoing care for a serious condition, such as dialysis or chemotherapy, consult legal counsel and consider ways to provide notice, and *then* transition the patient to another provider selected by the patient, so as not to interrupt or delay ongoing treatment.
2. There are federal (and often state) obligations for patients who present to a hospital's ED. If you terminated a relationship with a patient from your office practice but the same patient presents to you in the ED while you are working an extra shift there, you should fulfill your EMTALA (Emergency Medical Treatment and Labor Act) obligations by seeing the patient in the ED setting.

Conclusion

Where medical practice, business, and the general public meet in urgent care, lawsuits are bound to eventually occur. For the urgent care provider or operator, the risk of litigation can be reduced by communication that demonstrates caring and competence, by recognizing the traits or behaviors that signal potentially litigious patients, and by having a plan for service recovery or terminating the provider–patient relationship for patients who cannot be satisfied. Although these efforts can reduce the chance of lawsuits by demonstrating that the provider cares (and also can alleviate patient angst), such efforts can also help create positive patient experiences that lead to practice success in repeat visits and good word of mouth. ■

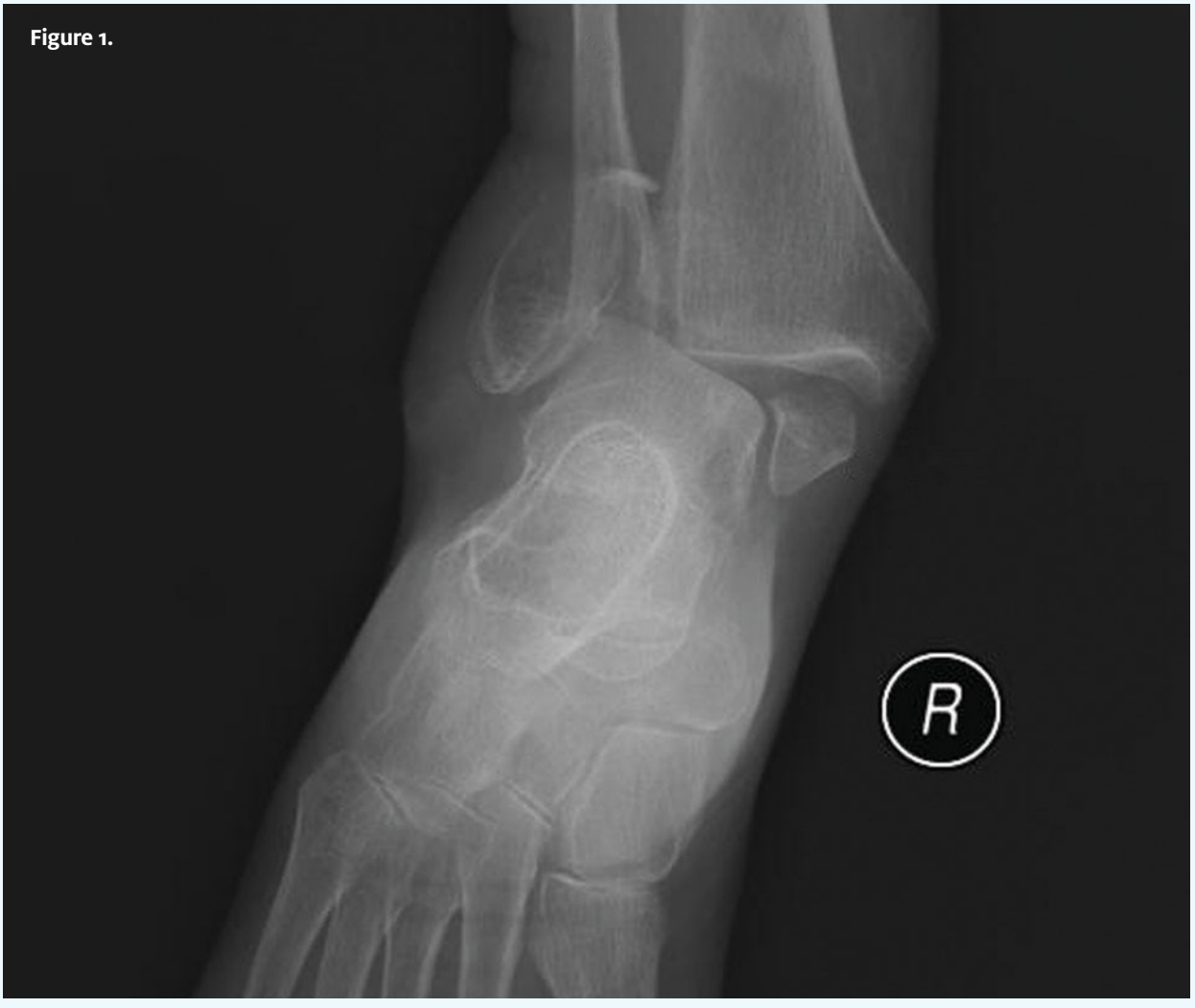
INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 1

This feature will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of conditions that real urgent care patients have presented with.

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

Figure 1.



Ankle Pain After a Misstep

Case

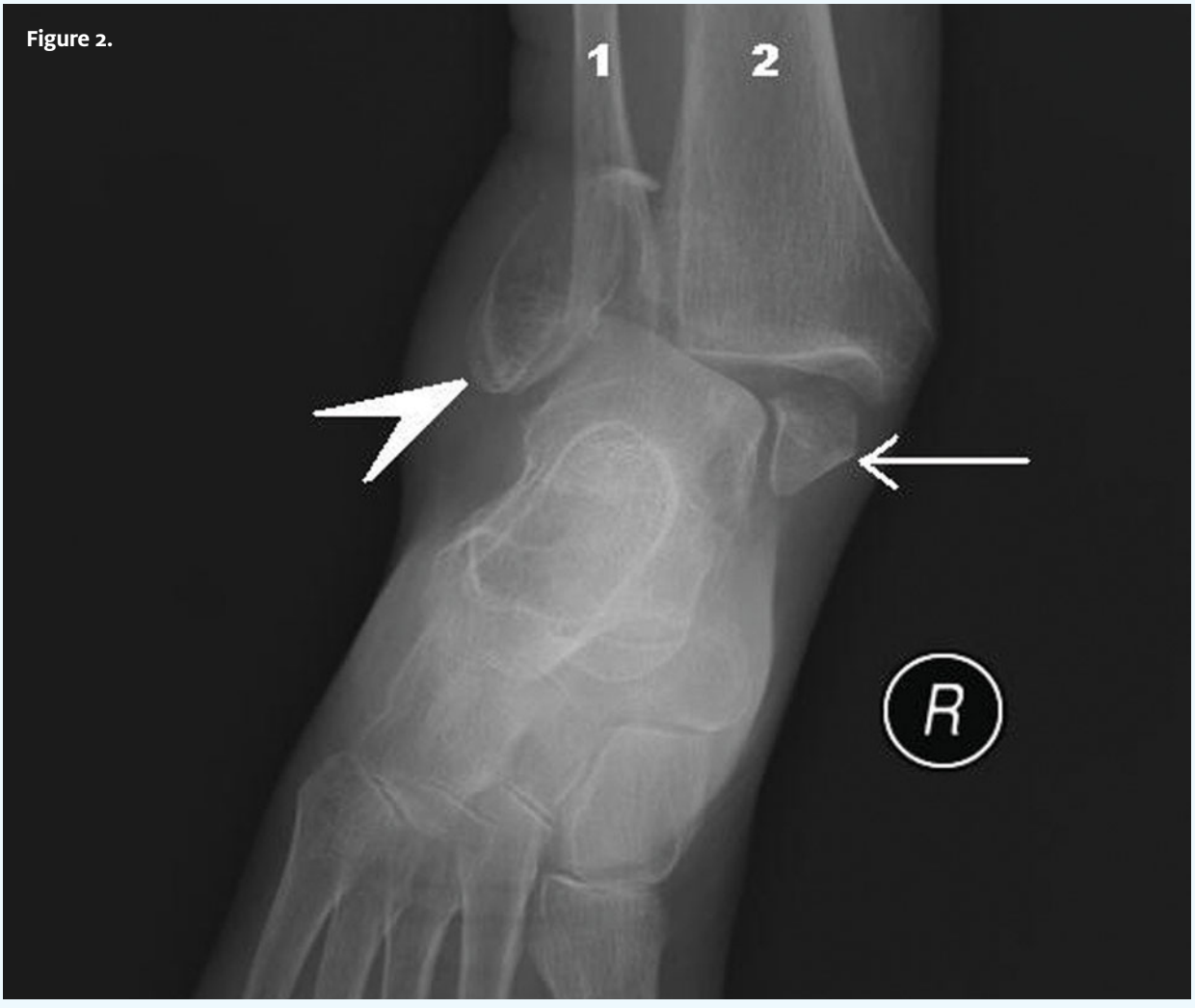
A 56-year-old woman presents to an urgent care center with severe ankle pain after stepping off a curb. The physician obtains a radiograph of her ankle.

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

Resolution of the case is described on the next page.

THE RESOLUTION

Figure 2.



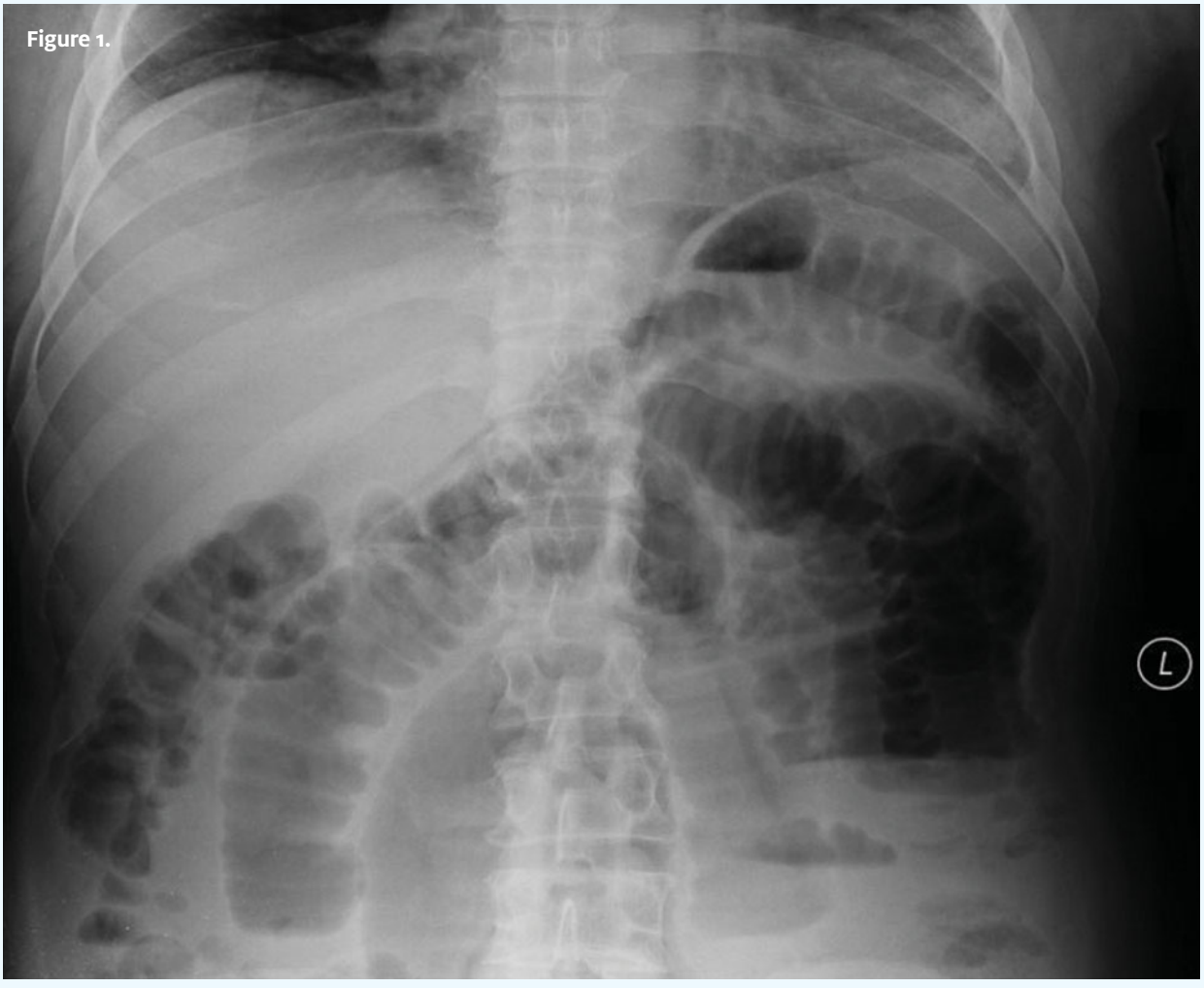
Diagnosis

Bimalleolar ankle fracture with dislocation (**Figure 2**).

Learnings

Suspect a bimalleolar fracture on the basis of the mechanism of injury, visible deformity, and significant pain. Distinguish between isolated bimalleolar fracture and bimalleolar fracture–dislocation. Check the proximal and distal joint to ensure that there is no Maisonneuve fracture (spiral fracture of the proximal fibula). A bimalleolar fracture is an unstable fracture that requires splinting, avoidance of weight-bearing, and usually surgery. If the patient will be sent home, ensure that the mortise is intact and that there is no dislocation, and arrange with an orthopedist for rapid orthopedic follow-up.

CLINICAL CHALLENGE: CASE 2



Constipation and Abdominal Pain

Case

A 67-year-old man presents with constipation and abdominal pain that has been present for the last 2 days.

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

Resolution of the case is described on the next page.

THE RESOLUTION

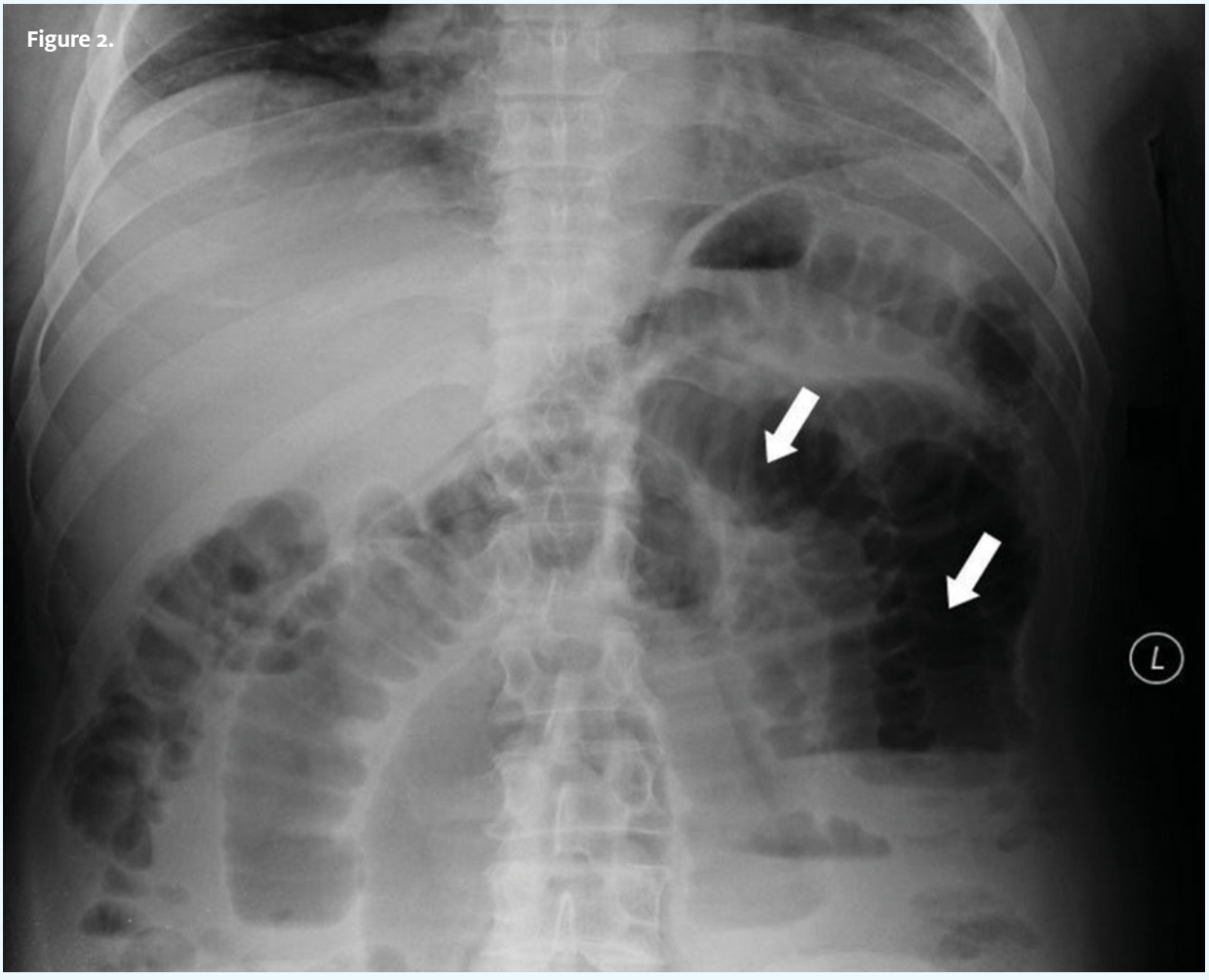


Figure 2.

Diagnosis

Small bowel obstruction (**Figure 2**).

Learnings

The most common causes of small bowel obstruction are adhesions (from previous abdominal surgery), malignancy, hernia, and Crohn disease.

Plain abdominal films do not have sufficient sensitivity to detect small bowel obstruction. The treatment of small bowel obstruction should be performed in a hospital setting, so a referral is in order. Often, a nasogastric tube or observation will be all that is required, but sometimes a patient will need surgery. Do not take a patient's self-diagnosis of constipation as accurate; it is important to investigate further.

ABSTRACTS IN URGENT CARE

- Hypertonic Saline in Bronchiolitis
- Cross-Reactivity Between Cephalosporins
- PECARN Criteria as a Tool for Predicting Intra-abdominal Injury
- Rethinking Duration of Antibiotic Treatment in Strep Throat
- Phenylephrine May Have No Benefit
- Patients Should Be Told About Potential Constipation with Opioids
- Use of Ottawa Ankle Rules by Triage Nurses Reduces Patients' Length of Stay
- Lack of Sleep Really Does Increase the Chances of Getting Sick

SEAN M. McNEELEY, MD

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

Hypertonic Saline in Bronchiolitis

Key point: Consider using hypertonic saline for bronchiolitis.

Citation: Zhang L, Mendoza-Sassi RA, Klassen TP, Wainwright C. Nebulized hypertonic saline for acute bronchiolitis: a systematic review. *Pediatrics*. 2015;136:687–701.

Bronchiolitis continues to be difficult to treat despite its high prevalence. With the exception of nasal bulb suction, few techniques have shown significant benefit, to the frustration of both patients' parents and health-care providers. A Cochrane Review suggested that hypertonic saline (HS) may benefit patients by decreasing length of hospital stay and disease severity scores. HS is thought to decrease airway edema, reduce mucous plugging, and increase mucociliary clearance. This systematic review of mostly randomized studies (one was pseudo-randomized) focused on the use of HS 3% versus normal saline 0.9% or standard care.

According to the review's authors, "[T]his new systematic review shows that nebulized HS is associated with a mean reduction of 0.45 days (~11 hours) in length of stay (LOS) among infants admitted for acute bronchiolitis and a mean reduction of 20% in the risk of hospitalization among outpatients. This review also suggests that nebulized HS is a safe treatment in infants with bronchiolitis, especially when administered in conjunction with a bronchodilator."

For the acute-care provider, the question of whether this is just another popular but soon-to-fade treatment for bronchiolitis is still unanswered. Of concern is the lack of analysis of complications, owing to the use of different criteria among the studies reviewed. Also, most urgent care centers are unlikely to stock HS; depending on how it is stocked, it could present a risk of accidental misuse. ■

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Cross-Reactivity Between Cephalosporins

Key point: Perhaps not all cephalosporin allergies are alike.

Citation: Romano A, Gaeta F, Valluzzi RL, et al. IgE-mediated hypersensitivity to cephalosporins: cross-reactivity and tolerability of alternative cephalosporins. *J Allergy Clin Immunol*. 2015;136:685–691.e3.

Like other antibiotics, cephalosporins can cause anaphylactic (type I) IgE-mediated allergic reactions. Although several recent studies have compared risk of allergic reactions between peni-

"Bronchiolitis continues to be difficult to treat despite its high prevalence. With the exception of nasal bulb suction, few techniques have shown significant benefit, to the frustration of both patients' parents and health-care providers. . . . Hypertonic saline may benefit patients by decreasing length of hospital stay and disease severity scores."

cillins and cephalosporin, not much is known about cross-reactivity between cephalosporins. A small study of 102 patients in Italy compared reactions to penicillin, ampicillin, amoxicillin, and 11 cephalosporins via skin test and oral challenge. Their findings seem to confirm the cephalosporin reactions are likely due to the side chains rather than the β-lactam ring. Their conclusion was that cross-reactivity occurred within a group of cephalosporins that have a common side chain (cefuroxime, ceftriaxone, cefotaxime, cefepime, and ceftazidime) and within a group consisting of ampicillin and two aminocephalosporins (cefaclor and cephalexin). Cefazolin typically was tolerated by patients with allergies to cephalosporins in either group.

For the urgent care provider, this is potential good news, but it is far from conclusive. Further studies with larger numbers of participants are probably warranted to establish risk. ■

PECARN Criteria as a Tool for Predicting Intra-abdominal Injury

Key point: The PECARN criteria are better than clinical suspicion at predicting intra-abdominal injury.

Citation: Mahajan P, Kuppermann N, Tunik M, et al; Intra-abdominal Injury Study Group of the Pediatric Emergency Care Applied Research Network (PECARN). Comparison of clinician suspicion versus a clinical prediction rule in identifying children at risk for intra-abdominal injuries after blunt torso trauma. *Acad Emerg Med*. 2015;22:1034–1041.

Although intra-abdominal injury is not a frequent issue in urgent care, children who may have such injuries should be rapidly assessed and transferred to an emergency department. Authors in this planned subanalysis of a previous study done by the Pediatric Emergency Care Applied Research Network (PECARN) compared clinical suspicion to a decision rule to determine risk of intra-abdominal injury. The rule checkpoints included absence of visible trauma, a score on the Glasgow Coma Scale of >13, no abdominal tenderness, no evidence of thoracic wall trauma, no complaint of abdominal pain, no decreased breath sounds, and no history of emesis after the injury. The authors found that the clinical prediction rule had a significantly better sensitivity (97% vs. 83%) than did clinical suspicion. This did come at a reduction of specificity (42.5% vs. 79%).

From an urgent care perspective, this rule should not supplant clinical concerns but could be a baseline for when to transfer patients to an emergency department. The key is to quickly discern which patients need a higher level of care. ■

Rethinking Duration of Antibiotic Treatment in Strep Throat

Key point: A full 24 hours may not be needed for contagion to end.

Citation: Schwartz RH, Kim D, Martin M, Pichichero ME. A reappraisal of the minimum duration of antibiotic treatment before approval of return to school for children with streptococcal pharyngitis. *Pediatr Infect Dis J*. 2015 August 20;1. doi: 10.1097/INF.0000000000000883. [Epub ahead of print.]

The amount of time needed for children with strep throat to become noncontagious can significantly interfere with schooling. Authors in this study evaluated 111 patients with positive findings on rapid and *Streptococcus* culture for response to a 50-mg/kg dose of amoxicillin. Patients were seen the next morning before school, and a rapid test as well as a culture were obtained. Only 10 patients had positive findings on the rapid test, which were supported by culture findings. Seven of them had much less growth on the culture. All patients had been seen by 5 p.m. on the preceding day.

The findings of this small study should at least cause urgent care providers to reconsider whether the rule of 24 hours of antibiotic intake is hard and fast. Some children did have positive test findings, however. A study of infectivity, although difficult to create, would be even more beneficial. ■

Phenylephrine May Have No Benefit

Key point: Phenylephrine is no more effective than placebo for nasal congestion.

Citation: Meltzer EO, Ratner PH, McGraw T. Oral phenylephrine HCl for nasal congestion in seasonal allergic rhinitis: a randomized, open-label, placebo-controlled study. *J Allergy Clin Immunol Pract*. 2015;3:702–708.

Since pseudoephedrine was moved behind the pharmacy counter by law in 2006, few options for decongestants have existed for patients. The most popular option has been phenylephrine. This study attempted to find out whether it is beneficial in patients with allergic rhinitis. A total of 539 adults were randomized to take one, two, three, or four 10-mg phenylephrine pills or a placebo for a week. The end point of the study was improvement of a daily congestion score. Unfortunately there was no significant improvement. At least 18.4% of participants experienced an adverse effect.

"Since pseudoephedrine was moved behind the pharmacy counter by law in 2006, few options for decongestants have existed for patients. . . . It is unfortunate that pseudoephedrine has become more difficult to obtain."

It is unfortunate that pseudoephedrine has become more difficult to obtain. For the acute-care provider, this study highlights the problems with treating patients' symptoms without evidence of effectiveness, and it shows that phenylephrine should not be used for any patient. ■

Patients Should Be Told About Potential Constipation with Opioids

Key point: Medication adverse effects should be explained to patients and treated if possible.

Citation: Hunold KM, Smith SA, Platts-Mill TF. Constipation prophylaxis is rare for adults prescribed outpatient opioid therapy from U.S. emergency departments. *Acad Emerg Med*. 2015;22:1118–1121.

Constipation, although usually not a serious complication of medication use, can be bothersome and decrease the benefit of pain control. Most guidelines recommend preventative measures when prescribing pain medication. In this study of emergency department patients treated with outpatient opioid medications, the use of laxative was evaluated. Approximately 1% of patients 18 years and older and of the subgroup of those 65 years and older received laxatives. The authors compared findings for these groups to those for the 42% treated for constipation who received laxatives. The retrospective nature of this study as well as the prevalence of good-quality over-the-counter stool softeners may make this study less concerning.

For the urgent care provider, this is a good reminder of potential adverse effects of medications we provide and the need to at least inform patients about these effects, if not treat them. Longer courses of opioid medications should be infrequent in the urgent care setting, but even a few days of constipation can worsen an already negative situation, causing pain. ■

Use of Ottawa Ankle Rules by Triage Nurses Reduces Patients' Length of Stay

Key point: Ottawa ankle rules make help decrease patient wait times.

Citation: Lee WW, Filiatrault L, Abu-Laban RB, et al. Effect of triage nurse initiated radiography using the Ottawa Ankle Rules on emergency department length of stay at a tertiary centre. *CJEM* 2015 Jul 20;1–8. doi: 10.1017/cem.2015.67. [Epub ahead of print.]

The Ottawa Ankle Rules are a well-known and validated method for accessing the need for x-rays in patients with ankle injuries. This study focused on the use of these rules by triage nurses and the effect on length of stay. A total of 146 patients were randomized to 15 nurses specifically trained in application or the rules or standard triage. Length of stay was reduced by an average of 20 minutes. Agreement between nurses and health-care providers on the application of the rules was moderate. The satisfaction level of the triage nurses and the study participants was reported as high.

Although throughput times in an urgent care center are usually quite a bit shorter than those in an emergency department, a provider might sometimes be otherwise occupied, so getting the x-ray before evaluation would make sense. Whether the appropriate staff members are available to complete this triage may be the only limiting factor.

Lack of Sleep Really Does Increase the Chances of Getting Sick

Key point: Get more than 6 hours of sleep.

Citation: Prather AA, Janicki-Deverts D, Hall MH, Cohen S. Behaviorally assessed sleep and susceptibility to the common cold. *Sleep*. 2015;38:1353–1359.

It seems intuitive that if we are fatigued, we may be more susceptible to illness; however, there is not much research in this area to prove it. In this study, 164 healthy volunteers aged 18 to 55 years were monitored for 7 days with wrist actigraphy and sleep diaries. Participants were then exposed to a rhinovirus via nasal drops. Those participants sleeping more than 7 hours were less likely to develop a cold than those sleeping less. The odds ratio was more than 4.

Although this small study does not by itself provide overwhelming evidence regarding whether lack of sleep causes increased likelihood of illness, it does provide some confirmation. These findings reinforce idea that health-care providers who see ill patients every day need to get a good night's sleep. ■

CODING Q&A

Travel Immunizations

DAVID STERN, MD, CPC

Q. What is the best way to code for and bill patients who come in because they are planning to travel out of the country and need to know what immunizations they should have before traveling? We advise them on preventive measures to take in relation to where they are traveling, provide literature if appropriate, and even try to find health-care facilities close to where they will be staying while abroad. I know we can bill for any vaccines that are administered, but can we also bill an evaluation and management (E/M) code?

A. You are correct that you can bill for any immunization(s) provided, as well as for the administration of the immunization(s). Bill the appropriate code in the medicine section of the *Current Procedural Terminology* (CPT) manual. For example, you verified that all routine immunizations are up-to-date except for tetanus, and on the basis of the destination of the patient, you discuss preventive measures to take regarding what foods and activities to avoid, how to self-treat minor ailments (such as diarrhea), provide information on medical facilities in the area and guidance on safe contact with animals indigenous to the area. You determine that the patient should receive the tetanus, yellow fever, typhoid, and polio vaccines. You would bill procedures as follows:

- **90715:** "Tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap), when administered to individuals 7 years and older, for intramuscular use"
- **90717:** "Yellow fever vaccine, live, for subcutaneous use"
- **90690:** "Typhoid vaccine, live, oral"
- **90713:** "Poliovirus vaccine, inactivated (IPV), for subcutaneous or intramuscular use"
- **90460:** "Immunization administration through 18 years of age via any route of administration, with counseling by physician or other qualified health care professional; first or only component of each vaccine or toxoid administered"

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

"You are correct that you can bill for any immunization(s) provided, as well as for the administration of the immunization(s). Bill the appropriate code in the medicine section of the Current Procedural Terminology *(CPT) manual."*

- **90461:** "Each additional vaccine or toxoid component administered (list separately in addition to code for primary procedure)"

You will notice that the codes for the immunization administration include a counseling component. However, if you are researching information regarding the travel destination of the patient, offering guidance on which immunizations are needed and guidance on how to avoid sickness and injury while traveling, that is more counseling than is required for just administering those immunizations.

According to CPT guidelines, if you are seeing a patient for a visit and more than 50% of the time spent in the visit is attributed to counseling, you may select the visit level on the basis of the typical time shown for each level of visit:

- New patient E/M levels 1 through 5
  - **99201:** 10 minutes
  - **99202:** 20 minutes
  - **99203:** 30 minutes
  - **99204:** 45 minutes
  - **99205:** 60 minutes
- Established patient E/M levels 1 through 5
  - **99211:** 5 minutes
  - **99212:** 10 minutes
  - **99213:** 15 minutes
  - **99214:** 25 minutes
  - **99215:** 40 minutes

If the patient comes to the clinic only for counseling regarding immunizations required for foreign travel and preventive travel measures, then you might consider codes from the preventive medicine section of CPT:

CODING Q&A

"As always, when the code you choose is based on time, that time spent must be documented, as well as what topics were discussed and the advice you gave."

- **99401:** "Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 15 minutes"
- **99402:** "Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 30 minutes"
- **99403:** "Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 45 minutes"
- **99404:** "Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 60 minutes"

As always, when the code you choose is based on time, that time spent must be documented, as well as what topics were discussed and the advice you gave. Please note that some payors deny these services as uncovered services. This is especially true for payors with urgent care contracts that specifically exclude preventative or primary-care services.

The diagnosis code(s) to use will be determined by the services performed in the clinic. If the patient received immunizations, you would use ICD-10 [*International Classification of Diseases, 10th revision, Clinical Modification*] code Z23, "encounter for immunization," no matter how many immunizations were administered. This is one area where ICD-10 decreased the number of codes used to report the reason for the encounter. It was decided that one diagnosis code would be used to represent any immunization, as opposed to ICD-9 [*International Classification of Diseases, Ninth Revision, Clinical Modification*], where there were diagnosis codes that specified many different types of immunization, (i.e., V04.61, "need for prophylactic vaccination and inoculation against tetanus pertussis combined vaccine," or V04.4, "need for prophylactic vaccination and inoculation against yellow fever," etc.). If only counseling was provided and no vaccines were administered, you would just code Z71.89, "other specified counseling."

Be sure to check with payors regarding their policies for any of these services. ■

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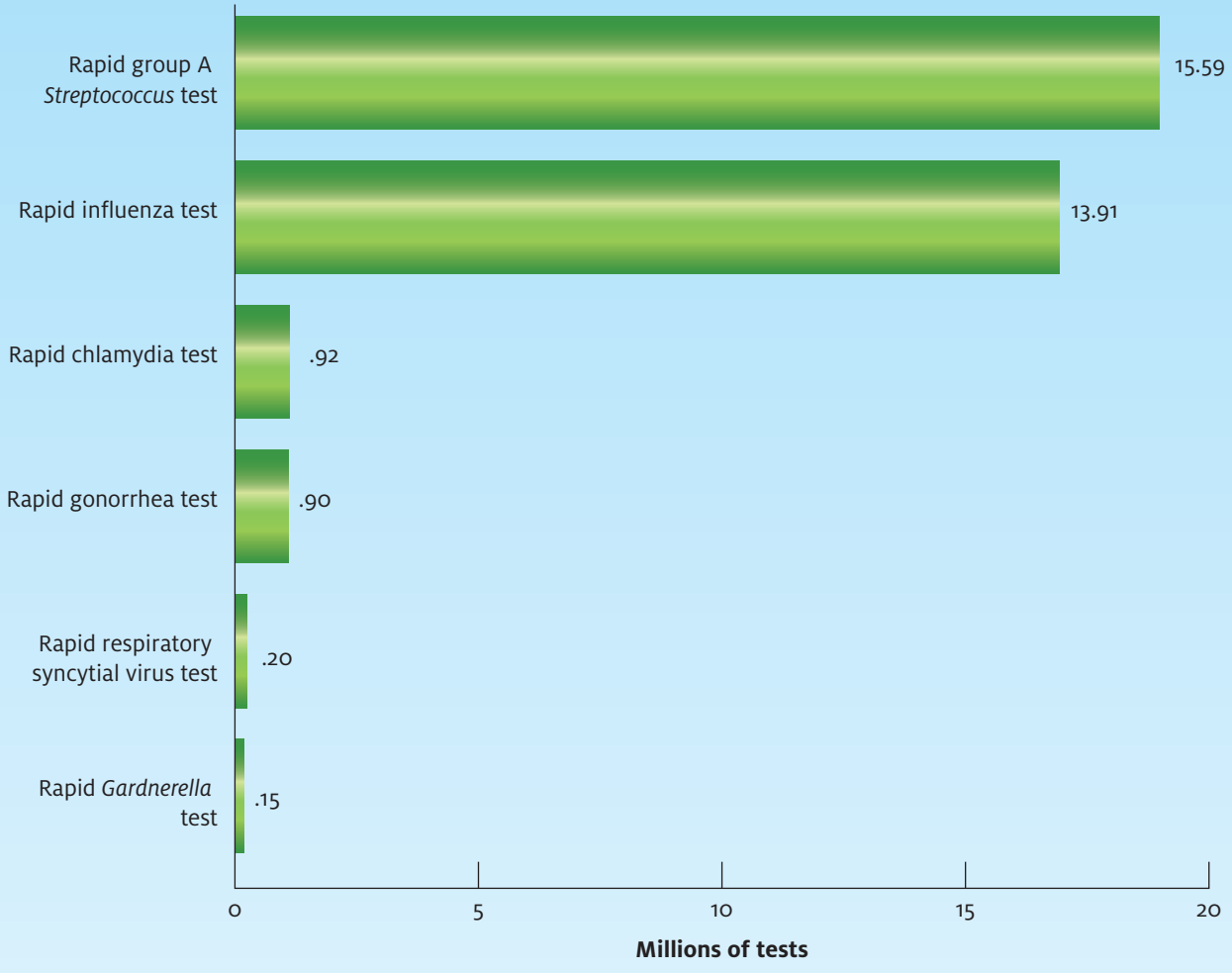
DEVELOPING DATA

Data from the 2014 Urgent Care Chart Survey of 1,778,075 blinded visits by patients to more than 800 different urgent care clinics, conducted by the *Journal of Urgent Care Medicine*, reveal that the top 3 rapid tests performed at U.S. urgent care centers in 2014 were as follows, in descending order:

- Rapid group A *Streptococcus* test—15.59 million tests
- Rapid influenza test—13.91 million tests
- Rapid chlamydia test—0.92 million tests

The survey's methodology and data abstraction forms were initially designed in 2008 by researcher Robin M. Weinick, PhD, then an assistant professor at Harvard Medical School and a senior scientist at the Institute for Health Policy at Massachusetts General Hospital, and now associate director of RAND Health.



Projections based on 150 million patient visits to urgent care centers annually.

Source: 2014 Urgent Care Chart Survey, *Journal of Urgent Care Medicine.*

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