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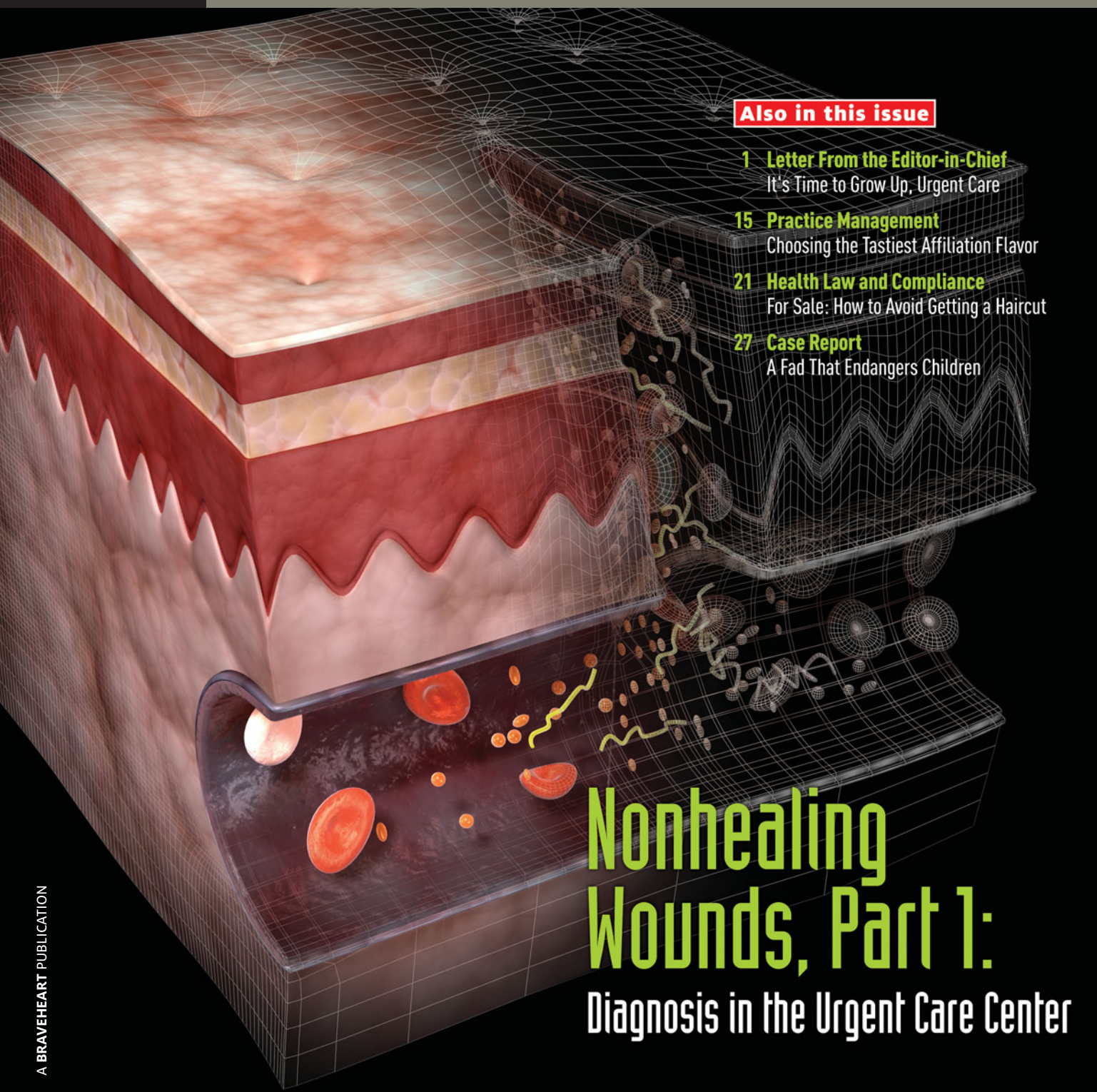

Also in this issue

Nonhealing Wounds, Part 1:
Diagnosis in the Urgent Care Center

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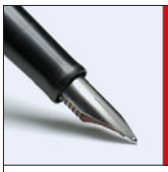


LETTER FROM THE EDITOR-IN-CHIEF

Time for Urgent Care to Grow Up

I never thought I'd quote the rap artist Kamari aka Lyrikal, but I was drawn to his words of wisdom while preparing for this column: "The hardest part about growing up is letting go of what you were used to, and moving on with something you're not."

As the "children" of urgent care, we have seen an adventurous and revolutionary spirit create an industry and discipline from scratch. We cared about things our "parents" dismissed as idealistic. We actually listened to the needs of our patients. The early years were raucous, with waiting rooms that were overflowing late into the night. Urgent care became so popular that we began opening centers on every corner.

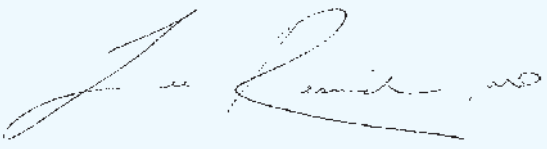
Then came the rush of followers, first moneyed outsiders and then more traditional interests. Soon the competition was fierce. Intuition and gut were replaced by analytics and metrics. Those of us looking to keep the industry going will have to change our ways a bit.

As we look to the future, we must understand what it will take to survive. We are no longer unnoticed or dismissed as a passing fad. We are facing more scrutiny and a burden of proof that the industry and discipline must own. If we don't do this, then someone from the outside will do it for us. In the maturation of any serious discipline, practitioners have to demonstrate achievement and competence in specific areas. This is imperative in health care, where the bar is set high and the stakes are great. Consider the following targets for improvement:

- **Outcomes-based research:** We must show how urgent care delivers better results than other care-provision models. Those results can be cost, quality, efficiency, or patient experience. We must convert our theoretical contributions into an objective, outcomes-based paradigm.
- **Comparative effectiveness research:** This is like outcomes-based research but with a comparison group. It helps solidify value standards and best practices.
- **Value:** It's time to clearly quantify our value in health care. Talk is cheap, and some, including large payors, are beginning to doubt that value.
- **Patient safety:** We must commit to developing patient-safety initiatives that specifically address the urgent care setting.
- **Best practices:** Defining best practices requires analyzing existing literature and then translating it for urgent care realities. Combining outcomes-based and comparative effectiveness research provides plenty of opportunities to define best practices in urgent care.
- **National health policy:** We must demonstrate how we can help address the priority of a national health policy. Treatment of obesity, early detection and treatment of diabetes mellitus, provision of smoking cessation assistance, prevention of antibiotic resistance, and even concussion prevention and management are areas where we can have a role.
- **Stewardship:** Antibiotics and controlled substances are obvious targets for good stewardship in urgent care.
- **Training and education:** If we believe that urgent care is a unique discipline, with a unique decision-making paradigm, then we must agree on how we define, train, and test for unique competencies.
- **Care coordination:** We must improve our care transitions and our role in an integrated health model.
- **Technology:** We have a head start here because urgent care has always embraced technology. If we analyze the data from this technology right, we can use the findings to support research and best practice initiatives.
- **Patient experience:** Providing a high-quality patient experience is our bread and butter for sure, but expectations are evolving. How will we adapt?

In the coming months, I will focus this column on initiatives that are under way to support efforts like those described here. We have a great yet fleeting opportunity to re-establish urgent care as a critical thread in the health-care delivery fabric.

Let's get moving. Let's grow up. ■



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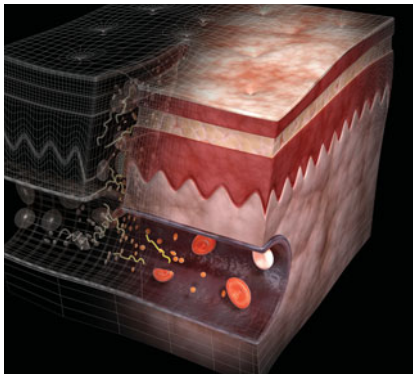

CLINICAL

PRACTICE MANAGEMENT

CASE REPORT

With children, health-care providers must start with a comprehensive differential diagnosis because of the difficulty in obtaining accurate information directly from the patient. When the presentation is vomiting, clues such as risky behaviors of other family members can guide the diagnosis and eventual treatment.

Andy Pham, MS-3, and John Shufeldt, MD, JD, MBA, FACEP

IN THE NEXT ISSUE OF *JUCM*

In the second part of a two-part series, authors Nathan M. Finnerty, MD, Michael B. Weinstock, MD, and Colin G. Kaide, MD, FACEP, FAAEM, UHM, describe the treatment of specific types of nonhealing wounds and show, through several case presentations, how to apply this knowledge to improve patients' quality of life.

DEPARTMENTS

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editor@jucm.com

MANAGING EDITOR
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komooreklopf@jucm.com

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CONTRIBUTING EDITORS
Sean M. McNeeley, MD
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MANAGER, DIGITAL CONTENT
Brandon Napolitano
bnapolitano@jucm.com

ART DIRECTOR
Tom DePrenda
tdeprenda@jucm.com

BRAVEHEART PUBLISHING
185 State Route 17, Mahwah, NJ 07430

PUBLISHER
Stuart Williams
swilliams@jucm.com • (201) 529-4004

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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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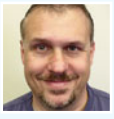
In the early years, the mavericks of urgent care medicine took a new path: They actually listened to the needs of patients. As Editor-in-Chief Lee Resnick writes this month, those were raucous times, with waiting rooms overflowing late into the night and with new centers opening on every corner. But now it's time for urgent care to grow up. In the coming months, Resnick will focus on specific initiatives that are under way to make that maturation happen, including some in the areas of outcomes-based research, comparative effectiveness research, patient safety, best practices, national health policy, stewardship, training and education, coordination of care transfers, technology, and the patient experience.

We are pleased to tell you that *JUCM* took two awards in the 2016 competition of the American Society of Healthcare Publication Editors. From our September 2015 issue, "Delayed Prescribing of Antibiotics for Respiratory Tract Infections," by Kim Hasbach, DNP, APRN-BC, took a silver award for best case history. From our February 2015 issue, "A Process Approach to Differentiating Your Urgent Care Brand by Ensuring That Patients Leave Satisfied," by Alan A. Ayers, MBA, MAcc, took a bronze award for best how-to article. We're proud of the important contributions our authors make to the literature on urgent care.





As the number of older people in the United States grows exponentially, urgent care providers have an opportunity to improve quality of life and outcomes for more patients through a thorough knowledge of the fundamentals, diagnosis, and treatment of nonhealing wounds. In part 1 of a two-part article , Nathan M. Finnerty, MD, Michael B. Weinstock, MD, and Colin G. Kaide, MD, FACEP, FAAEM, UHM, explain how to determine what's behind many different types of nonhealing wounds.

Finnerty is Senior Resident in the Department of Emergency Medicine at Ohio State University College of Medicine, Columbus, Ohio; a member of the Research and Social Media Committees for the Society for Academic Emergency Medicine; and a manuscript reviewer for *Annals of Emergency Medicine*. Weinstock is Professor of Emergency Medicine; Emergency Department Chairman and Director of Medical Education, Mount Carmel St. Ann's Hospital Department of Emergency Medicine, Immediate Health Associates, Inc., Columbus, Ohio; Associate Clinical Editor for the *Journal of Urgent Care Medicine*; and Editor-in-Chief of *Urgent Care Reviews and Perspectives* (*UC:RAP*). Kaide is Associate Professor of Emergency Medicine at Wexner Medical Center at Ohio State University in Columbus, Ohio.

Hospitals and health systems are now joining forces with urgent care centers in various models that benefit patients and spur the growth and development of all entities involved. Author Todd Latz, JD, describes five common models so that you can determine which one will fit your institution's strategic objectives and distinct market conditions.

Latz is Chief Executive Officer of GoHealth Urgent Care, which operates joint-venture partnerships with leading health systems across the United States.


Vomiting is a common presentation in urgent care, especially in children. Authors Andy Pham, MS-3, and John Shufeldt, MD, JD, MBA, FACEP, write that providers must start with a comprehensive differential diagnosis because it is difficult to obtain accurate information directly from these patients. Sometimes details about the risky behaviors of other family members can guide diagnosis.

Pham is a third-year medical student at Creighton University School of Medicine, Phoenix Regional Campus, in Phoenix, Arizona. Shufeldt is Principal of Shufeldt Consulting, in Scottsdale, Arizona.

Also in this issue:

In *Health Law and Compliance*, **Adam J. Rogers, JD, BHS Physical Therapy,** details key issues in due diligence for preparing an urgent care center for sale or acquisition, especially regarding sharing information and ensuring compliance with the doctrine of corporate practice of medicine and with other health-care regulations.

Rogers is a partner in the Miami, Florida, office of DLA Piper, LLP, and is a board-certified specialist in health law who focuses his practice on health-care transactional, regulatory, and litigation matters.

Sean M. McNeeley, MD, and the **Urgent Care College of Physicians** review new reports from the literature on longer-term antibiotic therapy for persistent Lyme disease symptoms, the global prevalence of antibiotic resistance in children with urinary tract infections, the addition of salmeterol to fluticasone for asthma, adhesive strips instead of sutures in two-layer wound closure, fluoroquinolone and arrhythmia risk, and smartphone applications for measuring heart rate.

In *Coding Q&A*, **David Stern, MD, CPC,** discusses new rules for coding when billing for the removal of impacted cerumen.

Our *Developing Data* column provides illuminating statistics on the various purposes for which patients chose in 2014 to visit retail clinics versus urgent care centers versus the offices of their primary-care physicians. You may find some surprises. ■

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Bright Stars of Urgent Care:

Past, Present & Future, a Foundation Celebration

Nearly 150 bright stars of urgent care gathered in Orlando, Florida, on April 19 to celebrate the UCAOA, its founders, and past and present leaders and awardees, and to raise funds for the Urgent Care Foundation. Held in conjunction with the 2016 UCAOA National Urgent Care Convention, this inaugural event brought together individual and corporate leaders.

Congratulations to this year's award winners! Photos and updates from the event are posted on the UCAOA website.

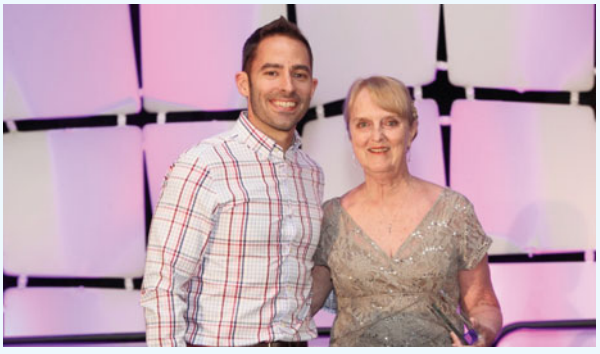
Save the date for next year's Bright Stars of Urgent Care: Past, Present & Future, a Foundation Celebration. Join us May 2, 2017, at the Gaylord National Resort & Convention Center in National Harbor, Maryland. ■

Peter Lamelas, MD, MBA, FACEP, accepts the 2016 Outstanding Achievement Award at Bright Stars of Urgent Care: Past, Present & Future, a Foundation Celebration, the inaugural fund-raiser for the Urgent Care Foundation.

P. Joanne Ray is Chief Executive Officer of the Urgent Care Association of America. She may be contacted at *jray@ucaoa.org*.

Nathan Newman, MD, FAAFP *(left)*, the 2016 recipient of the Advocacy Award, with Radwan Hallaba, MD, the 2015 recipient.

Anthony Euser, DO *(left)*, recipient of the 2015 Community Service Award, with Max Lebow, MD, MPH, MBA, FACEP, FACPM, the 2016 recipient.



Eric McDonald, Chief Executive Officer of DocuTAP and the recipient of the 2015 Humanitarian Award, with Ellen Lawson, Medical Director of Sisters of Mercy Urgent Care and the 2016 recipient.

Nonhealing Wounds, Part 1: Diagnosis in the Urgent Care Center

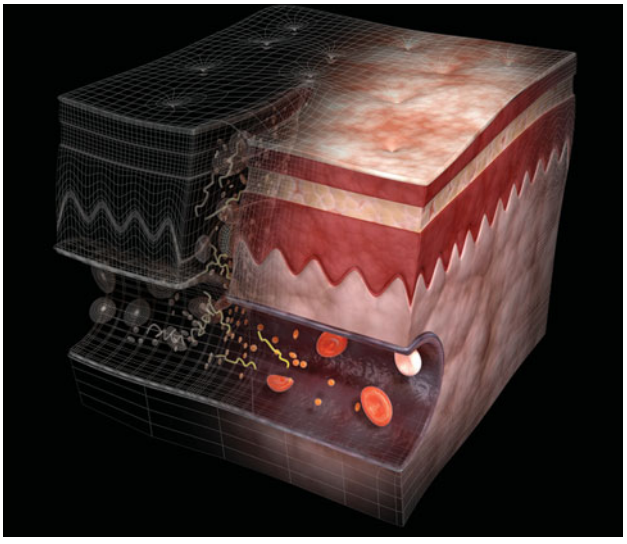
Urgent message: Nonhealing wounds not only are prevalent but also are complex in terms of wound management and treating the accompanying comorbid disease. By both recognizing the diagnosis and understanding how to treat these wounds, urgent care providers have the opportunity to differentiate life-threatening illness from life-inhibiting disease and improve outcomes for patients.

NATHAN M. FINNERTY, MD, MICHAEL B. WEINSTOCK, MD, and COLIN G. KAIDE, MD, FACEP, FAAEM, UHM

Introduction

An estimated 6 million people in the United States have a nonhealing wound, with a 1% lifetime incidence for the total population.[1,2] This number is expected to increase with the exponential growth of the population of older people.[3] The urgent care provider has a unique opportunity to improve quality of life and patient outcomes by understanding the fundamentals, diagnosis, and treatment of nonhealing wounds.

Nonhealing wounds (also called chronic wounds) are typically defined by the source of the wound (i.e., venous vs. arterial insufficiency) and have proven unresponsive to initial therapy or persist despite continued care.[1] The majority of nonhealing wounds affect the lower extrem-



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Nathan M. Finnerty, MD, is Senior Resident, Department of Emergency Medicine, Ohio State University College of Medicine, Columbus, Ohio; a member of the Research and Social Media Committees for the Society for Academic Emergency Medicine; and a manuscript reviewer for *Annals of Emergency Medicine*. **Michael B. Weinstock, MD,** is Adjunct Professor of Emergency Medicine, Ohio State University College of Medicine; Emergency Department Chairman and Director of Medical Education, Mount Carmel St. Ann's Hospital Department of Emergency Medicine, Immediate Health Associates, Inc., Columbus, Ohio; Associate Clinical Editor for the *Journal of Urgent Care Medicine*; and Editor-in-Chief, *Urgent Care Reviews and Perspectives* (*UC:RAP*). **Colin G. Kaide, MD, FACEP, FAAEM, UHM,** is Associate Professor of Emergency Medicine at Wexner Medical Center at Ohio State University in Columbus, Ohio.

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ities and are associated with circulation problems.[2] Nonhealing wounds are often a physical manifestation of a chronic illness. Failure to recognize the significance of such wounds and initiate care may decrease quality of life, increase morbidity and mortality, and increase health-care expense for the patient.[3] Understanding critical components of the medical history and physical examination, indications and best evidence for treatment, and the need for appropriate follow-up care is crucial for effective and efficient management of such a debilitating condition in the urgent care setting.

"An estimated 6 million people in the United States have a nonhealing wound, with a 1% lifetime incidence for the total population. This number is expected to increase with the exponential growth of the population of older people."

Pathophysiology of Acute Versus Chronic Wounds

Although an in-depth understanding of the pathophysiology of chronic wounds is not necessary in order to provide treatment, a basic understanding of why some wounds become chronic and some heal normally is useful.

Normal healing of an acute wound begins with an injury that damages the blood vessels, initiating a cascade of blood clotting and platelet aggregation, which releases growth factors that draw inflammatory cells (neutrophils and macrophages) into the injured area, destroying bacteria. This phase peaks during the first 2 to 3 days. The activation of macrophages results in the release of growth factors and pro-inflammatory cytokines, which start wound healing.

The chronic wound, however, has a persistent pro-inflammatory stimulus that may be caused by

- Repetitive trauma
- Local tissue ischemia
- Necrotic tissue
- Heavy bacterial burden
- Tissue breakdown

In a chronic wound, the neutrophils and macrophages continue to secrete the inflammatory cytokines, which destroy the wound matrix and impair the deposition of connective tissue. This chronic inflammatory state can be self-sustaining and prevents wound healing.

Initial Assessment

Emergency complications of nonhealing wounds include rapidly progressive infection, sepsis, limb ischemia, deep vein thrombosis (DVT), and pulmonary embolism. Tachycardia, hypotension, or tachypnea (1) alone or (2) in conjunction with each other or with associated fever is considered an overt sign of clinical instability or systemic illness. A progressing chronic wound may also be the physical manifestation of exacerbation of an underlying medical condition. These can include poorly controlled diabetes, peripheral vascular disease, malnutrition, and the simple inability of the patient to care for herself or himself. In any such case, the patient would likely benefit from rapid intervention and treatment in a setting of higher acuity.

Differential Diagnosis

The differential diagnosis is broad and includes many entities, such as acute trauma, autoimmune disorders, and cancer. The list provided here is not comprehensive, but it delineates some key diagnoses that should be considered in the initial approach to a nonhealing wound.

- **Trauma:** Acute injuries may be mistaken for chronic wounds if they are contaminated with debris or discolored, as in the case of partial-thickness and full-thickness burns.
- **Viral infection:** Herpes zoster (shingles) and herpes simplex infections may present with cutaneous wounds or ulcers. Confirmation is made with a viral culture.
- **Bacterial infection:** Patients may have simple streptococcal infections (as in the case of impetigo), methicillin-resistant *Staphylococcus aureus* infections, or, even more concerning, polymicrobial necrotizing infections. Bacterial infections may affect any layer of tissue, from the dermis through the muscle fascia (fasciitis) and to the bone (osteomyelitis).
- **Fungal infection:** The most common fungal infection causing a lower-extremity wound is tinea pedis. Interdigital lesions are highly suggestive of this condition. Topical antifungals are the recommended initial treatment.
- **Atypical infections:** Tuberculosis, leprosy, syphilis, leishmaniasis, amebiasis, blastomycosis, and coccidioidomycosis may all manifest with resistant cutaneous lesions in the right patient population or location or with the right travel history.
- **Bites:** Spider, tick, and scorpion bites and snakebites may present with acute wounds or may be mistaken for chronic wounds. Scabies may also manifest as

nonhealing wounds, which are typically extremely pruritic and affect the hands, feet, and flexor surfaces.
- **Vascular issues:** Venous-insufficiency and arterial-insufficiency ulcers are among the most common nonhealing wounds. However, septic or thrombotic emboli may also manifest as nonhealing wounds.
- **Inflammatory issues:** Vasculitis, polyarteritis nodosa, dermatitis, psoriasis, lichen simplex chronicus, erythema nodosum, pyogenic granuloma, lupus, and bullous pemphigoid are all typically inflammatory conditions and not infections (though they may be confused with infectious disorders) and vary widely in etiology and treatment.
- **Malignancy:** Cancers may manifest as nonhealing wounds. These are commonly cutaneous in origin (squamous cell carcinoma, basal cell carcinoma) but may also be caused by lymphoma and melanoma.

History of Present Illness

As you interview the patient, consider the following items as they pertain to the patient's chronic wound.[3]

- Wound characteristics:
  - How long has the wound been present?
  - Is the wound changing? Redness, drainage, foul odor, progression, and discoloration can all be signs of acute infection.
  - Is it painful? Pain and progression of the wound have the highest correlation with bacterial infection.[4]
  - What therapy has already been tried, and has it been effective?
- Associated symptoms:
  - Fevers or chills can be indications of systemic infection.
  - Numbness or paresthesias may suggest vascular compromise.
  - Polyuria, polydipsia, and polyphagia may be manifestations of underlying hyperglycemia.
- Medical history:
  - Is there a history of nonhealing wounds? If so, how were they treated?
  - Is there a personal or family history of DVT or clotting disorder?
  - Malignancy, chemotherapy, sickle cell disease, previous organ transplantation, and human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) are only a few of the disease states or conditions that lower a host's immunity and increase susceptibility to acute infections and nonhealing wounds.
- Surgical history:
  - Recent surgery should raise suspicion for retained or infected surgical equipment.
  - Recent acute wound closure should raise suspicion for infection or a retained foreign body.
- Social history:
  - Poor sanitation
  - Poor diet
  - Inability to perform activities of daily living
  - Elder abuse
- Overall goals of care: Some patients with end-stage or terminal illnesses may seek only to keep wound drainage and odor under control, as opposed to undergoing the process of complete wound healing.

Physical Examination

The physical examination should begin with obtaining a complete set of vital signs and assessing the patient's general appearance. Unstable vital signs, altered mental status, cachexia, mottled or ashen skin, and acute distress from pain are all indications for rapid intervention and transfer to an acute-care setting. Most patients who present with a nonhealing wound are elderly or have multiple comorbidities, and thus a complete examination is recommended. Here we focus on critical elements most likely to guide treatment.

Systemic Inflammatory Response Syndrome

Systemic inflammatory response syndrome (SIRS) is the body's response to an acute insult (e.g., infection, burn, surgery). SIRS is defined by the presence of two or more of the following:

- Temperature >100.4°F (38°C) or <96.8°F (36°C)
- Heart rate >90 beats/min
- Respiratory rate >20/min or arterial carbon dioxide concentration <32 mm Hg
- White blood cell count >12,000/μL or >10% immature band forms

The presence of two or more SIRS criteria and a presumed source of infection (this may or may not be from a nonhealing wound) have traditionally been the accepted definition of sepsis and should prompt rapid intervention and transfer to an acute-care setting, though new definitions have been published.[5]

Lower Extremities

Look

The examination of the lower extremities should begin with the general appearance of the legs.

- Dark blue, red, or purple discoloration can be characteristic of venous insufficiency or long-standing edema. This discoloration is worsened in the dependent position and lessens with elevation. In contrast, arterial insufficiency is typically characterized by pale skin.
- Hemosiderin staining (reddish-gray or brown discoloration of the skin, most commonly on the anterior portion of the lower leg and the ankle) is a cardinal sign of venous insufficiency.
- Dilated, enlarged, palpable, and often bluish veins (varicose veins) are characteristic of venous insufficiency.
- Cellulitis is typically bright red and should be considered if erythema is noted farther than 1 cm from the edge of the wound.
- Thin and shiny skin, pale color, an absence of hair growth, and thickened and/or brittle nails can be a sign of arterial insufficiency or diabetic neuropathy.
- Unilateral edema should raise concerns for DVT, because most chronic forms of edema are symmetrical.
- Deformity of the foot may indicate repeated trauma and suggests neuropathy.

Feel

- Cool (hypothermic) skin suggests arterial insufficiency. Normothermic skin is common with venous insufficiency. Cellulitis is typically characterized by warm (hyperthermic) skin.
- Autonomic dysfunction leads to decreased secretions, causing dry, cracked, and calloused skin.[3]
- Edema may be pitting (when impressions made by fingers remain after compression) or nonpitting. In long-term, poorly controlled venous insufficiency, soft tissue may harden and develop a woody-textured, nonpitting edema termed lipodermatosclerosis. Lymphedema is also typically nonpitting.
- Palpate the distal pulses. If they are not palpable, they should be identified and marked via Doppler ultrasound. An absence of pulses on Doppler ultrasound represents a vascular emergency, for which transfer to an acute-care setting is indicated.
  - The dorsalis pedis artery is located on the dorsum of the foot, lateral to the extensor tendon of the big toe.
  - The posterior tibial artery is located on the medial aspect of the foot, posterior to the medial malleolus.
- Common pitfalls when identifying pulses:
  - The pads of digits 2, 3, or 4 should be used to reduce the tendency to mistake the health-care provider's pulse for the patient's pulse.
  - Correlation with the patients' upper-extremity pulses or continuous monitoring should be used to further avoid mistaking the provider's pulse for the patient's pulse.
  - Excessive pressure over the artery may falsely produce nonpalpable pulses.
- Assess capillary refill. The normal range is 2 to 3 seconds. Delayed return may indicate arterial insufficiency, whereas rapid return may be seen in cellulitis.
  - Evaluate the nerves by checking sensation in the web space, lateral heel, and sole of the foot. Diabetic neuropathy is symmetrical and often follows a "glove-stocking" distribution. Unilateral nerve deficits should prompt a more detailed neurologic examination. Proprioception (Is the patient able to identify movements of the toes?) is also lost symmetrically with neuropathy.
  - Test motor function via plantarflexion and dorsiflexion of the foot. Symmetrical weakness and/or muscle atrophy can be seen with chronic immobility, poor nutrition, and arterial insufficiency.

The Wound

- Document the location, length, estimated depth, and general shape of the wound. Wound characteristics vary by etiology, but nonhealing wounds typically have a rounded edge and calloused appearance.
- Proximity to or involvement of underlying tendons, nerves, or arteries should be investigated.
- Assessment for the presence of foreign bodies should be performed, as should irrigation of the wound. Local anesthesia can be used as indicated.
- A nonhealing wound represents a chronic inflammatory condition as the wound attempts to heal. Thus, mild surrounding erythema is expected. Cellulitis should be considered if inflammation or erythema is noted farther than 1 cm from the edge of the wound.
- Is the ulcer mobile, or is it fixed to deeper layers of tissue? Mobile ulcers are typically superficial, whereas fixed ulcers suggest involvement of deeper structures.
- Dead tissue and debris may make debridement necessary for accurate assessment of the wound base.

Examination Techniques

- **Ankle-brachial index (ABI):** The ABI is the ratio of lower-extremity to upper-extremity systolic blood pressure (**Table 1**). ABIs should be obtained for all leg ulcers, because clinical examination findings are not independently sufficient to include or exclude the diagnosis.[6,7]
- **Toe-brachial index (TBI):** A TBI is used when the ABI is abnormally high because atherosclerosis has caused the formation of plaque and calcification in the leg arteries. Because the toe vasculature does not develop calcifications, the TBI can be a more reliable predictor of extremity blood flow.
- **Probing:** The depth of the wound should be assessed by inserting a sterile (ideally metal) instrument into the wound to identify involvement of deep structures. If the probe reaches bone, osteomyelitis should be strongly suspected and arrangements should be made for further evaluation and definitive diagnosis.
- **Elevation:** Simple elevation of the lower extremity can provide valuable information.
  - Pain related to venous insufficiency is worsened in the dependent position and lessened with elevation.
  - Pain related to arterial insufficiency is lessened in the dependent position and worsened with elevation.
  - Dependent rubor can be differentiated from cellulitis by placing the patient in the supine position and elevating the leg approximately 60°. If the discoloration fades, dependent rubor is more likely than cellulitis.

Table 1. Ankle-Brachial Index

Category	Value
Normal	>0.96
Mild obstruction	0.71–0.96
Moderate obstruction	0.31–0.71
Severe obstruction	<0.31

Table 2. The Levine Technique

1. Irrigate the tissue with normal saline solution.
2. Swab a 1-cm^2 area of viable tissue for 5 minutes with enough force to produce exudate.

- **Homans sign:** Homans sign has been defined as pain in the calf (posterior compartment) with passive dorsiflexion of the foot. Its presence may suggest DVT in the right clinical context; however, the absence of Homans sign does not rule out DVT.

Diagnostic Work-Up

The diagnosis of a nonhealing wound is largely clinical and is based on findings from the medical history and physical examination. Diagnostic studies should be tailored to elaborating the suspected causative or confounding diagnosis (e.g., lower-extremity ultrasonography if DVT is suspected). Once the diagnosis of a nonhealing wound is made, the provider must determine whether the wound is infected and to what extent. Similarly, infection in a nonhealing wound is primarily clinical, with fever, redness (>1 cm beyond the wound margin), drainage, foul odor, progression of wound severity, and discoloration serving as signs and symptoms of infection. Pain and progression of the wound have shown the highest correlation with bacterial infection.[4]

For suspected infection, consider the following:

- Wound biopsy for culture analysis is the reference standard for the diagnosis of infected tissue and should be done when possible, especially if topical or systemic antibiotics will be initiated. However, tissue culture often requires special preparation and analysis that may not be available in the urgent care setting. As an alternative, the Levine technique (**Table 2**) has shown favorable sensitivity for wound culture.[8]
- Best available evidence suggests that a normal erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) level in a low-risk patient population provide reassurance that no further urgent investigation is required.[9] However, the patient with a nonhealing wound is at increased risk for osteomyelitis, and therefore a normal ESR or CRP level cannot rule out the diagnosis.[9]
- If the urgent care provider strongly suspects osteomyelitis or there is an unexplained elevation in ESR or CRP level (ESR >30–70 mm/h and/or CRP level >10–30 mg/L), further evaluation is recommended and transfer to an acute-care facility is indicated.[9]
- A white blood cell count is not helpful in the evaluation of osteomyelitis.[9]
- Abnormal findings on plain radiographs in the correct clinical setting increases the likelihood of osteomyelitis but cannot definitively confirm or rule out the diagnosis.[10]
- Normal findings on magnetic resonance images can reasonably be used to rule out the diagnosis of osteomyelitis, and abnormal findings can confirm the diagnosis.[10–12]

"The diagnosis of a nonhealing wound is largely clinical and is based on findings from the medical history and physical examination. Diagnostic studies should be tailored to elaborating the suspected causative or confounding diagnosis (e.g., lower-extremity ultrasonography if DVT is suspected)."

Conclusion

The diagnosis of a nonhealing wound is largely clinical, with diagnostic studies tailored to the suspected cause as well as to the underlying process. Once the diagnosis is made, the first step is to determine whether the wound is infected. Part 2 of this article, in next month's issue, will focus on wound treatment, with specific case scenarios. ■

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Joint Ventures Between Health Systems and Urgent Care: Achieving the Best of Both Worlds

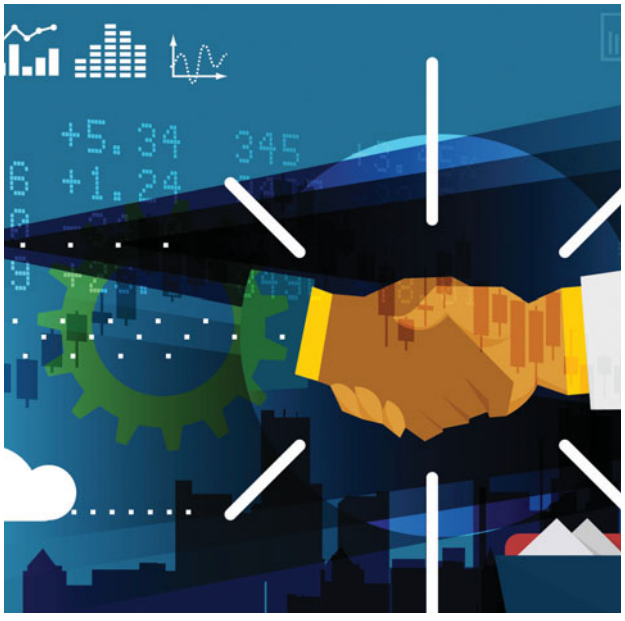
Urgent message: As hospitals and health systems develop and grow their urgent care footprints, many leverage the expertise and experience of outside partners. Five common affiliation models fit differing strategic objectives and distinct market conditions.

TODD LATZ, JD

Introduction

As the number of urgent care centers increases across the United States, so too do the variety of urgent care center models and the ways in which urgent care centers seek to meet the growing demand for urgent care. Gone are the days when simply being more convenient and cheaper than the emergency department (ED) was enough to ensure success. Private equity investment, strategic health-system growth and development, payor vertical integration, and mergers and acquisitions are all fueling growth and evolution of the care-delivery model and increasing consolidation in what is still a highly fragmented market.

Although a number of affiliation and partnership models have the potential to spur growth and generate profitability for urgent care providers and health systems looking to strengthen their market positions, not all models are created equal. The various flavors of affiliation cover the spectrum from "light" contractual arrangements to full-blown equity joint ventures. Identifying the optimum form of health-system (or even health-plan) affiliation or partnership for urgent care operators depends on individual circumstances and



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Todd Latz, JD, is Chief Executive Officer of GoHealth Urgent Care, which operates joint-venture partnerships with leading health systems across the United States.

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objectives, as well as on the competitive landscape and other market dynamics. Partnership models have been evolving since about 2011 and now generally fall into one of five relatively distinct structures (**Figure 1**).

Affiliation Models

Contractual Affiliations

Contractual affiliations generally require the least amount of partnership interaction and commitment between the parties once the affiliations have been executed, but they can still provide substantial benefits for operators looking to grow their urgent care businesses. Contractual affiliations most often take the form of brand licensing, clinical staffing arrangements, equipment leasing, debt financing, or participation in clinically integrated networks. Although these partnerships do not technically result in co-investment, they can certainly fill a specific need, increase the efficiency of operations, expand market opportunities, or otherwise fuel growth. For those simply in need of capital, a health-system contractual affiliation could both meet this need and offer greater market and operational alignment than traditional financing sources because of branding opportunities, clinical staffing and recruiting synergies, and potential alignment with the health system's existing network.

Management-Only Partnerships

Management-only partnerships are a form of contractual affiliation, but they typically include much greater involvement by both parties than the typical contractual affiliation already described. The most common management-only arrangement is an independent urgent care provider managing health-system-owned urgent care centers. The health system continues to own all of the urgent care center assets and still employs the staff, but an outside manager provides daily direction, training, operational workflows, and other urgent care–specific expertise to the health-system-owned urgent care center. These management services often include operational, financial, and even revenue cycle functionality. Independent urgent care operators are often more adept than large health systems at running urgent care centers on tighter budgets with greater consumer focus and more efficient work streams. Alternatively, and somewhat less frequently, an urgent care provider may lack the infrastructure or staff to efficiently manage its urgent care center as it grows, and thus it might partner with a larger health system to tap into greater management resources, broader health-care expertise, and significant efficiencies of scale.

Figure 1. Affiliation models for urgent care centers and health systems.

(Source: GoHealth Urgent Care.)

Minority-Ownership Interests

Most often, health-system and health-plan minority-ownership interests in urgent care centers do not involve material collaboration between the parties. They customarily take the form of a health system or health plan making a passive investment in an existing urgent care provider, where the existing urgent care provider maintains nearly all governance and control rights. Minority-ownership interests benefit health systems or health plans without the ability to move urgent care further up their list of strategic priorities or without the desire to make a large commitment. Through this affiliation model, the health system or health plan aligns itself with the rapidly growing urgent care sector without having to commit substantial capital or internal resources to the effort. This model also may be a great option for independent urgent care operators looking for assistance with purchasing, recruiting, or other administrative and support services, but not a fully collaborative operational partnership that could mean ceding some measure of control. Urgent care centers with minority health-system ownership typically advertise this relationship, but to varying extents that can include little to no health-system signage or, conversely, substantial health-system signage and co-marketing.

Figure 2. A co-branded urgent care center that is a joint venture between a health system and private-equity-backed independent operator.

In late 2014, GoHealth Urgent Care, backed by private equity firm TPG Growth, began building urgent care centers through its joint venture with Northwell Health (formerly known as North Shore–Long Island Jewish), the largest health system in New York. Today, its 23 joint-venture urgent care centers are co-branded by GoHealth Urgent Care and Northwell Health. (Source: GoHealth Urgent Care.)

Majority-Ownership Interests

Majority-ownership interests are essentially the inverse of minority-owned interests, and they typically are formed when a health system or health plan acquires a large stake in an existing urgent care entity, whereas the independent urgent care operator reduces its ownership to a minority interest. Majority-owned partnerships can also arise from inception when an independent urgent care operator has agreed to manage urgent care centers on behalf of a health system or health plan and also takes a minority equity stake in the entity to further align interests. This structure is very similar to what is often seen in the ambulatory surgery center industry.

Fifty-Fifty Joint Ventures

The most complex and time-consuming of all of the partnership models is the true equity joint venture, where the health system and independent urgent care operator are equal partners. Although the other four models already discussed could certainly have distinct advantages depending on the parties involved and on the transactional context, true fifty-fifty equity joint ventures have recently emerged as the greatest value-enhancing and fastest-growing model, offering distinct benefits not only to the parties involved but also to the communities and patient populations they serve. This model, if properly executed, benefits from the best of what both the health system and independent urgent care operator bring to the endeavor. These joint ventures result in culturally aligned partners equally motivated to achieve a common purpose, both for themselves and for the communities they serve. The true fifty-fifty equity joint venture lends itself to greater focus on the full continuum of care, well beyond just the urgent care center itself, and often leads to a deeper level of integration, collaboration, and engagement, given the shared ownership, accountability, and capital commitment. It also facilitates new and creative growth opportunities, beyond leveraging economies of scale and the increased efficiencies consistent with other partnership or affiliation models. Joint-venture partners should have better access to capital, more consistent patient volume, greater engagement with payors, and

"Fifty-fifty equity joint ventures have recently emerged as the greatest value-enhancing and fastest-growing model, offering distinct benefits not only to the parties involved but also to the communities and patient populations they serve. This model, if properly executed, benefits from the best of what both the health system and independent urgent care operator bring to the endeavor."

broader patient demographic and trend data to inform urgent care center acquisition and development opportunities. In addition, joint ventures between a health system and an urgent care center are better able to pursue alternative payment strategies, such as risk-based contracts, participation in an accountable care organization, and narrow network strategies. **Figure 2** shows an example of how GoHealth Urgent Care co-brands urgent care centers with its health-system partners.

Each of the partners in an equity joint-venture gains meaningful benefits. From a health-system perspective, the many advantages include the following:

- Broader reach, especially for health systems with more urban acute care facilities that can extend into suburban neighborhoods with heavily commercially insured populations
- Opportunities to decant their own overflowing ED volume or to competitively take market share by opening urgent care centers in close proximity to competitive health-system EDs
- Substantial downstream revenue through specialty-physician and ancillary-service referrals
- The ability to minimize leakage outside the system, especially for their populations of self-insured employees
- Growth of the network of primary-care providers through referrals of urgent care center patients who seek a medical home and do not yet have an established relationship
- The ability to leverage the specific service line expertise and singular focus of an experienced urgent care operator

Experienced urgent care operators can benefit from the following:

- A trusted and more recognized brand in that specific healthcare community
- The clinical quality halo associated with high-performance hospitals and integrated health systems, as well as broader access to experienced clinicians, clinic protocols, and training
- Greater access to capital and payors

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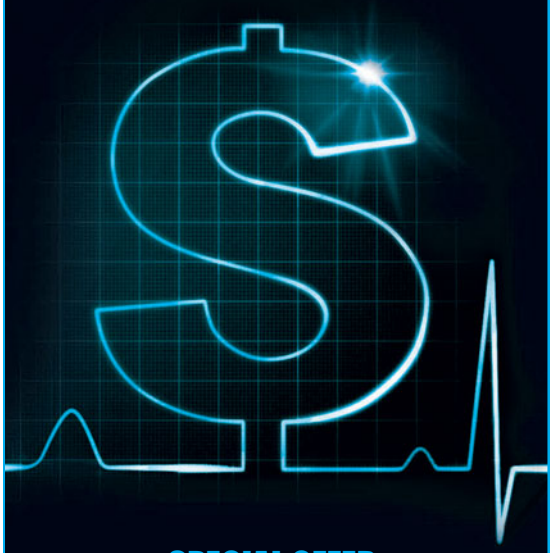

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Sidebar 1. Rapid Growth in Urgent Care Fuels Health-System Interest in Partnerships

Despite the increasing speed of care model evolution and the many challenges—both known and unknown—that urgent care will face in the coming years, the future is bright. A report by the Centers for Disease Control and Prevention reveals that nearly 80%[1] of visits to emergency departments (EDs) were due to a lack of access to other health-care providers. According to researchers, the United States faces an estimated shortage by 2025 of 52,000 primary-care physicians,[2] and wait times for primary care appointments may reach an average of 18.5 days (up to more than 60 days in certain U.S. cities).[3] EDs are overcrowded today, and volume continues to rise each year, exacerbated by a decrease in the number of EDs because of increased costs for provider care, hospital mergers, and funding cuts.

The urgent care industry is expected[4] to be valued at $20 billion by 2020. This growth is fueled by health-care-specific and broader environmental and sociologic trends:

- Access issues:
  - Substantial wait times associated with ED visits
  - Diminishing supply of primary-care providers and almost no availability of same-day visits with those providers
- A burgeoning health-care consumerism movement:
  - Increasing costs (especially for ED visits)
  - The emergence of an on-demand or instant-gratification economy
  - Demand for pricing transparency
  - Greater patient responsibility and high-deductible insurance plans
  - Increased patient engagement in health-care decision-making
- Value-based care:
  - The first stages of population health management
  - Accountable care organizations
  - Risk-based contracts
  - Greater focus on outcomes versus services
- A robust transactional market:
  - Increased activity by strategic buyers, financial sponsors, and nontraditional ambulatory consolidators, such as large insurance companies
  - Very interested sellers motivated by current valuations
- Technologic innovation:
  - More control by patients over their own medical records
  - Online reviews of health-care providers
  - Virtual visits and other technology-enabled access to clinicians

The list goes on and on. Thankfully, at least for those of us fortunate enough to be in the urgent care industry and for the patients we care for on a daily basis, urgent care is uniquely positioned at the intersection of many (if not most) of these trends.

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- Substantial patient data and demographic data to inform site selection, service offerings, and other operational decisions
- Preferred participation in health-system-owned health plans, narrow networks, and other managed-risk populations
- Well-developed care networks and supportive primary-care providers looking for assistance with after-hours coverage

Patient communities also benefit from joint ventures between health systems and urgent care centers through the following:

- Health-system-quality clinicians working in an environment designed for patient convenience, customer service, and efficient use of a patient's time
- Better access to urgent care centers with fully integrated electronic medical records and other systems
- More timely specialty and ancillary referrals
- Superior care coordination through seamless follow-up and aftercare

Conclusion

There is today—and will continue to be—ample room (**Sidebar 1**) for urgent care operators to grow, especially with the inevitable shift to value-based care. This growth can be accelerated through health-system joint ventures. Urgent care can support health systems today in the fee-for-service environment, building market share and supporting specialists, primary-care providers, and crowded EDs. At the same time, urgent care helps prepare health systems for tomorrow by creating a highly accessible, lower-cost channel to manage the overall cost of care and ensure that patients are treated in the most appropriate environment. ■

Critical Due Diligence Issues for Buyers and Sellers of Urgent Care Centers

Adam J. Rogers, JD, BHS Physical Therapy

Urgent message: *Because deal activity for urgent care centers has been on the rise, prospective buyers and sellers of urgent care centers should understand key issues in preparing a center for sale or acquisition, sharing information, and ensuring compliance with the doctrine of corporate practice of medicine and with other health-care regulations.*

Introduction

No segment of the U.S. health-care services industry has seen more merger and acquisition activity over the past few years than the urgent care market (which includes occupational health). Dozens of deals were consummated in 2014 and 2015, including two separate billion-dollar deals closing in 2015.[1] Although 2016 may not see another megadeal, urgent care continues to garner substantial interest from a broad spectrum of potential buyers seeking to either get into the market or expand their existing urgent care platform.

For urgent care operators looking to sell their business in the near or even distant future, it is never too early or too late to think about some of the key legal issues described herein that might adversely impact their centers and, ultimately, their purchase price. Buyers too have little room for error; they must take care in evaluating potential targets, given that many urgent care centers yield relatively thin profit margins. Missing an issue that affects revenue can quickly undermine the deal value, even with indemnity, which may not be sufficient to make a buyer whole.

Adam J. Rogers, JD, BHS Physical Therapy, is a partner in the Miami, Florida, office of DLA Piper, LLP, and is a board-certified specialist in health law who focuses his practice on health-care transactional, regulatory, and litigation matters.

Getting the House in Order

All of your hard work has finally paid off. After years of building from a single-center start-up to a successful multicenter business, your team can see that the efforts paid off. You are now ready to cash in, so you ink a letter of intent reflecting a purchase price equal to a large multiple of your trailing earnings before interest, taxes, depreciation, and amortization (EBITDA). Then due diligence starts in earnest, and after uncovering a few potentially significant issues in your business's structure that you were not aware of, the buyer is now rethinking its valuation and wondering what else it does not know about the business that could come back to bite it. Suddenly, your elation is dampened by a conversation about giving a "haircut" to the purchase price that was agreed on in the letter of intent, because of unanticipated concerns about the business.

That may sound a bit dramatic, but it is unfortunately not rare. When the business being sold is yours, having buyer doubt creep in just once is once too often. In most cases, however, potential sellers can avoid being caught flat-footed in the middle of a deal. By taking a few steps to help "get the house in order," sellers may avoid the haircut discussion by mitigating the impact of problematic issues. Getting things out in the opening at the start, when there are typically multiple potential bidders for a business, also allows the seller to deal with an issue at a time when it has greater leverage than will be possible once the seller commits to a single buyer.

Some operators will expend significant resources on presale process preparations, such as an external coding audit or even sell-side due diligence. These efforts can certainly be useful, but before proceeding, the seller should understand the costs and resource commitments involved and what it expects

[1]Optum, a division of UnitedHealthcare, acquired MedExpress for $1.5 billion in April 2015, and Humana sold Concentra to a joint venture between Select Medical Holdings and Welsh, Carson, Anderson & Stowe XII for $1.05 billion in a deal that closed in June 2015.

to gain. For instance, if a seller has been in business for years without having had an outside billing and coding audit, then engaging in a pre-sale audit can still be helpful, but it may not give the seller the ability to clean up a major ongoing issue in time to avoid affecting the sale process.

Getting the house in order, however, does not necessarily require a substantial amount of resources. It can be as simple as stepping back from the daily grind and thinking about the issues that never made it off the back burner because operating and growing the business barely left enough hours in the day to focus on anything else. Checking in with key staff members, managers, and even health-care practitioners to understand what has been keeping them up at night is also a good way to identify potential concerns about the business. Obviously, this must be done in the right way, particularly to avoid signaling that a transaction may be pending and without suggesting that the company is doing anything inappropriate.

If, on closer examination, the potential concerns appear to have merit, then the operator can drill down into the issues and determine how much of an impact they have or are likely to have on the business. If the operator requires outside expertise to properly assess the issue, evaluating the risk through outside counsel will provide an opportunity to determine the best course of action through privileged communications.

Any level of introspection prior to a sale process will better equip a seller to respond to due diligence scrutiny. A common refrain among defense attorneys is that "it is always better to give the explanation before hearing the accusation." In other words, it is usually better to take charge of an issue and control the dialogue about it, framing it appropriately. In many cases, this will help sellers defuse issues that look worse at first than they really are.

Sharing Information: Some Key Dos and Don'ts

After the seller is aware of its potential vulnerabilities and is ready to start discussions with one or more potential buyers, all parties will have to be mindful of how they share certain information when the sellers are trying to gauge interest. An investment banker or broker who is involved will typically put together a teaser describing key facts about the business on a client-anonymous basis. Potential buyers who show an interest after reading the teaser will then be able to obtain more specific information about the seller, but only after a confidentiality agreement, or nondisclosure agreement (NDA), among the parties is in place.

The NDA will specify, among other things, the scope of confidentiality restriction, who the receiving party may share information with (such as key advisors who agree to treat the information in accordance with the NDA), how long the restriction lasts, and obligations on termination of discussions. Because prospective buyers are often competitors of the seller, the NDA may also include a nonsolicitation provision.

Once the NDA is in place, there are still certain limitations or issues that can be triggered depending on the nature of the information being shared. These generally fall into three categories:

- **Materials under attorney–client privilege:** Sharing with an unrelated third party any communications that are protected under attorney–client privilege or that would otherwise be protected attorney work product usually constitutes a waiver of privilege. Thus, if the company had received legal advice in connection with a particular issue (e.g., relating to a practice that subsequently led to a business dispute) and then shares that information in the course of due diligence, it has potentially waived the privilege over that advice, meaning that the seller could be forced to disclose the otherwise-privileged advice in discovery regarding the business dispute. Often in connection with due diligence, sellers will stop short of producing anything that could be deemed to waive privilege and will instead talk through the facts (that are not themselves privileged) rather than the privileged advice given by counsel. There are times when an issue is a key concern for a buyer and the buyer will not want to proceed without understanding the privileged communications. Under certain circumstances, parties will take the position that both the buyer and seller have a common interest in the privileged information and thus will enter into a common-interest agreement. Many jurisdictions, but not all, recognize such a privilege. To avoid unwittingly waiving an important privilege, the parties should proceed with sharing such information only under the advice of their counsel.
- **HIPAA/patient information:** Although the sharing of protected health information (PHI), as defined under the Health Insurance Portability and Accountability Act (HIPAA), is permitted to an extent in connection with due diligence as part of the definition of health-care operations, all parties must be careful about sharing this information. When PHI must be shared as part of due diligence, all parties must adhere to HIPAA's "minimum necessary" standard and avoid unnecessary disclosure of PHI. If it is anticipated that a buyer will receive PHI as part of due diligence, the seller should consider including language in the NDA about the buyer's obligations regarding PHI. If buyers are engaging third-party consultants to assist with due diligence, such as coding or chart audits, a business-associate agreement will likely be required before any PHI is shared with the consultants.
- **Competitively sensitive information:** All parties must also be careful about sharing competitively sensitive information, to avoid potential antitrust issues. Because potential

buyers are often already in the same line of business and often within (or at least overlapping to some extent) the same market, the sharing of sensitive pricing information such as payor rates can create antitrust liability. Each situation is different, and the parties should consult their counsel in determining what information can be shared and when. However, if there are antitrust concerns, the buyer will often have to forgo direct review of any competitively sensitive information and will instead often rely on a third-party black box or messenger-model review to get a general sense of such information.

Key Legal Due Diligence Issues for Urgent Care Centers

The following are some of the key legal issues that should be evaluated whether a seller is looking to get its house in order or a potential buyer is kicking the tires. The discussion here is not meant to be exhaustive, and each operator and its circumstances must be evaluated independently.

The Doctrine of Corporate Practice of Medicine, Fee-Splitting Restrictions, and Management-Services Organizations

The majority of states have some prohibition of the corporate practice of medicine (CPOM). Although its scope varies, the prohibition generally limits the ability of a person or entity other than a licensed physician to participate in the ownership or control of a medical practice. That usually means that a nonphysician cannot own a medical practice, and that an entity that is owned by a nonphysician cannot employ a licensed physician to provide professional services.

Failure to comply with a CPOM prohibition can have substantial repercussions for an urgent care operator and its physicians, including fines and sanctions against licensees. More important, from a business perspective, is that CPOM violations have been used to invalidate agreements or obligations to pay providers. In particular, physicians have sued to unwind their employment or management agreements on the basis of CPOM doctrine, and payors have also cited alleged CPOM violations to avoid payment obligations for medical services that were otherwise properly rendered.

Fee-splitting provisions are also found in most jurisdictions, and although they are often not limited to arrangements with nonphysicians or entities, they often work as restrictions complementary to CPOM prohibition. In its most typical form, a fee-splitting provision will, like an anti-kickback provision, prohibit a physician from sharing professional fees with a person who refers patients to the physician.

Because a number of owner-operators and most of the potential buyers in the urgent care space are not licensed physicians, urgent care companies are often operated under some form of a management-services organization (MSO), sometimes referred to as a "friendly physician" or "captive practice" model. Under that structure, the MSO usually owns all nonclinical assets of the urgent care practice entity (the captive practice) and leases those assets, along with providing certain nonlicensed personnel, space, and administrative services, to the captive practice pursuant to a management-services agreement (MSA).

Although the nuances of the MSO model and MSA terms are beyond the scope of this article, the CPOM prohibition, fee-splitting provisions, and the MSO model all have potential pitfalls that must be monitored, including these:

- Noncompliance of the seller's corporate structure and ownership with the laws of the applicable jurisdiction
- Possession of authority, by the MSO or any other nonphysician, over clinical decision-making or control over operations that might invalidate the arrangement
- Noncompliance with fee-splitting provisions and other laws where an MSO is in place, and particularly when the MSO is engaging in marketing for the center
- Insufficient management of the risks of the "friendly physician" model to avoid having the physician–owners of the captive practice seek to unwind the arrangement, take actions contrary to the MSA, or otherwise interfere with the business terms for the MSO and its owners

Fraud and Abuse Issues

As with any health-care provider, urgent care operators have to be mindful of federal laws regarding fraud and abuse, including the Stark law and the Anti-Kickback Statute. Urgent care is often viewed as having lower exposure than other health-care markets to the risk of fraud and abuse because its providers are not controlling or directing a captive patient base but are instead just personally performing and supervising services for those who come through the door. Yet there is substantial risk, including in the following aspects of the seller's operations:

- "Referrals" by the clinics' professionals to the clinics' ancillary service lines, which typically include, at a minimum, x-ray and basic laboratory services. These must be monitored for violation of the Stark law, among other laws. The Stark law is a complicated strict-liability statute that many urgent care operators inadvertently trip over. A violation typically also triggers a prompt repayment obligation (within 60 days of the issue and of the amount owed becoming known) that could involve a voluntary self-disclosure under the Centers for Medicare & Medicaid Services Self-Referral Disclosure Protocol.
- Other financial arrangements with referral sources and recipients. These must be examined for compliance with laws concerning fraud and abuse. This category includes both compensation and ownership arrangements with the clinics' own professionals as well as arrangements

with third parties (e.g., leases where the landlord is an affiliate of a referral recipient of the urgent care clinics).
- Marketing practices that can trigger potential anti-kickback concerns, depending on the relationship with marketing personnel and their compensation structure. Additionally, giveaways and discounts to patients can run afoul of patient-inducement restrictions and should be examined carefully to ensure compliance.
- Coding and billing practices. These must be examined:
  - Has the seller been subject to third-party payor audits, and if so, what were the results, and were material repayments required?
  - If there has not been third-party audit activity, what has the seller done historically to verify its practices and recordkeeping?
  - Have other billing and coding issues come up, including the following?
    - Documentation in the chart not supporting the level of service billed
    - Too much automation in the process (e.g., prepopulation of form fields to show more work being done unless a provider affirmatively indicates that it was not done)
    - Billing for a new patient versus an established patient and how that is tracked in the seller's systems to avoid overbilling when not warranted under the guidance of the Centers for Medicare & Medicaid Services or payors

Misclassification of Personnel

In addition to other human resource issues that any employer invariably deals with, misclassification issues are not uncommon for urgent care operators. *Misclassification* refers to the individual's status as an employee or independent contractor of the seller. Professionals will often be engaged as independent contractors, but the parties' choice of agreement is not controlling, according to the guidance of the Internal Revenue Service. Rather, a number of factors must be examined, including how the person is paid and what control the company has over how the job is performed. Misclassification can result in liability for unpaid payroll taxes and potentially for overtime payments (for nonexempt personnel). Additionally, in many cases, the professionals themselves have a strong preference to remain independent contractors for tax purposes, and a required transition could jeopardize a relationship with a key person.

HIPAA and Other Privacy and Security Matters

HIPAA enforcement began in 2003, but settlements and fines were only sporadic through the early 2010s. Since 2012, the number of HIPAA settlements and fines imposed has increased significantly and will only continue to rise under the 2016 Phase 2 HIPAA Audit Program of the Office of Civil Rights that is now under way. A number of providers have paid or are facing substantial fines for violations. Additionally, security breaches are happening more and more frequently. Although no one can prevent every issue, providers who do not demonstrate that they are serious about compliance with HIPAA and related privacy and security laws will inevitably face stronger consequences. It is important to understand how the operator addresses patients' privacy and information security and whether there have been any violations.

Other Key Issues

Other steps that sellers and buyers should take include these:
- Confirmation should be sought for the existence of a compliance program that covers fraud and abuse and other concerns in addition to HIPAA, for how compliance is documented, and for how staff members are trained in compliance.
- Verification should be obtained for all licenses and permits that the operator and its professionals need in order to operate in their jurisdictions and localities and to offer the scope of services that they have been providing.
- Exclusion checks for all personnel should be done to ensure that someone working for the company is not excluded, which would leave the company exposed to potential civil monetary penalties.
- Supervision arrangements and documentation should be reviewed to ensure compliance with state requirements.
- Medical malpractice claims and insurance coverage should be examined to ensure that the seller is not an outlier in terms of number of claims or amount of damages assessed, which would be cause for concern about quality throughout the organization. Additionally, evaluating the adequacy of the insurance and the type of policy will be important in determining whether additional coverage is warranted or a tail policy is needed in connection with a sale.

Conclusion

Due diligence consists of the "reasonable steps" taken to assure a buyer and seller that a business is in fact what has been represented. Whether a sale is imminent or is a consideration for the distant future, urgent care owners should be aware of the issues that can arise. Preparing an urgent care business for sale requires advance planning, careful consideration of the types of information shared between buyers and sellers, and a keen understanding of health-care regulations, to ensure that no surprises arise that could change the pricing and terms of a deal or even derail it. ■

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Case Report

Poisoning of a Child Because of an Older Sibling's Habit

Urgent message: Be aware of new fads and habits that are growing in popularity. Some of them can result in life-threatening symptoms and serious permanent health consequences.

ANDY PHAM, MS-3, and JOHN SHUFELDT, MD, JD, MBA, FACEP

Introduction

Vomiting is a common presentation in the urgent care setting, especially in the pediatric population. With children, health-care providers must start with a comprehensive differential diagnosis because of the difficulty in obtaining accurate information directly from the patient. The medical history, often presented by the parent, must be carefully sorted through for clues to a diagnosis. Information such as vomiting duration and frequency and associated symptoms can uncover any red flags. Other clues such as diet, dangerous environmental exposures, and risky behaviors of other family members can guide the diagnosis and eventual treatment.

Case Presentation

A 4-year-old boy presents to an urgent care center, accompanied by his mother, because of new-onset vomiting and a rapid pulse. The mother says that the child has vomited three times in the past hour but that the boy was "completely fine" beforehand.

A review of systems shows that he also has rhinorrhea, diarrhea, abdominal pain, and some shortness of breath. His mother reports that he has not had any seizures and has not exhibited an altered mental state. The boy has no history of previous major illness, and all of his immunizations are up to date. At the boy's last visit to his pediatrician 1 month earlier, the mother was told that her son's weight and height were above the 75th percentile for his age.

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The boy attends day care, and his mother reports that he has had no recent contact with sick children there. He has a 15-year-old stepbrother. The patient's mother says that she has locked up all harmful chemicals in the house. She reports that no one in the household smokes but says that she believes her stepson has a "new cigarette-like smoke machine" that he has been using late

Andy Pham, MS-3, is a third-year medical student at Creighton University School of Medicine, Phoenix Regional Campus, in Phoenix, Arizona. **John Shufeldt, MD, JD, MBA, FACEP,** is Principal, Shufeldt Consulting, in Scottsdale, Arizona.

at night. Upon further questioning, the mother recalls that she noticed an empty vial of fluid on the coffee table but that she did not think much about it at the time.

Physical Examination

The boy's vital signs are as follows:

- Temperature: 36.9°C
- Blood pressure: 104/75 mm Hg
- Pulse: 144 beats/min
- Respiratory rate: 27 breaths/min

Physical examination shows an alert, well-nourished boy in moderate distress. Wheezing is heard in both lungs, and tachypnea is noted. Cardiovascular examination shows significant tachycardia. Abdominal examination shows diffuse tenderness but no rebound or guarding. The boy's pupils are equal, round, and reactive to light. His skin is flushed, particularly on his cheeks. His reflexes are normal, and there are no other significant physical examination findings. Findings on neurologic examination are normal.

Diagnosis

With the presentation of abdominal pain and vomiting, the differential diagnosis must include gastroenteritis, dehydration, volvulus, appendicitis, intussusception, overdose or toxic exposure, and small bowel obstruction. The boy's wheezing could be related to an acute episode of asthma or aspirin overdose, but asthma alone cannot explain his other gastrointestinal symptoms.

When the medical history and social history are taken into account, one potential diagnosis is nicotine poisoning secondary to accidental ingestion of fluid used in electronic cigarettes (e-cigarettes). The boy might have ingested the e-cigarette fluid that his stepbrother left on a table. His wheezing, vomiting, and diarrhea can be explained by the muscarinic effects of nicotine.

Discussion

Disposition and Treatment

The boy was referred to an emergency department because of his multiple episodes of vomiting, tachycardia, and continued symptoms of nicotinic poisoning. The urgent care providers believed that he needed more advanced monitoring and treatment, such as atropine, for the muscarinic symptoms of nicotine poisoning.

Intractable vomiting can be a cause for further care. In addition, muscle aches and soreness can be signs of rhabdomyolysis, which requires escalation of treatment. Nicotine poisoning can also manifest with seizures and respiratory failure; both scenarios necessitate advanced medical attention.

Management includes but is not limited to treatment of muscarinic and nicotinic symptoms, evaluation of electrolyte abnormalities, and monitoring of renal function. Muscarinic symptoms such as bronchorrhea, diarrhea, and wheezing can be treated with atropine. Seizures should be managed initially with benzodiazepines. For more persistent seizures, phenobarbital can be used.[1]

In patients with respiratory failure, intubation is required.[2] Electrolyte abnormalities such as hyperkalemia, hyperphosphatemia, and hypocalcemia can be present with nicotine poisoning. Hyperkalemia is the most worrisome and should be identified and treated immediately. Acute renal failure can occur secondary to rhabdomyolysis. For this reason, the patient's serum creatinine kinase, electrolyte, and urine myoglobin levels should be carefully monitored. Nicotine poisoning can cause serious permanent consequences if it is not quickly caught and treated.

Electronic Cigarettes and Children

Advertised as the safe alternative to smoking, e-cigarettes have captured the attention of longtime smokers and young people alike. The manufacturers of e-cigarettes claim that their product is less harmful than traditional cigarettes because e-cigarettes do not produce harmful tobacco smoke. Instead, the devices heat up a premixed fluid within a cartridge and generate a rapidly dissipating vapor that the user inhales.

Recent surveys show that the popularity of e-cigarettes has rapidly increased since the early 2000s. The modern form of the e-cigarette was first patented in 2003 by a Chinese pharmacist who came up with the smoking alternative after his father died of lung cancer. By 2007, the product had reached the United States, where it would reproduce its initial success. Between 2010 and 2011, the percentage of e-cigarette users nearly doubled.[3] Findings from a December 2015 Gallup survey[4] show that e-cigarettes have become the second most common form of tobacco consumption after traditional cigarettes. That same survey found that 5.4% of young adults between the ages of 18 and 29 reported that they use e-cigarettes. High school students have a higher usage rate, at 13.4%, according to 2014 data from the Centers for Disease Control and Prevention.[5]

The growing prevalence of e-cigarettes has increased the rates of nicotine poisoning, particularly in the pediatric population. According to the American Association of Poison Control Centers,[6] the number of reported liquid nicotine exposures increased from 271 in 2011 to 3783

"Management includes but is not limited to treatment of muscarinic and nicotinic symptoms, evaluation of electrolyte abnormalities, and monitoring of renal function. Muscarinic symptoms such as bronchorrhea, diarrhea, and wheezing can be treated with atropine."

in 2014. With the increasing use of e-cigarettes in U.S. households, the number of cases of liquid nicotine poisoning involving children will most likely continue to rise. Fatalities from nicotine poisoning from e-cigarettes have been reported. One case involved a toddler who accidentally ingested cartridge fluid,[7] and another case involved an adult directly injecting the fluid into the bloodstream.[8]

Take-Home Points

The number of nicotine poisoning accidents secondary to e-cigarette use has increased exponentially in recent years. Health-care providers who are acutely aware of the possibility of nicotine overdose can make rapid, life-saving diagnoses. It is crucial to know the red flags for higher levels of care:

- Decreased oxygen saturation
- Increased respiratory work
- Seizures
- Intractable vomiting
- Rhabdomyolysis
- Hyperkalemia
- Hyperphosphatemia
- Elevated serum creatinine kinase level
- Elevated urine myoglobin level

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ABSTRACTS IN URGENT CARE

- Longer-Term Antibiotic Treatment and Persistent Lyme Disease Symptoms
- In Children, the Greater the Exposure to Antibiotics, the Greater the Resistance to Them
- A Salmeterol-Fluticasone Combination Is Not Inferior to Fluticasone Alone in Treating Asthma
- Initial Pain Medication for Renal Colic
- Amiodarone Versus Lidocaine Versus Placebo for Cardiac Arrest Outside the Hospital Setting
- Adhesive Strips in Two-Layer Wound Closures
- Fluoroquinolone Does Not Increase Risk of Arrhythmia
- Smartphone Applications Do Not Provide Reliable Data on Tachycardia

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 M. McNeeley, MD, leads this effort.

Longer-Term Antibiotic Treatment and Persistent Lyme Disease Symptoms

Key point: Longer therapy for Lyme disease is not helpful.

Citation: Berende A, ter Hofstede HJ, Vos FJ, et al. Randomized trial of longer-term therapy for symptoms attributed to Lyme disease. *N Engl J Med*. 2016;374:1209–1220.

Lyme disease continues to be in the news because persistent symptoms after infection are of great concern. In a double-blind, placebo-controlled study, researchers gave antibiotics for an extended period to 280 patients with persistent Lyme disease symptoms, to determine whether symptoms would decrease more than in short-course therapy. All patients received ceftriaxone for 2 weeks and then either doxycycline, clarithromycin-hydroxychloroquine, or a placebo for 12 weeks. No difference in scores on the SF-36 (36-item Short Form Health Survey) physical-component summary was noted among the three groups, and no serious side effects or issues were noted. These results appear to show either that persistent symptoms are not related to persistent disease or that persistent disease is not affected by these antibiotics. This information will help guide urgent care providers in choosing a treatment for patients with persistent disease. ■

Sean M. McNeeley, MD, is an urgent care practitioner and Network Medical Director at University Hospitals of Cleveland, home of the first fellowship in urgent care medicine. Dr. McNeeley is a board member of UCAOA and UCCOP. He also sits on the *JUCM* editorial board.

In Children, the Greater the Exposure to Antibiotics, the Greater the Resistance to Them

Key point: Antibiotic resistance is related to prior antibiotic exposure in children.

Citation: Russell G. Antibiotic resistance in children with *E coli* urinary tract infection. *BMJ*. 2016;352:i1399.

This two-part study looked at the global prevalence of antibiotic resistance in children with *Escherichia coli* infections of the urinary tract who had previous exposure to antibiotics. One part, a systematic review of 58 studies in 26 countries, analyzed resistance patterns, and the other part, a meta-analysis, examined the relationship between antibiotic exposure and resistance. Resistance was a significant issue, being as high as 53% for ampicillin and 24% for trimethoprim. Resistance in countries where antibiotics were available over the counter was significantly higher; the rate was 80% for ampicillin. Exposure to prescribed antibiotics also increased resistance. Although the study

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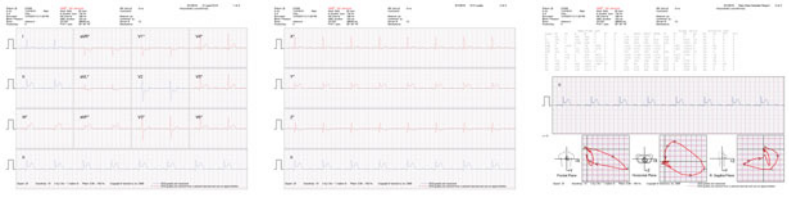

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did not focus on the United States alone, the main concept likely holds: The greater the exposure to antibiotics, the greater the resistance. Urgent care providers should keep these findings in mind when deciding on antibiotic treatment as well as when counseling parents about when antibiotics are unnecessary. ■

A Salmeterol-Fluticasone Combination Is Not Inferior to Fluticasone Alone in Treating Asthma

Key point: Adding salmeterol to fluticasone does not increase serious asthma events.

Citation: Stempel DA, Raphiou IH, Kral KM, et al. Serious asthma events with fluticasone plus salmeterol versus fluticasone alone. *N Engl J Med*. 2016;374:1822–1830.

There have been concerning findings from previous studies regarding serious adverse asthma events with salmeterol alone. This randomized, double-blind, placebo-controlled study investigated whether adding salmeterol to fluticasone propionate also increases the risk of serious adverse asthma events. More than 11,000 patients aged 12 years or older with at least one significant asthma exacerbation in the previous year were enrolled in the 26-week study. The end point was first serious event (death, intubation, or hospitalization). Serious adverse events were rare. There were 36 such events in the combination group and 38 in the fluticasone-only group. Serious asthma exacerbations occurred in 10% of the fluticasone-only group and only 8% in the combination group. The authors concluded that there was no increase in serious asthma events related to the addition of salmeterol and that there were fewer serious exacerbations in the combination group. These findings confirm for urgent care providers the safety of adding salmeterol, with a very modest decrease in asthma exacerbations. Hopefully we will see some longer-term studies in the future. ■

Initial Pain Medication for Renal Colic

Key point: Injected nonsteroidal anti-inflammatory drugs are best for renal colic control in in an acute-care setting.

Citation: Pathan SA, Mitra B, Straney LD, et al. Delivering safe and effective analgesia for management of renal colic in the emergency department: a double-blind, multigroup, randomised controlled trial. *Lancet*. 2016 Mar 15. doi: 10.1016/S0140-6736(16)00652-8. [Epub ahead of print.]

The authors of this report note there have not been many well-designed studies of the best type of initial pain medication for renal colic in the acute-care setting. Thus they conducted a randomized, controlled trial to compare the analgesic effect of diclofenac, paracetamol, and morphine for pain control. The primary outcome was the percentage of patients whose pain was reduced by 50% in 30 minutes. The participants were 1644 adults in only one location in Qatar. Of them, 1316 were found to have renal colic. Pain relief compared to that for morphine was found to be significantly better in the diclofenac group but not the paracetamol group. Primary outcome measures did not differ much between groups: Pain relief was achieved in 68% of the diclofenac group, 66% of the paracetamol group, and 61% of the morphine group. Significant adverse events occurred more often in the morphine group (3%) than in the others (1% each). For the acute-care provider, these results are helpful in guiding the choice of anesthesia for patients with renal colic. Unfortunately, diclofenac, rather than ketorolac, was used; ketorolac is more commonly used in urgent care centers, at least in my experience. ■

"One part [of the study], a systematic review of 58 studies in 26 countries, analyzed [antibiotic] resistance patterns. . . . Resistance was a significant issue, being as high as 53% for ampicillin and 24% for trimethoprim."

Amiodarone Versus Lidocaine Versus Placebo for Cardiac Arrest Outside the Hospital Setting

Key point: It is doubtful that amiodarone and lidocaine make a difference in out-of-hospital cardiac arrest.

Citation: Kudenchuk PJ, Brown SP, Daya M, et al; Resuscitation Outcomes Consortium Investigators. Amiodarone, lidocaine, or placebo in out-of-hospital cardiac arrest. *N Engl J Med*. 2016;374:1711–1722.

This randomized, placebo-controlled trial compared parenteral amiodarone, lidocaine, and saline placebo in 3026 patients with out-of-hospital cardiac arrest and shock-refractory ventricular fibrillation or pulseless ventricular tachycardia. Although the numbers trended slightly better for both medications compared with placebo, the difference was not significant. Perhaps the numbers, although large, were not large enough, considering the very low survival rate for patients who have had cardiac

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arrest in any setting. There is some debate about these medications and whether urgent care centers should consider carrying them, because they are infrequently used and because emergency medical services have reasonable response times. Whatever the medication used, it is important to remember that good-quality cardiopulmonary resuscitation and early defibrillation are the most important life-saving treatments. ■

Adhesive Strips in Two-Layer Wound Closures

Key point: Adhesive strips appear to provide better aesthetics and patient satisfaction than sutures do.

Citation: Yang S, Ozog D. Comparison of traditional superficial cutaneous sutures versus adhesive strips in layered dermatologic closures on the back—a prospective, randomized, split-scar study. *Dermatol Surg*. 2015;41:1257–1263.

In this prospective, randomized study, patients underwent an elliptical incision and repair with two layer closures. The wounds were split in two, and each half of the wound was then closed with either 4-0 polypropylene running sutures or one-quarter-inch Steri-Strip films. The wounds were compared at 2 weeks, 3 months, and 6 months. At 3 weeks, the wounds with adhesive strips had a superior appearance, which resulted in superior patient satisfaction. At 3 and 6 months, however, no difference was noted. Unfortunately, this study involved only 10 patients and focused on surgical wounds. The study's findings indicate that wounds that are closed with deep sutures may do well with adhesive-strip outside closure. Urgent care providers can discuss these findings with patients when deciding on wound-closure methods, as long as they also discuss the study's limitations. ■

Fluoroquinolone Does Not Increase Risk of Arrhythmia

Key point: A large new study shows no excess arrhythmia from oral fluoroquinolone use.

Citation: Inghammar M, Svanström H, Melbye M, et al. Oral fluoroquinolone use and serious arrhythmia: bi-national cohort study. *BMJ*. 2016;352:i843.

Several reports have noted concern about an increased risk of arrhythmia in patients who take fluoroquinolone orally. The theory is that fluoroquinolones slow the potassium outflow from the heart muscle, potentially resulting in torsade de pointes. This large cohort study based in Sweden and Denmark looked at fatal and nonfatal arrhythmia in patients taking fluoroquinolone compared with those taking penicillin, within 7 days of starting the medication. The arrhythmia rate was actually higher in the penicillin group (3.4 vs. 4.0 per 100,000 patient-years). There were no significant differences in rates in any subgroups of fluoroquinolone types. For the urgent care provider, this is some evidence of safety, but a different study type would have been preferable. Further data are likely necessary for a final answer. ■

"The study's findings indicate that wounds that are closed with deep sutures may do well with adhesive-strip outside closure. Urgent care providers can discuss these findings with patients when deciding on wound-closure methods, as long as they also discuss the study's limitations."

Smartphone Applications Do Not Provide Reliable Data on Tachycardia

Key point: Smartphone applications are not completely accurate in tachycardia evaluation.

Citation: Wackel P, Beerman L, West L, Arora G. Tachycardia detection using smartphone applications in pediatric patients. *J Pediatr*. 2014;165:1133–1135.

It seems like everyone, including children, is using smartphone applications to measure heart rate. Thus, it would seem logical to use these tools to help diagnose pediatric arrhythmia. This study analyzed the accuracy of these applications in monitoring heart rate. Twenty-six patients with supraventricular tachycardia (SVT) had their heart rate tracked by Instant Heart Rate (app 1; Azumio, Palo Alto, California) and Heart Beat Rate (app 2; Bio2imaging, Montbonnot, France) and simultaneously by electrocardiography. These measurements were obtained during electrophysiology studies. At baseline, the applications worked well, within ±4 bpm. During SVT, the applications failed to measure a heart rate in 11 of 21 attempts, and heart rates greater than 200 bpm were not very accurate. Variation was from +1 to −47 bpm. Considering that SVT usually occurs at rates greater than 200 bpm, this information may make these applications less helpful. Urgent care providers should exercise caution when using any of the applications, even when patients bring their results to the office. However, abnormal findings should not be ignored. ■

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INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 1

In each issue, *JUCM* 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 email the relevant materials and presenting information to *editor@jucm.com*.

Hip Pain in an Adult After a Fall

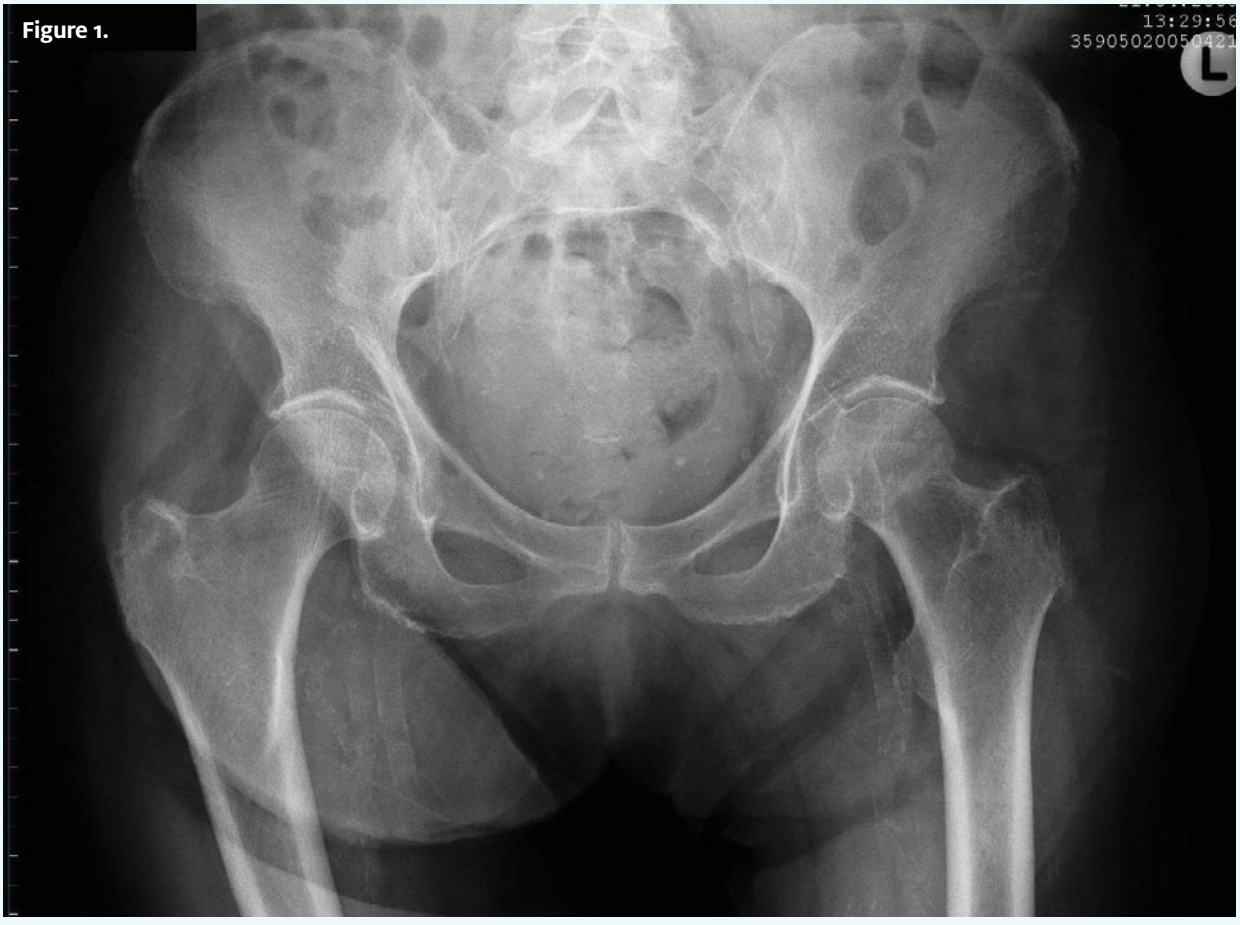

Figure 1.

Case

A 67-year-old woman presents to an urgent care center after 12 hours of pain in her right hip that began after she slipped in her kitchen and fell onto that hip. She reports that the pain is constant and worsens with walking. She has not experienced numbness in the hip, and she reports no other injuries. She has not sustained any head trauma, and she has no head or neck pain.

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

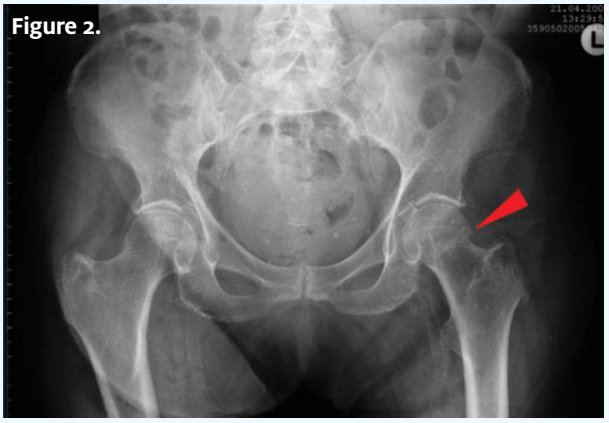
Figure 2.

Differential Diagnosis

- Osteoporosis
- Inferior pubic rami fractures
- Intertrochanteric hip fracture
- Subcapital hip fracture
- Pathologic femur fracture

Physical Examination

On physical examination, the patient has a temperature of 98.8°F (37°C), a pulse of 112 beats/min, a respiration rate of 20 breaths/min, a blood pressure of 146/92 mm Hg, and an oxygen saturation of 99% on room air. She is alert and oriented and is not in acute distress. She has a regular heart rate and rhythm without murmur, rub, or gallop. Her abdomen has a normal appearance, has no surgical scars, and is soft and nontender without rigidity, rebound, or guarding.Palpation shows her pelvis to be stable, but she feels pain when her right hip is palpated, as well as pain on passive range of motion. She has no leg-length discrepancy.

Her medical history reveals that she has osteoporosis, hypertension, and acid reflux disease. She takes Fosamax (alendronate), hydrochlorothiazide, and omeprazole. She smokes cigarettes.

Diagnosis

An x-ray of the painful hip (**Figure 2**) is performed, and it shows a subcapital hip fracture (*arrowhead*).

Learnings

Fractures of the proximal femur account for 11.6% of all fractures in older adults (average age, 80.5 years) in the United States and occur in women three times as often as in men. Each year, more than 250,000 hip fractures occur, at a total annual cost of about $8 billion. Plain radiographs are 90% sensitive for detecting hip fracture. With a typical mechanism of injury (a fall onto a hip), typical symptoms (hip pain worse with movement through the range of motion), and typical examination findings (a shortened and externally rotated painful hip), the diagnosis is easy. However, with an impacted, nondisplaced, or stress fracture, a patient may still be able to ambulate, and the fracture may not be evident on plain x-rays. Hip fractures in patients with osteoporosis may not be visually detectable.

Explore causes for the fall that might be rectifiable, including

- Dementia
- Balance problems
- Difficulty with vision or hearing
- Alcohol or substance use
- Repeated falls
- Domestic abuse (elder abuse)
- Deconditioning

What to Look For

During the physical examination, check for the following:

- The patient's general appearance, position, and ability to ambulate
- Location of pain
- Exacerbators of pain such as movement through the range of motion
- Shortening of the affected leg
- External rotation and abduction
- Swelling over the hip
- Skin changes such as ecchymosis

The following diagnostic tests are appropriate.

- X-rays (plain film): approximately 90% of fractures will be evident on plain x-rays
- Computed tomography scans: more sensitive than plain x-rays for detecting hip fractures
- Magnetic resonance imaging: more sensitive than computed tomography and bone scans

Transfer the patient to an emergency department in the presence of the following:

- Diagnosed hip fracture
- Suspicion for hip fracture despite normal x-ray findings
- Concern that there is multi-trauma such as a closed-head injury, cervical spine fracture, or thoracoabdominal trauma
- Hemodynamic instability
- Inability to adequately assess the patient because of severe pain, altered mental status, or body habitus ■

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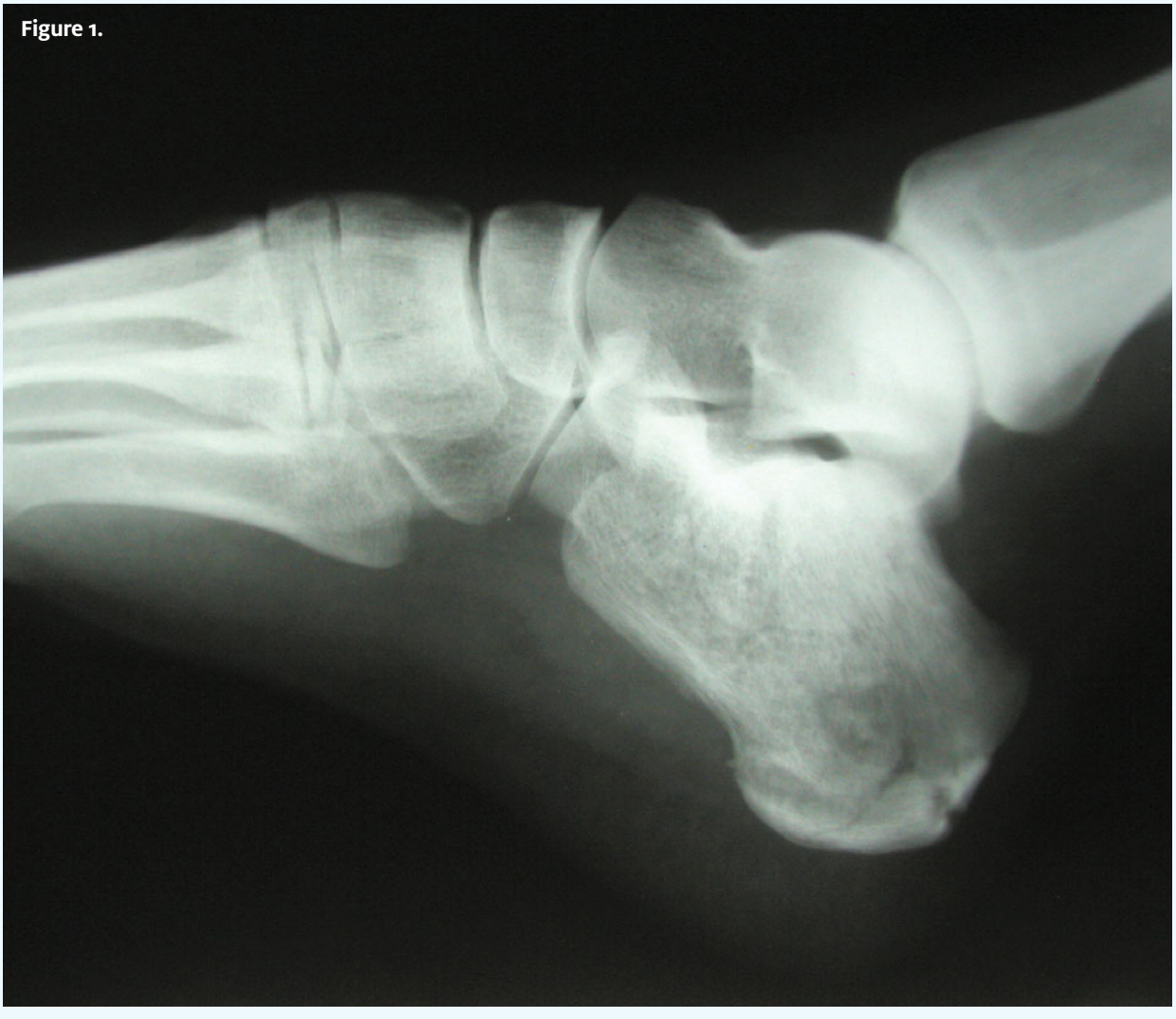
Heel and Ankle Pain in an Adult After a Jump from a Second-Floor Window

Figure 1.



Case

A 38-year-old man presents to an urgent care center and reports pain in his right heel and ankle that he describes as severe enough that he cannot walk on the foot. He says that the pain began the previous evening when he landed on the group after jumping out of a second-floor window on a dare. He has some minimal paresthesia, but he has no fever, vomiting, head trauma, head or neck pain, or chest or abdominal pain.

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

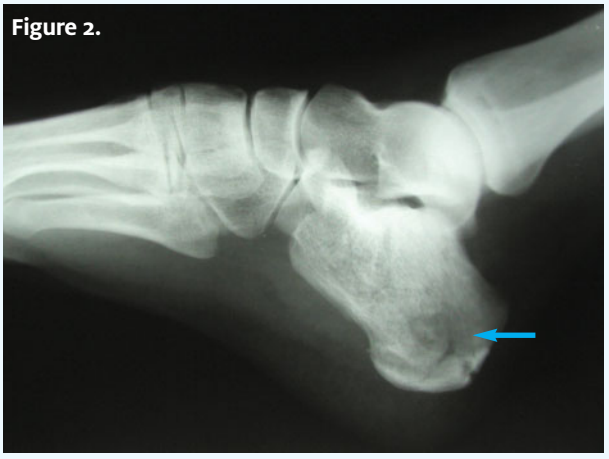


Figure 2.

Differential Diagnosis

- Cuboid fracture
- Osteolytic lesion
- Ankle dislocation
- Bimalleolar fracture
- Trimalleolar fracture

Physical Examination

On examination, the patient has a temperature of 98.8°F (37°C), a pulse rate of 112 beats/min, a respiration rate of 24 breaths/min, a blood pressure of 88/52 mm Hg, and an oxygen saturation of 99% on room air. He is alert and oriented and seems uncomfortable, and there is a wheelchair parked in the corner of the room. He has pain on palpation of his back at the midline. His medical history reveals no previous illnesses. He takes no prescription medications.

Diagnosis

An x-ray is obtained (**Figure 2**), and it shows a comminuted fracture (*arrow*) of the calcaneus.

Learnings

Calcaneus fractures account for 1.2% of all fractures in U.S. adults, and they occur most commonly in those who are about 40 years of age. Men are three times more likely than women to sustain such fractures. Most injuries (71%) occur from a fall from a height, usually over 6 feet (1.8 m). Fractures may be intra-articular (75%), which means that they involve the subtalar joint (more severe fractures with worse outcomes), or extra-articular (25%), which means that they do not involve the subtalar joint (and often have a favorable outcome).

What to Look For

During the medical history, check for the following items.

- **Onset—gradual versus sudden:** Most mechanisms will be a fall from height with sudden onset of pain.
- **Location:** These fractures are typically over the heel, but there may be referred pain, so even when there is a known mechanism of ankle strain, palpate the heel.
- **Duration:** Typically patients with these fractures seek immediate medical care, though if there are extenuating circumstances, such as substance use, assault, or physical abuse, the patient may delay seeking care.
- **Severity:** Pain is typically severe and increases with attempts to bear weight.
- **Other types of trauma:** Is there ankle, leg, or hip pain? Is there intra-abdominal, chest, neck, or head pain?
- **Social history:** Ask about the patient's occupation, ask whether there is alcohol or substance use, and consider assault as a cause.

The following diagnostic tests are appropriate.

- X-rays:
  - Obtain lateral and axial views, and consider an oblique view if an avulsion fracture is suspected.
  - X-rays are usually adequate for determining the severity of the deformity and assessing the prognosis.
- Computed tomography scans:
  - These are useful for fracture evaluation when findings are normal on plain x-rays.
  - These are helpful for defining the extent of the fracture to determine surgical indications and approach.
- Magnetic resonance imaging:
  - Use this modality to evaluate for stress fracture.
  - Use this modality to further define nonspecific computed tomography findings.

The following are indications for transferring the patient to an emergency department:

- An open fracture
- Severe pain
- Possibility of a compartment syndrome
- The presence of neurovascular compromise
- Fractures with dislocation
- Comorbid conditions such as coagulopathy, anticoagulant use, immunosuppression, and difficulty with baseline ambulation

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CODING Q&A

Impacted Cerumen

DAVID E. STERN, MD, CPC

Q. When a patient comes in with ear pain due to impacted cerumen, the health-care provider would normally instruct the nurse to perform ear irrigation. If the irrigation successfully removed the impacted cerumen, the procedure would be considered part of any evaluation and management (E/M) service and we could not bill for the service separately. With new rules regarding cerumen removal this year, can we get reimbursed for the ear irrigation if it is not performed by the provider?

A. You are correct that prior to January 1, 2016, you would have had to report the ear irrigation as part of the E/M code if instrumentation was not needed to perform the procedure. The American Medical Association introduced *Current Procedural Terminology* (CPT) code **69209**, "removal impacted cerumen using irrigation/lavage, unilateral," to rectify that situation. The provider must still document that the cerumen was impacted in order to bill for the service, but removal does not have to be performed by a physician. The Medicare Physician Fee Schedule (MPFS) has assigned professional component (PC) and technical component (TC) indicator **5** to this code. This indicator means that the service is covered incident to a physician's service when the service is provided by auxiliary personnel employed by the physician and working under the physician's direct personal supervision. You may not bill CPT code **69209** with CPT code **69210**, "removal impacted cerumen requiring instrumentation, unilateral," for the same ear. However, CPT codes **69209** and **69210** can be billed for the same encounter if impacted cerumen is removed from one ear using instrumentation and from the other ear using lavage. You will bill each code with the appropriate **-RT** (right) and **-LT** (left) modifiers.

Both of these CPT codes are listed as unilateral services, and CPT guidelines instruct us to append modifier **-50**, "bilateral procedures that are performed at the same session," if one of the procedures is performed on both ears. However, the Centers for Medicare & Medicaid Services (CMS) treats these codes differently from what is in the guidelines. It has assigned a Medically Unlikely Edit (MUE) value of 2 to CPT code **69209** and MUE value of 1 for CPT code **69210**. An MUE is defined as the maximum units of service (UOS) that a provider would report for a procedure under most circumstances for a single beneficiary on a single date of service. This means that even though the physician may remove cerumen using instrumentation for both ears on the same date of service, CMS will reimburse you for only one instance, so you should not use modifier **-50**. Because the MUE for CPT code **69209** is 2, you would append modifier **-50** to report that the ear lavage was performed in both ears if both ears had impacted cerumen.

CMS limits payment for CPT code **69210** to earwax removal during visits that meet all of the following criteria:

- Cerumen removal is the only reason for the visit.
- Cerumen removal is performed personally by a physician or advanced practice provider.
- The patient is symptomatic (has pain, pressure, poor hearing, etc.) from excessive cerumen.
- Cerumen removal requires more than drops, cotton swabs, and a cerumen spoon.
- Documentation in the patient record shows that the procedure required significant time and effort.

CPT code **69210** will be reimbursed at around U.S.$50, and CPT code **69209** will be reimbursed at around U.S.$12, depending on the payor and your Medicare Administrative Contractor (MAC) jurisdiction.

When billing CPT codes **69209** and **69210**, report *International Classification of Diseases, 10th Revision, Clinical Modification* (ICD-10-CM) codes:

- **H61.21**, "impacted cerumen, right ear"
- **H61.22**, "impacted cerumen, left ear"
- **H61.23**, "impacted cerumen, bilateral"

You may also report an E/M service if it is a medically necessary, significant, and separately identifiable procedure that is supported by medical record documentation.

Review payor contracts to determine rules for reimbursement

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.urgentcareconsultants.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.

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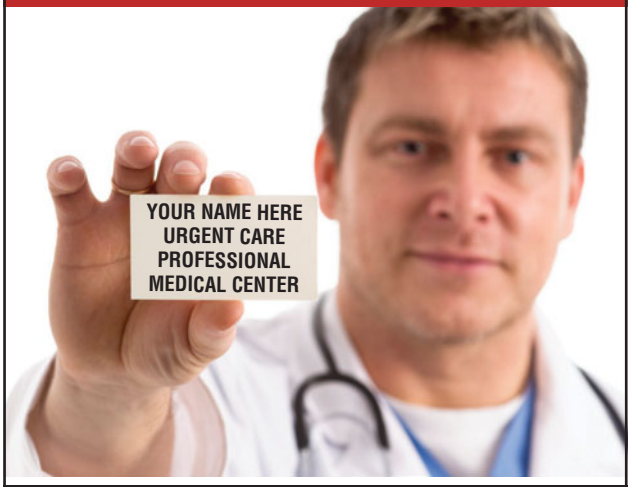

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CODING Q&A

"Prior to January 1, 2016, you would have had to report . . . ear irrigation as part of the E/M code if instrumentation was not needed to perform the procedure. The American Medical Association introduced Current Procedural Terminology *(CPT) code 69209, 'removal impacted cerumen using irrigation/lavage, unilateral,' to rectify that situation."*

of these services. Most payors have adopted CMS requirements for reimbursement. Also look for local coverage determinations (LCDs) in your MAC jurisdiction for specific guidelines when billing CMS for these services, because they are more stringent than CPT guidelines, especially when it comes to reporting an E/M service with the cerumen removal. ■

Q. What are the criteria used to define impacted cerumen?

A. To meet the CMS definition of impacted cerumen, the physician must observe and document at least one of the following conditions in the chart:

- **Significant obstruction of the canal:** Cerumen impairs examination of clinically significant portions of the external auditory canal, the tympanic membrane, or a middle ear condition
- **Bothersome symptoms:** Extremely hard, dry, irritative cerumen causing symptoms such as pain, itching, and hearing loss
- **Inflammation:** Associated with foul odor, infection, or dermatitis
- **Difficult removal:** Obstructive, copious cerumen that cannot be removed without magnification and multiple instrumentations requiring a physician's skills

Because almost all patients requiring cerumen irrigation have significant obstruction of the canal (first criterion listed above), almost all cases requiring cerumen irrigation meet the CMS definition of impacted cerumen. ■

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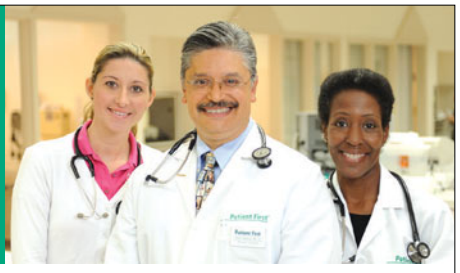

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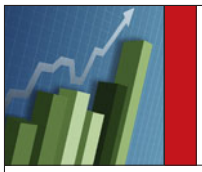

DEVELOPING DATA

In 2015, Merchant Medicine (Shoreview, Minnesota) released data from a detailed national study conducted in 2014 regarding U.S. patients' preferences regarding retail clinics versus urgent care clinics versus primary-care physicians' offices. The survey involved more than 2,000 adults between the ages of 18 and 54 years and was conducted by Sparks Research and Merchant Medicine on behalf of DXM Marketing Group.

Survey data showed that the reasons patients chose a specific type of health-care setting varied according to the physical issue involved. For example, these were the top reasons for visiting each type of health-care facility:

- Of those who visited retail clinics, 39% chose the setting for getting immunizations.
- Of those who visited urgent care clinics, 34% chose the setting for treatment of respiratory illnesses.
- Of those who visited their primary-care physicians' offices, 48% chose the setting to obtain full physical examinations.

REASONS FOR PATRONAGE

For what purpose(s) do you typically visit...	Retail Clinic	Urgent Care Clinic	Primary-Care Physician
Immunizations	39% (1)	14%	31% (3)
Physicals	22%	15%	48% (1)
Health screenings	22%	15%	46% (2)
Skin conditions	19%	17%	16%
Head/ear/eye conditions	28% (2)	26% (3)	25%
Respiratory illnesses	28% (3)	34% (1)	30%
Stomach/digestive conditions	22%	24%	19%
Urinary conditions	11%	11%	13%
Minor injuries	26%	33% (2)	19%
Chronic illnesses	10%	13%	24%
Major head conditions	8%	9%	7%

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