Fever and Drooling: Typical, or a Red Flag for Something Serious?
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LETTER FROM THE EDITOR-IN-CHIEF

Anger Management: Hostile Encounters in Urgent Care

Eliminating disruption, distraction, and dissatisfaction is paramount to delivering efficient and high-quality care these days. More than ever, urgent cares are competing to differentiate themselves by moving patients through the encounter faster and with a more reliably exceptional experience. We’ve adopted slick technologies and reconfigured work flows to improve care delivery.

So, why do our teams still struggle with consistency? Why do we still see high levels of burnout and turnover—and what can we do to stem the tide?

Variance from standard practice is a well-known contributor to risk and disruption. In fact, we take great pains to reduce variability in practice through standardized training, enforcement of policy and procedure, and optimization of technology to name a few. Yet we still experience breakdowns in standard operating procedure that disrupt work flow and create dissatisfaction for patients and staff alike. The two most common categories of variance are clinical and behavioral. Let’s look at each one separately.

Clinical
Complex or unstable clinical presentations are common in urgent care and an unavoidable part of practice. Most of us embrace these clinical challenges. This is, after all, what we signed up for. Clinical teams can learn how to manage these cases more smoothly with a disciplined and systematic approach, but they are inherently disruptive and unpredictable.

Behavioral
Disruptive patient behavior, on the other hand, can be managed more directly. Specific steps can be taken to avoid escalation. While these patients can certainly be difficult, their aggressive (at times abusive) behaviors can be mitigated with the right approach. Difficult, disruptive patients are more commonly encountered in acute care settings like urgent care where we lack ongoing relationships with patients who are already sick and in pain (two common triggers for hostility). So, implementing proven techniques for reducing anger and hostility is critical to reducing the impact these patients have on work flow and staff morale.

The good news is that most hostility follows a very typical pattern and understanding that pattern can help us ensure the best outcome. During the initial phase of hostility, the patient is angry and venting. Let them. Do not interrupt or try to offer solutions. Eventually the hostility wanes and they begin to cool down.

Now is a good time to say something supportive. Being supportive doesn’t mean you agree, but it does mean you understand their feelings. Some examples:
- “I know how difficult this must be for you.”
- “Healthcare can be a frustrating maze. Let me see if I can help.”

This is also a good time to say something empathetic: “I understand why you would be angry about this.” This helps the patient get back to a more rational level and that is when we can begin solving problems.

Here are some other hostility tips and tricks:
- Listen carefully.
- Try to get the patient to a quiet part of the office.
- Do not interrupt.
- Do not take it personally.
- Do not get defensive.
- Do not embarrass the patient by identifying their inappropriate behavior.
- Do not tell them to “Calm down!”
- Ask what you can do to help make the situation better.

The trick is training yourself and your staff to avoid the natural instinct to defend when being attacked. Often, angry patients are actively trying to “hook” you into a fight; do not bite. Instead, if we focus on controlling our emotions and following the hostility reduction plan, we can short-circuit the conflict and get back to the business of problem solving and clinical care—just what the doctor ordered!

Lee A. Resnick, MD, FAAFP
Editor-in-Chief, JUCM, The Journal of Urgent Care Medicine
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Approach to Fever and Drooling in Infants and Toddlers

Babies drool. They can run a fever. It’s not a big deal—unless those presenting symptoms are excessive or accompanied by other key complaints, in which case it could be a very big deal that requires immediate care. Awareness of, and vigilance for, the red flags is required in every case.

Katherine P. Dureau, MD

Leg Pain in a 34-Year-Old Man

Whether this new patient’s symptoms are due to deep vein thrombosis or cellulitis (or something you might not typically consider), you have to get to the right answer and the appropriate treatment—fast.

Jeff Heimiller, MD

Establishing Success Habits for Leaders and Organizations

People don’t become successful by accident. Further, the most successful professionals in the urgent care field often have certain attributes in common. Recognize (and encourage) them and you’ll reap the rewards.

Alan A. Ayers, MBA, MAcc

Which Way to Go: The Pros and Cons of 1099 vs W-2 Income for Urgent Care Physicians

Staff models are changing throughout the urgent care industry. How we pay and account for our clinicians is, too. Operators should understand the importance of classifying physicians as independent contractors or employees.

Alan A. Ayers, MBA, MAcc

IN THE NEXT ISSUE OF JUCM

Nearly one third of Americans have hypertension. Most of them address it with their primary care provider or a cardiologist. However, some might not even know they have high blood pressure—and others may present to urgent care in full-blown hypertensive crisis. Either way, you need to keep up to date with current guidelines in order to help the hypertensive patient who is in your exam room right now. We’ll help with an original article on the subject in the September issue of JUCM.

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TO SUBMIT AN ARTICLE:

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The fact that babies drool is not a surprise to parents—and certainly not to clinicians. So, when a family brings an infant or a toddler to an urgent care center because they’re drooling so much that it raises concern, it bears investigation. This is especially true if the child also has a fever. If the parents (even nervous first-timers) find their child’s high temperature or their drooling excessive, you need to be aware of potential red flags that could indicate something serious.

That’s the premise of Approach to Fever and Drooling in Infants and Toddlers, our cover article this month, in which Katherine P. Dureau, MD details signs that such children could have Ludwig angina, retropharyngeal abscess, upper airway obstruction, or something else that requires further assessment or immediate care. It starts on page 11.

Dr. Dureau is a Fellow, PGY4 in pediatric urgent care, Department of Pediatrics in the Division of Emergency Medicine at Emory University.

Another complaint that bears immediate attention—and possibly much more: unexplained lower leg pain severe enough to make a 34-year-old man get himself to an urgent care center. The patient at the center of this case report had reached his limit of living with the pain in his calf after a week, and couldn’t get in to see his primary care provider. So, off to urgent care he went. It’s a good thing he did, too. You can read why in Leg Pain in a 34-Year-Old Man, on page 16 of this issue. The author, Jeff Heimiller, MD is a Resident in the Department of Emergency Medicine at the Vanderbilt University Medical Center in Nashville.

Success in urgent care starts with excellent care like the one described in the case report, but it doesn’t end there. For a business in any industry to thrive, it needs leaders who are committed, talented, and driven to excel and help their colleagues do the same. That doesn’t just happen, however; a lot of successful business leaders share many of the same traits. Alan A. Ayers, MBA, MAcc gives us insights into some of them in Establishing Success Habits for Leaders and Organizations (page 25). As the chief executive officer of Velocity Urgent Care and the practice management editor for this publication, it’s a subject he knows a thing or two about.

Another thing that goes into running a successful business is making decisions that will both enhance the operation’s chance for financial success and ensure that it’s run in a legal, ethical manner. This can be especially challenging when it comes to complying with and making the most of ever-changing tax laws. A hot topic in that arena right now: determining who’s an actual employee, and who should be considered an independent contractor. It’s a distinction with significant implications for the employer and the clinician. Fortunately, Mr. Ayers again shares his expertise as the author of Which Way to Go: The Pros and Cons of 1099 vs W-2 Income for Urgent Care Physicians (page 30). Read it to get a better understanding of the best way to classify your clinical leaders.

David E. Stern, MD, CPC has mastered the art of making such important decisions (and many more) as the founder and principal of several groundbreaking urgent care businesses. He’s very generous in sharing that experience, too, as the regular author of Revenue Cycle Q & A (page 39). In this month’s installment, he clarifies the appropriate level of coding for splint and cast applications by nonphysicians in the urgent care center. Dr. Stern is the CEO of Practice Velocity; Urgent Care Consultants; and PV Billing.

Finally, we all recognize that the field of medicine continues to evolve through the sharing of new discoveries and practice norms. It’s an expansive field to keep up with. Fortunately, Glenn Harnett, MD has a passion for keeping abreast of the current literature and has committed to distilling it down into urgent care-relevant reviews for us. This month’s Abstracts in Urgent Care (page 21) cover a new CDC health alert on synthetic cannabinoids, the dangers (and alarmingly high rate) of poor follow-up with postconcussion patients, how artificial intelligence might aid in assessing fractures, a new option for helping patients head off days of agonizing with migraines, and more. Dr. Harnett is principal, No Resistance Consulting Group.

Thanks to Our Peer Reviewers
We appreciate the time and insights shared by the urgent care leaders who accepted our invitation to review clinical and practice management content for this issue:

Shannon Clark, MSN, RN, FNP-C
Luis de la Prida
Cornelius O’Leary, Jr., MD
Brandon Wiese, DO
Edward Zompa, MD, PhD

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CONTINUING MEDICAL EDUCATION

Release Date: July 1, 2018
Expiration Date: June 30, 2019

Target Audience
This continuing medical education (CME) program is intended for urgent care physicians, primary care physicians, resident physicians, nurse practitioners, and physician assistants currently practicing, or seeking proficiency in, urgent care medicine.

Learning Objectives
1. To provide best practice recommendations for the diagnosis and treatment of common conditions seen in urgent care
2. To review clinical guidelines wherever applicable and discuss their relevancy and utility in the urgent care setting
3. To provide unbiased, expert advice regarding the management and operational success of urgent care practices
4. To support content and recommendations with evidence and literature references rather than personal opinion

Accreditation Statement

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Case Western Reserve University School of Medicine and the Institute of Urgent Care Medicine. Case Western Reserve University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Case Western Reserve University School of Medicine designates this journal-based CME activity for a maximum of 3 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Planning Committee
• Lee A. Resnick, MD, FAAFP
  Member reported no financial interest relevant to this activity.
• Michael B. Weinstock, MD
  Member reported no financial interest relevant to this activity.
• Alan A. Ayers, MBA, MAcc
  Member reported no financial interest relevant to this activity.

Disclosure Statement
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# CONTINUING MEDICAL EDUCATION

**Approach to Fever and Drooling in Infants and Toddlers** (p. 11)

1. When evaluating a child with fever, which of the following suggest(s) a viral etiology?
   a. Prodromal symptoms, including nasal congestion
   b. Cough
   c. Vomiting
   d. Diarrhea
   e. All of the above

2. How do children with lesions causing glottic narrowing such as epiglottitis or deep neck infection position themselves?
   a. Laying calmly in parent’s arms
   b. Playing on the floor with toys
   c. Sitting up in the “tripod” or “sniffing position” to maximize airway patency
   d. Neck hyperflexion
   e. Laying in the left lateral decubitus position

3. Oral ulcers are the hallmark of hand-foot-and-mouth disease (HFMD) and herpangina. What is the likely causative organism?
   a. *Pneumococcus*
   b. *Strep*
   c. *E Coli*
   d. *Coxsackie virus*
   e. *Salmonella*

**Leg Pain in a 34-Year-Old Man** (p. 16)

1. Which of the following places a patient at increased risk for pulmonary embolism (PE)?
   a. History of thromboembolic disease
   b. Unilateral lower extremity swelling
   c. Hemoptysis
   d. Pleuritic chest pain
   e. All of the above

2. True or false: Pleuritic chest pain, one of the hallmark symptoms of PE, can be simply described as “pain between the clavicles and the costal margin that is worse with deep breathing or cough.”
   a. True
   b. False

3. What is the most common site for the origin of a PE?
   a. Pelvic veins
   b. Amniotic fluid
   c. Lower extremity clot
   d. Upper extremity clot
   e. Cerebral venous thrombosis

**Establishing Success Habits for Leaders and Organizations** (p. 25)

1. Why is it important to maintain positive habits in the urgent care industry?
   a. Because a positive attitude at work will ultimately lead to a healthier lifestyle
   b. Managing the many and varied aspects of the day-to-day operation, interacting with patients and vendors, and managing clinical and administrative teams takes focused, organized, and well-prepared leaders
   c. It will lead to a better patient experience
   d. Cultivating habits that lead to success is nearly impossible in the urgent care industry

2. What is a good method to develop a habit?
   a. Step outside your comfort zone
   b. Override old behaviors
   c. Execute new behaviors
   d. Stay consistent for 3 weeks, on average
   e. None of the above
   f. All of the above

3. What are some benefits of great habits in the workplace?
   a. Habits give your days and activities structure
   b. Habits help you grow and develop as a professional
   c. Habits sharpen your focus
   d. None of the above
   e. All of the above

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FROM THE UCA CEO

Thoughtfully Flourishing into New Frontiers

LAUREL STOIMENOFF, PT, CHC

UCA frequently receives calls from the media questioning the impact of current or looming influences on the industry. Typically, they are seeking opinions on how urgent care will fare in the uncertain future and if its meteoric growth trajectory can continue. The good news is we are on their radar, though I sometimes sense they are seeking a more savory story, even hoping our fate is like that of the Ford Edsel. I attribute it to envy, particularly in those who believe the road was an easy one devoid of the ingenuity and grit it took to get you where you are.

Urgent care centers have transformed on-demand medicine. The industry collectively chose to put the patient first and the consumer gravitated to it. Its focus has always been on elevating the patient experience and gaining their loyalty. Yet in recent months I have spoken with both clinical and operational leaders in a number of organizations regarding issues of clinical quality and patient safety. Suffice it to say that I have been extremely impressed and humbled by the profound commitment that fundamentally begins with these core tenets. A parallel can be found in Disney, which is known for its courtesy and the guest experience but defines its highest priority as safety. While quality and safety are “given” expectations of consumers and they may lack the “wow” factor, they require relentless attention by those who provide the care and service.

High-Reliability Organizations

A high-reliability organization (HRO) is defined as an organization that operates in complex, high-hazard domains for extended periods without serious accidents or catastrophic failures. HROs consistently achieve their goals and deliver safe, high-quality service based on six foundational elements, including a preoccupation with failure. They focus on predicting failures instead of reacting to them. While on the surface the urgent care environment may not seem to be highly complex or looming with hazards, reliability is a core tenet of value-based care (VBC). And VBC will inspire integration with other providers and systems, resulting in an increasingly complex web where failure probabilities increase.

What Could Go Wrong?

We are not pessimists when reflecting on what could go wrong. As a mentor used to tell me, a pessimist is just an optimist with experience. Whether considering quality and safety issues, the fate of your business, or the future of our industry, we must do what oftentimes feels impossible: take time to think. The Urgent Care Foundation recently convened a representation of industry thought leaders for this purpose. We learned that many of these innovators are implementing and improving their organizations with what some perceive as necessary defensive moves, while others see it as playing offense. Either way, we saw ways these organizations continue to evolve while maintaining a keen focus on quality and safety. One of HRO’s foundational elements is resiliency, and these thought leaders define it.

In support of this, UCA’s revised mission reads: “We are an organization of leaders, providers and suppliers in the field of on-demand, consumer-focused healthcare. We advance our industry and support success through advocacy, education, research, collaboration and high standards of excellence.”

The upcoming urgent care conference is themed New Frontiers, representing the innovation of the industry and our collective commitment to reinventing ourselves in anticipation of changes in technology, the regulatory climate, consumer demands, and our healthcare communities, while always building on the fundamental successes that launched on-demand ambulatory healthcare. When the media calls, I make sure they understand the strength of the fabric that makes up this organism we call urgent care. That should be their story.

I hope to see you at the UCA Fall Conference in Houston, October 12-14. It’s where failure is not an option!
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**Approach to Fever and Drooling in Infants and Toddlers**

**Urgent message:** Typical drooling is no cause for alarm in infants and toddlers. However, excessive drooling accompanied by fever or other various red flags could be signs of more serious concerns such as retropharyngeal abscess, Ludwig angina, or upper airway obstruction. Recognition should trigger a thorough evaluation by the urgent care provider.

**KATHERINE P. DUREAU, MD**

**Case**
A 24-month-old previously full-term and vaccinated male presents to an urgent care center with 24 hours of fever with a maximum temperature of 102.5°F. The father also reports drooling, decreased oral intake, fussiness, and no urine output for 12 hours. There is associated diaper rash, congestion, and rhinorrhea but no neck stiffness, neck swelling, or difficulty breathing. The child goes to daycare and has two older school-aged siblings.

On examination, the patient is fussy but nontoxic appearing and in no respiratory distress. He is febrile to 102.2°F with a heart rate of 140 beats/minute and a respiratory rate of 32 breaths/minute. He is irritable but consoles well to the father. He has normal range of motion of his neck without a palpable mass. He has copious clear drooling from the mouth.

**Introduction**
It is normal for infants and toddlers to drool as part of their oral-motor development, as well as with the eruption of new teeth. However, excessive drooling coupled with fever or an ill appearance should prompt the urgent care clinician to perform a thorough examination of the head and neck, placing special emphasis on the mouth and oral cavity. Visualization of the oral mucosa can help distinguish benign and self-limiting illnesses from acute and life-threatening emergencies.

**History And Exam Pearls**
The majority of the diagnoses that include fever and drooling can be made clinically, often without the need for additional laboratory testing or imaging. Inquire about prodromal symptoms including nasal...
congestion, chest congestion, coryza, cough, emesis, and diarrhea which may suggest a viral etiology. Other factors to ascertain include change in voice, refusal to eat, dysphagia, sore throat, trismus, neck pain, neck stiffness, and difficulty breathing.

A child who is up to date on their immunizations has protection against vaccine-preventable illnesses such as epiglottitis and diphtheria. A series of DTaP and Hib vaccines is recommended starting at 2 months old to protect against the aforementioned diseases commonly caused by *H influenzae* type B and *C diphtheriae*, respectively.

The examination should begin by noting the general appearance of the child. An ill-appearing child is more suggestive of a bacterial etiology, including retropharyngeal abscess, Ludwig angina, and epiglottitis. Stridor and/or neck extension are suggestive of upper airway obstruction. Children with lesions causing glottic narrowing such as epiglottitis or deep neck infection classically prefer to sit up in the “tripod” or “sniffing position” to maximize airway patency.

Though it may be difficult in a fussy child, valuable information can be discovered by visualization of the tongue, buccal mucosa, soft and hard palate, gingival ridge, uvula, posterior pharynx, and tonsils in addition to the neck and cervical area. Specific findings may include:

- The presence of neck swelling and stiffness in conjunction with drooling and fever which may be suggestive of a deep neck infection.
- Tenderness, erythema, and fluctuance of the submandibular area are suggestive of Ludwig angina.
- White plaques on the buccal mucosa, palate, tongue, or the oropharynx are characteristic of oral candidiasis (thrush).
- Oral ulcers are the hallmark of hand-foot-and-mouth disease (HFMD), herpangina, and herpes gingivostomatitis, with the location of these lesions within the mouth being the clue to distinguishing one from the other.
  - The lesions of HFMD and herpangina are typically located in the posterior mouth, including the soft palate, tonsils, and uvula.
  - Herpes gingivostomatitis commonly involves the anterior oral cavity, lips, and skin around the mouth. The affected mucosa appears friable, erythematous, and edematous.
  - Herpes stomatitis has a more insidious onset and longer duration. HFMD and herpangina mostly occur in the summer and early fall, whereas herpes stomatitis occurs year-round.

A gentle approach should be taken when examining the mouth, as the aforementioned lesions can be quite painful to touch.

In addition to the oral exam, perform a skin assessment, paying particular attention the palms, soles, and diaper area as HFMD and other enterovirus variants may be characterized by a vesiculopapular rash in these areas. Involvement of the buttocks and genital area occur in 30% of cases.1

### Diagnosis and Management

#### What’s Common

- The diagnosis of HFMD and herpangina is made with the identification of ulcers on the posterior oropharynx. These illnesses are commonly caused by the Coxsackie virus (an enterovirus). When ulcers are isolated to the mouth, it is called herpangina. When coupled with lesions on the palms or soles, it is referred to as hand-foot-and-mouth. Some variants (eg, Coxsackie A6) are characterized by more diffuse rash, particularly around the mouth and on the buttocks. The illness begins with the sudden onset of high fever along with the eruption of painful oral lesions.2-4 Management includes supportive care with antipyretics and pain relievers, as the illness is usually benign and self-limited. Reinforce adequate hydration; a mouthwash containing equal parts Maalox and Benadryl may help soothe oral discomfort, but data proving its efficacy are lacking.5

- Herpes gingivostomatitis is the most common manifestation of a primary herpes simplex virus (HSV) infection of childhood. It is characterized by the onset of prodromal symptoms including fever, irritability, and malaise followed by the eruption of painful mucocutaneous vesicular lesions. Relative to the Coxsackie viruses, HSV-1 more typically causes ulcers in the anterior oral area (eg, gingiva, tongue, and lips). Classic

### Differential Diagnosis

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<th>What’s Common</th>
<th>What Not to Miss</th>
<th>What to Think About</th>
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<tr>
<td>• Hand-foot-and-mouth disease</td>
<td>• Retropharyngeal abscess</td>
<td>• Epiglottitis</td>
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<td>• Herpangina</td>
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<td>• Herpes gingivostomatitis</td>
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<td>• Thrush</td>
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<td>• Streptococcal/viral pharyngitis &amp; tonsillitis</td>
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skin lesions around the lips are vesicles that often cluster together and coalesce. The gingiva appear inflamed and bleed easily.\(^6,7\) The diagnosis can be made clinically without the use of additional laboratory techniques to confirm the diagnosis; however, sending a viral PCR test may be necessary in children who are immunocompromised as the risk of complications may be higher. Oral acyclovir may help shorten the duration of symptoms if initiated within 72-96 hours of disease onset.\(^5\) Keep in mind that neonates concerning for cutaneous HSV infection require special consideration for escalation of care due to the high risk of morbidity and mortality associated with HSV encephalitis and disseminated infections in this particular population.

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**What Not to Miss**

- **Herpangina** is a common viral illness in children, characterized by vesicles on the oropharyngeal mucosa.
- **Thrush** is an oropharyngeal Candida infection that appears as white plaques on the intraoral mucosa. It can be distinguished from milk curd by running a tongue depressor over the plaques, as thrush is difficult to remove. Treatment is with topical nystatin suspension.\(^8\) Thrush typically does not cause fever. Some infants may have a coexisting viral infection that causes elevation in body temperature.
- Acute bacterial pharyngitis is most commonly due to a group A streptococcus (GAS) infection. It affects children ages 5-15 years old. Clinical manifestations include fever and sore throat, and, when severe, can be associated with difficulty swallowing. On exam, the tonsils are enlarged and erythematous, with or without exudates. Cervical lymphadenopathy is often present. Ill appearance, neck stiffness, and trismus are not typically associated with uncomplicated tonsillopharyngitis. Viruses predominate as acute infectious causes of tonsillopharyngitis and often mimic the symptoms and exam findings of GAS pharyngitis. The treatment is supportive for viral causes; however, GAS pharyngitis requires antibiotic therapy.\(^9\)

As opposed to common viral illnesses that present with fever and drooling, children with deep neck infections usually have a more dramatic presentation including ill appearance, refusal to move the neck, and, rarely, stridor.

---

**Approach to Fever and Drooling in Infants and Toddlers**

Figure 1. Suspected herpangina

Credit: Katherine P. Dureau, MD
or there is a high clinical suspicion. If the clinician does opt for lateral neck imaging on site, the film should be taken during inspiration and false thickening can be caused by crying, especially in infants. Prevertebral space thickening on a good quality film has fair specificity for an RPA, but a negative film does not exclude the possibility of a deep neck infection. In addition, this is not a definitive study to guide management. Contrast-enhanced neck CT is the imaging modality of choice to identify, localize, and differentiate abscess from phlegmon/cellulitis. Signs of an RPA should prompt referral to a specialty center for further evaluation by a pediatric otolaryngologist, as management includes intravenous antibiotic therapy and possible surgical intervention.10,11

Ludwig angina (submandibular space infection) is a bacterial cellulitis of the floor of the mouth in the sublingual and submaxillary space. In the most severe cases, oropharyngeal intubation is difficult because of the inability to lift the tongue, making this infection a potential airway emergency. Ludwig angina is typically a mixed anaerobic bacterial infection that is often due to spreading of a mandibular molar abscess. Patients present with fever, mouth pain, stiff neck, drooling, and dysphagia. They have tenderness in the submandibular area and the mouth is held open by lingual swelling. The diagnosis is made based on the suggestive exam findings. CT imaging may be helpful to evaluate the depth and size of the infected area. The treatment is empiric broad-spectrum antibiotics, but surgery is usually not necessary. Immediate transport to a specialty center is indicated given the risk of airway compromise from glottic swelling.12,13

What to Think About:
- Epiglottitis is an inflammation of the epiglottis that can lead to a rapidly progressive upper airway obstruction.
“Classic epiglottitis should be suspected in an unimmunized toddler with an acute onset of fever, dysphagia, drooling, and respiratory distress.”

With the introduction of the Haemophilus influenzae type b vaccine, the incidence has dropped dramatically; however, the epidemiology has changed with an increasing incidence secondary to Streptococcus infection in older vaccinated children. Classic epiglottitis should be suspected in an unimmunized toddler with an acute onset of fever, dysphagia, drooling, and respiratory distress. The child may appear toxic and prefer to sit in the “sniffing” or “tripod” position to maximize airway patency. Stridor may also be present, but cough is distinctly uncommon, differentiating epiglottitis from tracheal diseases such as croup and bacterial tracheitis. A lateral neck radiograph may show the classic “thumb sign” demonstrating a swelling of the epiglottis. If the diagnosis of epiglottitis is suspected, immediate transport to a specialty center is indicated and additional stresses should be avoided to prevent the risk of sudden airway obstruction.

He is given a dose of ibuprofen and a popsicle. Reexamination 30 minutes later shows a playful child without drooling. He appears comfortable and well hydrated. No diagnostic testing is performed. He is discharged home with education and supportive care including acetaminophen or ibuprofen and supportive care including acetaminophen or ibuprofen as needed for fever reduction and pain control. Return precautions were discussed, including dehydration or inability to manage pain at home.

References

Case Conclusion
Upon further examination, the patient’s oral exam shows multiple erythematous oral ulcers on his soft palate. He has scattered erythematous macules on his palms and soles. Removal of his diaper reveals erythematous papules and vesicular lesions. The patient is diagnosed with hand-foot-and-mouth disease based on the findings of oral ulcers coupled with skin lesions found on the palms, soles, and buttok. His history and physical examination are absent for red flags to suggest a deep neck space infection or a bacterial infection of the floor of the mouth or epiglottis.
Leg Pain in a 34-Year-Old Man

Urgent message: The ability to differentiate deep vein thrombosis from other diagnoses such as cellulitis is important in choosing the correct treatment option.

JEFF HEIMILLER, MD

Case Presentation
A 34-year-old male presented with a 1-week of right calf pain that was exacerbated by palpation and walking. He was unable to see his primary care physician that day, so he went to urgent care for evaluation. The patient also reported a sensation of shortness of breath since the onset of leg pain. He did endorse two previous hospitalizations for deep vein thrombosis and cellulitis, however the last admission for either was over 5 years ago. He is no longer taking anticoagulation. He reported his current pain did not feel quite the same as it did when he experienced DVT previously, and he denied calf edema, which was typical of previous episodes. The patient remembered that the initial pain and shortness of breath began when walking from his car to his office building. He further denied vomiting, diaphoresis, palpitations, syncope, edema, hemoptysis, cough, chest pain, leg trauma, and infectious symptoms such as fever.

Vital signs
- Temp: 95.8°F
- Pulse: 67
- Resp: 20
- Blood pressure: 140/94
- Pulse ox: 99%

Past Medical History
- Medications: Ziac
- Allergies: NKDA
- PMH: HTN, DVT

Physical Examination
- General: Well-appearing, NAD, morbidly obese. A moderate-sized pannicus is present. A&O x3
- Head: Normocephalic; atraumatic
- Resp: Normal chest excursion with respiration;

Results
- ECG: Normal sinus rhythm, rate of 75; normal ECG
- CTAB; no wheezes, rhonchi, or rales
- Card: RRR without murmurs, rubs, or gallops
- Abd: Morbidly obese, nontender to palpation, with no palpable organomegaly or masses
- Ext: Carotid, radial, femoral, and dorsalis pedis pulses are normal. Capillary refill normal. Peripheral edema: right and left calves are 61 cm and symmetrical, without obvious edema. No redness or warmth of the lower extremity. Positive for Homan’s sign
- Skin: Normal for age and race; warm and dry; no apparent lesions

Jeff Heimiller, MD is a Resident in the Department of Emergency Medicine at the Vanderbilt University Medical Center in Nashville, TN. The author has no relevant financial relationships with any commercial interests.
Diagnosis
1. Pain in limb, r/o DVT
2. Obesity
3. HTN

Disposition
- The patient was discharged to home ambulatory.

Primary Care Visit (1 Day Later)
Seen by PCP and sent for a V/Q, which showed multiple mismatched wedge-shaped perfusion defects. This includes two moderate-to-large subsegmental defects in the right lung base and one to two moderate-to-large subsegmental defects in the left lower lobe. There are also small subsegmental defects in the left upper and right upper lobes.

Impression
- High probability for pulmonary embolism.

Disposition
- Transferred to emergency department for admission to hospital.

Hospital Discharge Diagnoses and Discussion
1. Pulmonary embolus: Plan for anticoagulation and ECHO to evaluate for right ventricular strain
2. History of hypertension
3. Sleep apnea
4. Morbid obesity

Case Discussion: Evaluation of Lower Extremity Swelling and Pain
A patient presenting with isolated lower extremity swelling, palpable cords, Homan’s sign, and a history of thromboembolic disease would raise even a medical student’s suspicion for DVT.

Unfortunately for the provider, the presentation is often subtle. Congestive heart failure can result in lower extremity swelling and pain, but this is usually a bilateral presentation. Other causes of bilateral lower extremity swelling are obstructive processes at the level of the inferior vena cava (IVC), such as malignancy, pregnancy, and IVC thrombus. Traumatic processes, such as hematoma, muscle injury, or fractures are more likely to result in unilateral lower extremity swelling. It is often difficult to clinically distinguish DVT from cellulitis, as both often present with a diffusely swollen, painful, and erythematous lower extremity. However, certain findings such as ulceration, abscess formation, or lymphadenopathy are more specific to cellulitis. Prior DVTs can also result in destruction of normal venous anatomy, culminating in recurrent unilateral swelling.

Physical exam is also tricky; while fairly specific, the presence of palpable cords is insensitive, and its absence should not be used to rule out DVT. Homan’s sign is even less helpful; low sensitivity and specificity render it essentially meaningless in this regard. In contrast, comparing calf sizes remains one of the most specific physical exam findings in the evaluation of potential DVT. A difference of 3 cm in calf diameter measured 10 cm distal to the tibial tuberosity should greatly heighten one’s suspicion for DVT.

The risk factors for DVT are many and variable, but they ultimately revolve around the triad of venous stasis, hypercoagulability, and endothelial injury first described by Virchow. The entire triad need not be present to result in DVT. Stasis resulting from immobility or paralysis, hypercoagulability resulting from malignancy or elevated estrogen levels, and endothelial injury resulting from recent trauma or instrumentation are all important examples of situations wherein a single derangement results in an increased risk of DVT. Wells, et al published a useful set of guidelines to help estimate an individual

Table 1. Wells Criteria for DVT

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment)</td>
<td>1</td>
</tr>
<tr>
<td>Paralysis, paresis, or recent plaster immobilization of the lower extremities</td>
<td>1</td>
</tr>
<tr>
<td>Recent bedridden for &gt;3 days or major surgery requiring general or regional anesthesia within the previous 12 weeks</td>
<td>1</td>
</tr>
<tr>
<td>Localized tenderness along the distribution of the deep venous system</td>
<td>1</td>
</tr>
<tr>
<td>Entire leg swollen</td>
<td>1</td>
</tr>
<tr>
<td>Calf swelling at least 3 cm larger than that on the asymptomatic leg (measured 10 cm below tibial tuberosity)</td>
<td>1</td>
</tr>
<tr>
<td>Pitting edema confined to the symptomatic leg</td>
<td>1</td>
</tr>
<tr>
<td>Collateral superficial veins (nonvaricose)</td>
<td>1</td>
</tr>
<tr>
<td>Previously documented deep vein thrombosis</td>
<td>1</td>
</tr>
<tr>
<td>Alternative diagnosis at least as likely as deep vein thrombosis</td>
<td>-2</td>
</tr>
</tbody>
</table>

Scores ≥ 2 qualify as high risk

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LEG PAIN IN A 34-YEAR-OLD MAN

Pleuritic chest pain, which is one of the hallmark symptoms of PE, can be simply described as pain between the clavicles and the costal margin that is worse with deep breathing or cough. However, pain from PE may be referred to other parts of the body and in so doing, cause shoulder or high abdominal pain.

### Diagnosis of Pulmonary Embolism

In order to determine the most appropriate test to assess the potential risk for PE, it is helpful to first determine the patient’s pretest probability for having a PE. Several decision instruments have been published to assist in risk stratifying. The modified Wells’ score (Table 2) is one such risk stratification tool. A widely accepted pretest probability cutoff to determine the need for further testing is <2%. It should be noted that once testing is performed, the commonly accepted cutoff for exclusion of PE is a posttest probability less than 1%.

In patients found to have a low pretest probability for PE, it may not be necessary to perform any laboratory testing or imaging. Kline, et al developed the PE rule-out criteria (the PERC rule), which is listed in Table 3. If a patient is determined to have a low pretest probability and all criteria of the PERC rule are met, the risk of discharging that patient with a PE is <1.8%. Many advocate for using a Wells’ score to determine which patients are low risk and then employing another validated instrument like the PERC to terminate a workup without having to employ a D-dimer if the PERC score is 0. In our patient’s case, the history of DVT prevents application of the PERC rule, and we must proceed with further diagnostic testing.

Although a PE usually arises from a lower extremity DVT, a DVT is not always evident on the initial workup. For this reason, a negative ultrasound of the lower extremities does not rule out a PE. In fact, ambulatory patients are even less likely than hospitalized patients to have a discoverable DVT, making the lower extremity ultrasound an even less sensitive factor to exclude PE. In a best-case scenario, a negative Doppler ultrasound of the bilateral lower extremities results in a negative likelihood ratio of about 0.5—in other words, if a bilateral lower extremity Doppler is negative, this decreases your pretest risk by half. Many have advocated for potentially using lower-extremity Doppler to reduce the radiation exposure in pregnant patients with concerns for PE. If the ultrasound is positive for DVT and the patient has a combined low pretest probability with a negative workup for submassive PE, then theoretically CT of the chest could be avoided.

The newer quantitative immunoturbidimetric or ELISA

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**Table 2. Modified Wells Prediction Rule for Diagnosing Pulmonary Embolism**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical signs of deep vein thrombosis</td>
<td>3</td>
</tr>
<tr>
<td>Alternative diagnosis less likely than pulmonary embolism</td>
<td>3</td>
</tr>
<tr>
<td>Previous pulmonary embolism or deep vein thrombosis</td>
<td>1.5</td>
</tr>
<tr>
<td>Heart rate &gt;100 beats per minute</td>
<td>1.5</td>
</tr>
<tr>
<td>Recent surgery or immobilization (within 30 days)</td>
<td>1.5</td>
</tr>
<tr>
<td>Hemoptysis</td>
<td>1</td>
</tr>
<tr>
<td>Cancer (treated within last 6 months)</td>
<td>1</td>
</tr>
</tbody>
</table>

Score 0-1 is low probability; 2-6 is intermediate probability; >6 is high probability.

**Table 3. Pulmonary Embolism Rule-Out Criteria (PERC)**

- Age < 50
- HR < 100
- O2 sat on room air ≥ 95%
- No prior history of venous thromboembolism
- No surgery or trauma requiring hospitalization within 4 weeks
- No hemoptysis
- No exogenous estrogen
- No unilateral leg swelling

Note: All of the above must be present in order to apply PERC

patient’s risk for DVT (Table 1). However, this study does not specifically include certain high-risk groups such as pregnant women.

**Using Patient History to Guide Evaluation of Potential Pulmonary Embolism**

In contradistinction to the case presented, the potential for PE is not subtle in a patient presenting with sudden onset of pleuritic chest pain, dyspnea, and hemoptysis. Dyspnea related to PE, however, often develops much more insidiously, and may occur in the absence of chest pain. In fact, unexplained dyspnea is one of the strongest independent predictors of PE.

Although a slow onset of dyspnea may mimic heart failure, this diagnosis is much more likely to cause orthopnea. In contrast, PE may even cause platypnea, where respirations are subjectively easier when supine. The varied characteristics of dyspnea in PE are often due to the specific location of the PE.
D-dimer tests have a sensitivity and specificity of 95% and 50%, respectively, resulting in a negative predictive value of 0.1. The D-dimer is thus an incredibly useful test in ruling out DVT in the low-to-moderate pretest probability groups. In fact, in moderate-risk patients or in low-risk patients who fail the PERC criteria, a negative D-dimer is sensitive enough to comfortably rule out PE. However, in the high-risk group, it is widely believed that the pretest probability is so great that the D-dimer is insufficient to rule out DVT without obtaining imaging of the pulmonary vasculature.

In our case, a ventilation/perfusion (V/Q) scan was used to make the ultimate diagnosis of PE, but this test has significant limitations. In general, only 50% of V/Q scans will result in a normal or diagnostic positive result, with the other half resulting in “nondiagnostic” scans. These indeterminate results are usually the result of underlying lung disease, cardiovascular disease, or a chest x-ray that is significantly abnormal. Any baseline defect in ventilation or perfusion will limit the sensitivity of the VQ scan. When these nondiagnostic scans are read as low probability, the negative likelihood ratio is approximately 0.3, which may be enough to bring a low pretest probability patient into an acceptable range; however, further testing if often required, which is why many providers have begun to favor computed tomography.

Because of the vast improvements in quality of imaging with modern CT scanners, CT pulmonary arteriograms have become the test of choice. Adequate imaging and interpretation rely on an adequate injection technique and the radiologist’s adeptness at reading the CT.

**Management of Pulmonary Embolism**

In determining the best means of managing a PE, it is helpful to first categorize how “large” or “serious” a PE is. Massive PE is defined as resulting in hemodynamic instability characterized by a systolic blood pressure <90 for 15 minutes or any persistent signs of shock. Submassive PEs result in right ventricular dysfunction or myocardial necrosis, as evidenced by elevated troponin, elevated BNP or pro-BNP; ECG with evidence of right heart strain; CT with an enlarged right ventricle; or echocardiographic evidence of right heart strain, shock index <1, or a systolic blood pressure <90 at any time. Both massive and submassive PEs should be referred immediately to an emergency department for further evaluation, as these may require emergent thrombolytics, mechanical intervention, or surgery.

Although there is little real evidence to support its use, initial anticoagulation with heparin remains the standard of care for low-risk PEs. Typically, patients will be started on unfractionated heparin (UH) or low molecular weight heparin (LMWH), as well as a vitamin K-dependent anticoagulant such as warfarin at the time of diagnosis. Once a therapeutic INR of 2.0–3.0 has been reached, the follow-up provider can stop the heparin agent and the patient can be maintained on vitamin K antagonists for a period determined by their physician. The FDA has also approved several novel oral anticoagulants (NOACs), such as dabigatran, rivaroxaban, apixaban, and edoxaban for use in low-risk PEs.

**References**

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ABSTRACTS IN URGENT CARE

- CDC Health Alert on Synthetic Cannabinoids
- Poor Follow-Up with Postconcussion Patients
- ACIP ‘Reminder’ on Zoster Vaccines
- AI Algorithms Aid in Fracture Assessment
- A New Option in Preventing Migraine
- Broad- vs Narrow-Spectrum Antibiotics in RTI
- New Guidelines on Allergic Rhinitis
- ACS Lowers Age for Recommended Colorectal Cancer Screening

GLENN HARNETT, MD

Each month the College of Urgent Care Medicine (CUCM) provides a handful of abstracts from or related to urgent care practices or practitioners. Glenn Harnett, MD leads this effort.

CDC Attributes 200+ Cases of Coagulopathy to Synthetic Cannabinoids

Key point: “Marijuana alternatives” are widely available—and being blamed for multiple deaths.


The Centers for Disease Control and Prevention revealed that they have received more than 200 reported cases of coagulopathy linked to use of synthetic cannabinoids since the first case was reported in March 2018. Synthetic cannabinoids are known by a number of brand names including K2, Spice, Black Mamba, Bombay Blue, Genie, Krypton, Lava Red, and many more. They are often called synthetic marijuana, natural herbs, herbal incense, or herbal smoking blends. In 2017, 26 synthetic cannabinoids were listed as Schedule I substances under the Controlled Substances Act. However, they are often marketed as alternatives to marijuana or labeled as not for human consumption. They remain available for purchase, are relatively inexpensive, and are sometimes favored over marijuana because they are not detected in routine drug testing. The synthetic cannabinoid supply chain is unregulated, resulting in variable product compositions and new analogs are continually synthesized that get around regulatory restrictions. According to the CDC, 95 biological samples from the reported cases have tested positive for brodifacoum, which is a vitamin-K antagonist anticoagulant commonly used in rat poison. The CDC believes that brodifacoum was mixed with the synthetic cannabinoids, which puts users at high risk for coagulopathies. The majority of cases thus far have been reported in Illinois, with the remaining cases distributed across Florida, Indiana, Kentucky, Maryland, Missouri, Pennsylvania, Virginia, and Wisconsin. To date, there have been five deaths reported. The CDC recommends that clinicians be on high alert for vitamin K-dependent coagulopathy in any patients who report a history of synthetic cannabinoid use and reiterate that all patients should be routinely queried about recreational drug use. Bruising, nosebleeds, bleeding gums, bleeding disproportionate to injury, vomiting blood, coughing up blood, blood in urine or stool, or excessively heavy menstrual bleeding should lead to clinical suspicion of a coagulopathy. The CDC alert suggests that any patients who have used synthetic cannabinoids within the previous 3 months should undergo INR measurement, even in the absence of symptoms. An INR >2 can help identify potential cases. They also recommend that clinicians ask synthetic cannabinoid users about any recent blood or plasma donations and report these donations to their state health department.

New Study Reveals the Need for Better Follow-Up in mTBI

Key point: Postconcussion discharge instructions and follow-up care found lacking.

Citation: Seabury SA, Gaudette E, Goldman DP, et al. Assessment of follow-up care after emergency department presentation for mild traumatic brain injury and concussion:

According to a study published in *JAMA Network Open,* most patients presenting to the emergency department with mild traumatic brain injury (mTBI) receive no follow-up care in the early weeks and months postinjury. This cohort study evaluated 830 patients age 17 or older, who were diagnosed with mTBI at presentation to one of 11 Level I trauma centers in the U.S. between 2014 and 2016. Study data included patients with head trauma who underwent a computed tomography (CT) scan within 24 hours of injury, had a Glasgow Coma Scale score of 13 to 15, were aged 17 years or older, and completed follow-up care surveys at 2 weeks and 3 months after injury. Data revealed that only 42% of patients reported receiving educational material at discharge. The provision of educational material varied from 19% to 72% across sites. Additionally, only 44% reported seeing a physician or other medical practitioner within 3 months after injury, and follow-up calls from the hospital were extremely rare. Even when patients complained of three or more moderate to severe postconcussive symptoms, the follow-up rate was only 52%. Even in those patients with a positive finding on a CT scan, 39% had not seen a clinician for follow-up 3 months after the injury. Somewhat surprisingly, patient income and insurance status were not associated with receipt of follow-up care. Researchers also found that patients admitted to the hospital ward or ICU were no more likely to have received follow-up care than those discharged directly from the ED. A commentator to the publication called the findings “stunning” and noted that, “early education and symptom-based interventions may mitigate costly secondary comorbid issues, and they deserve further clinical and economic evaluation.” These results clearly highlight the need for more rigorous and systematic follow-up for patients who experience TBI or concussion, including systems of care specifically designed to offer follow-up treatment to these patients.

**An ACIP Reminder Regarding Proper Use of Zoster Vaccine**

Key point: Zoster vaccine administration errors prompt CDC to remind clinicians of proper use.


Recombinant zoster vaccine (RZV; Shingrix), licensed in October 2017, is preferentially recommended by the Advisory Committee on Immunization Practices (ACIP) over zoster vaccine live (ZVL; Zostavax), licensed in 2006. Also, ACIP recommends that persons previously vaccinated only with ZVL receive the full two-dose RZV intramuscular series, with the second dose given anytime from 2 to 6 months after the first. During the first 4 months of RZV monitoring following its approval, the Vaccine Adverse Event Reporting System received 155 reports involving RZV, 8% of which documented an administration error, including some reports documenting more than one error. Among these reports, nine involved RZV given by the subcutaneous (SQ) route rather than the IM route. RZV administered through the appropriate IM route is already associated with high rates of local and systemic reactions, and erroneous SQ injection can increase the likelihood of these episodes. Other errors included giving it to a person not eligible to receive the vaccine, administration of RZV after incorrect frozen storage, and failing to instruct patients to return for a second dose. Early monitoring also indicates that vaccine providers might be confusing storage requirements of the older ZVL and the newer RZV (which requires reconstitution). The authors conclude that, “To prevent RZV administration errors, vaccine providers should be aware of prescribing information, storage requirements, preparation guidelines, and ACIP recommendations for herpes zoster vaccines.”

**AI May Help Providers in Assessing Wrist Fracture**

Key point: Artificial intelligence-based software for detection of wrist fractures approved by FDA.


The FDA has approved a computer-aided detection and diagnostic software called OsteoDetect to speed the diagnosis of wrist fractures in adults. The software uses an artificial-intelligence algorithm to detect fractures in the distal radius by analyzing standard x-ray images and then marks the image for further review by a clinician. The FDA gave its approval after the company submitted the results of a retrospective study including 1,000 radiograph images. The study independently verified the artificial intelligence algorithm’s ability to identify wrist fractures with similar accuracy against the performance of three board-certified orthopedic hand surgeons. In combination with a second retrospective study reviewing the performance of over 200 images and 24 providers who used the algorithm, the FDA determined that the software tool increased performance in regard to sensitivity, specificity, and positive and negative predictive values by a measurable degree as compared to the clinicians unaired performance. However, the FDA explicitly says the product “is an adjunct tool and is not intended to replace a clinician’s review of the radiograph or his or her clinical judgment.” The software simply marks the location of the fracture on the image and allows the radiologist or treating provider to decide on the
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ABSTRACTS IN URGENT CARE

New Preventive Migraine Treatment Approved by FDA

Key point: New option may help reduce monthly migraine days.


The FDA has approved Aimovig, a once-monthly self-injection, for the preventive treatment of migraine in adults. Aimovig works by blocking the activity of calcitonin gene-related peptide, a molecule involved in migraine attacks. In its press release, Eric Bastings, MD, the deputy director of the Division of Neurology Products in the FDA's Center for Drug Evaluation and Research, stated, “Aimovig provides patients with a novel option for reducing the number of days with migraine. We need new treatments for this painful and often debilitating condition.”

The effectiveness of Aimovig for the preventive treatment of migraine was evaluated in three clinical trials. The first study included 955 participants with a history of episodic migraine and compared Aimovig to placebo. Over the course of 6 months, Aimovig-treated patients experienced, on average, 1–2 fewer monthly migraine days than those on placebo. The second study included 577 patients with a history of episodic migraine and compared Aimovig to placebo. Over the course of 3 months, Aimovig-treated patients experienced, on average, 1 fewer migraine day per month than those on placebo. The third study evaluated 667 patients with a history of chronic migraine and also compared Aimovig to placebo. In that study, over the course of 3 months, patients treated with Aimovig experienced, on average, 2.5 fewer monthly migraine days than those receiving placebo. The most common side effects that patients in the clinical trials reported were injection-site reactions and constipation.

No Advantage in Broad-Spectrum Antibiotics for Bacterial RTI in Children

Key point: Narrow-spectrum antibiotics are as effective as broad-spectrum antibiotics in kids with acute bacterial respiratory infections.


A new study published in JAMA reveals that broad-spectrum antibiotics used increasingly for children with acute bacterial respiratory tract infections (otitis media, group A streptococcal pharyngitis, or sinusitis) are not more effective than narrow-spectrum antibiotics and can also lead to more adverse events. In a retrospective cohort study using electronic health record data, researchers identified 30,159 children aged 6 months to 12 years, who were diagnosed with acute bacterial respiratory tract infections and received prescriptions for oral antibiotics. About 15% were prescribed broad-spectrum antibiotics (eg, amoxicillin-clavulanate, cephalosporins), and the remainder were prescribed narrow-spectrum drugs (penicillin or amoxicillin). At 14 days, treatment with broad-spectrum vs narrow-spectrum antibiotics was not associated with treatment failure. However, adverse events necessitating clinical care were more common with broad-spectrum vs narrow-spectrum antibiotics (3.7% vs 2.7%). In a prospective cohort of 2,472 children, receipt of broad-spectrum vs narrow-spectrum antibiotics was associated with a slightly worse child quality of life and higher rates of adverse events (35.6% vs 25.1%, respectively). The authors concluded that, “These data support the use of narrow-spectrum antibiotics for most children with acute respiratory tract infections.”

ACAAI Updates Guidelines on Seasonal Allergic Rhinitis

Key point: New guidelines on the treatment of seasonal allergic rhinitis in kids.


The American College of Allergy, Asthma, and Immunology (ACAAI) has issued updated guidelines on the treatment of seasonal allergic rhinitis. The guidelines published in Annals of Allergy, Asthma and Immunology and recommendations published in the Annals of Internal Medicine include:

• In patients 12 years or older, clinicians should routinely prescribe intranasal corticosteroid monotherapy rather than a combination of oral antihistamine + intranasal corticosteroid. Based on the studies analyzed, there was no statistically significant superiority for the combination for any of the outcomes.

• Clinicians should recommend an intranasal corticosteroid over a leukotriene receptor antagonist for patients 15 years or older. Based on the studies analyzed, intranasal corticosteroids have a greater clinical benefit over montelukast with regard to nasal symptom reduction.

• For patients 12 years or older with moderate to severe symptoms, the combination of intranasal corticosteroid + intranasal antihistamine may be recommended, as there is a statistically significant clinical benefit with regard to total nasal symptom reduction when using this combination. However, they also noted the potential for increased adverse events when using combination therapy.
Call for Authors

*JUCM, The Journal of Urgent Care Medicine* has built a reputation as the voice of the urgent care community by engaging urgent care professionals at every level.

In fact, we thrive on contributions from the urgent care community. The process tends to work out pretty well for our authors at times, too. For example:

- **January 2017**: Ralph Mohty, MD, MPH and Michael Esmay, MD submit an article on a real-life patient for consideration in our Case Report department.
- **May 2018**: Drs. Mohty and Esmay are bestowed with a Silver Award in the American Society of Healthcare Publication Editors 2018 Awards Competition—the 15th time *JUCM* has taken home a prize in our history.

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Establishing Success Habits for Leaders and Organizations

**Urgent message:** High achievers across industries and professions all share a common trait: the ability to leverage the power of habit to ingrain positive behaviors that lead to success. Hence, urgent care operators that can cultivate great habits in themselves and their teams effectively lay the foundation for a thriving operation.

**ALAN A. AYERS, MBA, MACC**

**The urgent care model is one that is dynamic, fast-paced, and multifaceted, such that it requires highly competent professionals at the helm for the business to thrive.** As such, managing the many and varied aspects of the day-to-day operation, interacting with patients and vendors, and managing clinical and administrative teams takes focused, organized, and well-prepared leaders.

And though high achievers of this sort might vary in their educational backgrounds and training, they typically share a common trait: an embrace of the immense power of habit, and an understanding of how effective habit is in shaping desired behaviors. Indeed, if you study successful people from all walks of life, you’ll find that invariably they’ve learned to cultivate and reinforce habits that lead to success. Thus, urgent care leaders would do well to partake in a close examination of how success coaches, business leaders, and other high achievers wield the power of habit, then cultivate great habits throughout their organizations.

**The Power of Habit**

*The American Journal of Psychology* defines a habit as “a fixed way of thinking, willing, or feeling acquired through previous repetition of a mental experience.” Basically, behavior patterns that are repeated consistently become imprinted upon the neural pathways of the brain, such that the link between the context and the action becomes increasingly stronger with each repetition. Eventually, the behavior becomes nearly automatic through a process called *habit formation*. For context on how the concept of habit is viewed historically, consider a few famous quotes about the power of habit:

- “We are what we do repeatedly. Excellence, therefore, is not an act but a habit.” – Aristotle
- “Repetition of the same thought or physical action develops into a habit which, repeated frequently enough, becomes an automatic reflex.” – Norman Vincent Peale

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“Good habits are the key to all success. Bad habits are the unlocked door to failure.” – Og Mandino

In our own lives and careers, we’ve all experienced how poor habits can keep us and others stuck and unfulfilled. Likewise, we’ve witnessed how those who adopt and reinforce excellent habits ascend to incredible heights in business, athletics, entertainment, and academia. In fact, motivational speakers and coaches the world over attest to the remarkable power of habit, with renowned success coach and entrepreneur Brian Tracy chiming in that “habits determine fully 95% of a person’s behavior.”

How to Develop New Habits
To succeed in adopting new, empowering habits, you first must understand the process of habit formation. Creating new habits is, in a sense, embarking on a psychic journey of sorts. You’re leaving behind familiar, well-worn mental terrain in favor of a novel landscape that’s unfamiliar, yet far more conducive to your personal and professional goals. You’re effectively stepping outside of your comfort zone and committing to different, foreign behaviors, which can feel unsettling at first.

This indicates that during the beginning stages of habit adoption/elimination, a healthy dose of self-discipline will be necessary. Why? Because the psychic tug of the old, disempowering habit is still firmly in place, and exerting its influence on your behaviors. So, at this stage, you’re going to have to exercise genuine willpower to override the old behaviors, in the moment, and execute the new ones. This is the true price of developing new habits. And flexing your mental muscle and practicing discipline will indeed be mentally taxing at first.

Finally, after around 3 weeks (on average) of consistently practicing the new behavior, it becomes an ingrained habit that happens automatically, with little to no willpower exerted. When viewed from that context, the power of habit becomes incredibly tantalizing. And as long you continue to practice the new habit diligently, you will have effectively developed a new “brick” to place in the foundation of your long-term success. Hence, the effort is well worth it.

The Benefits of Great Habits in the Urgent Care Workplace
So, what are some of the direct benefits of adopting new, empowering habits in the workplace? Several are as follows:

- Habits give your days and activities structure. By developing habits toward productivity and goal completion, your time and activities at work will necessarily become more structured. Habits help you develop a consistent routine, and facilitate getting the most out of your days. When you’ve installed great habits, there isn’t much time left over to meander and coast like many of us find ourselves doing. Rather, your most precious commodity, time, is consistently put to great use.

- Habits help you grow and develop as a professional. Habits allow you to take on new tasks, projects, and undertakings that can help you develop as a professional. By installing the habit of forgoing TV in the evenings, for example, to study a curriculum toward CME, you grow more rapidly as a marketable professional. Likewise, installing the habit to walk for 30 minutes during your lunch break is proven to relieve stress, increase energy levels, and improve the quality of sleep—which of course improves your workplace performance.

- Habits sharpen your focus. Virtually any professional or personal goal, big or small, can be achieved more rapidly when you’re focused. And habits facilitate focus. For instance, if you’ve decided to make it a habit to get, say, 33% more work done each day, you’ll necessarily excise the bad habits of idle water cooler chat, constantly checking and replying to low-priority emails, checking your smartphone, and excessive trips to the vending machine. Yes, it will take willpower those first few weeks, but afterward, focusing on getting more done will be an ingrained habit, and second nature.

“Consistently viewing things from the patient’s perspective is perhaps the most important habit of all to ingrain, reinforce, and make an integral part of the urgent care culture.”
Habits bring fulfillment. This is one of the greatest rewards of developing positive, constructive, empowering habits. Truth be told, many people are going through their lives experiencing low-grade anxiety and dread due to feeling that time is passing them by, their dreams and desires are going unfulfilled, and they’re simply not being productive at work and at home. In short, they experience a vague feeling that they’re coasting, and wasting their potential. By putting in the work to install, develop, and cultivate constructive habits, you effectively trade the willpower needed to build the habits for a powerful sense of well-being and fulfillment. You take comfort in the knowledge that, for instance, those 2 hours you used to waste surfing online each day have been rightfully reclaimed, and can now be invested in your most important goals. As a result, you feel like you’re finally on the right path.

Urgent Care Organizational Habits

In light of what’s been revealed thus far regarding the power of habits, what are some of positive habits that urgent care leaders can cultivate in their clinical and administrative teams toward building a culture of excellence? Below are some examples:

- **Commencing a daily huddle** – Having a daily huddle with providers and the care team creates a positive vibe of togetherness, aids in mapping out and planning the center’s daily objectives, and ensures each team member understands their role. When things get hectic or busy, the temptation may be to skip the huddle and dive right into work. Habits are sustained by discipline and commitment, however, so leaders should resist the urge to bypass the huddles when busy, and ensure they become an ingrained part of the culture.

- **Consistently using proper greetings and salutations at work** – Familiarity, stress, and a fast-paced work environment can lead to care team members forgoing their usual greetings and salutations to patients, staff, and providers. Thus, proper and professional salutations must become a core part of the culture that’s continually reinforced as a matter of habit. Being consistent with this habit lends the entire operation a level of professionalism and courtesy that is sure to be appreciated by every stakeholder—including patients.

- **Acknowledgement and recognition of the successes of care team members** – Making it a habit to single out and publicly recognize achievements and exemplary behavior of care team members goes a long way toward instilling a sense of pride, belonging, and appreciation, not to mention elevating overall employee engagement throughout the organization.

- **Being punctual** – By making it a habit to simply be on time for meetings, work shifts, and other appointments, team members clearly demonstrate that they respect everyone’s time, believe in being prepared and ready, and value professionalism.

- **Consistently viewing things from the patient’s perspective** – This is perhaps the most important habit of all to ingrain, reinforce, and make an integral part of the urgent care culture. Things to take note of from the patient’s point of view:
  - Are waiting areas, front desk areas, corridors, and exam rooms clean and orderly?
  - Are care team members’ uniforms and attire clean and professional?
  - Are patients consistently addressed by their name?
  - Are care team members interacting with each other in a professional manner, especially in the presence of patients?
  - Are the expectations of each phase of the visit clearly explained to patients, and are delays/excessive wait times acknowledged, and apologized for?

While there are many additional organizational habits that can be adopted, the aforementioned are indeed essential, and a great starting point for building a culture of urgent care excellence.

“Adopting empowering behaviors ingrained through the power of habit can help leaders stay positive, organized, engaged, and effective.”
Key Habits for Urgent Care Operators

Urgent care operators are the leaders of their operations, whether it’s a single center, a chain, or individual units belonging to a larger hospital system group. Hence, managing a dynamic and diverse group of providers, office staff members, and clinical teams can be an all-encompassing job that’s taxing to their mental and emotional reserves. Adopting the following set of empowering behaviors ingrained through the power of habit can help leaders stay positive, organized, engaged, and effective:

- **Deep breathing.** When work gets hectic, tasks pile up, and tense situations arise, practicing the habit of deep breathing is soothing, calming, and centering. In fact, according to WebMD.com, deep breathing is scientifically proven to reduce stress and increase willpower. So, take at least 2 minutes a couple times a day to engage in slow, deep breathing exercises.

- **Be patient with habit formation.** As behavioral scientists claim it takes around 21 days to fully form a new habit, be patient with yourself and your teams. Given the power of old, well-established habits, there’s bound to be a relapse or two along the way. Rather than give in to discouragement, understand that a temporary relapse is simply a minor setback.

- **Remain in the moment during trying or stressful situations.** As a leader, you must always stay calm under pressure. So, in addition to deep breathing exercises, get into the habit of always asking yourself, “What is the single action I can take right now to improve the situation, or move toward a resolution?” Then habitually take that action.

- **Don’t attempt too many habit changes at once.** Trying to get yourself or your team to take on too many habit changes at once is a recipe for failure. Instead, get into the habit of looking for ways to improve the culture by implementing no more than one or two changes at a time. Slow and steady wins the race here.

- **Create vision boards.** Many higher achievers and successful leaders maintain vision boards in their homes or offices so they have a constant visual reminder of the goals they’re pursuing. Make it a habit to create a visual representation of whatever goal you set and view it often.

- **Solicit feedback from your team whenever feasible.** Urgent care operators should get into the habit of asking their teams about challenges they face in their daily roles, how upper management can help, and suggestions for operational improvements. Communicating to your staff this way increases engagement, since the team sees that their voices are heard, and management values their input.

- **Surround yourself with inspirational quotes.** On your screensaver, desktop wallpaper, pictures hanging from the wall, or even on your phone. Better yet, see if you can find a program or app that delivers a fresh inspirational quote everyday automatically. Quotes from high achievers and historical figures are incredibly motivating and can put what seems like insurmountable obstacles into their proper context.

- **Network and stay abreast of industry happenings.** Don’t allow yourself to develop tunnel vision while obsessing over the minutiae of your own operation. Instead, make it a habit to maintain a fresh perspective on the industry by subscribing to newsletters, signing up for webinars, touring other urgent care operations, and attending conferences. The energy, insights, fellowship, and ideas you gain there can recharge your batteries, allow you to benchmark your own operation, and build the impetus to implement necessary changes.

Conclusion

As the saying goes, successful people are simply those with successful habits. However, empowering habits have another useful purpose: They become the sturdy emotional bulwark you can lean on when self-discipline wanes. Because no matter how strong your willpower, you’re bound to experience stress, duress, and fatigue at some point. And it’s at that point we get to see the power of our deeply ingrained habits, because they will surely rise to the fore under tough circumstances.

In sum, habits, although incredibly powerful, do not form easily. There is a price to paid, and that price is relentless repetition of the new, desired behavior. This requires willpower, being present, and above all, patience. Doing so will allow urgent care leaders to literally transform their operations through the power of habit, paving the way for them to realize a level of career success they may not have thought possible.
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Urgent message: To avoid running afoul of labor and tax laws, urgent care operators should understand what constitutes an “independent contractor” vs an “employee” and classify and pay their physicians appropriately.

Introduction
Many smaller, independent urgent care providers pay their physicians under 1099 arrangements rather than with W-2 income. There are advantages to this practice, such as decreased payroll taxes, workers compensation coverage, malpractice insurance, and not paying these individuals benefits. The notion is that an urgent care provider is an independent medical professional, practicing his or her art at the center.

In fact, there are some centers that go so far as to pay 1099 income on “production” (i.e., “eat what you kill”). This means that if the center is open and sees few patients, the center does not pay the doctors. Labor is usually the greatest expense in urgent care. However, larger urgent care operations avoid this practice because they see the potential for legal risk and that the IRS may view it as an attempt to avoid payroll taxes.

This article will explain the difference between 1099s and W-2s and will address what constitutes being an “independent contractor,” as well as the risks involved if the practice inappropriately classifies paid physician employees as contractors.

Background
IRS Forms 1099 and W-2 are two different tax forms for two different types of workers. Independent contractors receive a 1099 form, and employees of a business get a W-2. W-2 employees have payroll taxes automatically deducted from their paychecks; those are paid to the IRS by the employer. Independent contractors, on the other hand, are responsible for calculating and submitting their own payroll taxes to the IRS every quarter.

IRS guidelines state that if the business owner has the right to control or direct not only what but how it is to be done, then the workers are most likely employees. However, if the business owner can direct or control only the result and not the means and methods of accomplishing the result, then the workers are probably independent contractors. It’s an important distinction, because there are penalties for misclassification.

Discussion
Although the hourly calculated reimbursement for independent contractors may be dramatically higher compared to traditional employees, working with independent contractors in many instances will still result in less overall spend. That’s because independent contractors are responsible for paying both the employer and the employee portion of Social Security and Medicare (FICA). The urgent care center isn’t responsible for this costly expense. For independent contractor physicians, the urgent care center must file a 1099 form but not pay payroll taxes, worker’s compensation, or unemployment for these individuals.

However, the rules for recognizing employees have recently become more regulated: if an urgent care center engages a contractor who is full time (30 hours or more per week consistently for 90 days), the government may deem that person to be an employee who can claim unemployment insurance. W-2 and 1099 workers are treated differently as far as an urgent care owner’s ability to terminate them. For a W-2 em-
employee, an owner can exercise at-will employment and terminate
their employment at any time—pursuant to federal and
state labor laws which regulate employee dismissal. However,
with a 1099 worker, an urgent care owner should be cognizant
of the terms of the contract that’s been signed and what it pro-
vides for the right to terminate that individual physician.

The last significant distinction between a W-2 vs a 1099 em-
ployee is that they are typically paid in different ways and re-
ceive different benefits. A W-2 employee will most likely be
salaried and either full-time or part-time with a consistent
schedule. But a 1099 physician may be paid on a different
schedule—such as on a monthly invoice or upon completion
of a shift. And typically, only W2 employees receive employ-
ment benefits like healthcare insurance.

What Exactly is an Independent Contractor?

Typically, individuals such as doctors, dentists, veterinarians,
lawyers, accountants, contractors, and subcontractors who are
in an independent trade, business, or profession where they
offer their services to the general public are independent con-
tractors. However, whether an individual is an independent
contractor or an employee depends on each situation. Again,
the IRS stipulates that an individual is an independent con-
tractor if the company paying their wages has the right to control
directly only the result of the work and not what will be done
and how it will be done.10

Degree of Control and Independence

The important distinction between the two types of workers is
evidence of the degree of control and independence. This can
be placed in three categories:

- Behavioral. An owner should determine whether man-
  agement controls or has the right to control what the
  physician does and how he or she does their job.
- Financial. Determine if the urgent care center aspects of
  the physician’s job are controlled by the owner, such as
  how he or she is paid, whether expenses are reimbursed,
  and who provides tools and supplies.
- Type of relationship. The urgent care center owner must
determine if there is a written contract or employee-type
  benefits (ie, pension plan, insurance, vacation pay, etc.),
  whether the relationship continuous, and if the work per-
  formed is a key aspect of the business.

An urgent care center should examine all these factors when
deciding if a worker is an employee or independent contractor.
While some of these factors may indicate that the worker is an
employee, other factors may lead an owner to determine that
the worker is an independent contractor.11

Courts have found that there is no “magic” or set number
of factors that constitute when a worker is an employee or an
independent contractor, and no one factor stands alone in mak-

 Independent Contractor
( Form 1099 )  
• Controls every aspect of
  how, when, and where
  the work will be done.
• Sets own schedule.
• Assumes all risk (ie,
  workers compensation,
  medical malpractice
  insurance) and is not
  covered by anyone.
• Deducts costs associated
  with work including
  home office, supplies
  and technologies
  (including cell phone),
  transportation to/from
  job site, health insurance
  and other benefits.
• Not important for daily
  workflow in the business.
• Uses own resources to
  get job completed.

 Employee ( Form W-2 )
• Does not control how,
  when or where he/she
  works. Works shifts
  scheduled by the facility
• Has no personal risk and
  is covered by Workers
  Compensation. Employer
  pays malpractice
  insurance premiums.
• Eligible for employee
  benefits including
  medical, dental, and life
  insurance; retirement
  planning (ie, 401k); paid
  time off, etc. Employee
  expenses like CME and
  cell phone are often
  reimbursed by the
  employer.
• Day-to-day work is
  important to the
  business.
• Uses company resources
  to get job completed.
The settlement Program, which gives employers the option of reclassifying their workers as employees for employment tax purposes. They are granted partial relief from federal employment taxes for consenting eligible taxpayers to prospectively treat their workers (or a class or group of workers) as employees.13

Summary

Urgent care center owners should know the difference between and what's required for independent contractors and employees in their facilities. Again, there is no hard-and-fast answer; owners should apply the government guidelines to each specific employment situation.

References


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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.

## A Toddler with a Sudden Limp

**Case**
The patient is a 3-year-old female who is brought to your urgent care center by her parents, who report that she has been limping and crying intermittently seemingly without reason for the past several hours. Her father says she cries acutely when picked up, but that she calms down quickly with comforting.

View the images taken ([Figure 1](#) and [Figure 2](#)) and consider what the diagnosis and next steps would be. Resolution of the case is described on the next page.
Differential Diagnosis
- Hairline spiral fracture of the tibial diaphysis (also known as a toddler fracture)
- Irritable hip
- Subacute osteomyelitis
- Transverse fractures of the proximal tibial metaphysis (also known as trampoline fracture)

Diagnosis
The images reveal a hairline spiral fracture of the tibial diaphysis, or a toddler fracture.

Learnings
Toddler fractures are often identified clinically in a walking toddler who is limping or unable to put any weight on their leg, most commonly after a minor fall. They can also occur when a sneaker gets caught on the side of a playground slide (especially if the child is riding down on the parent’s lap). Sometimes there may be no history of trauma, and the diagnosis is suspected based on presenting symptoms.

Tibia and fibula films are the preferred radiographic study for evaluation. In this case knee and ankle films were performed, and partially captured the fracture.

Pearls for Urgent Care Management and Consideration for Transfer
- Closed reduction and long leg casting are used to treat most patients. These can be administered in the urgent care center according to the provider’s skill level, or transferred emergently to a specialist or higher-acuity setting.

Acknowledgment: Images courtesy of Teleradiology Specialists.
CLINICAL CHALLENGE: CASE 2

A 52-Year-Old Man with Recent-Onset Dizziness

Figure 1.

Case
A 52-year-old man presented to urgent care with a 2-day history of dizziness. He denies chest pain, syncope, shortness of breath, or diaphoresis. He is not taking any medications, and has no noteworthy personal medical history.

Upon exam, you find:

**General:** Alert and oriented X 3, slightly pale

**Lungs:** CTAB

**Cardiovascular:** Irregularly irregular and tachycardic without murmur, rub, or gallop

**Abdomen:** Soft and NT, no pulsatile mass

**Ext:** No peripheral edema, pulses are 2+ and equal in all extremities

View the ECG taken and consider what the diagnosis and next steps would be. Resolution of the case is described on the next page.
INSIGHTS IN IMAGES: CLINICAL CHALLENGE

THE RESOLUTION

Differential Diagnosis
- Inferior STEMI
- Premature ventricular contractions (PVCs)
- Ventricular tachycardia (VT)
- Left bundle branch block (LBBB)
- Atrial fibrillation with preexcitation (WPW)

Diagnosis
- The ECG reveals atrial fibrillation with preexcitation. What makes the ECG confusing is that the QRS complexes are wide, easily confused with ventricular tachycardia. The important qualifier is that the rhythm is "irregularly irregular." This is atrial fibrillation with preexcitation likely from Wolf-Parkinson-White (WPW)
- An inferior STEMI should have ST elevation in leads II, III, and aVF, often with reciprocal changes. PVCs and scattered and not continuous
- LBBB should have a wide QRS, but will be regular.

Learnings/What to Look for
- WPW is a supraventricular re-entrant rhythm which may have a normal rate or fast rate with findings of a delta wave, short PR interval, and prolonged QRS complex
- Atrial fibrillation is a supraventricular rhythm characterized by an irregularly irregular rhythm; it may be a normal rate or have a rapid ventricular response (RVR)
- Patients with atrial fibrillation have an increased risk of stroke (CVA), so consideration needs to be given for anticoagulation
- Inquire about signs of ischemia such as chest discomfort, shortness of breath, diaphoresis
- Assess for hemodynamic instability such as hypotension, dizziness, or confusion

Pearls for Urgent Care Management and Considerations for Transfer
- Atrial fibrillation with WPW is a unique rhythm and is treated with procainamide. Typical AV nodal blockers may result in decompensation of the rhythm to ventricular fibrillation
- Unstable patients may require cardioversion
- Patient should be transported to the ED by EMS
- While awaiting EMS, place an IV (or two large-bore IVs) and put the patient on a monitor

Figure 2.
A 3-Year-Old Girl with Vesicles on Her Palms and Soles

Case
A 3-year-old girl was brought to urgent care with small widespread vesicles, including on her palms and soles. She had begun to develop painful oral vesicles, as well, and was refusing to eat. The rash began a few days after flu-like symptoms of fever, sore throat, cough, and headache.

View the photo and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.
**Differential Diagnosis**
- Varicella
- Chikungunya
- Hand-foot-and-mouth disease
- Erythema multiforme

**Diagnosis**
The little girl was diagnosed with hand-food-and-mouth disease (HFMD), an acute, self-limited viral illness predominantly caused by Coxsackievirus or other Enteroviruses. It is often characterized by an oral enanthem, accompanied by macular, papular, or vesicular rash on the hands, feet, buttocks, genitalia, and thighs.

**Learnings**
- Typically, HFMD lasts from 7 to 10 days. The incubation period is approximately 3-6 days
- The course usually starts with mild fever, sore throat and mouth, cough, headache, malaise, diarrhea/vomiting, and occasional arthralgias. Small oral macules can develop into vesicles and ultimately ulcerate 1 to 2 days after the start of systemic symptoms
- HFMD is highly contagious and is commonly transmitted in daycare centers, schools, summer camps, and hospitals. Most often, outbreaks usually occur from June to October
- Transmission occurs via the fecal-oral route and through secretions, including secretions of vesicular fluid and nasal/oral fluid
- Following infection, individuals can shed the virus via gastrointestinal passage for 4-6 weeks or via the upper respiratory tract for 3 weeks
- While HFMD affects children primarily, adults can also develop the disease

**Pearls for Urgent Care Management and Considerations for Transfer**
- Given that the infection is self-limiting, supportive care includes management of prodromal symptoms that may include fever, abdominal pain, fussiness, emesis, and diarrhea
## REVENUE CYCLE MANAGEMENT Q&A

### Clarifying the Coding for Splint and Cast Application by Nonphysicians

**Q.** I would like clarification on an article I read in *The Journal of Urgent Care Medicine* (JUCM) online archive. The article, Splint and Cast Application Performed by Someone Other Than Physician, referenced that non-physician staff could bill for splint and cast application. Will you please expand on the references and confirm that we can bill for splint and cast application if it is done by someone on staff other than the physician?  

**A.** Yes, you can still bill for the service if the application is performed by someone other than the provider in the clinic. The American Medical Association (AMA) provided guidance on this in the April 2002 issue of *Current Procedural Terminology (CPT) Assistant*:

> “You will note that the reference to ‘physician’ has been retained in the clinical examples provided. This inclusion does not infer that the cast/splint/strap procedure was performed solely by the physician, as nurses or ED/orthopaedic technicians also apply casts/splints/straps under the supervision of the physician.”

The narrative further explains that the use of “physician” in the clinical scenarios given is to differentiate the individual patient physician encounters and the procedures performed in the clinic setting.

A June 2006 *CPT Assistant* gave a Q&A regarding a spinal fracture treatment requiring bracing/casting. The question: Could they bill it if it was placed by someone other than the physician? The AMA response was, “In order to report the casting or strapping codes, the procedure must be performed by a physician or by other personnel under the direct supervision of a physician. As direct supervision indicates, the physician must be present during the procedure when a nonphysician is performing the splint application” (see Medicare Benefit Policy Manual Chapter 15, Section 60, available at https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/bp102c15.pdf).

Direct physician supervision means that the physician must be physically present in the same office suite and be immediately available to render assistance if that becomes necessary. Section 100 specifically addresses splints, casts, and other devices used for reductions of fractures and dislocations, stating that the services are covered under Medicare Part B. The section references services being performed by a physician “or other healthcare professional to the extent permissible under State law.”

Based on the references above, a nonphysician who is qualified to apply a splint or cast can perform the service as long as there is an order for the service by a physician and direct supervision by the physician. CMS further defines the term “qualified practitioner” as a physician or other individual who is:

- A qualified physical therapist or a qualified occupational therapist
- Licensed in orthotics or prosthetics by the state in which the item is supplied (in the case where the state provides licensing)
- Specifically trained and educated to provide or manage the provision of prosthetics and custom-designed or custom-fabricated orthotics, and is certified by the American Board for Certification in Orthotics and Prosthetics, Inc. or by the Board of Orthotist/Prosthetist Certification (in the case where the state does not provide licensing)

Keep in mind, you should only bill an application code if work is involved in making the cast or splint out of materials such as plaster or fiberglass. For example, an x-ray reveals a

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nondisplaced fracture of the head of the right radius, initial encounter, International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) code S52.124A on a 10-year-old patient. You stabilize the affected extremity by applying a static, short-arm fiberglass splint and refer the patient to an orthopedist for follow-up. Since you are not providing restorative care and have referred the patient on, you can bill for both the supplies used to make the splint as well as the application, using the following codes:

- Q4024, “Cast supplies, short arm splint, pediatric (0-10 years), fiberglass”
- 29125, “Application of short arm splint (forearm to hand); static”

If the key components for the Evaluation and Management (E/M) codes are met, then also report the appropriate level of E/M with modifier -25, “Significant, separately identifiable E/M service by the same physician or other qualified health care professional on the same day of the procedure or service” appended.

Using the same patient example, let’s say the physician agrees to follow the patient through the healing process and the splint will be the definitive (“restorative”) treatment for this fracture. This is considered to be definitive care and the rules for billing are a little different. You can still bill for the splint supplies. In lieu of billing the splint application code, you would bill CPT code 24650, “Closed treatment of radial head or neck fracture; without manipulation” if no manipulation was required, or CPT code 24655, “Closed treatment of radial head or neck fracture; with manipulation” if manipulation was required before applying the splint.

If the key components for the Evaluation and Management (E/M) codes are met, then you may also report the appropriate level of E/M with modifier -57, “Decision for surgery” appended.
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