

# JUCM<sup>®</sup>

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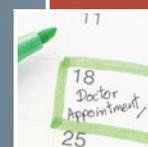
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# Why Don't You Take A Break?



I took up smoking for about 6 months in college, but not for the reasons you'd guess. This was during my freshman year shortly after I got a job waiting tables. It was a hard job. There was always work to be done—refill a drink, check how the food was cooked, and, most importantly, bring the check post-haste when the customers wanted to leave. The shifts always seemed like a blur. I'd run around non-stop without a break until there was no more work left to be done—not unlike many of your shifts in urgent care, I'd imagine.

So, how does smoking fit into all this? I'm glad you asked. Because of the nuances of labor law and being paid in tips, servers were not given dedicated breaks. Sure, I'd run to the bathroom or slam a glass of water occasionally, but other than that I was always going. However, after a few weeks, I noticed that there was a group of servers who got special treatment from the manager when it came to breaks: the smokers.

About every 2 hours, my co-servers who smoked would make a gesture to the floor manager putting two fingers to their lips—the universally accepted, yet unofficial pantomime, for a cigarette. The managers, all smokers themselves, would give an approving nod and then watch the server's section for 5-10 minutes so they could smoke. Breaks were accommodated, even facilitated, in cases of nicotine craving alone. So, despite my distaste for tobacco, I decided to take up smoking—not because I enjoyed it, but because the work was just much less overbearing with an occasional breather.

As clinicians, regardless of our practice environment, we face this same paucity of break opportunities. There is always another patient to be seen, a note to finish, and an inbox of results to sift through. There's always work to be done and we belong to a culture, as practitioners, defined by stubbornness and reluctance to pause until it's all completed. All of the support staff, whether it be nurses, techs, or medical assistants, typically have dedicated (even mandated) breaks scheduled several times per day. However, despite having the most cognitively demanding role, providers are rarely compelled to pause their work and rest. And even if breaktime were offered, many clinicians would bristle at the notion because of the very ethos mentioned above. *The work's gotta get done. Breaks will just slow me down, keep the patients waiting, and keep me here*

*longer, the thinking goes.*

While this line of thinking is common among clinicians, organizational psychologists who study workplace effectiveness have found that it is also fundamentally flawed for several reasons. Most notably, we do not perform with the same efficiency throughout the workday. We all have times of the day where our mental acuity is best. Some of us are early birds and some of us are night owls; psychologists call this a chronotype. Additionally, our mental vigilance is depleted through the day with each decision we make. And we all make hundreds, if not of thousands, of decisions per day, with each decision taking an incremental cognitive toll.

What's the impact of this? Two-fold. The work becomes increasingly less pleasant for us and the care becomes increasingly less safe for our patients. The latter being a natural consequence of the former. As our mental reserves become depleted, our cognitive and emotional states worsen.

Think about how you feel during busy days seeing patients and how your mood changes from the start to the end of the shift. Many researchers, most notably Daniel Kahneman, have explained that our ability to avoid bias and make well-reasoned decisions rather than quick, "shoot from the hip" guesses becomes compromised when we are tired or in a bad mood. Kahneman details this phenomenon at length in his oeuvre, *Thinking Fast and Slow*.

The result of this bias is worse outcomes for patients. This has been substantiated across specialties and care settings. For example, later in the day, patients in primary care settings are prescribed more unnecessary antibiotics, patients undergoing surgical procedures have more adverse anesthesia events, and patients having colonoscopies have fewer polyps identified. There's no reason to believe that patients seen in the afternoons are systematically different from those seen in the mornings. It must be the care that has changed as the day wears on.

Now, if we trust the researchers studying our ability to deliver care safely, we as clinicians must also develop a sense of obligation to combat this issue of diminishing quality later in the workday.

Fortunately, the solution is simple: take a short break a few times per day. Nearly all studies on cognitive performance unequivocally demonstrate significant improvements after breaks

*“Intermittent breaks can transform our workday from a long, slow grind to a series of short, manageable episodes each beginning with a fresh (or at least fresher) start.”*

lasting even just a few minutes.

However, just because the solution is simple doesn't make it easy. In fact, there are a number of reasons why implementing breaks will present a challenge for most of us. We are not in the habit of taking breaks and, therefore, most hospitals and clinics have limited dedicated space for providers to take an uninterrupted breather. It's incumbent upon us to create new habits. We need to be intentional about arranging, and at times fighting for, the necessary breaks.

In the April 2019 issue of *JUCM*, I offered a few tips to help you get the most out of your break time once you do find the time and space to pause. They bear expanding upon here:

1. **Unplug.** In the smartphone era of constant connectivity, we generally reach for our phones to fill any short moment of interstitial time. Logging into social media or checking email, while certainly a distraction from work, is far from a relaxing mental resetting exercise. We rely heavily on our ability to focus during clinical work. Avoiding the trap of simply shifting our focus to our phones and spending the break time with an unfocused mind allows for this function of our brains to be recharged.
2. **Get some nature.** In the movie *Office Space*, Peter Gibbons memorably says, “Human beings were not meant to sit in little cubicles staring at computer screens all day,” and he's right. There is something restorative about nature. Getting some fresh air, even for a few minutes, has been shown to improve mood and reduce stress among many types of workers. And if it's too cold/wet/dark, not to worry. Even looking out a window seems to confer similar benefits.
3. **Talk to people (and not about work).** After talking with patients all day, it may feel that talking with your co-workers is the last thing you'd want to spend your break doing. However, research suggests that social interaction, which differs from goal-directed clinical interactions, is physically and mentally restorative. Plus, it boosts team performance when you get to know the people you work with better.  
Not in the mood to talk to your colleagues? Calling to chat with a friend for a few minutes can offer similar benefits.
4. **Meditate.** Mindfulness practice improves what psychologists call “cognitive inhibition,” which refers to our ability

to tune out irrelevant stimuli and focus on what matters. In other words, we get better at discerning the signal from the noise.

While the idea of meditation may sound daunting to those who don't practice regularly, it need not be intimidating. There is a multitude of guided meditation apps now available for smartphones that make meditation as easy as pressing play, sitting down, and closing your eyes for a minute or two.

5. **Get a tea or coffee (and water).** Take a walk. Change the scenery. Stay hydrated. Re-caffeinate. What's not to love?

6. **Get physical.** It turns out that the ortho residents at your hospital were right about one thing: working out is a good way to recharge your mental energy during the workday. While we've known for decades that physical activity reduces stress and improves mood, more recent evidence suggests that there is also an immediate boost in cognitive performance, as well, conferred by short bursts of intense exercise (commonly called high-intensity interval training, or HIIT).

Intense muscle contraction causes the release of myokine hormones, many of which are brain-derived neurotrophic factors that encourage healthy brain function. HIIT exercises are perfect for breaks on shift because they require only a few minutes to reap the benefits and can consist of simple calisthenics like push-ups, jumping jacks, and lunges, which require no equipment.

#### Break Length and When to Schedule Them

As we've discussed, the utility of breaks is to improve mood and cognitive function so that work is more enjoyable for us as clinicians and care is safer for our patients. This means that breaks should make work less stressful and not more. However, because taking breaks will require adjusting your workflow and perhaps receiving awkward gawks from colleagues, there may be some discomfort that arises with integrating intentional pauses into your workday. Don't be discouraged! Even a break of 1-2 minutes can offer a powerful mental recharge.

#### Microbreaks

Rather than trying to schedule a 30-minute break, set yourself up for success by trying “microbreaks.” While there is no universally accepted definition, a microbreak usually consists of a period of about 1-3 minutes where work is completely paused. I recommend a 2-minute break fully away from patient care every 2 hours on shift. Setting an alarm or using a reminder app on your phone can be helpful, especially as you are beginning to develop the habit.

**Vigilance Breaks**

If you are feeling totally cognitively drained but can't steal away, even for a few minutes, try taking a "vigilance break." The concept of a vigilance break is the same as that as a pre-procedural timeout. Recognizing that you're fried, pause and review the case you're thinking about. It's best to actually do this out loud, even if just to yourself. This will help to focus your fading attention on where you are and where you are going, thus reducing the chance of cognitive error.

Psychologists refer to "habituation" to describe the phenomenon when we lose the forest for the trees. On shift, habituation is our enemy. Cognitive psychologists also have identified the "fresh start effect," which refers to the vigor we feel with new beginnings. This is why many of us experience peak motivation on the first day of a new year, for instance. With intermittent breaks, our workday becomes transformed from a long, slow grind riddled with habituation to a series of short, manageable episodes each beginning with a fresh (or at least fresher) start.

Over recent years, as I've learned more about the neuroscience and psychology of taking breaks, I think back to my days waiting tables. I realize now it wasn't choking down the nicotine that refreshed me, but rather it was taking 5 minutes outside and breathing deeply. It was getting better acquainted

and laughing with my co-workers. That's what rejuvenated me so I could better handle whatever was awaiting me for the rest of the shift. ■

**Resources**

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**CLINICAL**

## 19 Practice Review: Patients Presenting with Symptoms of Odontogenic Infection

Dental infections extend way beyond—and can be far more dangerous—than a garden-variety toothache. The ability to differentiate those that require emergent care is essential for the urgent care provider.

*Amandeep Kaur Bains, BDS(Hons) MFDS RCPS (Glasg); Awais Safdar Ali, BDS MJDF RCSEng; and Pavan Padaki, BDS, MFDS RCPS (Glasg), MBChB, MRCS, FRCS (OMFS)*

**PERSPECTIVES**

### 12 Pitfalls of Point-of-Care Ultrasound (POCUS)—A Perspective



As safe and reliable as point-of-care ultrasound is, nothing is risk-free. Attention to the little details is essential to ensuring hygiene and minimal radiation exposure.

*Avijit Barai MBBS, MRCS, MSc, PgCertCPU, FRNZCUC; Martin Necas, MMedSonography, AMS, RDMS, MRT, RVT; and Bruce Lambie, MBBS, FACEM*

**ORIGINAL RESEARCH**

### 25 Implementing Clinical Practice Guidelines in Adults with Hypertension: An Effective Practice Change in Urgent Care



Sometimes, a patient will deny any history of hypertension only to discover that their blood pressure is, in fact, too high. Your adherence to the guidelines may be their best chance to start down the right road to bringing it to a healthy level.

*Jennifer Iacovo, DNP, APRN, FNP-C; Bonni Cohen, PhD(c), DNP, APRN, ANP-C, FNP-C, CHFN, CNE, FAANP; and Judith Butler, DNP, CNM, WHNP, CNE*

**ORIGINAL RESEARCH**

### 33 A Novel Method for Blinding Reviewers to Gender of Proceduralists for the Purposes of Gender Bias Research



Gender bias has no place in the urgent care center—and certainly not in a physician's training. Engineering ways to blind reviewers to a clinician's gender will benefit all parties concerned.

*Michael Pallaci, DO; Jennifer Beck-Esmay, MD; Adam R. Aluisio, MD, MSc; Michael Weinstock, MD; Allen Frye, NP; Ashley See, DO; and Jeff Riddell, MD*

**HEALTH LAW & COMPLIANCE**

### 38 Are There Any Restrictions on an Urgent Care Provider Charging a No-Show or Cancellation Fee?



Time is money, as they say. If you've been holding a spot for a patient who's not going to show up while turning away another patient, everybody loses. What course do you have to recoup the lost revenue?

*Alan A. Ayers, MBA, MAcc*

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*Ellen Hancock, MD; Julie Park, MD, FACS; and Kendall Wermine*

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*Joshua Sherman, MD and David Mathison, MD, MBA*

**CASE REPORT**

### 51 When It's More Than Just a Cough



Cough may be one of the quintessential urgent care presentations, but that doesn't mean the case is a simple one. Be vigilant for life-threatening etiologies.

*Frank Schaller, DNP, APRN, FNP-C and Lauren Dunn, MSN, APRN, FNP-C*

**NEXT MONTH IN JUCM**

IgA vasculitis (IgAV) is the most common systemic vasculitis in children. While it has a benign natural history in most patients, it is essential to identify severe cases and complications that may require more aggressive therapy to avoid potential complications and morbidity. We'll use one such case, involving a 12-year-old patient, as the basis of a thorough discussion of IgAV in the April issue of JUCM.

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It's 4:30 on Friday afternoon. Dentists' offices are closing up for the day. When a patient suddenly has severe mouth pain, that makes for a very long and painful weekend—at best—before they can get in to see their oral health provider. They come to you for help. Could you provide it?

There are no reliable data on how often the scenario described above happens in urgent care, but it's a surprisingly frequent occurrence in emergency rooms. And sometimes it turns out to be far more complicated (and dangerous) than a loose filling or cracked crown.

This topic is addressed thoroughly in this issue's cover article, Practice Review: Patients Presenting with Symptoms of Odontogenic Infection (page 19) by **Amandeep Kaur Bains, BDS(Hons) MFDS RCPS (Glasg); Awais Safdar Ali, BDS MJDF RCSEng; and Pavan Padaki, BDS, MFDS RCPS (Glasg), MBChB, MRCS, FRCS (OMFS)**, a trio of authors from the UK.

Hypertension is another malady few patients associate with urgent care. Cardiologists and primary care providers might write more prescriptions for blood pressure medications, but many people first discover they have a problem when visiting an urgent care center. If your team isn't on board with existing guidelines, you're missing an opportunity to start that patient down the path to a healthier blood pressure.

**Jennifer Iacovo, DNP, APRN, FNP-C; Bonni Cohen, PhD(c), DNP, APRN, ANP-C, FNP-C, CHFN, CNE, FAANP; and Judith M. Butler, DNP, CNM, WHNP, CNE** wondered if there were ways to ensure their own colleagues approached management of hypertension in a uniform, guidelines-adherent manner. So, they took the initiative to design a study and submit it to *JUCM*. Implementing Clinical Practice Guidelines in Adults with Hypertension: An Effective Practice Change in Urgent Care starts on page 25. Dr. Iacovo is associated with HonorHealth FastMed Urgent Care in Arizona; Dr. Cohen with Frontier Nursing University and Cohen Cardiology; and Dr. Butler with Frontier Nursing University.

Our second original research article this month looks at the role gender plays in how clinicians are evaluated during their training. A Novel Method for Blinding Reviewers to Gender of Proceduralists for the Purposes of Gender Bias Research by **Michael Pallaci, DO** (Northeast Ohio Medical University, Ohio University Heritage College of Osteopathic Medicine, and Summa Health System); **Jennifer Beck-Esmay, MD** (Department of Emergency Medicine at St. Luke's-Mount Sinai West in New York City); **Adam R. Aluisio, MD, MSc** (The Warren Alpert Medical School of Brown University); **Michael Weinstock, MD** (Adena Health System Emergency Medicine Residency Program; Wexner Medical Center at The Ohio State University; *The Journal of Urgent Care Medicine*); **Allen Frye,**

**NP**, (Adena Health System); **Ashley See, DO** (Adena Health System Emergency Medicine Residency Program); and **Jeff Riddell, MD** (Keck School of Medicine of the University of Southern California) starts on page 33.

These days, any patient presenting with a respiratory complaint is bound to raise attention (and anxiety). There are many possible causes other than COVID-19, of course, from "just a tickle" to life-threatening pathology. **Frank Schaller, DNP, APRN, FNP-C** and **Lauren Dunn, MSN, APRN, FNP-C** walk us through the steps they followed in one such presentation in When It's More Than Just a Cough (page 51). Dr. Schaller is assistant professor at Eastern Michigan University and a nurse practitioner at PrimeCare Urgent Care. Ms. Dunn is a nurse practitioner at PrimeCare Urgent Care and at Hope Medical Clinic.

Our second case report recounts the tale of A Hand Wound Caused by a Pressure Washer (page 41). Such injuries usually require debridement; severe cases may even result in amputation. In this case, however, a novel approach was employed to realize a positive outcome without the need for surgical intervention. We appreciate **Ellen Hancock, MD; Julie Park, MD, FACS; and Kendall Wermine**, all of the University of Texas Medical Branch at Galveston, giving us the opportunity to publish it.

Another injury for which there are multiple modes of treatment involves patients that can be a challenge to manage, making the ultimate decision an important one for more than clinical reasons. When children present with lacerations, you have to consider the "squirm factor" and the prospect of cosmetic effects. In Chin Lacerations in Children—A Call for Caution (page 44), **Joshua Sherman, MD** and **David Mathison, MD, MBA** offer a refresher on adhesive repair for skin lacerations in pediatric patients, including insights into when that's a viable (even preferable) option. Dr. Sherman is regional medical director, California, PM Pediatrics. Dr. Mathison is vice president, clinical operations for PM Pediatrics and editor, Pediatrics, for *JUCM*.

Just as there are consequences when making what proves to be the wrong decision for a given patient, so too are there missteps that could render the usually reliable point-of-care ultrasound less helpful than it could be, or even harmful to the patient. **Avijit Barai MBBS, MRCS, MSc, PgCertCPU, FRNZCUC; Martin Necas, MMedSonography, AMS, RDMS, MRT, RVT; and Bruce Lambie, MBBS, FACEM** walk us through those in Pitfalls of Point-of-Care Ultrasound (POCUS)—A Perspective on page 12. Dr. Barai is affiliated with Christchurch Hospital, Dr. Necas with Waikato Hospital, Hamilton and the University of Otago, and Dr. Lambie with Dunedin Hospital

and Dunedin School of Medicine, University of Otago, Dunedin, all in New Zealand.

Urgent care providers aren't the only ones who need to worry about the consequences of their decisions, of course. Patients who fail to show up for appointments need to understand that they may have cost the urgent care center money, and prevented another patient from receiving timely care. Some urgent care operators deal with this situation by imposing no-show fees. Could this be a good move for you? Before deciding, read *Are There Any Restrictions on an Urgent Care Provider Charging a No-Show or Cancellation Fee?* (page 38) by **Alan A. Ayers, MBA, MAcc**, president of Experity Networks and senior editor, practice management, for *JUCM*.

Urgent care operators also run the risk of losing out on revenue when they fail to code correctly. What may not be so obvious is the role that credentialing and contracting play in this process, especially when expanding the business. **Monte Sandler**, vice president, revenue cycle management for Experity, understands this as well as anyone. He shares his thoughts on how to get it right in *Credentialing and Contracting: What to Expect When Expanding* (page 62).

Finally, in *Abstracts in Urgent Care* (page 47), Dr. Barai offers his second contribution to the March issue. Here, he provides highlights from articles on the significance of "seat

belt signs" in patients who've been in a car accident; controlling pain for patients with corneal abrasions; analgesia when reducing a shoulder dislocation; and various effects of the COVID-19 pandemic.

**Thanks to Our Peer Reviewers**

In every issue of *JUCM*, there are select articles on which we ask members of our peer review panel to comment. It's one step we take in trying to ensure that all the content we publish is relevant, clearly communicated, and free of bias. For their contributions in reviewing content for the January, February, and March issues, we thank:

- **Charlotte Albinson, MD**
- **Terence Change, MD, FAAFP**
- **Sal A. D'Allura, DO, FAAFP**
- **Tracey Quail Davidoff, MD, FACP, FCUCM**
- **Joan Finno, CRNP**
- **Glenn Harnett, MD**
- **Jessica Kovalchick, RPA-C**
- **Sean McNeeley, MD, FCUCM**
- **Gina M. Nelson, MD, PhD**
- **John Reilly, DO**
- **Joseph Toscano, MD**
- **Courtney Wilke, MPAS, PA-C** ■



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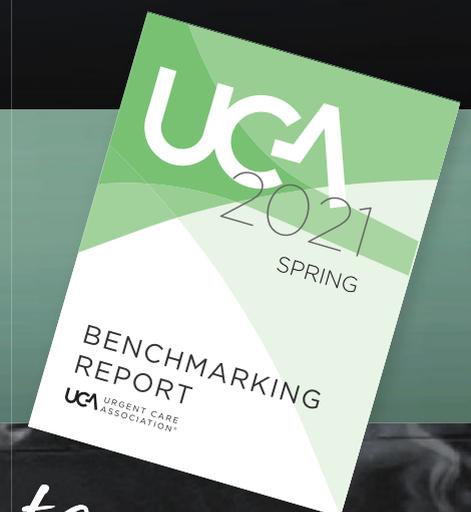
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# Make or Break

■ LOU ELLEN HORWITZ, MA

This month I'm going to do something I almost never do in my column—talk about a UCA product. But let's begin by considering success and failure. When you look closely at who's truly controlling the success or failure of an urgent care center, on a daily basis, who do you think that is?

Many people would say it's our providers, who are often the ones that dominate the visit in the eyes of patients and control much of the documentation that influences reimbursement. Or you might say it's our senior leaders or executives who choose sites, negotiate contracts, form partnerships, build brands, and establish culture. I also hear that it's our front desk team who really controls success or failure, because they are the first and last people our patients see.

I would argue that all of these are wrong, and that by misinterpreting who really makes or breaks a center and thereby investing our resources in the wrong places, we are missing a huge opportunity for improvement.

The people I believe are truly in control of not only the success of a center or two, but ultimately the success of all operations, are your center managers. And I also believe we have been doing them a disservice that I'd like to help rectify.

Center managers tend to be promoted from within, train on the job, and learn through trials by fire. Most organizations don't have formal training programs for managers—either initially or ongoing—and many managers are asked to handle quite a bit more than they are ready for. It's just the nature of our lean staffing model; the fact that they succeed at all is a tribute to how good these folks are and how truly outstanding they could be if we gave them a bit more investment and support.

I've met a lot of center managers. They are some of the smartest, hardest-working people in our industry. They usually don't have management experience, however, so they fall prey to "rookie mistakes" and loneliness from being promoted past their peers. They may live in fear that someone will discover

they aren't understanding 100% of what we are asking them to do. And the people they report to are so busy with their own responsibilities of growth or marketing or analysis or performance that they can't truly mentor these managers, which is why an unfortunate number of them fail or voluntarily "return to the floor." We can do better than this.

UCA hasn't focused efforts on these essential members of your team until now, and I'm excited to tell you about what we've put together.

It's called UCBX ("urgent care box") because it's a monthly package of small bites of professional development that will *incrementally* improve the knowledge and performance of your urgent care managers. Why incrementally? Because that's how we actually learn and grow—little by little. We learn something, try it out, try it again if we get it wrong, and slowly it becomes part of our repertoire. The next month we can try a few more new things, and the next month, and the next month, and before you know it we are performing at new levels.

Why small bites? Because we know what their day is like. And by "day" I mean the 12 hours, 7 days/week that they are "on" handling scheduling, callouts, meetings, interviews, patient complaints, and supply orders, traveling between clinics, solving problems, coaching staff, and oh yes, reinventing workflows and all daily practices because of pandemics.

Is there a better time to start investing more in these amazing team members? I don't think so, and I hope you will check out UCBX then sign them up. Did I mention we also made it affordable? And if you'd like to discuss a group discount, just ask us. We're on a bit of a national mission with this initiative!

Finally, we do have some more exciting news for all of our Members. We're migrating almost 200 hours of medical and management lectures onto a private YouTube channel and are making them available to UCA/CUCM Members for *free*. This will greatly increase the educational resources at your fingertips, and we hope you enjoy this new benefit. Watch your email for the go-live announcement and how to access, and of course, if you're not a member yet, what better time to join us?

(PS: We've gotten lots of questions lately about the 2021 Convention. We've moved it this year to October 9-13, still in New Orleans, so be sure to save the dates!) ■



**Lou Ellen Horwitz, MA** is the chief executive officer of the Urgent Care Association.

# Pitfalls of Point-of-Care Ultrasound (POCUS)— a Perspective

**Urgent message:** As POCUS becomes more common in urgent care, users must take care to minimize risk for infection and excessive radiation exposure.

AVIJIT BARAI MBBS, MRCS, MSC, PGCERTCPU, FRNZCUC; MARTIN NECAS, MMEDSONOGRAPHY, AMS, RDMS, MRT, RVT; and BRUCE LAMBIE, MBBS, FACEM

## Introduction

Point-of-care ultrasound (POCUS) is well established as an imaging tool in the urgent care center. Although it is generally considered safe and easy to use, ultrasound is a potential fomite. Further, the biological effects of ultrasound energy are not completely understood (and not always inconsequential).

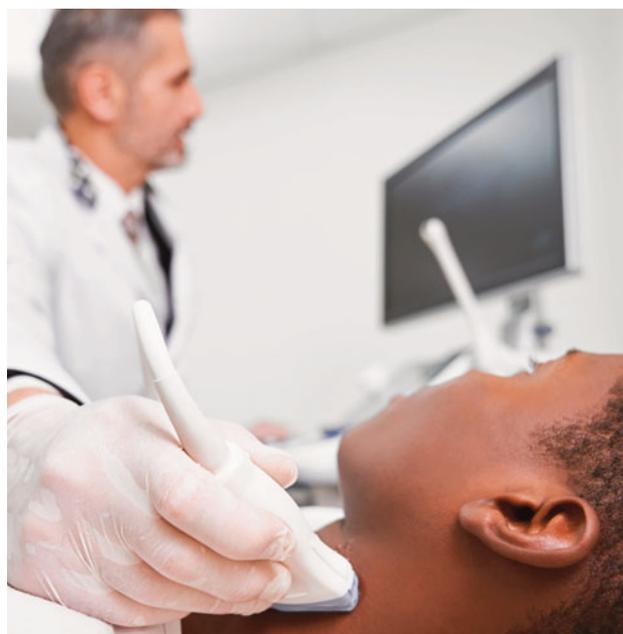
## Background

Although its use was initially limited to specific applications such as focused assessment with sonography in trauma (FAST), evaluation for abdominal aortic aneurysm (AAA), and pneumothorax, the spectrum of POCUS indications has expanded to include a wider variety of applications (Table 1).

During many of these procedures, ultrasound probes may come into contact with blood and/or other potentially infectious body fluids. In addition, lack of familiarity with possible bioeffects of ultrasound and energy and utility associated with various modes of US use might not only provide poor diagnostic information, but also lead to theoretical harm from indiscriminate use.

## Myths and Realities

- *It's safe.* The general perception is that US is categorically safe in all settings. However, the complete bio-



logical safety of US energy has not been conclusively established. Additionally, contamination of US probes can lead to transmission of organisms.<sup>1-3</sup> Inappropriate reliance on US also can lead to harm through misdiagnosis in the hands of clinicians without adequate

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training or understanding of its limitations.

- *It's effective.* As US provides a real-time graphical representation of internal anatomic structures, clinicians tend to assume that this is always reliable. However, US is a highly operator-dependent modality and there are many sources of artifact which can lead to misinterpretation by less experienced operators.
- *It's an easy tool.* Many novice clinicians assume anybody can pick up a probe and start scanning. While technically true, the quality of such scans is generally poor. Understanding the physics of US, appropriate settings for given indications, and the US findings in various disease states takes extensive practice.

### Bioeffects and Biohazards

US propagates through soft tissues as an oscillating, longitudinal, mechanical wave. Much of the transmitted sound energy is converted to heat. Although the amount of such *thermal bioeffects* is small, prolonged exposure may cause damage to sensitive tissues, like nerves, and developing embryonic fetal tissues.<sup>4</sup> Thermal bioeffects are particularly increased during the application of spectral and color Doppler settings because these technologies use longer pulses resulting in greater energy transfer to the human body.

In addition, US may have *non-thermal bioeffects* like cavitation (stable and inertial), microstreaming, and acoustic force streaming. Of these, inertial cavitation is particularly concerning as it causes rupture of gas bubbles in soft tissue (such as the lung or gut) with intense localized effects including high pressures, free radical formation, cell membrane disruption, etc.

The magnitude and significance of these effects has been poorly characterized and remains largely theoretical. However, knowing that this can occur is important for appreciating that US is not a zero-risk technology.

### Specific Safety Issues

- *Cross-transmission of organisms:* A soiled probe is a potential source of transmission of microbes including *Pseudomonas*, methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococcus (VRE).<sup>1</sup> A simple paper wipe fails to sterilize probes and can allow for cross-transmission of such microbes.<sup>5-7</sup>
- *Blood-borne organisms:* Hepatitis B, hepatitis C, and HIV can be transmitted by blood, blood products, and body fluids on instruments.<sup>8,9</sup> The risk of transmission should be considered if using US over an open wound.
- *Pregnancy:* Concerns have been raised about the risks to the fetus due to the application US imaging during

**Table 1. Applicability of POCUS in the ED and Urgent Care**

• FAST and eFAST scan	• Pulmonary embolism
• AAA	• Focused cardiac ultrasound
• Pneumothorax	• Renal scan
• Pulmonary edema	• Obstetric evaluation
• Pneumonia	• Musculoskeletal scan
• Pleural effusion	• Foreign body removal
• Venous cannulation	• Fracture reduction
• Assessment for shock	• Retinal detachment
• Central line insertion	• Scrotal/testicular assessment
• DVT	

FAST, focused assessment with sonography in trauma; eFAST, extended FAST; AAA, abdominal aortic aneurysm; DVT, deep vein thrombosis

pregnancy.<sup>10,11</sup> In addition, evidence collated from laboratory studies revealed potential clinically significant effects to fetal development from the energy of US waves.<sup>12</sup> However, multiple authors and professional bodies agree that ultrasound is safe during pregnancy provided certain precautions are undertaken.<sup>13,14</sup>

- *Ophthalmology:* Ultrasound may pose a thermal risk to highly sensitive tissues of the eye.<sup>15</sup>

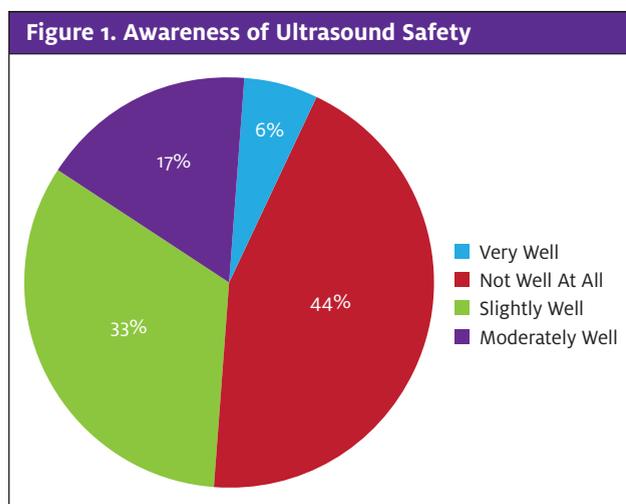
### Safety Indices

All US machines feature a real-time display of thermal and mechanical indices. As these indices vary with system settings of the machine, it is important to ensure these remain within recommended values.

*Thermal index (TI)* is defined as the ratio of the current acoustic power output to the acoustic output power required to cause a temperature rise of 1°C in tissues. Because different tissues have a different capacity for heating, three types of TI have been developed: TI in soft tissue at the focus (TIS), TI in the bone at the focus (TIB), and TI at the cranial surface (TIC).

TIS is applicable in all soft tissues and during pregnancy <8 weeks gestational age. TIB is specifically applicable in pregnancies dated >8 weeks gestational age. TIC is used in neonatal brain ultrasound. It is important to remember that the TI is a ratio, not an absolute value. For instance, during early pregnancy scanning, the following information may be displayed: "TIS=0.5." This should be interpreted as, *The current power output is 0.5 times that which would cause temperature rise in soft tissues at focus of 1°C.* This is not the same as saying the temperature will rise by 0.5°C.

In addition, *mechanical index (MI)* provides some information about the probability of cavitation events in the tissue. The MI ranges from 0 to 1.9. Transient cavitation can occur with MI values of >0.3. Inducing tran-



sient cavitation probably confers very little clinical risk to adults. However, in neonates or pediatric patients, keeping the MI <0.4 is advisable if gaseous bodies are present within the beam path (ie, lung, gut etc.).

### Maintenance Issues

Ultrasound is not only operator-dependent but also machine-dependent. A defective machine may give improper diagnostic information. Maintenance of the machine is the clinician's responsibility. It is important to check for worn or damaged parts and damaged transducer cables, and to verify the integrity of the transducer face and proper functioning of all the elements. Finally, an image uniformity check can be easily accomplished by applying a small amount of gel to the transducer surface and running a finger back and forth.

### Awareness Among Clinicians

Although there are safety consideration regarding the clinical use of US, there is generally a lack of awareness of this issue among most clinicians.<sup>16,17</sup> We recently conducted a local survey among ED clinicians which revealed that awareness of the safety and maintenance of ultrasound varies considerably from one clinician to the next. In the survey, 44% of ED clinicians felt that they were not well aware of US safety and maintenance issues (Figure 1). Multiple studies across Europe, North America, and Australasia have demonstrated that even experienced users of ultrasound knew little about the safety considerations in diagnostic US use.<sup>18</sup>

The Australasian College for Emergency Medicine (ACEM) endorses policies and guidelines on the credentialing of US in the ED.<sup>19,20</sup> However, there is a lack of rigorous protocols for the safety and maintenance of

US. There is a demand from the ACEM for such protocols on the clinical applications of US.<sup>21</sup> Moreover, how these policies will be created and practiced remains unclear.

## Recommendations

### 1. Minimizing the risk of cross-infection by US surfaces

- Transducers which have not been in direct contact with body fluids or broken skin should be cleaned by first removing all gel with an absorbent cloth followed by wiping the transducer and cable with a low to medium level disinfectant. However, some cleaning wipes may not be suitable for all systems. Specifically, frequent use of alcohol wipes after every patient may degrade the rubber seal of the probe on some transducers.<sup>22</sup> The system console and cables also require regular cleaning.
- Applying a sterile cover on the probe during a sterile procedure may reduce the risk of cross-infection. Remember that regular US gel is not sterile unless it is specifically labeled as such.
- The use of single disposable gel bottles is the preferred option for UC and ED use. If the gel is decanted into gel bottles from bulk containers, there must be provision for cleaning of gel bottles.

### 2. Minimizing biological effects of US

- *Prudent use:* US should be used by suitably qualified health professionals to provide medical benefit to the patient.<sup>23</sup> Alternatively, it is reasonable for the US to be used by trainees under direct supervision whereby direct correction of a technical or diagnostic error is possible.
- *ALARA principle:* The acoustic dose to the patient should be as low as reasonably achievable (ALARA). Common breaches of ALARA include excessive scanning times, high power output, and inappropriate use of high energy modes.
- *During pregnancy:* Observe the TIS in pregnancies <8 weeks and TIB in pregnancies >8 weeks. If the TI is >1.0, turn down the acoustic output power control. Routine use of Doppler ultrasound in the first trimester is not advisable.<sup>13</sup>
- *In neonates and pediatric patients:* If possible, minimize the probability of inertial cavitation when scanning near air-filled structures (eg, lung, bowel) by reducing the power output until MI <0.4.
- *Ophthalmology:* The eye may be covered with a Tegaderm, especially if there is a wound in or around the eye. Some ultrasound machines have settings for ophthalmologic use to prevent eye injury.

### 3. Minimizing misdiagnoses

- Formal education in POCUS and established protocols for demonstrating competency should be developed to ensure prudent use of POCUS in the hands of clinicians. Those holding certifications in limited areas (eg, FAST, eFAST) should resist the compulsion to expand their practices into other areas without formal training and oversight.

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# CONTINUING MEDICAL EDUCATION

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**Expiration Date:** February 28, 2022

## 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 the Urgent Care Association and the Institute of Urgent Care Medicine. The Urgent Care Association is accredited by the ACCME to provide continuing medical education for physicians.

The Urgent Care Association 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

- **Joshua W. Russell, MD, MSc, FACEP**  
*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.*

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## Practice Review: Patients Presenting with Symptoms of Odontogenic Infection (page 19)

- 1. Antibiotics are required in patients presenting with dental complaints when:**
  - a. Dental pain is the sole complaint
  - b. The patient is sitting forward and drooling and there is a concern for Ludwig's angina
  - c. The patient demands a prescription
  - d. The patient has failed multiple courses of antibiotics
- 2. Inconclusive radiography in a patient with facial swelling should prompt assessing for:**
  - a. Mumps
  - b. Acute parotitis
  - c. Sialolithiasis
  - d. All of the above
- 3. Red flags for emergent referral related to odontogenic presentations include which of the following?**
  - a. Signs of sepsis
  - b. Tachycardia
  - c. Difficulty breathing with stridor
  - d. All of the above

## Are There Any Restrictions on an Urgent Care Provider Charging a No-Show or Cancellation Fee? (page 38)

- 1. The American Medical Association's Code of Ethics says it is permissible to charge patients a fee for missed appointments:**
  - a. If the policy is applied to all patient groups
  - b. If patients have been made aware of the policy
  - c. In states where such fees are allowed
  - d. All of the above
  - e. Never
- 2. There is no standard for how much to charge as a no-show fee. However, the amount should be appropriate for the fee to serve as:**
  - a. A deterrent to missing appointments
  - b. A penalty for patients who have missed an appointment
  - c. A revenue stream
  - d. A way to offset the cost of pro bono work

- 3. If an urgent care operator decides to impose no-show fees, they should create a written policy that requires the signature of prospective patients. Further, that policy should state all but which of the following?**
  - a. The patient will have to submit an insurance claim for reimbursement of the fee
  - b. By signing, the patient is consenting to financial liability for missed or late appointments
  - c. Missed or late appointments amount to a lost business opportunity for the operator, as staff could have accepted other patients at the time of the no-show
  - d. The amount of the fee

## A Hand Wound Caused by a Pressure Washer (page 41)

- 1. Which of the following complications may be present in patients who have experienced hand wounds when using a pressure washer?**
  - a. Loss of finger
  - b. Flexor tenosynovitis
  - c. Loss of range of motion
  - d. All of the above
- 2. Which of the following is not a common result of high-pressure injuries?**
  - a. Finger fracture
  - b. Laceration
  - c. Swelling
  - d. Pain
- 3. Surgical intervention is usually required to repair injuries caused by pressure washers when:**
  - a. There is sand or paint in the wound
  - b. The skin has not been broken
  - c. The pressure washer has sprayed water onto a bystander
  - d. The temperature of the water is very cold

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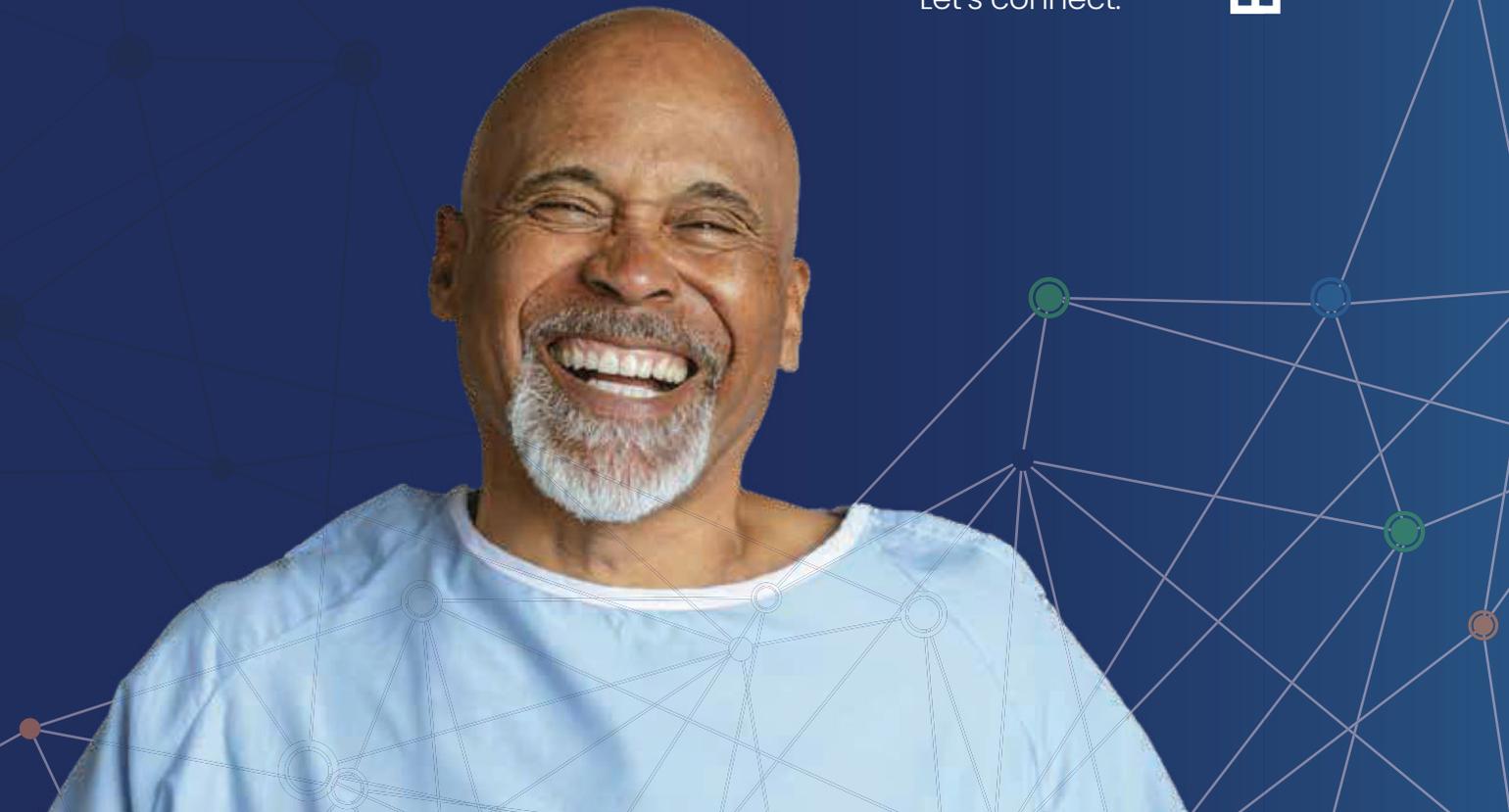
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# Practice Review: Patients Presenting with Symptoms of Odontogenic Infection

**Urgent message:** Odontogenic infections can pose life-threatening risk when swelling occurs in close proximity to the airway. It is essential that the urgent care provider be able to differentiate cases of relatively straightforward infection that can be managed in the urgent care setting vs true airway emergencies.

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## Introduction

While odontogenic or “dental” infection is a subject scarcely covered in medical training, dental-related presentations worldwide are on the rise. In the U.S., for example, dental visits account for up to 3% of visits to emergency rooms.<sup>1</sup> Odontogenic infections can pose a life-threatening risk when in close proximity to the airway. Differentiating emergent cases requiring immediate consultation from those that are either non-odontogenic or that can be managed on an outpatient basis is a frequent challenge in all acute care settings.

### Essential Questions Addressed in This Article

- What do you need to immediately assess in a patient presenting with possible odontogenic infection?
- What should you consider in the history?
- Which areas of the maxillofacial region should you assess?
- When are antibiotics indicated for odontogenic infections and dental pain?
- What are the red flags requiring immediate oral maxillofacial surgeons (OMFS) review and treatment?

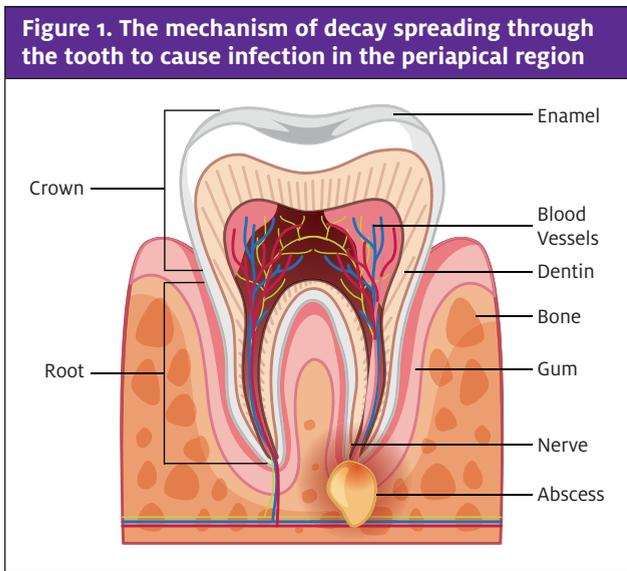
## Pathophysiology

The majority of dental infections arise from dental caries which can penetrate the outside enamel and inner den-



tine to enter the blood supply in the pulp chamber, causing acute dental pain, called pulpitis. The patient will describe a severe throbbing ache which is difficult to locate. Commonly, the patient will not show systemic signs of spread such as swelling or sepsis symptoms; pain management will be sufficient in these cases.<sup>3</sup>

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source. Infections arising from the lower teeth can spread to the sublingual and submandibular/submental spaces, as well as to the parapharyngeal space and mediastinum. There is a risk of airway compromise with these infections due to the swelling of the parapharyngeal/paraglottic spaces leading to narrowing of the airway. Upper arch dental infections can lead to buccal space abscess, or canine space abscess, which can cause periorbital cellulitis. In rare cases, this can cause cavernous sinus thrombosis and visual loss.<sup>5</sup>

**Clinical Case**

A middle-aged man presented with facial and neck swelling. He reported feeling unwell and was not talking in a coherent manner. His other chief complaint was a toothache of 2 days’ duration. He had not visited a dentist in over 3 years. His oxygen saturation had begun to deteriorate.

Acetaminophen and nonsteroidal anti-inflammatory drugs will be the first line of treatment.

If not treated in short order, pulpitis can progress into the alveolar bone surrounding the tooth, forming a periapical abscess (Figure 1). The patient will find the tooth tender to bite on; the precise source of the pain becomes easy to locate due to the confined area in which the abscess resides.<sup>4</sup> This phase can last from a few weeks to a few months.

Left unresolved, the subsequent infection can break through the cortical plate of the jaw, allowing bacteria to enter the fascial planes. This is often when patients present with facial swelling and systemic signs.<sup>4</sup>

The extent and spread of infection depend on the

**Immediate Assessment**

The airway may be threatened by the elevation and posterior displacement of the tongue, as well as parapharyngeal/ paraglottic swelling and edema.

Airway compromise can be assumed when a patient situates himself in a sitting position with the face looking down, drooling saliva, using accessory muscles, and unable to form a single sentence in one breath. In addition to stabilization measures, this should prompt an immediate request for consultation due to the severity of the case. In cases of Ludwig’s angina, which is explained later, intubation may be required with aid from anesthetics. At this point, a stat dose of dexamethasone 8 mg can aid in reducing the edematous swelling.

Table 1. Employing SOCRATES in the Pain History	
Pain History	Examples
Site	Posterior teeth, upper arch, lower arch
Onset	Sudden onset, gradually over a period of days
Character	Early dental pain will often be severe, sharp, and constant Pain relating to facial abscesses will be similar to a throbbing ache
Radiates	Pain can travel vertically between the upper and lower dental arches due to the close innervation of the head and neck
Associated symptoms	Nausea, fatigue, vomiting
Time/duration	Dental pain is often constant in the early stages; later stages will be spontaneous
Exacerbating/relieving factors	Amount of pain relief taken; be aware dental pain can often cause patients to have overdoses of pain relief Pain on closure of teeth
Severity	Note the patient’s subjective pain ratings

*“NSAIDs at regular intervals have been shown to be the best option for dental pain. Acetaminophen can be added to promote a synergetic effect. If this does not yield adequate pain relief, a short-term opioid prescription can be considered.”*

### Taking The History

The history can help to determine the source of the pain and whether a collection has started to form. To begin, take a pain and swelling history; SOCRATES is a mnemonic that can be helpful for the pain history (Table 1). Patients presenting with dental pain will likely be able to locate the pain in the dental arch, but asking *Where does it hurt to bite?* can help locate the causative tooth.

A patient presenting with gradual-onset pain that suddenly worsens suggests an acute exacerbation of a chronic dental infection. Any patient presenting with sudden-onset toothache with no obvious swelling needs to seek help from an emergency dentist.

Facial swelling of <24 hours duration is likely to be edematous in nature, whereas longstanding facial swelling may have a collection of exudates which requires drainage.

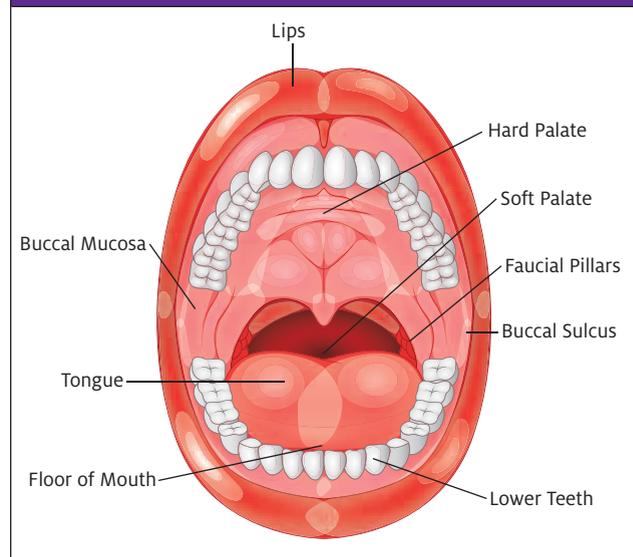
Patients may be alarmed by sudden swelling upon waking; however, this edema may be due to the patient being supine for a long period of time. It is important to identify any history of previous treatment carried out on the dentition or oral cavity, including dental treatments, previous drainage, and prescription of antibiotics. Lastly, identifying the most recent dental visit and the patient’s ability and willingness to follow up with a dentist following their visit can help in determining the next steps.

### Clinical Assessment

Begin with the extra-oral examination. Evaluate surrounding structures to detect the severity and rule out Ludwig’s angina.<sup>7</sup> Look at the patient straight-on and assess for asymmetry and the location of the swelling. Then stand behind the patient and feel the border of the mandible down to the neck, assessing for unilateral/bilateral swelling and the border of the mandible.

Assessment of the facial swelling location and a relationship to any adjacent or affected structures should be noted. For example, inability to palpate the lower border of the mandible indicates a collection in the submandibular space. Closure of the eye due to swelling

**Figure 2. Intraoral landmarks to aid the assessment of odontogenic swelling.**

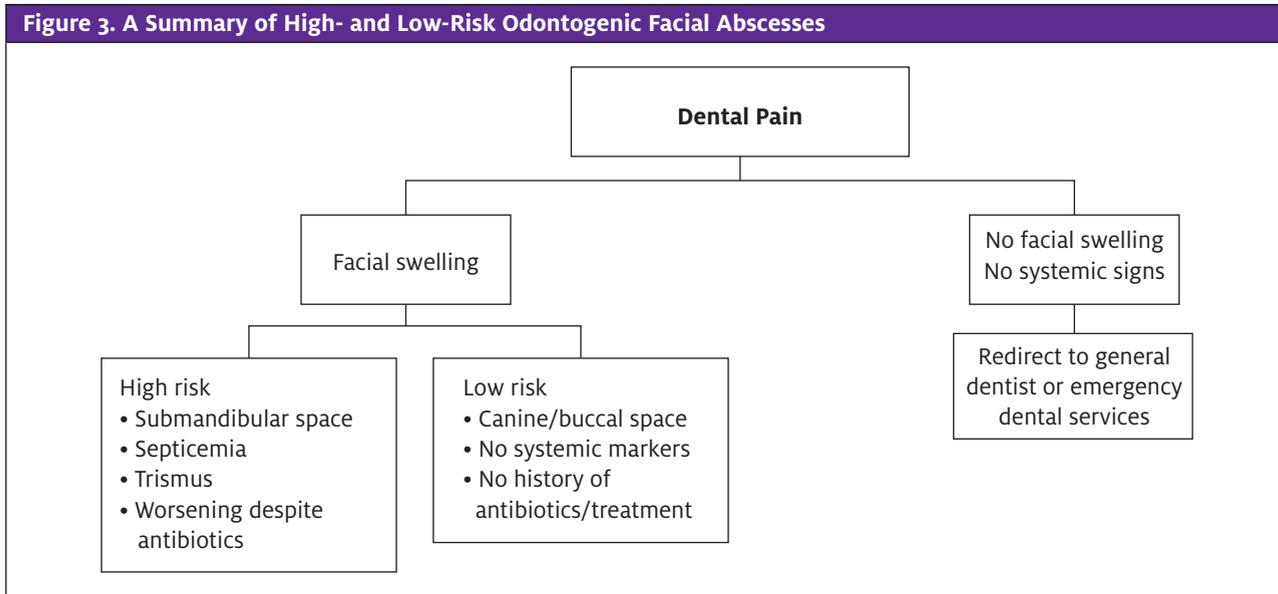


of the cheek is usually due to a canine space infection wherein the culprit tooth is located in the maxillary arch; very rarely, these can lead to vision compromise if the orbital septum is violated.

Often, buccal space abscesses can masquerade as a submandibular abscess. If the swelling is above the border of the mandible, it is likely to be a buccal space abscess, as opposed to a submandibular abscess. Further examination of the swelling through bimanual palpation can aid in assessing the consistency and extent of the swelling. Swelling which indicates a collection of pus can be fluctuant in the early stages and progress to firm due to pressure.<sup>7,9</sup> The site of swelling can also indicate the risk status, with those located in the submandibular and submental regions posing a greater risk due to proximity to the airway.

Evaluate the opening of the mouth. Trismus occurs due to submandibular, submasseteric, or medial pterygoid space abscesses as well as Ludwig’s angina. Differentiation between true and pain-related trismus through physical manipulation of the jaw adds to the clinical significance of the case. Any reduction in the normal range of the mouth opening (between 35 mm and 55 mm) may indicate fascial space infection.<sup>8</sup>

Through palpation of the floor of the mouth, tongue movements, swallowing difficulties, and drooling, the intra-oral examination offers vital information to aid the assessment of airway risk.<sup>9</sup> This can be achieved with one digit, looking for tenderness, firmness, and swelling and comparing with the contralateral normal floor of the mouth.



The buccal sulcus (the space between the teeth and the buccal mucosa) is assessed next for obliteration of the sulcus, as this in isolation indicates a buccal space abscess. Note if there is swelling of the faucial pillars, soft palate, and the uvula (Figure 2). The provider can often identify frank decay or broken teeth, which can be a strong indicator of odontogenic infection.

*"Any systemic spread, such as swelling, temperature, or rigors will require antibiotics. However, without such signs, oral antibiotics are of questionable utility."*

#### Initial Urgent Care Examination

In the absence of red flags, imaging with plain radiography is preferable to CT, which has been found to be overutilized in assessment of odontogenic infection.<sup>10</sup> Radiolucency around the apices of the teeth can indicate accumulation of granulation tissue, thus clearly indicating an infection of odontogenic origin.<sup>11</sup>

#### Red Flags for Emergent Referral

Any sign of sepsis, including pyrexia, tachycardia, tachypnoea, or increased white blood cell warrants a referral to maxillofacial surgeons.<sup>12</sup> Dysphagia will also require a second opinion; a red flag for referral will be an inability to swallow liquids and drooling.<sup>7,9</sup> Children with

facial swelling will also warrant a second opinion, as infection in these patients can exacerbate quickly.

Submandibular/submental abscesses in close proximity to the airway will need close review. In these cases, it is often preferable to surgically drain earlier. A warning sign will be the spread of infection past the midline; this will indicate the collection is spreading along the fascial planes. Immunocompromised patients will have a reduced ability to clear the dental infection and will often deteriorate faster and, therefore, may need admission.

#### Ludwig's Angina

Ludwig's angina is rapidly progressing cellulitis and bilateral edema of the submandibular, submental, and sublingual spaces. This poses an immediate risk for upper airway obstruction and requires immediate action.<sup>7,13</sup> The primary site of origin is the submandibular fascial spaces, causing spread to the sublingual and submental spaces. Symptoms can include pain, swelling, elevation of the tongue, inability to swallow saliva, and "hot potato" voice. While awaiting EMS response for ED referral, consider IV fluids, IV antibiotics, and a dose of systemic corticosteroids to reduce oropharyngeal and submandibular edema; these therapies should not delay ED/surgical evaluation.<sup>14,15</sup>

#### Management of Dental Infections Requiring Further Consultation from the Maxillofacial Team

The primary question to answer in regard to odontogenic fascial swelling is, *Does the patient require surgical*

*drainage?* Any patient with substantial swelling which has evidence of a collection or associated systemic signs of spreading infection as described above will likely require a second opinion from the maxillofacial team.

### Management of Dental Infection Not Requiring Admission

Nonemergent cases include those patients who present with swelling in low-risk regions or who do not show systemic signs of spreading infection (malaise, fever, rapid heart rate).

#### Pain Management

NSAIDs at regular intervals have been shown to be the best option for dental pain. Acetaminophen can be added to promote a synergetic effect.<sup>16</sup> If this combination does not yield adequate pain relief, a short-term opioid prescription can be considered if deemed appropriate after reviewing the patient's medical history.

#### Antibiotics

Any systemic spread, such as swelling, temperature, or rigors will require antibiotics.<sup>17</sup> However, without such signs, oral antibiotics are of questionable utility. There are many sources of information for correct antibiotic prescribing including the Faculty of General Dental Practitioner guidelines or even the British National Formulary.<sup>18,19</sup> Amoxicillin and metronidazole in combination or amoxicillin/clavulanic acid may be considered in the first instance after consulting the patient's allergy status. Patients with true penicillin allergy can be prescribed clindamycin and metronidazole.<sup>20</sup>

Encouragement to visit a dental practice is essential. Patients should be educated that care delivered in urgent care is not definitive. Further, it is advisable for urgent care centers to maintain contact information for emergency dentists, or even free dental care charities.

### Non-Odontogenic Etiologies

If facial swelling occurs, dentition appears normal, and the patient does not have history of prior dental pain, there may be alternative causes. It is advisable to keep this in mind when assessing a facial swelling. One such cause could be inflammatory lesions of salivary glands, such as mumps, acute parotitis, or sialolithiasis. In the submandibular region this can be submandibular sialadenitis. This can be investigated further with an ultrasound, or an MRI of the salivary glands.<sup>21</sup>

Cellulitis can cause swelling in the deep layers of the facial tissues, often occurring on the cheek. This can be caused by broken areas of skin where bacteria can pen-

etrate through the layers.

Another rare finding can be reactive hyperplasia of lymph nodes; this lymphadenopathy can progress into a submasseteric abscess which can mimic dental facial abscesses.<sup>21</sup> For example, in children, lymphadenitis can masquerade as a submandibular abscess. Any progressive increase in swelling in the region of lymph nodes with no acute cause can raise suspicion of lymphoma.

### Conclusion

A patient with only toothache in their first visit may progress to a facial abscess. Inform the patient of warning signs of spreading facial swelling toward the neck, eye, or associated systemic signs. This will also aid in conveying the importance of seeking appropriate dental care to the patient. ■

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# Implementing Clinical Practice Guidelines in Adults with Hypertension: An Effective Practice Change in Urgent Care

**Urgent message:** Too often, patients first learn that they have hypertension secondary to an unrelated presenting complaint—often, in the urgent care setting. Improving adherence to treatment guidelines may improve management and, ultimately, outcomes.

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## Abstract

### Background

There are approximately 100 million adults in the U. S. with hypertension (HTN); almost half go undiagnosed. The adjusted national cost burden for the treatment of HTN exceeds \$130 billion. Early HTN screening and treatment can help avoid unwanted cardiovascular events such as heart attack and stroke. Considering the limited research on HTN management in the urgent care setting, along with varying provider perceptions, the majority of patients leave the urgent care without an evaluation and treatment plan.

### Local Problem

Chart audits at an urgent care clinic in the southwest region of the United States revealed that 80% to 100% of clinicians were noncompliant in providing proper HTN management. Further, BP measurements were not uniformly nor accurately performed by the clinic staff.

### Objective

To improve the effective management of adult HTN within an urgent care setting over a 90-day period.

### Methods

A mixed-methods approach and four rapid plan-do-study-act (PDSA) cycles were used. Throughout the implementation process, data collected from surveys, observations, and chart audits were input into an aggregate data workbook and analyzed through a series of run charts. There were four primary interventions:

- A BP measurement checklist to provide a clinic protocol
- A patient shared decision-making (SDM) tool to increase patient involvement in HTN care
- A clinician adult high BP best practice checklist for adherence with best evidence-based practice (EBP) guidelines
- A team engagement plan to increase team collaboration

### Results

Informed by composite scores regarding BP measurement accuracy, adherence to EBP guidelines, and patient

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**Figure 1. Patient Surveys (given to all patients whose triage BP = SBP ≥ 130 and/or DBP ≥ 80)**

	1 – Strongly disagree	2 – Disagree	3 – Neutral	4 – Agree	5 – Strongly agree
1. I search treatment information about my health problems on my own (ex. Surgery)	1	2	3	4	5
2. I require the medical staff’s explanation about the diagnosis results of my health problem	1	2	3	4	5
3. I prefer to partner with medical staff and make a decision to maintain physical/mental health together	1	2	3	4	5
4. I was provided specific instructions by the <b>medical assistant</b> before my <b>blood pressure</b> was taken (ex. How I need to sit, no talking during the measurement taking process, where my arm needs to be placed, etc.)	1	2	3	4	5
5. The <b>provider</b> discussed my blood pressure reading with me and inquired more about my current symptoms and medical history	1	2	3	4	5
6. The <b>provider</b> went over the overall treatment plan regarding my blood pressure to my satisfaction (including when and where to follow-up)	1	2	3	4	5
7. I feel the <b>provider</b> made an effort to <b>ensure my understanding</b> of my blood pressure results	1	2	3	4	5
8. I was provided with <b>easy-to-read resources and tools</b> about blood pressure monitoring at home	1	2	3	4	5
9. If a provider told me I had high blood pressure and I were to be provided with a personalized resource on high blood pressure, it would improve my understanding of the topic and encourage me to make changes	1	2	3	4	5
10. When it comes to my health, what matters to me is...					

HTN comprehension and satisfaction, adult HTN management improved from 28% to 88% in 90 days. Both checklists produced positive outcomes by improving BP measurement accuracy and HTN quality care compliance. The patient SDM tool enhanced overall BP patient comprehension and increased BP management satisfaction with a mean composite score of 94% throughout implementation. Overall, the healthcare team collaboration rose from 55% to exceed the goal of 80%, through a series of team activities.

**Discussion**

Success in meeting all goals was a direct result of a combination of team and patient engagement strategies, demonstrating the usefulness of the intervention measures in improving effective BP management in an urgent care setting. Screening for undiagnosed HTN in urgent care clinics through the development of specific protocols offers an important opportunity to reduce associated disease burdens.

**Introduction**

Hypertension (HTN) affects over 100 million U.S. adults and contributes to the leading cause of mortality in our nation, which is heart disease.<sup>1,2</sup> Linked to a number of health disease burdens such as vision loss, renal disease, heart failure, sexual dysfunction, and peripheral artery disease, the annual HTN-associated healthcare costs total approximately \$131 billion.<sup>3</sup> Perhaps most alarming, approximately half (46%) of those individuals with HTN do not even know it, leaving them at risk for years of damage before symptoms develop.<sup>1</sup> With identification of HTN through early screening and treatment, substantial benefits can be recognized and unwanted cardiovascular events such as heart attack, stroke, or death can be avoided.<sup>4</sup>

Furthermore, there are approximately 90 million reported visits made to the urgent care system each year; statistically, it’s likely that almost half of the adults we come in contact with each day have undiagnosed HTN.<sup>5</sup> In the clinician’s perception, elevated BP in the urgent care setting is often thought to be related to pain, anx-

**Figure 2. Test of Changes**

Intervention	PDSA Cycle 1	PDSA Cycle 2	PDSA Cycle 3	PDSA Cycle 4
<b>1. Accurate BP Measurement Checklist</b>	Implement BP Measurement Checklist	Patient Secret Shopper (Patient scores MA on BP measurement process accuracy vs the provider)	Focus on repeat BP Process Accuracy (Observation focused on repeat BP measurements for those qualifying patients)	BP Champion (MA aids with training, chart audits, checklist log)
<b>2. High BP Treatment Plan Tool</b>  * Patient Shared Decision-Making Tool	Implement Patient SDM Tool	Provider Spread (to include three additional providers)	Patient Inquiry About Long-term Benefits of Tool (Survey Adjustment)	Spread Patient Population to include “Elevated BP” Category & In-room Patient Education (AHA’s What is High BP Fact Sheet)
<b>3. Provider High BP Best Practice Checklist</b>	Implement BP Best Practice	Checklist Provider Spread & Education (Target Organ Damage Desk Top Cue-Card; EVB articles)	Motivate Provider Change (Provider Contest)	Spread Patient Population to Include “Elevated BP” Category
<b>4. Team Engagement Plan</b>	Implement Team Engagement Plan (Meetings, morning huddles, weekly contests, emails, vision board)	Enhance Team Communication Through Group Text (appeal to generation Y)	Implementation of Daily Thank-you Notes (“Thank a Co-Worker”)	Team Motivational Meetings

iety, or white-coat syndrome, with the assumption being that after discharge their BP will normalize.<sup>6</sup> This results in a large majority of adult patients with asymptomatic HTN in the urgent care setting not being evaluated and being discharged without a HTN specific plan of care.<sup>7</sup> With the declining trend in the percentage of patients having a primary care clinician, the urgent care setting is often viewed as the frontline of healthcare for patients due to its convenient access and cost savings.<sup>8,9</sup> It is imperative that this setting engage in the early identification and management of asymptomatic HTN to help reduce overall mortality rates.

**Literature Review**

There is a paucity of research on the evaluation and management of asymptomatic HTN patients within the urgent care setting. The American College of Cardiology (ACC) and the American Heart Association (AHA) Task Force provides the latest evidence-based HTN recommendations and updated BP categories for medical professionals to follow.<sup>10</sup> In addition, the U.S. Preventive Services Task Force (USPSTF) provides HTN screening recommendations for all adults ≥18 years old.<sup>4</sup> These guidelines provide strong data-driven support on the screening and management of adult HTN but lack the evidence-based guidance on how to manage these patients within certain specialty settings, such as urgent care.

Although limited, there are some findings on the management of asymptomatic HTN patients in the ED. The American College of Emergency Physicians (ACEP)

has a clinical policy on the evaluation and management of asymptomatic HTN patients in the ED, which recommends that patients with asymptomatic, markedly elevated BP be referred for outpatient follow-up.<sup>11</sup> Overall, the literature revealed that referral and follow-up for patients who have asymptomatic high BP in the ED setting lacked adherence, partly due to clinician attitudes and being unfamiliar with the latest guidelines.<sup>12</sup> When it comes to screening, a recent study found that patients who had an elevated BP measured in the ED had an increased incidence of atherosclerotic cardiovascular disease (ASCVD), heart attack, or stroke by the end of a 6-year follow-up, suggesting the need for further intervention within this type of setting.<sup>13</sup> Furthermore, one recent study suggests that the application of a screening, brief intervention, and referral for treatment (SBIRT) model on asymptomatic HTN patients within the ED setting could help encourage early identification and referral for these patients.<sup>14</sup> It is reasonable to conclude that similar to the ED, the SBIRT model can be applied to patients in the urgent care setting. This initiative examined how the latest HTN guidelines were implemented in an urgent care setting and to further explore potential gaps in HTN management.

**Rationale and Objective**

An initial root cause analysis was performed to help identify gaps in HTN care at an urgent care clinic in the southwest region of the United States. When compared to the latest 2017 ACC/AHA HTN guidelines, evaluation

Figure 3.

### High Blood Pressure Treatment Plan

*A Shared Decision-Making Tool*

Patient Name: \_\_\_\_\_ DOB: \_\_\_\_\_ Date: \_\_\_\_\_

During your visit today you had two elevated blood pressure readings. Here are some facts:

- Approximately 1 in 2 (46%) U.S. adults have high blood pressure. *(Source: American Heart Association, 2018)*
- Often there are no obvious symptoms.
- High blood pressure puts you at risk for heart attack and stroke.
- Certain lifestyle choices may put you at greater risk.

This tool was developed to spark awareness, initiate healthy interventions, and ensure proper follow-up.

**Your Blood Pressure Measurement in Clinic**

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	1 <sup>st</sup> reading in clinic	2 <sup>nd</sup> reading in clinic
<b>Systolic</b>		
<b>Diastolic</b>		
<b>Heart Rate</b>		

**Treatment Options:** *A provider-patient shared decision*

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**Lifestyle Modifications (specify)**

- Weight loss
- Healthy diet (DASH)
- Reduce sodium intake
- Increase physical activity
- Smoking cessation
- Alcohol intake recommendations
- Other: \_\_\_\_\_

**Home blood pressure monitoring** (see provider instructions)

**Continue taking your currently prescribed blood pressure medications**

**Follow-up Recommendations**

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**Follow-up with:**

- Your primary care provider
- Your cardiologist
- Hospital emergency department

**If you don't have a primary care provider:**

- Call your insurance for their recommended list
- See referral list provided to you today
- Other: \_\_\_\_\_

**Follow-up timing:**

- Immediately (1-3 days)
- 1-2 weeks
- 4 weeks

of the BP measurement process revealed that staff were missing critical elements in performing an accurate BP measurement with each patient encounter. In addition,

for those patients who had a systolic BP of  $\geq 130$  and/or diastolic BP  $\geq 80$  (HTN Stage I) measured in clinic, pre-intervention patient surveys (n=20) (Figure 1) revealed

that BP readings were not being addressed by the clinician in 80% of visits, indicating a lack of quality in care. Furthermore, a randomized chart review of adult patients (n=40) who had a systolic BP of  $\geq 130$  and/or diastolic BP  $\geq 80$  (HTN Stage I) or higher, conducted between February 1, 2019 and March 31, 2019, revealed that 80% to 100% of charts were noncompliant in following best practice guidelines through repeating an elevated BP reading, utilizing proper diagnosis codes, and providing HTN education and specific follow-up instructions. Of note, patients' BP fell within HTN Stage II BP category (SBP  $\geq 140$  and/or DBP  $\geq 90$ ) in 98% of charts reviewed. Together, these findings reveal a gap in HTN quality care in the urgent care setting and the further need to improve the management of these patients through a quality improvement (QI) study. For this reason, the implementation of QI strategies aimed to improve the effective management of adult high blood pressure in an urgent care setting from 28% to 60% over the course of 90 days.

## Methods

### Study Setting and Inclusion Criteria

This QI study was implemented at an urgent care clinic in south-central Arizona. Patient population was drawn from a large metropolitan area primarily of Caucasian (54%), Hispanic (31%), and African-American (6%) ethnicity with an uninsured rate of 13% and poverty level of 12%.<sup>15</sup> Averaging approximately 35 visits per day, the project site operates each shift with one medical clinician, one back-office medical assistant, and one front-office representative. Inclusion criteria included all adult patients  $\geq 18$  years old who presented to the clinic for an urgent care visit between July 15, 2019 and September 8, 2019 on most days of the week while participating staff was working. The Institutional Review Board (IRB) approved this initiative as excused, meeting federal requirements for a quality improvement project. Additionally, no outside funding was received.

### Design

In line with the Institute of Healthcare Improvement (IHI) recommendations, this initiative followed four plan-do-study-act (PDSA) cycles, which provided a model for improvement for testing small scale changes before broader implementation.<sup>16</sup> Each of the PDSA cycles lasted 2 weeks to allow for rapid cycle improvements over an 8-week period. Small tests of changes (TOCs) were applied towards four core interventional tools (CITs) based on data from the previous cycle (Figure 2). A mixed methods approach consisting of both

qualitative and quantitative methodologies were used to allow for a more in-depth evaluation of the four CITs. Through the use of quantitative methodology, a retrospective chart review, surveys, and observational tools were performed at baseline and every 3 days. Data were input into an aggregate Excel workbook and analyzed using run charts, which allowed for immediate quality improvements. Qualitative data were gathered from staff and patients' feedback throughout the implementation process and observed for any recurring themes.

### Interventions

There were four CITs utilized throughout this study that were adapted from existing evidence-based practice guidelines, checklists, and toolkits. The first intervention was a BP measurement checklist that was laminated and attached to each vital sign monitor to effectively aid MAs with BP measurement accuracy. The second, a patient-shared decision-making (SDM) tool, the *High BP Treatment Plan* (Figure 3), followed an SBIRT model approach and explained HTN risks and treatment recommendations according to the latest guidelines. The SDM tool was initiated by the MAs during the triage process for patients with a HTN Stage I BP measurement or higher and then given to the clinician to facilitate a bidirectional BP discussion. All identified patients were given a survey at the end of their visit to evaluate their overall satisfaction and comprehension of their BP results. The third tool is the clinician *High BP Best Practice Checklist*, which also followed an SBIRT model approach and consisted of evidence-based HTN recommendations to improve chart compliance. Finally, a team engagement plan that included meetings, huddles, vision boards, and weekly contests, were scheduled to enhance team collaboration throughout the QI process. At the end of each cycle the healthcare team received a survey to assess for changes in team confidence, accountability, attitudes, communication, and support.

### Measures

To help identify areas of improvement, 10 measures were developed, including a balancing measure and aim, along with corresponding operational definitions. Each of the four CITs implemented utilization rates for their process measures through the use of a daily log system. Outcomes measures for each of the four CITs were obtained through the use of individualized scoring tools. The outcome measures for both checklists were determined through mean scores obtained from observation of the BP measurement-taking process (BP accu-

**Figure 4. Test of Change Results**

Test of Change	Measure Type	Baseline (%)	Goal (%)	Results Process = n (%) Outcome = Mean (%)
<b>AIM: Improve Effective Management of Adult High BP</b>		<b>28%</b>	<b>60%</b>	<b>88%</b>
<b>1. Accurate BP Measurement Checklist</b>	Process	0%	70%	465 (87%)
	Outcome	43%	80%	93%
<b>2. High BP Treatment Plan Tool (patient SDM tool)</b>	Process	0%	60%	169 (84%)
	Outcome	30%	80%	94%
<b>3. Clinician High BP Best Practice Checklist</b>	Process	0%	60%	163 (86%)
	Outcome	11%	60%	79%
<b>4. Team Engagement Plan</b>	Process	13%	80%	39 (100%)
	Outcome	55%	80%	83%
<b>Balancing: Average Triage Process Time to not increase more than 20%</b>		<b>4.6 min</b>	<b>&lt;5.52 min</b>	<b>4.4 min</b>

racy score) and chart audit reviews (HTN best practice score). In addition, mean scores were also taken from weekly patient and team surveys (Patient BP comprehension/satisfaction score and team collaboration score) that used a 5-point Likert scale to determine outcome measure results for those instruments.

**Data Analysis**

To study the impact of the four CITs, quantitative data were plotted on run charts and analyzed weekly to identify variations, trends, and shifts in the process during implementation, which helped to identify process improvement or degradation over time.<sup>17</sup> Qualitative data collected through field notes along with patient and staff open-ended questions were evaluated weekly for any recurring themes to gain insight on how they impacted the measures. Throughout implementation, in-person ongoing evaluation of contextual elements was performed to ensure that the information obtained was reliable and valid for completeness and data accuracy.

**Results**

The four CITs produced positive process and outcome measure results, surpassing all goals by the end of the rapid four PDSA cycles (Figure 4). The effective management of HTN in adults in an urgent care setting improved from 28% to 88%, exceeding its goal of 60%. Effective HTN management was accomplished by improving BP measurement accuracy, adherence to EBP guidelines, and patient HTN comprehension and satisfaction. An unintended consequence of the initiative yielded a 4.35% improvement in the triage process time by the end of initiative completion.

**Implementation of a BP Measurement Checklist**

The BP measurement checklist was utilized in a total of 465 patients, improving staff BP measurement technique from 43% to 93% in 90 days. In PDSA cycle 1, staff training improved BP measurement accuracy from a baseline of 43% to 91%. PDSA cycle 2 incorporated a secret shopper which further validated the BP measurement process and ensured that reliable data were collected. To assess the sustainability of the checklist process and desired outcomes, a BP champion was added during PDSA cycle 4 to place leadership responsibility on the MA and to test sustainability. This small TOC was demonstrated to be beneficial by contributing to a final BP accuracy mean score of 94%, surpassing the goal of 80%.

**Patient Engagement**

Over the course of the study, 84% of patients whose BP met HTN Stage I or higher criteria (ACC/AHA, 2017) received HTN specific education with the clinician. Use of the patient SDM tool (Figure 3) resulted in immediate improvement in patient satisfaction and comprehension of their BP results from 30% to 97% during PDSA cycle 1. As predicted, during PDSA cycle 2, the addition of a second clinician decreased tool utilization rates from 90% to 78%; however, patient satisfaction and understanding of their BP measurement remained high at 97%. During cycle 3, the patient survey was revised to inquire about the long-term benefits of BP discussion in a specialty setting. While utilization remained at 89%, 75% of patients stated that the BP discussion would have a positive effect on their long-term health. Cycle 4 increased patient eligibility to include those patients whose BP fell within systolic 120-129 (elevated

BP category).<sup>10</sup> This resulted in a 3% decrease in survey scores, still contributing to an overall survey mean of 94% and exceeding the goal of 80%.

### Implementation of a High BP Best Practice Checklist

A guideline-driven *High BP Best Practice Checklist* was made available for clinicians to use next to the charting station, resulting in a total of 163 checklists used throughout implementation and improvement in HTN chart audit rates from 11% to 80%. After expanding the checklist to include additional clinicians during PDSA cycle 2, there was a predicted initial drop in chart audit compliance with aggregate data identifying target organ damage (TOD) documentation as one of the lowest quality measures. To help improve HTN documentation the use of a TOD desktop cue card was implemented, improving TOD documentation from 43% to 68% by the end of PDSA cycle 3. In PDSA cycle 4, expanding the patient population to include BP measurements that fell within the 2017 ACC/AHA elevated BP category (systolic BP of 120-129 and/or diastolic BP <80) resulted in a decrease in chart audit scores from 89% to 80%. With an overall tool utilization median of 88%, a direct correlation was made between tool utilization and expected outcomes, exceeding both goals of 60%.

### Team Engagement

The launch of the team engagement plan during PDSA cycle 1 resulted in a steady upward trend in team encounters throughout implementation and had a positive correlation with overall team collaboration survey scores, which looked at the overall attitudes, confidence, accountability, support, and communication of the team. To enhance team support and communication methods, the addition of a team group text during cycle 2 and daily shift thank-you cards during cycle 3 were implemented, which proved to be effective in improving team survey scores from 55% to 88%. To help improve team collaboration scores during cycle 4, motivational meetings with each team member were unsuccessfully attempted due to time constraints, which resulted in a 1% decrease from previous cycle survey averages, still exceeding our goal of 80% at the end. The team engagement plan concluded with the completion of 100% of team encounters, with team collaboration scores improving from 55% to 87% by the end of PDSA cycle 4.

### Discussion

Team collaboration improved the management of adult

### BP Management Protocol for Urgent Care

1. First BP measurement is obtained and documented in the chart
  - a. Use validated/automated BP device and ensure bladder is emptied
  - b. Patient seated in chair with back supported and feet both flat on floor uncrossed
  - c. The measured arm is supported and at level of heart
  - d. Correct cuff size chosen
  - e. Instruct patient not to talk during measurement
2. If SBP is  $\geq 130$  and/or DBP  $\geq 80$ , wait at least 5 minutes ensuring the patient has rested quietly (no talking/texting) and repeat reading.
3. Patient and provider are notified of BP result(s) and documented
4. Provider-patient discussion and EMR documentation to include:
  - a. Patient PMH and patient HTN risk factors
  - b. Exam to identify signs of target organ damage (TOD)
  - c. Patient HTN education
  - d. Treatment options: lifestyle recommendations, home BP monitoring, medication adherence education
  - e. Follow-up recommendations: when, with who, place referral if necessary

HTN in the urgent care setting from 28% to 88%, indicating the usefulness of all four CITs in improving HTN care. The use of checklists, composed of evidence-based practice guidelines, was demonstrated to be an effective approach in ensuring patient safety and quality improvement.<sup>18</sup> Specifically, the BP measurement checklist improved efficiency and validity of the measurement-taking process, with an unexpected outcome in improving triage process times. The use of the clinician-driven HTN best practice checklist improved outcomes in HTN quality of care and charting compliance. Finally, the use of the SBIRT model was highly effective in identifying and intervening in the care of hypertensive patients within the urgent care setting, providing the ability to close health disparity gaps for this population.

Most importantly, the direct involvement of patients with the use of a patient SDM tool helped to initiate discussion and patient involvement with HTN care while in the fast-paced environment of the urgent care setting. This was associated with improvement of HTN care and enhanced patient understanding of their BP results. Patients want and need to be involved in their care, as it can lead to measurable advances in safety and quality compliance.<sup>19</sup> The SDM tool provided a positive impact on the urgent care system and patient population, and it would be feasible to spread the use of this tool by placing it in the electronic health record (EHR) system, similar to the Bartels, et al (2017) BP Connect toolkit.<sup>20</sup> Similarly, the development of the team engagement plan that encompassed a variety of activities and communication methods was associated with the effective utilization of all tools and improved

*"This study has significance for local and national systems as its tools provided a simple and inexpensive method to provide accurate BP screening, brief interventions, and follow-up recommendations."*

patient and clinician outcomes. Employees play a vital role in driving the success of the organization and through the use of workforce engagement, employee productivity and performance were enhanced.<sup>21</sup> Without the high level of commitment from the staff, the results could have shown continued gaps in HTN management, but ultimately the effort resulted in positive patient and data trends, as well as the overall success of this QI study.

### Limitations

This study was conducted at one site in an urban community during the summer months. This limits generalizability to other urgent and retail clinics in different community locations that have a fluctuating patient census. Although modified from existing tools, none of the tools utilized were validated, which therefore limits the validity of the results. In addition, the difficulty of patient follow-up within the urgent care setting led to the assumption that patients would adhere to clinician recommendations and seek follow-up care with their primary care clinician or cardiologist. Recommendations to mitigate these limitations include using a larger sample size with a more diverse population and performing patient follow-up calls.

### Conclusion

Over the course of 90 days, the effective management of adult HTN in the urgent setting improved through the guidance and direction of a clinician-led initiative. More importantly, its success in meeting all goals was a direct result of a combination of team and patient engagement strategies. Screening for undiagnosed HTN in the urgent care clinics offers an important opportunity to reduce the associated disease burden while helping to combat our nation's leading cause of death—heart disease. This study has significance for local and national systems as its tools provided a simple and inexpensive method to provide accurate BP screening, brief interventions, and follow-up recommendations within a specialty setting, allowing for easy replication into any healthcare facility that uses vital signs. Future

project sustainability can be maintained through the development of a company-wide protocol and transitioning the tools into the EHR while also promoting its use at other sites. Further research is recommended to determine the long-term impact that the four CITs have on overall patient cardiovascular health. ■

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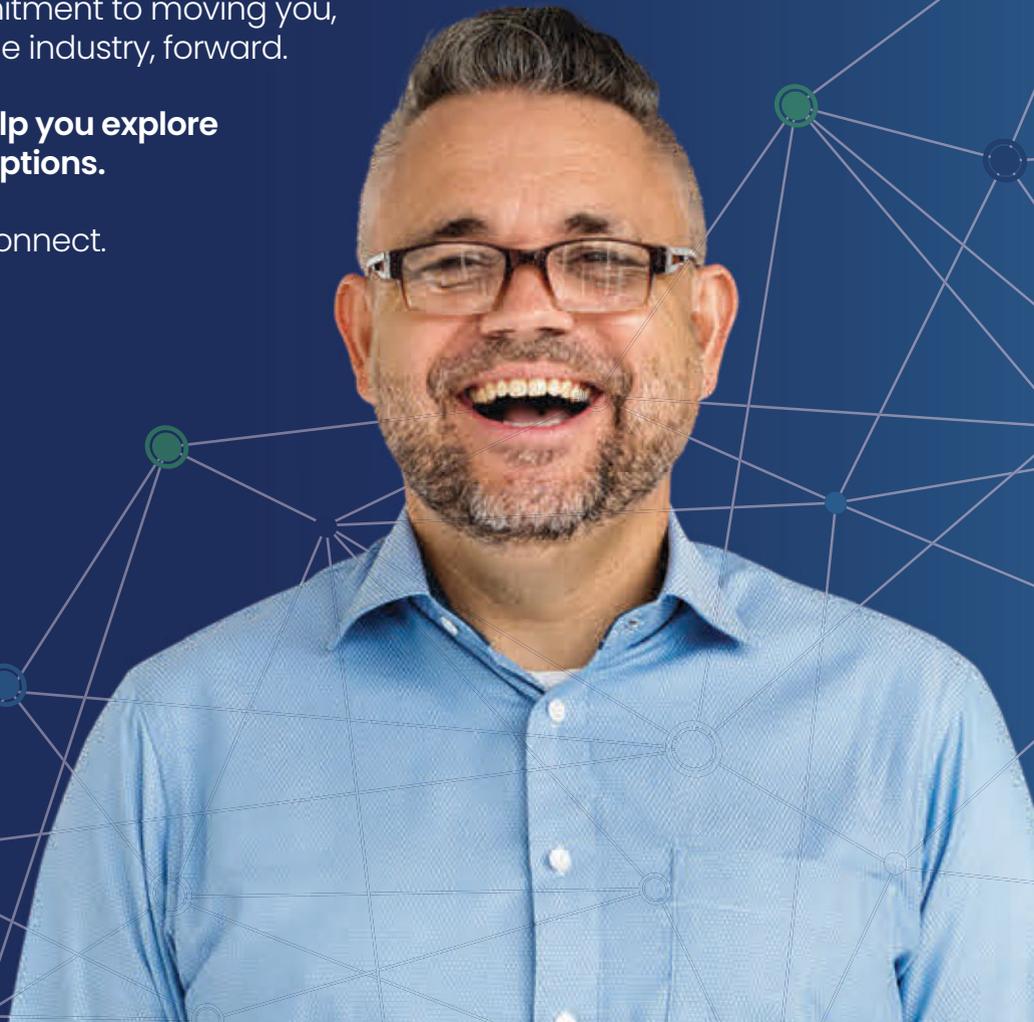
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# A Novel Method for Blinding Reviewers to Gender of Proceduralists for the Purposes of Gender Bias Research

**Urgent message:** Gender bias, whether overt or subconscious, may be to blame for disparities in hiring practices, salary, and advancement in medical schools, the urgent care setting, and any healthcare workplace. Recognizing the value of gender-neutral assessment may not only “even the playing field,” but increase the likelihood of identifying the best candidates for clinical positions.

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## Abstract

### Introduction

Gender disparity has been demonstrated on Accreditation Council for Graduate Medical Education (ACGME) milestone evaluations, with the largest differences in procedural competency. There are currently no validated methods by which researchers can blind reviewers to gender to evaluate for bias in procedural evaluations.

### Objective

Our objective was to determine if a novel video-based evaluation method could blind evaluators to the gender of trainees performing simulated procedures, thereby facilitating more objective assessment of gender disparity.

### Methods

After removing all jewelry from their hands, proceduralists were gowned, double-gloved, and filmed by a professional videographer while performing simulated procedures. Only their double-gloved hands, gowned forearms and lower torsos, and the procedural field were visible in the videos. Five residents (two male and three female) performed three procedures each (lumbar puncture, chest tube thoracostomy and central venous catheter placement), yielding 15 videos. Seven graduate medical educators with experience evaluating residents watched 30-45 second video clips and evaluated the perceived gender of the proceduralist on a Likert-type scale (1=definitely male, 3=likely male, 5=can't tell, 7=likely female, 9=definitely female). A response concordant with proceduralist gender with a confidence level of likely or higher (1-3 for males or 7-9 for females) was considered correct gender identification. Responses discordant with proceduralist gender or in the “can't tell” category, were considered incorrect.

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Reviewer scores were summarized, and one-sample proportion tests were used to assess for significant differences in correctly identifying the proceduralist gender assuming a null hypothesis of >50% correct gender identification (ie, greater than chance in the binary categorization).

## Results

Of 105 total responses, 56 (53.3%) expressed confidence in the gender of the proceduralist (1-3 or 7-9), and 62.5% of those assessments (35/56) were accurate. Across all reviewers and procedures, the proceduralist's gender was correctly identified in 33.3% (95% CI: 25.1% to 42.8%) of videos. This proportion was not statistically significant compared to the null of >50% correct gender identification ( $p=1.00$ ).

## Conclusion

The method used was effective in blinding reviewers to the gender of the proceduralist, and represents an innovative approach to facilitate research into gender bias in procedural evaluations.

## Introduction

Gender disparities exist throughout medicine.<sup>1-3</sup> Jena and colleagues have demonstrated significant differences in both salary<sup>1</sup> and academic rank<sup>2</sup> for women in U.S. medical schools, even after adjusting for age, experience, specialty, and productivity. While women now outnumber men in medical school classes, just over one-third of emergency medicine residents are female,<sup>4</sup> and women remain significantly underrepresented as faculty in academic medicine.<sup>3,5,6</sup> Additionally, there is a significant perception of bias among female physicians; a 2016 survey of over 1,000 academic physicians found that 70% of female physicians perceived gender bias, whereas only 22% of male physicians reported such bias.<sup>7</sup> It has been hypothesized that the greatest attrition in academia for women occurs during residency,<sup>8</sup> which may be potentiated by implicit bias and/or explicit discrimination experienced across all levels of training.

A recent study found an attainment gap between male and female emergency medicine (EM) residents in evaluations of performance on Accreditation Council for Graduate Medical Education (ACGME) milestones, as well as qualitative differences in the kind of feedback that male and female EM residents received from attending physicians.<sup>9</sup> The largest differences occurred in the evaluation of procedural competency.<sup>9,10</sup> A large study examining longitudinal milestone ratings for all EM residents reported to the ACGME found males were rated as performing better than females for four of the

22 subcompetencies at graduation, including three procedural subcompetencies.<sup>11</sup> As such, the procedural subcompetencies are appropriate target domains to study the etiology and significance of these gaps.

Multiple studies have found that delayed video procedural assessment is equivalent to direct observation. Aggarwal, Driscoll, and Dath all demonstrated good inter-rater reliability between scores based on real-time assessment and those based on delayed video review.<sup>12-14</sup> While Hassanpour and colleagues found scores on video review to be significantly lower than on real-time assessment, they found a strong correlation between the two methods ( $r=0.89$ ) and acceptable inter-rater reliability.<sup>15</sup> The authors also made the point that, unlike real-time assessments, video reviews can potentially be blinded, thereby limiting the potential for bias on the part of the reviewer.

Blinding of reviewers and evaluators to gender in other academic domains has helped reduce gender disparities.<sup>16,17</sup> As such, blinding faculty members to gender in the evaluation of simulated procedures could provide a methodologically rigorous way to investigate the etiology and magnitude of evaluation disparities and may help further mitigate gender bias in procedural evaluations.

There are currently no validated methods by which researchers can reliably blind reviewers to gender to evaluate for bias in these evaluations. The objective of this study was to evaluate if a novel method using video-based evaluations could blind faculty evaluators to the gender of trainees performing simulated procedures.

## Methods

We conducted a prospective evaluation to determine the effectiveness of a novel video-based method of blinding reviewers to the gender of residents performing simulated procedures. This study was approved by the Adena Health System Institutional Review Board (protocol number: 18-05-011).

## Video Content Development

Resident trainees in the emergency medicine residency program at the Adena Health System, a community-based residency program in the Midwest, volunteered to perform procedures for the video content. Two self-identified males and three self-identified females performed three procedures each (lumbar puncture, tube thoracostomy, and central venous catheter placement) on patient simulators, yielding 15 procedure videos. The proceduralists removed all jewelry from their hands and wrists. Each proceduralist donned a pair of opaque blue gloves followed by a standard Association for the Advancement of Medical Instrumentation (AAMI) Level 3

**Figure 1. Proceduralist performing right internal jugular central line placement**



**Figure 2. Proceduralist preparing for lumbar puncture.**



**Figure 3. Proceduralist performing tube thoracostomy**



The scale was coded as 1=definitely male, 3=likely male, 5=can't tell, 7=likely female, 9=definitely female. A response with a confidence level of "likely" or higher (1-3 for males or 7-9 for females) was considered correct gender identification if the reviewers' scores were concordant with the proceduralist self-reported genders. All proceduralists self-reported binary gender identification as either female or male. If the reviewers score was discordant with the proceduralist self-reported gender or if they were unsure (score 4-6) they were coded as not having correctly identified the gender of the proceduralist.

### Analysis

Reviewer scores were reported per video assessment, and percentage correct was calculated for scores that were concordant with the proceduralist self-reported genders. The primary outcome was correct identification of the proceduralist self-reported gender by the reviewer. As correct gender identification would be 50% based on chance alone, it was hypothesized that blinding would be effective if the reviewers did not correctly identify proceduralists' genders in  $\geq 50\%$  of assessments. One sample equality of proportions was used to assess significance against the null of  $>50\%$  correct gender identification in the overall sample. Similar one sample equality of proportions was also performed stratified by the three procedures evaluated by the reviewers. Data analysis was carried out with blinding to the gender of the proceduralists.

### Results

Fifteen clinical and core residency faculty (11 males and four females) were offered the opportunity to participate, seven of which (five males and two females) chose to participate (Table 1).

Table 2 details the responses of each reviewer to each video. Of the 105 total responses, approximately half (56; 53.3%) of the reviewers' responses expressed confidence in the gender of the proceduralist (1-3 or 7-9),

opaque blue surgical gown with tapered elastic wrist cuffs that extended past the wrist. Lastly, a pair of surgical latex gloves was donned on top of the opaque blue gloves, covering the gown wrist cuffs. A professional videographer (Blue Skies Video & Film Productions, LLC) was contracted to film the simulated procedures. A high-resolution video camera was used to record each procedure. Only the procedural field, the double-gloved hands of the proceduralists, and portions of their gowned forearms and lower torsos were visible in the videos (Figures 1, 2, and 3). Prior to the procedure, each video was assigned a unique number and entered into a log. The raw video was then edited, using Premiere Pro video editing software (Adobe Corporation) to create video segments approximately 5 seconds in duration, which were compiled into a single 3:02 video and posted to a password-protected website (vimeo.com).

### Protocol

The study participants were seven graduate medical educators with experience evaluating residents recruited by the primary author from both within and outside the study site. A template email contact developed by the authors was used for recruitment.

The reviewers scored each video using a Likert-type scale to identify the perceived gender of the proceduralist.

Table 1. Recruitment of Participants			
Program	Males Recruited (Participants)	Females Recruited (Participants)	Total Recruited (Participants)
Emergency medicine at primary site	3 (1)	1 (0)	4 (1)
Family medicine at primary site	3 (2)	1 (0)	4 (2)
Internal medicine at primary site	1 (1)	0 (0)	1 (1)
Emergency medicine at other sites	4 (1)	2 (2)	6 (3)
<b>Total</b>	<b>11 (5)</b>	<b>4 (2)</b>	<b>15 (7)</b>

Table 2. Reviewer Responses									
Procedure	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6	Reviewer 7	Mean score per individual operator	Operator gender
CVL	3	5	8	6	5	7	9	6.3	Female
LP	5	3	1	3	1	3	1	2.4	Male
CVL	5	7	4	7	7	2	5	5.3	Male
TT	5	5	6	2	5	2	5	4.3	Male
TT	7	6	1	8	6	2	2	4.6	Male
LP	5	7	9	4	5	1	7	5.4	Male
CVL	4	5	9	7	5	6	6	6.0	Male
TT	7	4	1	7	5	6	6	6.3	Female
TT	7	4	1	7	5	2	4	4.3	Female
LP	7	7	9	5	5	2	3	5.4	Male
CVL	3	7	1	2	5	5	4	4.0	Male
TT	6	6	9	7	5	7	6	6.6	Female
LP	6	7	3	7	5	3	1	4.6	Female
LP	6	5	1	5	5	3	2	3.9	Female
CVL	5	5	9	5	5	1	5	5.0	Female
Correctly identified	20%	20%	53%	53%	7%	47%	33%		

Score: 1, definitely male; 3, likely male; 5, unable to determine; 7, likely female; 9, definitely female. Key: Green, gender correctly identified (1-3, 7-9, concordant with proceduralist gender); pink, gender unable to be identified (4-6); red, gender incorrectly identified (1-3, 7-9, discordant with proceduralist gender)  
Procedures: CVL, central venous line; LP, lumbar puncture; TT, tube thoracostomy

but when they did, they were incorrect in 37.5% (21/56) of the assessments. Across all reviewers and procedures, 33.3% (95% CI: 25.1-42.8%) correctly identified the gender of the proceduralist. This proportion was statistically nonsignificant as compared with the null of >50% correct gender identification (p=1.00). The same nonsignificant differences were maintained when the data were stratified by each of the three procedures assessed. The mean response for four of the five proceduralists were between 5-5.7 (5=can't tell); the mean for

the fifth (a male) was 3.7, outside of the range that indicated a confidence level of likely or higher.

**Discussion**

Assessment of procedural competency should be objective and performed without regard to gender. We believe that research in this area is required in order to better define the extent of gender bias in medical education and the effectiveness of interventions to counter it. Before such research in the area of procedural eval-

uations can be performed, it is essential to develop and validate a method that could effectively conceal the gender of the proceduralist. This study, which found that a novel technique is effective in blinding evaluators to the gender of the proceduralist, lays the groundwork for potential future studies.

An effective blinding method for procedural skills assessment allows for more accurate evaluation for implicit gender bias. A recent systematic literature review identified nine studies examining the presence and influence of gender bias on resident assessment.<sup>18</sup> Eight examined faculty evaluation of residents in a real-world setting, inherently unblinded. Another examined faculty assessment of resident performance in simulated, standardized encounters, but in an unblinded fashion.<sup>19</sup> With an effective blinding method, further research focusing specifically on procedural skills assessment can be obtained.

This method also has potential for use outside of the research setting. Training programs can easily replicate this blinding method to limit the effect of gender bias in evaluations for procedural competency. The gloves and gowns required to conceal the gender of a trainee performing a procedure are readily available, and most training institutions have the ability to use video to record procedures in a simulation laboratory. Isaak and colleagues found video-based simulation reviews for the assessment of milestones in anesthesia residents to be as reliable as real-time assessment.<sup>20</sup> Moving some procedural evaluations from the bedside to video review, with the identity and gender of the proceduralist effectively concealed, would limit if not remove the effect of gender bias from these evaluations and, if bias is indeed a significant contributor, may reduce the documented gender disparity.<sup>8,9</sup>

### Limitations

The study participants were disproportionately male. The Likert scale employed was developed de novo and was not validated, and the reviewers did not receive formal training on the use of the scale. It is possible that longer clips, if available, would have revealed the gender of the proceduralist to the reviewers. There are stereotypical traits for each gender (eg, larger hands or fast and aggressive movements assigned to the male gender by some reviewers) that no blinding could conceal. It is possible that movements associated with procedures not included in this sample may reveal these or other stereotypical gender characteristics and therefore produce different results, which could theoretically have a negative effect on the applicability of our results to other procedures. Because previous studies on gender

bias have focused on male and female and the proceduralists self-identified in that manner, a binary gender paradigm was used. It is not certain how trainees with nonbinary gender identity would be identified and evaluated using the methods described in this study. However, expansion of the identification scale to include additional identifications is feasible, and is a potential area for further study.

### Conclusions

The method used was effective in blinding reviewers to the gender of the proceduralist, and represents an innovative approach to facilitate research into gender bias in procedural evaluations. The method could also potentially be used to mitigate the effect of gender bias on trainee procedural milestone evaluations. ■

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# Are There Any Restrictions on an Urgent Care Provider Charging a No-Show or Cancellation Fee?

**Urgent message:** When holding a time slot that could go to another paying customer, it's common for service businesses to charge no-show or cancellation fees. With many urgent care centers moving to online registration and queuing systems, could this be a solution for maximizing throughput in urgent care as well?

ALAN A. AYERS, MBA, MAcc

*Please provide at least 24-hour notice if you are unable to keep your appointment. Patients who fail to show for their scheduled appointment without notifying the office within 24 hours of their scheduled appointment time will be subject to a "No Show/Cancellation" fee of \$25.*

These policies are becoming commonplace at healthcare facilities everywhere. That's because no-shows and last-minute cancellations can negatively impact a facility's revenue and disrupt the practice's schedule. Missed appointments are a source of deep concern for every practice.<sup>1</sup>

Many primary care and specialty practices have a policy of charging a fee for missing an appointment (or a fee for cancelling with less than 24 hours' notice). This fee can range from a modest \$25 to upwards of \$100.<sup>1</sup> However, there's no CPT code for the cancellation penalty—without this code insurance can't be billed. As a result, a patient's insurance company won't reimburse the fee, which is usually imposed upon patients.

This is also an issue with online registration. Patient no-shows average roughly 20%.<sup>2</sup> Another study found that between 23% and 34% of patients don't show up for their doctor's appointments.<sup>3,4</sup> This means lost ca-



capacity of the urgent care provider.

One innovative provider, ZOOM+Care, offers thousands of same-day in-person and virtual appointments in Seattle and Portland, requiring patients to register online and include a credit or debit card number when doing so. Cancellations are permitted up to 1 hour before a scheduled visit. However, if a patient cancels less than an hour before the appointment, a \$99 fee applies.<sup>5</sup>

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## Discussion

Other industries, such as hotels, airlines, and restaurants, have managed the no-show issue by taking a credit card and charging a cancellation penalty through their smart phone apps.<sup>6</sup> Arguably, the public is growing accustomed to this practice.

Now, more urgent care centers are moving towards online registration. This changes the paradigm from the traditional walk-in operation to requiring patients to reserve a time, check-in, and register online. Operationally, this process improves productivity of the urgent care by aligning patient throughput with the doctor's capacity, which is measured in patients per hour.<sup>7</sup>

With the increased demand on all healthcare services, but particularly urgent care centers, reducing the rate of no-shows can be an important factor in the success of the business. Urgent care owners should understand the acceptable parameters of a policy for charging a no-show or cancellation fee.

### The AMA Provides Specific Guidance

The AMA's Code of Ethics permits physicians to charge patients for missed appointments and/or appointments cancelled with less than 24 hours' notice if: 1) the patients are properly made aware of the policy; and 2) the policy is applied to all patient groups.

Ethics Opinion 8.01 provides: "A physician may charge a patient for a missed appointment or for one cancelled 24 hours in advance if the patient is fully advised that the physician will make such a charge."

In addition, any charge must be legal pursuant to state and federal law.

### The Amount of the Fee

The AMA does not dictate the amount of the fee, so it's left to the operator's discretion. However, as one author writes, "(It) is important that the charge reflect a missed business opportunity, and not the amount the practice would have received had the patient not canceled or missed the appointment."<sup>8,9</sup> Reasonable charges have typically been intended to be used as a deterrent rather than a penalty or an attempt to generate revenue.<sup>10</sup>

But again, the no-show policy must be consistent for all patients, regardless of payer, and the fee structure should be included in the agreement for services signed by the patient.<sup>11</sup>

### A Written Late Fee/No-Show Policy

Urgent cares should provide a written policy that requires the patient's signature prior to rendering services. This written policy can include the requirements of the

AMA and can state:

1. The patient's insurer or CMS will not cover the fee for late cancellations, missed appointments, or late arrivals because they are not covered services
2. By signing the agreement, the patient is consenting to financial liability for missed or late appointments; this should be explicit
3. Missed or late appointment charges are reflective of a missed business opportunity (eg, "When you do not show up for a scheduled appointment, you are taking an appointment slot that could have been used for another patient")
4. The amount of the cancellation fee

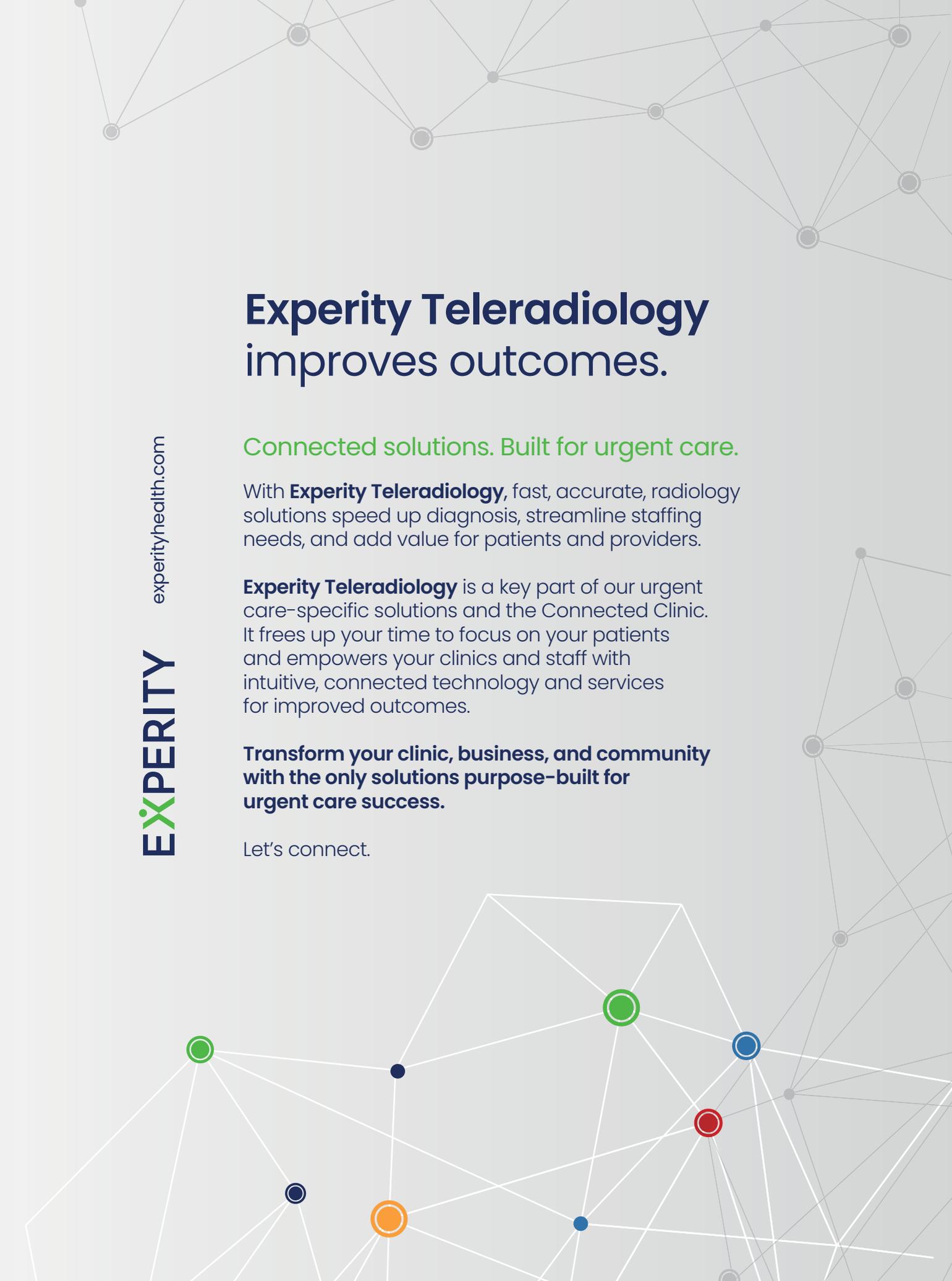
### Takeaway

Urgent care centers are permitted to charge a patient with a fee for a last-minute cancellation or if they're a no-show.

Urgent care centers may reduce their no-show problem by emulating other industries that include cancellation penalties. However, these fees must be reasonable, and the patient must be made aware of the policy, which also must be applied to all patient groups. Urgent care owners will need to weigh the deterrent effect vs the attempt to penalize a patient, which may in itself affect business if the policy is known in the community. Ask legal counsel about applicable state laws. ■

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# A Hand Wound Caused by a Pressure Washer

**Urgent message:** Injuries caused by pressure washers often require debridement or, in severe cases, amputation. Immediate assessment and appropriate management, where feasible, can preclude the need for surgical intervention while effecting a positive outcome.

ELLEN HANCOCK, MD; JULIE PARK, MD, FACS; and KENDALL WERMINE

## Introduction

Pressure washer injuries usually require a form of surgical intervention such as debridement of tissue and, in severe cases, amputation.<sup>1-4</sup> The need for surgical intervention is heightened when inorganic compounds are present in the wound.<sup>5</sup> Here, we present a case of a pressure washer injury to the hand that was resolved without surgical intervention.

## Case Presentation

An otherwise healthy 34-year-old male presented with a small laceration and edema to the middle and right fingers on his right hand, sustained while trying to fix a pressurized power washer that he had been using on his driveway that morning. The power washer contained just water and oxygen, with no other chemicals.

Upon initial examination, the distal portion of the ring finger was numb to sensation, ischemic, and white (**Figure 1**). Crepitus was palpated volarly and dorsally in the palm and dorsum; slight edema was noted on the right ring finger. Superficial lacerations to the volar and radial fourth digit and dorsal third digit were also present.

An x-ray taken to rule out underlying bony fracture revealed subcutaneous emphysema of the fourth digit and lack of other foreign bodies (**Figure 2**).

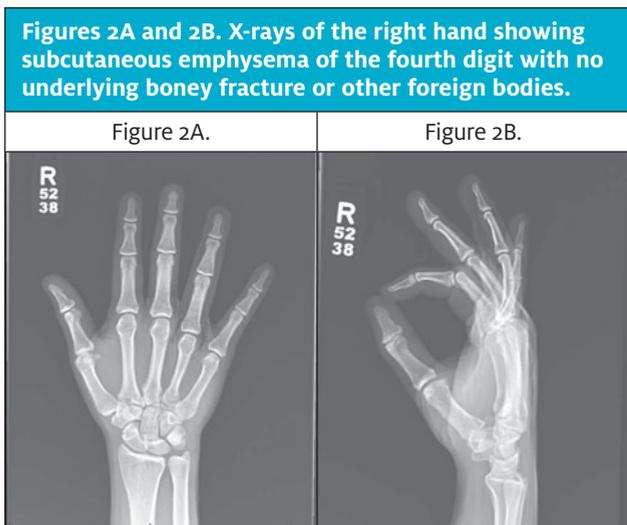
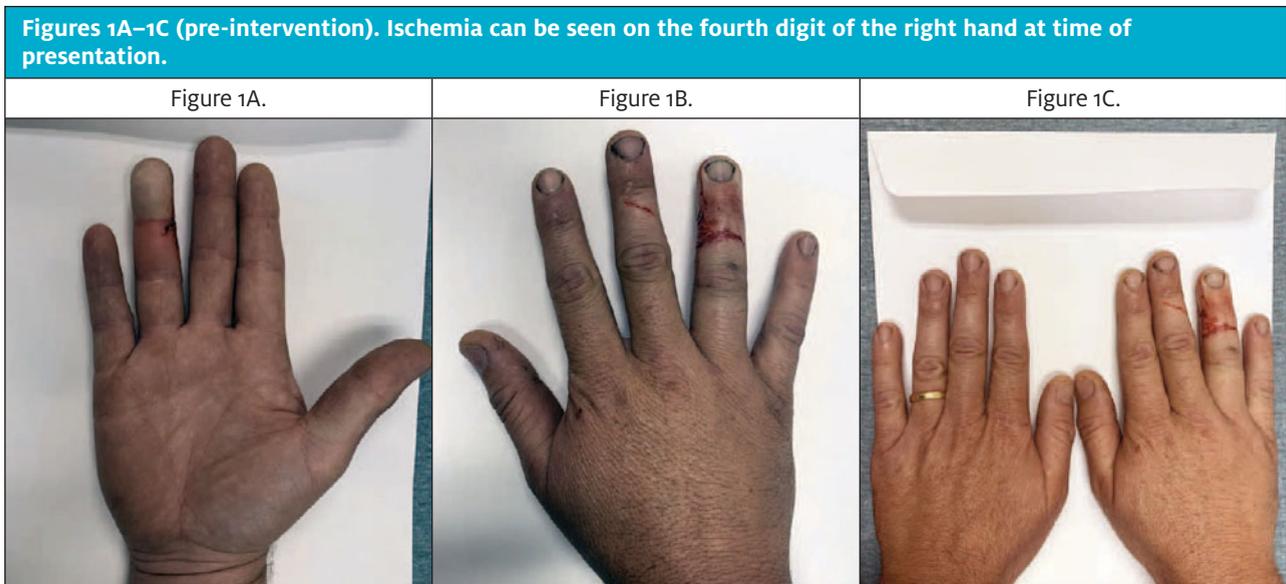
Physical examination of the finger showed the patient had full extension capabilities of his digits and only the last 10% of flexor digitorum superficialis (FDS) and flexor digitorum profundus (FDP) flexion was lim-



ited due to pain and stiffness.

The fact that water and oxygen were the only substances present in the wound allowed for a treatment method that avoided surgery. Treatment consisted of physically milking the water and air bubbles out of the wound while also using a warm compress along with antibiotics. This was accompanied by elevation of the right hand. Water and oxygen were milked out of the wound until no more

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*“This case shows the utility of nonsurgical intervention when treating a pressure washer injury to the hand. However, in cases where inorganic material such as sand or paint enters the wound, the treatment method used in this case is not practical as the material that entered the wound will require irrigation and debridement for removal.”*

water or air bubbles exited the wound through the laceration, which took approximately 30 minutes. Sensation, blood flow, and color then returned to the finger (Figures 3A–3C). The patient was ultimately admitted to the hospital, but maintained full range of motion and did not require surgical intervention.

**Discussion**

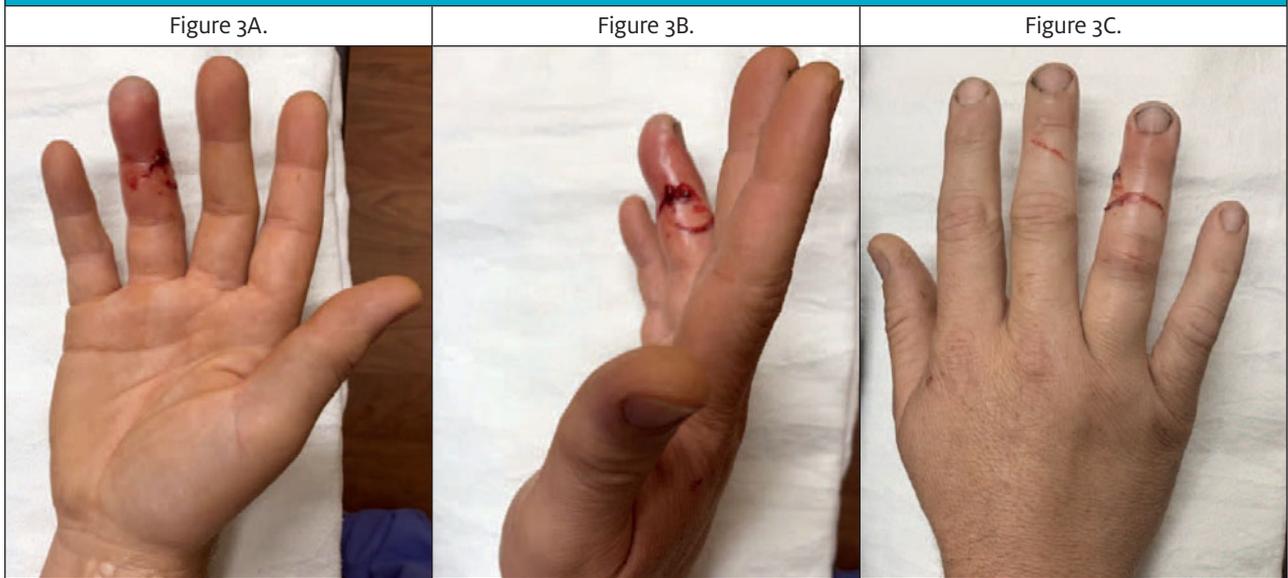
Much of the current literature cites pressure washer injuries as occurring to the lower extremities and the abdomen.<sup>1-4</sup> Three cases of lower extremity injuries all required debridement.<sup>1</sup>

This case shows a new way to treat pressure washer injuries to the hands. The patient had a combination of water and air bubbles in the wound. These were able

to be massaged out and in combination with elevating the patient’s hand and using a warm compress, surgical intervention was avoided. No inorganic substances were present in the wound, which made this method of treatment possible. The patient was prescribed a 7-day course of doxycycline and ciprofloxacin; in cases of pressure washer injuries, broad-spectrum antibiotics are normally utilized.<sup>6</sup>

A method similar to the one described in this case was utilized in a case by Kon, et al,<sup>7</sup> where surgical intervention was not used for a patient with a high-pressure injury to the hand. Instead, they elevated the patient’s hand and used antibiotics to treat the patient. The patient had a few complications, such as swelling of the small finger, but after treatment the patient left the hospital with normal functioning of all digits. Sur-

Figures 3A–3C (postintervention). Blood flow and color have returned to the fourth digit after milking and elevation.



gical intervention could be avoided because only non-sterile water had entered the wound.<sup>7</sup>

It is important to note that this method of elevation and massage therapy is not viable in every washer pressure injury, even if water is the only substance to enter the wound. Ray and Rainsbury wrote about a high-pressure injury from a steam hose that affected the foot of the patient. The injury resulted in burns and ended with digital amputation.<sup>8</sup>

Typically, in hand cases with involvement of the tip of the index finger and the thumb, restoration of the tip sensation by a sensate flap would need to be considered along with regular follow-up and early intensive rehabilitation to achieve optimal functional outcome.<sup>5</sup> We were able to avoid these complications and others such as loss of finger, loss of flexor tendons, loss of range of motion, stiffness, longer recovery, and flexor tenosynovitis.

In cases where inorganic material such as sand or paint enters the wound, the treatment method used in this case is not practical as the material that entered the wound will require irrigation and debridement for removal.<sup>9</sup> X-ray in this type of injury when substances other than water and air are involved shows the quantity and distribution of radio-opaque fluids<sup>6</sup>; the x-ray for this patient showed subcutaneous emphysema of the fourth digit with no underlying bony fracture or other foreign bodies.

Fracture is not typical for high-pressure injuries, with few documented cases of fracture caused by high-pres-

sure water jets.<sup>1</sup>

This case shows the utility of nonsurgical intervention when treating a pressure washer injury to the hand. By massaging out the air bubbles and water that filled the finger, normal blood flow was returned, and the patient was able to avoid surgery, and be discharged without permanent hyperesthesia, continuous pain, cold intolerance, contracture, or reduced sensitivity which are common after high-pressure injury.<sup>6</sup>

### Conclusion

Pressure washer injuries to the hand usually require surgical intervention. In this case, in which only water and oxygen were injected into the patient's wound, a novel treatment plan proved effective in avoiding surgery and facilitating quicker healing time. ■

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# Chin Lacerations in Children—A Call for Caution

**Urgent message:** Adhesive repair for skin lacerations in pediatric patients is a viable (sometimes preferable) option—under the right circumstances. Careful consideration is warranted when the wound is to the chin.

JOSHUA SHERMAN, MD and DAVID MATHISON, MD, MBA

## Introduction

Use of adhesive repair for minor lacerations has become increasingly commonplace.<sup>1</sup> When it is used correctly, cosmetic outcomes are similar and may be superior to suture repair in certain situations. Because it may be faster and less traumatic, adhesive repair is often the best option when working with younger children and those with developmental disorders or high anxiety. However, as these techniques become more widely used, it is important to understand the situations and anatomic locations where adhesives may or may not be appropriate.

## Literature Review

In the April 2019 issue of *Injury*, Lestage et al<sup>2</sup> published a retrospective chart review of children (median age 4.5 years) requiring facial laceration repair at a single tertiary care pediatric hospital in Montreal. The primary outcome was wound dehiscence in the first 30 days following the repair. A random sample of charts was reviewed in duplicate to ensure reliability of the chart review.

Among 2,044 children who presented with a facial laceration requiring intervention, 1,804 (88%) were repaired using tissue adhesive. Of the 360 chin lacerations, there were seven cases of dehiscence (2.2%) relative to zero cases of dehiscence in all other facial laceration locations [odds ratio (OR) = 2.2]. All of these seven cases were closed with tissue adhesive. There were no cases of dehiscence on chin lacerations that were sutured and zero cases of dehiscence on other facial lacerations closed with adhesives. When adjusting for other factors using logistic regression, the OR for location (chin vs other) being a predictor for com-



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plication was 3.84.

The authors concluded that the probability of dehiscence is greater in cases of chin lacerations vs other facial wounds.

## Discussion

This study supports previous reports demonstrating a small but statistically significant increased rate of dehiscence with tissue adhesive<sup>3</sup> and in this case highlights the chin as a particular area of caution.

From the perspective of a pediatric emergency medicine physician who works both in urgent care and the emergency department, this study highlights the importance of location when assessing wound integrity. The chin is not only a high-tension area, but it can be positionally difficult to repair in children if the patient flexes the neck (such as a reflex in fear of pain).

The authors' approach is to lean towards suture repair in the vast majority of chin lacerations, and to not make

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this decision until the wound has been thoroughly irrigated since the irrigation process may expose a deeper or wider wound.

When using suture repair, it is advisable to employ both subcutaneous and cutaneous layer repair (when possible) to have the best cosmesis and to prevent dehiscence.

Adhesives are wonderful tools for wound repair in children, but they must be used with caution. Using adhesive is an option for chin lacerations, but only for very superficial wounds that do not further open with quality wound irrigation. Adhesives may also be a better option with chin

lacerations that are more inferior and located more on neckline than the jawline.

There are obvious limitations to the Lestage paper. First, it was a retrospective chart review which lends to reporting bias, as well as incomplete documentation and follow-up. Also, this was performed at a single center where there was a very high rate (88%) of adhesive repair for facial lacerations. The outcome measure was dehiscence and not necessarily cosmetic appearance.

Working in urgent care, we balance speed and accuracy every day. We balance pain and anxiety with outcome on every shift. If we can be confident that using skin adhesive on chin laceration was as effective as using sutures it would save time, pain, anxiety, and cost while promoting patient satisfaction. However, we still must determine the level of tension, the location, and the parental preference, and make an educated decision regarding route of closure when assessing every wound. ■

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# ABSTRACTS IN URGENT CARE

- ‘Seat Belt’ Signs Post MVA
- Pain Control in Corneal Abrasions
- Analgesia with Reduction of Shoulder Dislocation
- Can Early PT Help with Sciatica?
- How Vaping Compromises Breathing
- COVID-19 in the Country
- Pandemic Depression—A Real Thing?

■ AVIJIT BARAI, MBBS, MRCS, MSc (CRITICAL CARE), PGCERTCPU, FRNZCUC

## Workup for ‘Seat Belt’ Sign in Trauma Patients

**Take-home point:** The presence of a “seat belt” sign has a high association with intraabdominal organ injury.

**Citation:** Shreffler J, Smiley A, Schultz M, et al. Patients with abrasion or ecchymosis seat belt sign have high risk for abdominal injury, but initial computed tomography is 100% sensitive. *J Emerg Med.* 2020;59(4):491-498.

**Relevance:** Patients commonly present with abdominal “seat belt” signs, such as abrasions and ecchymoses, following motor vehicle accidents (MVA). The assessment and management of these patients is controversial. This article attempts to address clinical assessment and imaging techniques for patients presenting with seat belt signs after an MVA.

**Study summary:** This is a retrospective cohort study conducted in a level 1 trauma center in Louisville, KY on 425 patients after MVA. Abdominal abrasions were present in 99 patients, ecchymoses were found in 177 patients, and 77 patients had both abrasions and ecchymoses. Interestingly, among patients who underwent CT of the abdomen, intraabdominal injury was found in 45.4% of those who had only abrasions as seat belt sign, in 32.8% of patients with ecchymoses, and in 37.1% of patients with both abrasions and ecchymoses. The abrasion-only group had a 1.7 times higher risk of intraabdominal injury on CT than those presenting with ecchymoses alone.

The authors conclude that the presence of a seat belt sign on

the abdominal wall following trauma warrants CT imaging of the abdomen due to the high prevalence of intraabdominal injury.

**Limitations:** This retrospective cohort study was conducted in a single center, a level 1 trauma center. Patients with seat belt sign presenting to urgent care are likely to have had less significant mechanism of injury and may be at lower risk for associated intraabdominal injury. ■

## Topical Anesthetics for Corneal Abrasions

**Take-home point:** Topical tetracaine is an effective analgesic in corneal abrasions.

**Citation:** Shipman S, Painter K, Keuchel M, Bogie C. Short-term topical tetracaine is highly efficacious for the treatment of pain caused by corneal abrasions: a double-blind, randomized clinical trial. *Ann Emerg Med.* 2020;27;S0196-0644(20) 3073903.

**Relevance:** The management of pain in corneal abrasion can be challenging. There is some concern about application of topical anesthetics in such cases due to a theoretical risk of corneal injury. This article explores the efficacy (as well as safety) of prescribing a topical anesthetic for pain management in cases of corneal abrasion.

**Study summary:** This was a prospective double-blind randomized controlled trial conducted in an urban emergency department in Oklahoma City on 111 patients with corneal abrasion. The patients were randomized into two groups: those treated with topical tetracaine (n=56) or with placebo (n=55). Each patient was given either tetracaine or placebo up to every 30 minutes as needed for up to 24 hours. Their pain scores were assessed at 24 to 48 hours following the initial presentation.

The authors found that the average pain score was significantly lower in the tetracaine group (pain score = 1) compared



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with the placebo group (pain score = 8). The difference between the groups was statistically significant (difference = 7, 95% CI 6-8,  $p < 0.001$ ). Adverse events were not statistically different between groups: 3.6% in the tetracaine group vs 11% in the placebo group. ■

**Limitations:** This single-center study had a small sample size.

### Intraarticular Anesthetic for Reduction of Shoulder Dislocation

**Take-home point:** Intraarticular anesthetic injections provide safe, inexpensive, and effective analgesia in cases of anterior shoulder dislocation.

**Citation:** Penn DM, Williams O. BET 1: Can acute shoulder dislocations be reduced using intra-articular local anaesthetic infiltration as an alternative to intravenous analgesia with or without sedation? *Emerg Med J.* 2020;37(11):725-728.

**Relevance:** There are multiple approaches to analgesia and anesthesia prior to manipulation of anterior shoulder dislocation. Evidence to support a best practice is limited.

**Study summary:** This was a systematic review exploring the usefulness of intraarticular injection of local anesthesia in the management of anterior shoulder dislocation compared with intravenous analgesics. Following a rigorous literature search, the authors identified 114 articles which examined the usefulness of intraarticular anesthetic use for such cases. Ultimately, 11 articles were included in the final review. Out of these articles, nine were prospective randomized controlled trials.

Overall, there was no significant difference in pain scores between the intraarticular anesthetic and IV analgesia group. Patient satisfaction was somewhat higher among the IV analgesia group. Intraarticular anesthetic only was associated with less resource utilization and fewer complications than IV analgesia. The authors concluded that the use of intraarticular anesthetic for procedural analgesia is a cheap, safe, and effective method of management of anterior shoulder dislocation. ■

### Physical Therapy for Sciatica

**Take-home point:** Early physical therapy referral for patients with acute sciatica improved disability.

**Citation:** Fritz JM, Lane E, McFadden M, et al. Physical therapy referral from primary care for acute back pain with sciatica: a randomized controlled trial. *Ann Intern Med.* 2020;174(1):8-17.

**Relevance:** Acute sciatica is one of the costliest and most challenging conditions managed in urgent care.

**Study summary:** This was a randomized controlled trial con-

ducted in two primary care clinics in Utah. Participants were randomized into two groups (110 in each group): 1) early physical therapy (EPT), which included both exercise training and manual therapy, along with one education session and 2) a usual care group, who received one session of education alone. The subjects were followed for 12 months. The primary outcome was disability as measured by the Oswestry Disability Index score.

Ninety-three participants in the EPT group and 98 in the usual care group completed 12 months of follow-up. The authors found a statistically significant reduction of OSW score among the EPT group compared with the usual care group at 4 weeks, 6 months, and 12 months. Surprisingly, despite improved back pain and disability measures in the EPT group, there was no difference in healthcare utilization or missed workdays.

**Limitations:** This was a relatively small and nonblinded study of predominantly white patients. ■

### Vaping and Respiratory Complications

**Take-home point:** Extrapulmonary symptoms are common among frequent users of e-cigarettes.

**Citation:** Layden JE, Ghinai I, Pray I, et al. Pulmonary illness related to e-cigarette use in Illinois and Wisconsin. *N Engl J Med.* 2020;382(10):903-916.

**Relevance:** Despite increasing utilization, there is a paucity of literature on the health effects of e-cigarette use.

**Study summary:** This retrospective observational study explored the association of pulmonary complications with the recent use of e-cigarette among previously healthy adults in Illinois and Wisconsin (N=98). The majority of the patients were young males (79%) with a median age of 21 years. Ninety-five percent required hospitalization, 53% were admitted to the ICU, and 26% required mechanical ventilation. All had constitutional symptoms as well as respiratory symptoms. Approximately 80% had gastrointestinal manifestations.

**Limitations:** This was a small retrospective study limited to two midwestern U.S. States. ■

### COVID-19 Literature Reviews

#### The Impact of COVID-19 in Rural America

**Take-home point:** There is a significant discrepancy in the impact of COVID-19 between rural and urban areas in the U.S.

**Citation:** Mueller JT, McConnell K, Burow PB, et al. Impacts of the COVID-19 pandemic on rural America. *Proc Natl Acad Sci USA.* 2021;118(1):2019378118.

**Relevance:** COVID-19 has had a profound impact on the health-care system. However, most research has focused on urban areas; little is known about its impact in rural America.

**Study summary:** This article reports data from a survey of 1,009 participants residing in rural areas of the U.S. to evaluate the effects of COVID-19 on their lives. About 28% stated they have had at least one COVID-19 exposure; 2.26% had COVID-19 themselves, 8.52% had a family member with COVID-19, and 19.35% had an acquaintance with COVID-19. Participants with higher levels of education were less likely to report the COVID-19 infection. The negative impact of COVID-19 on the financial, mental, and overall well-being of these rural Americans was significant. However, the majority of respondents reported no impact on their physical well-being. ■

### The Global Mental Health Consequences of COVID-19

**Take-home point:** Prevalence of depression was seven times higher from January 1, 2020 to May 8, 2020 (2 months prior to and 2 months after declaration of COVID-19 as a pandemic) compared with global estimated prevalence from 2017.

**Citation:** Bueno-Notivol J, Gracia-García P, Olaya B, et al. Prevalence of depression during the COVID-19 outbreak: a meta-analysis of community-based studies. *Int J Clin Health Psychol.* 2021;21(1):100196.

**Relevance:** COVID-19 continues to affect the world at-large. It is unknown to what extent the continued pandemic will affect the population's mental health.

**Study summary:** This systematic review and meta-analysis of 12 studies conducted during the COVID-19 pandemic examined its effects on the prevalence of depression. A random effect model was used to obtain a pooled proportion of depression. The investigators found that the prevalence of depression among the published cross sectional community-based studies ranged from 7.45% to 48.3%. The pooled prevalence of depression was 25% (95% CI, 18%-33%), which was about seven times higher than it was in 2017 (3.4%).

**Limitations:** The studies included in this review were all observational and the range of prevalence of depression varied widely. Additionally, no standard instrument was used to measure depression across populations. ■

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# When It's More Than Just A Cough

**Urgent message:** Take vital signs and physical examination of the chest with the utmost importance when evaluating a patient with a cough. The common complaint of “cough” in the urgent care setting can be a symptom of a life-threatening pathology.

FRANK SCHALLER, DNP, APRN, FNP-C and LAUREN DUNN, MSN, APRN, FNP-C

### Introduction

Cough is a common complaint across healthcare settings including the emergency department (ED), urgent care, and primary care arenas—especially during influenza season.<sup>1</sup> Cough is also reported in 50% of patients who test positive for COVID-19 in the U.S.<sup>2</sup> Often, a cough is a symptom of a benign pathology, but the clinician should be aware of potentially dangerous pathologies as well.

### Case Presentation

LS is a 52-year-old woman who presents with a chief complaint of 2-3 weeks of cough and shortness of breath. She states her cough is nonproductive with intermittent wheezing. She admits mild chest pain with increased dyspnea on exertion, especially with climbing a flight of stairs. She states it takes several minutes to catch her breath after exerting herself. She states she has chest pain with coughing and deep breathing. She endorses mild orthopnea. She denies fevers, postnasal drip, frequent throat clearing/swallowing, acid reflux, hemoptysis. She is a never smoker, with no environmental exposures other than dust recently cleaning. No recent international travel.

There is no recent surgery or immobility for extended periods of time, no personal or family history of blood clotting disorders, denies calf pain/ swelling, denies hormone therapy.

PMH: Breast cancer in remission 1 year ago

PSHx: Lumpectomy 1.5 years ago

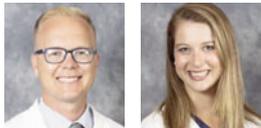


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### Observations and Findings

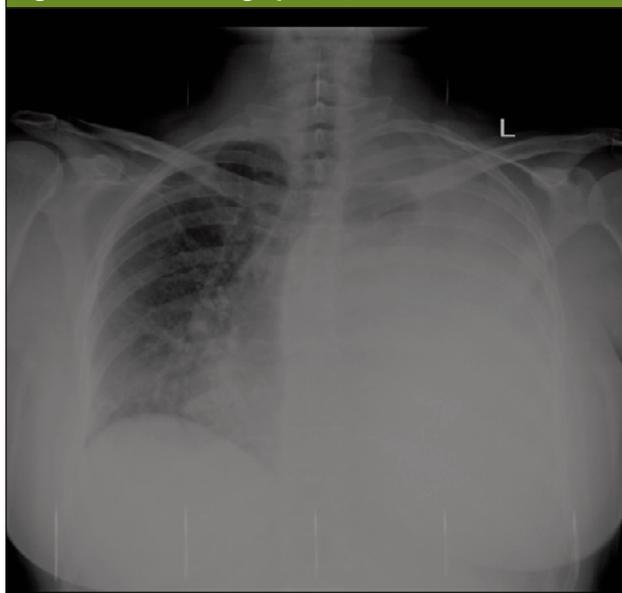
Evaluation of the patient showed the following:

Temperature	97.0° F
Respiratory rate	20
Pulse	97
Blood pressure	116/78
Oxygen saturation	93% room air



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Figure 1. Chest Radiograph (AP)



- *General/Constitutional*: Well appearing, well-nourished in no distress. Oriented x 3, normal mood and affect.
- *Skin*: No rash, prominent lesions, ulcers, or masses. Good turgor.
- *Ears*: Ear canals clear, tympanic membranes clear, ossicles normal appearance.
- *Pharynx*: No erythema, exudates or lesions.
- *Neck*: Supple, without lesions, bruits, or adenopathy, thyroid non-enlarged and non-tender.
- *Cardiac*: No cardiomegaly or thrills; regular rate and rhythm, no murmur or gallop.
- *Lungs*: Diminished to auscultation and percussion throughout L lung fields.
- *Extremities*: No amputations or deformities, cyanosis, edema or varicosities, peripheral pulses intact.
- *Lymphatics*: no lymphadenopathy in cervical, maxillary areas.

### Differential Diagnosis

- Acute bronchitis
- Pneumonia
- Pulmonary embolism
- Malignant pleural effusion
- Myocardial ischemia
- Congestive heart failure
- Other cardiopulmonary pathology

### Diagnostic Studies

Initially, an ECG and 2-view chest x-ray were ordered to rule out acute cardiopulmonary process (see **Figure 1** and **Figure 2**).

### Diagnosis

- Tension pneumothorax with associated hemothorax of L lung.
- ECG; Normal sinus rhythm
- This patient was transferred to a local hospital for further workup and management.

### Treatment and Hospital Course

ED course included chest tube placement requiring subsequent intubation and mechanical ventilation with admission to the ICU. Fluid cytology was sent positive for adenocarcinoma cells concerning recurrent malignancy and stage IV breast CA. Patient was eventually extubated and transitioned to room air. She was evaluated by thoracic surgery, and was able to have her chest tube removed and was discharged in stable condition. She was instructed to follow up with her oncologist outpatient.

### Discussion

Cough with pleuritic chest pain and subjective dyspnea are common complaints in urgent care.

### Pneumothorax

Clinical features include patient complaints of dyspnea, pleuritic chest pain.<sup>3</sup> On physical examination, the clinician may find absent tactile fremitus, hyperresonance to percussion, decreased breath sounds on the affected side. Hypotension may also occur.<sup>4</sup> Most common etiologies of pneumothorax include underlying pulmonary disease, mechanical ventilation, chest trauma.

Diagnosis is confirmed by chest radiograph, on which trachea may be visibly shifted to the opposite side of pneumothorax if pneumothorax is large, along with hyperresonance on the affected side.<sup>5</sup>

Important factors in making this diagnosis included having a low threshold for thoracic radiology when evaluating complaints such as dyspnea on exertion and orthopnea, and considering patient history (breast CA) when evaluating the seemingly routine complaint of cough.

Although a subtle change, the pulse ox of 93% should prompt the clinician for a possible emergent process. It would have been very easy to dismiss this complaint as a viral cough without considering subtle details. Chest radiographs and ECG are fairly inexpensive, minimally invasive procedures that can help establish diagnosis and

Figure 2. Electrocardiograph



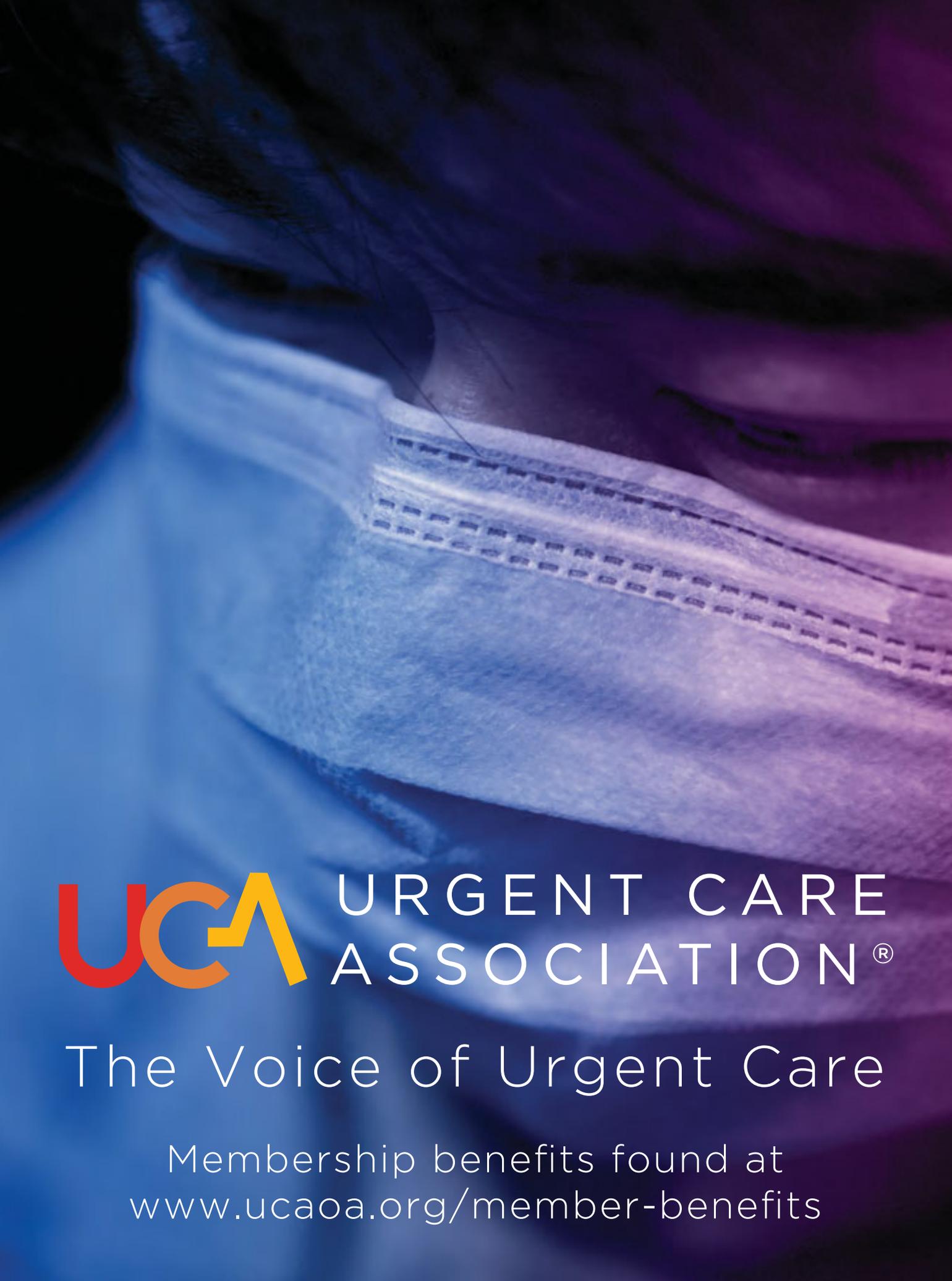
include or exclude acute cardiopulmonary processes in the urgent care setting. In this case, the provider was able to improve the outcome for the patient by arranging immediate transfer via EMS before clinical deterioration. Additionally, although it was not applicable in this case, a history of pneumothorax is clinically significant in that recurrence occurs in 37% of patients.<sup>6</sup>

### Conclusion

Always be meticulous when evaluating the chief complaint of cough—especially in the urgent care setting. ■

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## A 71-Year-Old Woman with Femur Pain After a Fall

Figure 1.



### Case

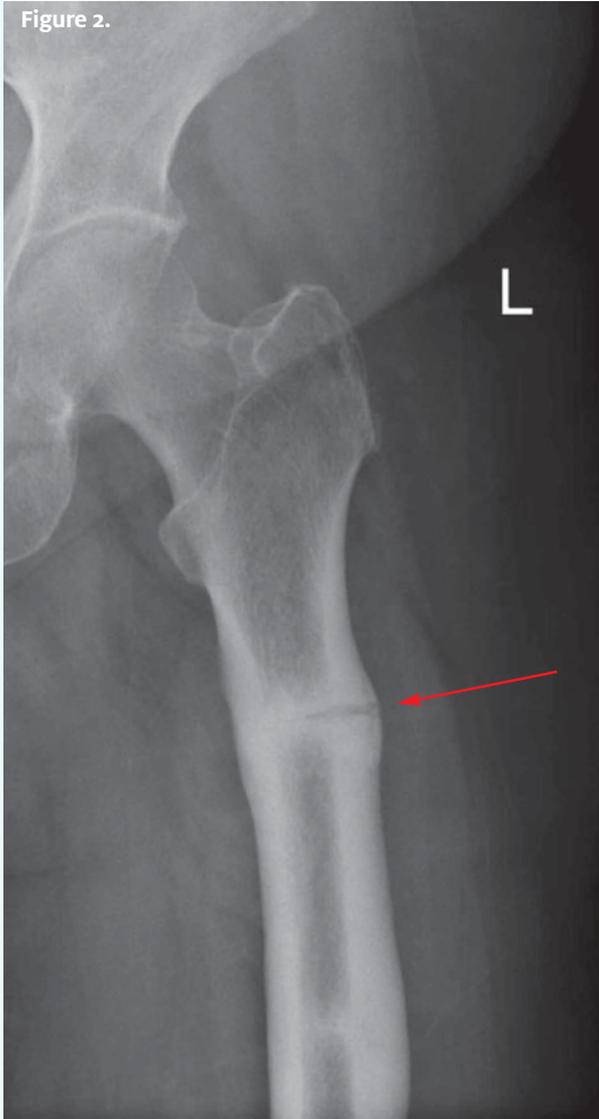
The patient is a 71-year-old female who presents with proximal femur pain after losing her balance and sustaining a “soft” fall onto a carpeted surface.

She has a past history of hypertension, hypercholesterolemia, and osteoporosis. She takes a statin, an ACE inhibitor, and a bisphosphonate.

View the image taken and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

## THE RESOLUTION

Figure 2.

**Differential Diagnosis**

- Hip dislocation
- Ipsilateral femoral neck fracture
- Osteoid osteoma
- Proximal femoral insufficiency fracture

**Diagnosis**

The AP view shown reveals transverse incomplete lucency of the vocally thickened lateral cortex of the proximal femoral diaphysis. This patient experienced a proximal femoral insufficiency fracture related to bisphosphonate therapy.

Bisphosphonates are used for osteoporosis therapy and act by inhibiting bone resorption by suppressing osteoclasts. Although this results in increased bone mineral density, it also decreases bone turnover and prevents remodeling and healing of cracks that occur in bone as a result of normal activity.

**Learnings/What to Look for**

- A transverse fracture of the proximal femur (distal to lesser trochanter) with associated localized thickening of the lateral cortex due to “minimal trauma” in a postmenopausal woman receiving long-term bisphosphonate therapy should be considered diagnostic for a bisphosphonate-therapy related insufficiency fracture
- Stress fractures occur in young military recruits and athletes and involve the medial cortex of the proximal femur
- Bland osteoporotic insufficiency femoral fractures are typically more proximal (ie, femoral neck)

**Pearls for Urgent Care Management and Considerations for Transfer**

- In older patients, femoral neck fractures may be treated with percutaneous pinning, a sliding hip screw, or arthroplasty
- Crutch-assisted weightbearing will be necessary pending further evaluation by an orthopedist

**Acknowledgment:** Images and case presented by Experity Teleradiology ([www.experityhealth.com/teleradiology](http://www.experityhealth.com/teleradiology)).



## A 13-Year-Old Girl with Scaling and Fissures on Her Lips



### Case

The patient is a 13-year-old girl who presents to a pediatric urgent care clinic with 1 month of scaling and fissures on her lips which began after she started using a retinoid cream prescribed for acne.

View the image taken and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

## THE RESOLUTION

Figure 2.

**Differential Diagnosis**

- Contact dermatitis
- Cheilitis
- Acne vulgaris
- Urticaria

**Diagnosis**

The patient has cheilitis, which appears as dry, scaly patches on the lips. There may also be edema and erythema. Many cases represent a factitial disorder related to lip-licking habits, and it can be difficult to convince patients that the vermilion zone of the lip should be dry (the "wet line" is the demarcation between the labial mucosa and vermilion zone).

**Learnings/What to Look for**

- Cheilitis may be related to contact hypersensitivity reactions to compounds found in products that commonly come into contact with the vermilion zone of the lip, including cosmetics, lip balms, toothpastes, and sunscreens (oxybenzone [benzophenone-3]). Other causative factors include:

- Candidal infection related to chronic lip-licking or to the use of petrolatum-based materials that are applied to the lips. (The petrolatum seals in moisture, allowing the candidal organism to thrive in the moist keratin that results)
- Retinoids (isotretinoin and acitretin)
- High doses of vitamin A, lithium, chemotherapeutic agents (busulfan and actinomycin), d-penicillamine, isoniazid, and phenothiazine

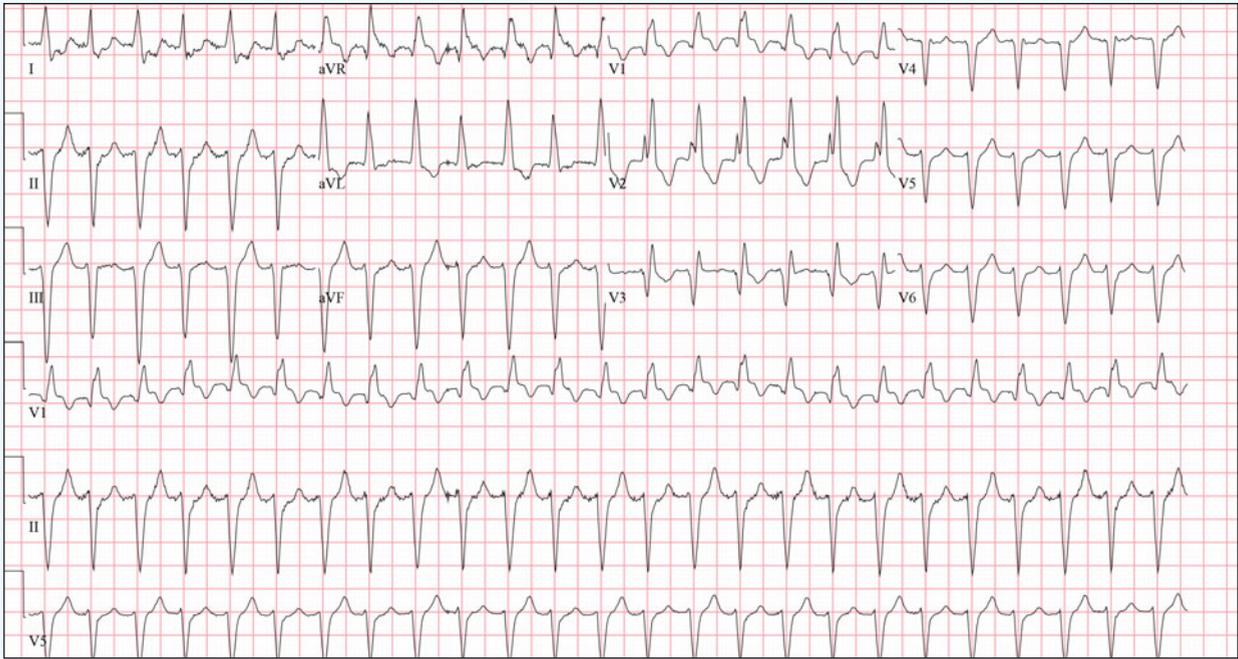
**Pearls for Urgent Care Management and Considerations for Transfer**

- Treatment of infection with clotrimazole troches, miconazole mucoadhesive tablets, or nystatin swish and swallow
- Counsel the patient to resist licking their lips
- Consider use of lip moisturizers and emollients

**Acknowledgment:** Images and case presented by VisualDx ([www.VisualDx.com/JUCM](http://www.VisualDx.com/JUCM)).



## A 96-Year-Old Male with Palpitations and a History of CAD



### Case

The patient is a 96-year-old man who is brought to your urgent care center by his daughter, with whom he lives. She reports that he has been feeling light-headed for “a few days.” The patient confirms this, adding that he has felt his heart “fluttering,” as well. He denies chest pain and shortness of breath, but acknowledges a history of coronary artery disease.

View the ECG and consider what your diagnosis and next steps would be.

*(Case presented by Benjamin Cooper, MD, FACEP, McGovern Medical School Department of Emergency Medicine. Dr. Cooper is also lead author of ECG Stampede: A Case-Based Curriculum in Electrocardiography Triage, available on Amazon.)*

## THE RESOLUTION

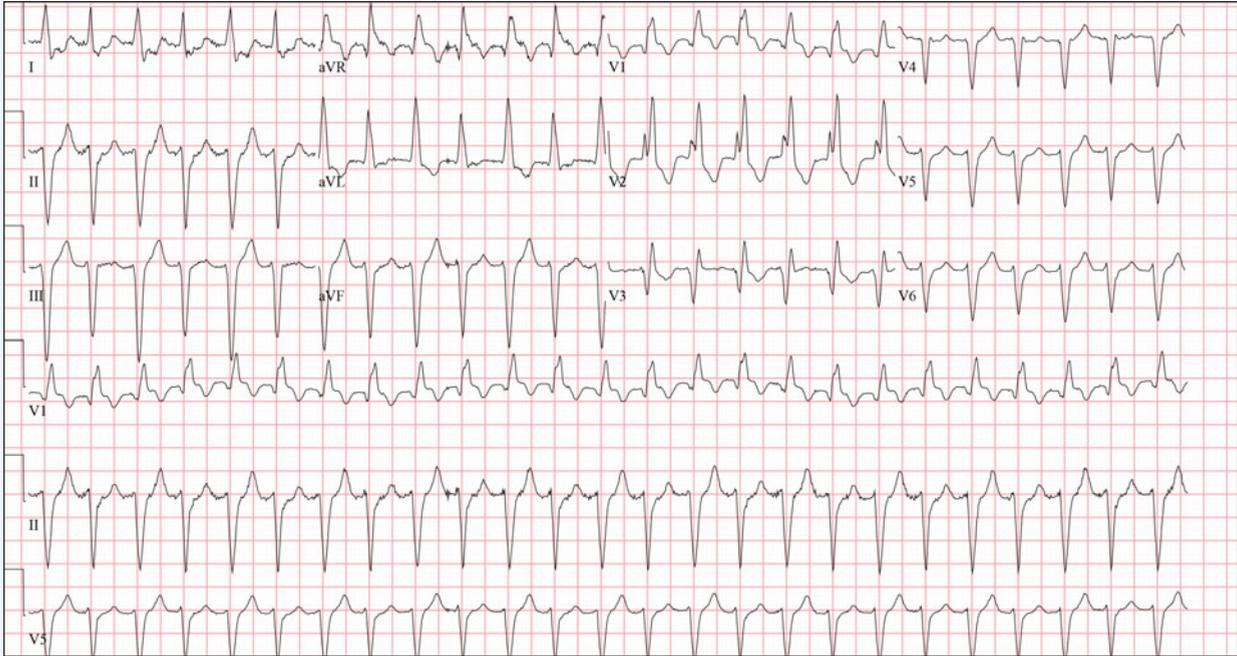


Figure 2. Baseline ECG demonstrating bifascicular block (right bundle branch block and left anterior fascicular block).

### Differential Diagnosis

- Ventricular tachycardia
- Supraventricular tachycardia with aberrancy
- Atrioventricular reentrant tachycardia
- Sodium channel toxicity
- Hyperkalemia

### Diagnosis

This patient was diagnosed with supraventricular tachycardia with aberrancy. The ECG reveals wide complex tachycardia (WCT) with ventricular rate 150 beats/minute.

The QRS duration is prolonged, measuring >120 ms. The QRS complex has a right bundle branch block (RBBB) pattern with an “M”-shaped QRS complex in the anterior precordial leads (V<sub>1</sub>-V<sub>3</sub>) and a slow, slurred S-wave in the lateral leads (I, aVL, V<sub>6</sub>). Additionally, there is an extreme left axis deviation (>45° of leftward deviation), suggesting left anterior fascicular block (ie, bifascicular block).

This rhythm is either arising from a supraventricular focus (ie, atrioventricular node or higher) with aberrancy (ie, bundle branch block) or is ventricular in origin (ie, ventricular tachycardia).

Ventricular tachycardia (VT) is the most life-threatening WCT and should be the presumed diagnosis unless there is a very compelling reason to suggest otherwise. Up to 80% of all WCT is VT,<sup>1</sup> and the diagnosis is even more likely in an elderly patient with

known coronary artery disease (as with this case).

There are established algorithms to help differentiate supraventricular tachycardia (SVT) with aberrancy versus VT. SVT includes atrial flutter (2:1 conduction is a strong consideration in a patient with a heart rate of 150 beats/min like this one), atrial tachycardia, and atrioventricular nodal reentrant tachycardia.

When a patient has underlying conduction disease (ie, bundle branch block) at baseline, supraventricular tachycardia will have the appearance of WCT. The most cited algorithm to help differentiate SVT with aberrancy from VT is the Brugada algorithm.<sup>2</sup> It involves a series of four criteria; VT is diagnosed when any single criterion is met. The criteria include:

1. Absence of an rS complex across the precordium
2. Beginning of the R to the nadir of the S wave greater than 100 msec
3. Signs of atrioventricular dissociation (ie, fusion complexes or capture beats)
4. Absence of typical bundle branch morphology

It should be noted that none of the established criteria perform well in the acute setting.<sup>1,3,4</sup> Therefore, it is safest to treat WCT as VT because the consequences of treating WCT as SVT could be devastating if the diagnosis is incorrect. Atrioventricular nodal blocking agents like beta blockers or non-dihydropyridine calcium channel blockers could result in cardiac decompensation in patients with ventricular tachycardia.

## THE RESOLUTION

Cardioversion is the preferred management. Synchronized electrical cardioversion is safest, although pharmacologic cardioversion can be attempted. Procainamide 10 mg/kg over 20 minute is likely to be the most effective for VT,<sup>5</sup> but other pharmacologic options exist. Adenosine is a short-acting atrioventricular nodal-blocking agent that can be attempted and may be both diagnostic and therapeutic. If the patient converts with adenosine (6 mg intravenously followed by 12 mg if ineffective), the diagnosis is likely to be SVT with aberrancy, although adenosine-sensitive VT does exist.<sup>6</sup>

While this patient was ultimately diagnosed with SVT with aberrancy, the presumed diagnosis should be VT in the acute setting for the aforementioned reasons. This patient spontaneously converted out of the rhythm and into sinus rhythm with underlying bifascicular block (Figure 2). When the QRS morphology in the WCT exactly matches that of their baseline ECG (assuming one is available), SVT with aberrancy can be more reliably diagnosed (as with this case).

Sodium channel toxicity can cause WCT, although there was no history of ingestion with this case. Sodium channel-blocking toxicity was initially described in tricyclic overdoses,<sup>7</sup> but other sodium channel-blocking agents include antiarrhythmics (lidocaine, phenytoin, propafenone, flecainide, amiodarone, sotalol), antiepileptic medications (carbamazepine, lamotrigine), selective serotonin reuptake inhibitors (citalopram, fluoxetine), antihistamines (diphenhydramine), propranolol, cyclobenzaprine, and others.<sup>8</sup> Hyperkalemia can also cause WCT, but this was not the case here. Atrioventricular reentrant tachycardia, when conducted in an antidromic fashion, is a cause of WCT. It is a phenomenon that can happen in patients with ventricular pre-excitation (ie, the Wolf-Parkinson-White syndrome)<sup>9</sup> and was not the case here.

**Learnings/What to Look for**

- WCT is VT up to 80% of the time
- Algorithms for differentiating VT from SVT with aberrancy exist, but none are reliable in the acute setting
- Consider all WCT to be VT unless a compelling alternative exists

**Pearls for Urgent Care Management and Considerations for Transfer**

- The safest approach to management of WCT is electrical synchronized cardioversion
- If the patient is unstable, cardioversion should be pursued immediately
- If stable, patients with WCT should be immediately transferred to the nearest emergency department with defibrillation pads in place

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ECG  STAMPEDE



# Credentialing and Contracting: What to Expect When Expanding

■ MONTE SANDLER

For those trying to grow their urgent care business, conversations around payer contracting and credentialing (CC) can often be overwhelming and seem contradictory to the mission of on-demand care. Tammy Mallow, our resident Experity advisor on all things CC, says she often finds herself being perceived as a “dream killer” when educating owners to the inner workings of this process.

Established groups often expect the payer rules to be the same as they were years ago, only to find they may not be able to add a new location to current contracts, or they must now credential *all* providers—even per diem providers. They are shocked to find they may now be required to have a physician on site, or no longer have a physician on site, or pass accreditation to renew a contract...it goes on and on.

### Considerations When Growing and Expanding in the Same Market

- Provider type credentialing changes
- Fee schedules and contracted rates
- Services allowed or excluded
- Oversight requirements
- Accreditation or site visits
- Ability to add locations to existing contracts

### Differences to Anticipate and Explore If Moving Into a New Market or a New Start-Up

- Types of agreements available
- Barriers to network access
- Credentialing criteria
- Oversight requirements
- Accreditation or site visits



**Monte Sandler** is Executive Vice President, Revenue Cycle Management of Experity (formerly DocuTAP and Practice Velocity).

- Contracted rates (average by payer and differences in type of provider)

In both scenarios, one of the most frequent questions addressed, per Ms. Mallow, is whether a provider currently, or previously, credentialed or enrolled with a payer must go through the credentialing process again.

Sadly, the answer most of the time is *Yes*. The rules do vary by payer, provider type, and market, so it is always very important to understand that one size does not fit all—even within a market. For example, Blue Cross Blue Shield in State A could require providers to credential each time they join or start a new practice while Aetna in State A would only require some type of demographic update form to add a provider.

So, how about a little good news (or at least some better news)?

The timeframe to credential a new provider has historically been completely at the will of the payer, and still is in many cases, as is the decision on when a provider would be considered effectively in-network and able to see and bill patients accordingly. That date is usually the date the credentialing committee approves, which can be 90 days or longer from the time the application was submitted. During this time, the provider likely has not been seeing patients, or only a select few. Or worse, seeing them as out-of-network and not being reimbursed much, if at all.

As urgent care continues to influence the healthcare industry, combined with the effect that provider shortages are having on patient care, some states have started to consider or introduce legislation around credentialing timeframes and even requiring payers to pay claims retroactively. While this is a start, and is very good news, most payers still do not pay retroactively, do not offer any type of provisional credentialing, and can take months to credential a new provider.

The moral of this story is that you cannot assume anything is the same in the world of urgent care contracting and credentialing. The work of a CC team is so much more than filling out applications. Doing your homework, surrounding yourself with a strong CC team, and staying current are the keys to success! ■

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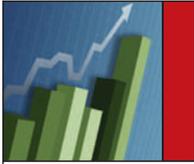
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## Is Specialization the Future of Urgent Care?

Urgent care has historically been viewed as a setting where patients could present with anything short of life- or limb-threatening complaints (though even those parameters have been stretched in dire situations.) And that identity has served the industry well, as evidenced by nearly constant growth over several decades. As time wore on, though, it became evident that there are business opportunities to be had by addressing niches with special needs.

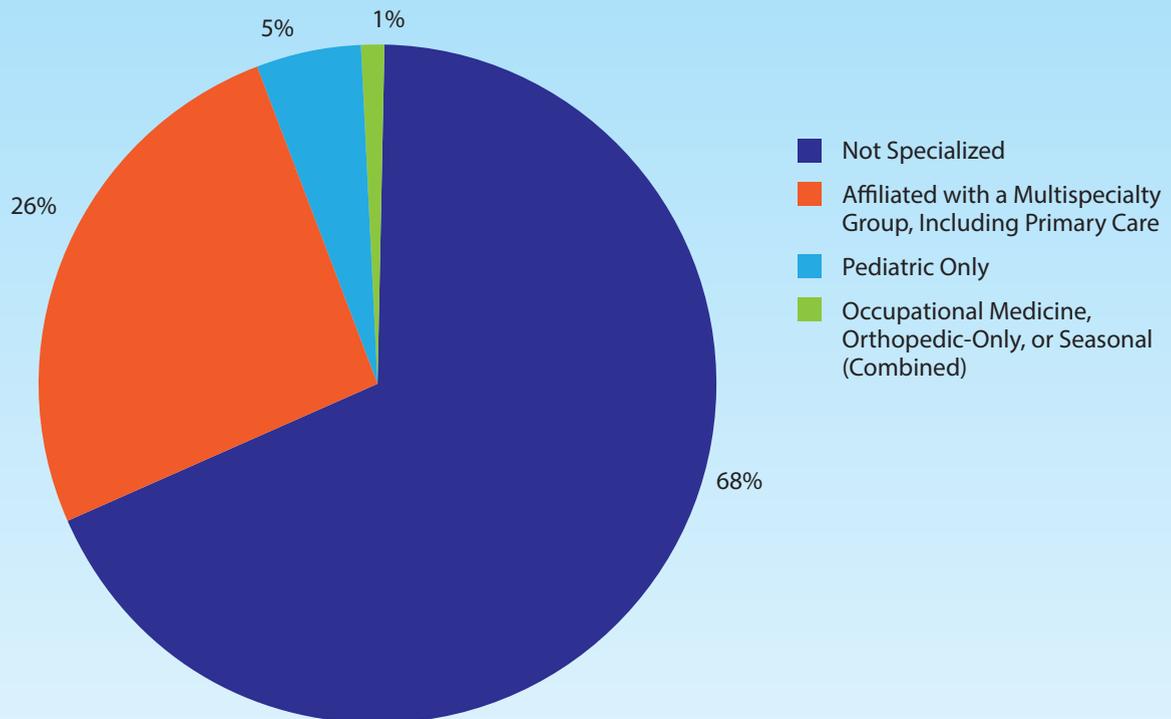
Occupational medicine is a prime example. Many urgent care centers serve the needs of local businesses and industries in administering pre-employment physicals, conducting drug screens, and offering immunization services. Typically,

this has been done as an offshoot of an overall urgent care operation.

While that's still the case, largely, there is a slight—but growing—trend toward specialization within the industry, as revealed in the Urgent Care Association's most recent benchmarking report. (Locations that offer pediatric-only urgent care are the most common, at this point.) Further, it's become more common for urgent care centers to have an affiliation with multispecialty groups, including true primary care practices.

Check out the graph below to see a breakdown of how urgent care operators present themselves to the healthcare marketplace. ■

### SPECIALIZATION AMONG URGENT CARE CENTERS (N=979 RESPONDENTS)



Data source: Urgent Care Association 2019 Benchmarking Report. (For more information or to purchase the report, visit [www.ucaoa.org/resources/industry-reports/benchmarking](http://www.ucaoa.org/resources/industry-reports/benchmarking).)

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