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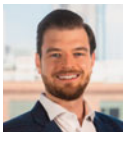
Practical Advice for Clinicians on Interfacing with Social Media

Adam Goodcoff, DO

Did you know the average person spends over 2 hours on social media every day?[1] While it's clear that social media is here to stay, the impacts of social media usage on clinicians and patients alike is probably less apparent to you—but it is undoubtedly the reality we face. Today, 8 in 10 internet users search for health information online,[2] and 74% of these people use social media.[3] Perhaps more surprisingly, in a 2023 survey, 57% of physicians admitted to changing their perceptions of a medication or treatment based on content they'd seen on social media.[4] So, even if you're one of few healthcare workers who abstains completely from social media, it's important to appreciate the influence it has on your patients and colleagues.

At this year's Urgent Care Association (UCA) convention in Las Vegas, the keynote speaker was ophthalmologist William Flanary, MD, who has quickly risen to international fame through social media posts in the persona of his satirical alter ego, Dr. Glauckom-flecken. In so doing, he's inspired clinicians to imagine how they might follow in his footsteps and build their own social media presences. As an urgent care clinician, you might wonder how engaged you should be in social media. It's critical, however, to recognize that involvement in social media has distinct implications for healthcare providers. For us, casual posting can have serious—and potentially irrevocable—professional implications.

As an emergency physician with more than 10 years of experience in social media content creation and as the founder and CEO of Medfluencers, a healthcare influencer marketing agency, I would like to share the top 5 lessons for UC clinicians, administrators, and clinic owners to consider before logging in and posting on social media.



Adam Goodcoff, DO, is a practicing emergency medicine physician, the creator behind @seethemedlife, and Co-Founder and CEO of MedFluencers.

Social Media Considerations

1. Content is Forever

It may seem obvious, but it cannot be overstated: Once something is posted on the internet, it's out there forever. The implications of the permanence of social media posts are especially relevant for those in the healthcare space. For example, an emergency department nurse in a New York City hospital was fired in 2014 after posting a photo of a blood filled trauma bay after an intensive resuscitation. The patient was no longer in the trauma bay, so therefore, the post did not constitute a Health Insurance Portability and Accountability Act (HIPAA) violation. However, the post was brought to the attention of her hospital's administration who deemed the content insensitive. Ultimately, the action was viewed as sufficient grounds for termination. One thoughtless moment cost her not only her job but her professional reputation.[5]

A post may seem perfectly appropriate in the moment, but unlike a spoken comment, the captured words or photos will persist indefinitely and likely reach a larger audience. Certainly all of us are familiar with numerous examples of celebrities being "canceled" as the result of historic social media posts. As healthcare providers, we are held to much higher standards of conduct.

Additionally, modern cultural opinions on the appropriateness of language are changing quickly. A post that seems reasonable today may be considered objectionable or offensive several years in the future. Because content on social media can endure forever, one must remember that as frustrating as it may seem, posted content exists indefinitely.

2. Content is Contextual

One of the greatest pitfalls of posting on social media comes from the failure to appreciate how comments,

when seen out of context, may be misconstrued. English is an incredibly contextual language. A word or phrase out of context can convey something entirely different than the desired message. Once a post is live, the narrative is no longer in the hands of the individual who posted the content, but rather at the mercy of an uncertain audience who may find a well-meaning gesture offensive.

As an illustrative example, consider the real-life case of a freshly minted intern who recently started residency in a new hospital system. This individual already had millions of viewers and routinely posted lighthearted medical content on social media. At the time, a trend on social media had emerged soliciting small donations from followers to show appreciation. This intern jumped on the wave and recruited financial support for a janitor within the hospital's housekeeping staff to show support for the janitor's hard work.

At its core, this was seemingly a well-intentioned and charitable means of leveraging a large following for an act of kindness. Unfortunately, the context was not clear from the short video that was posted, and a few hostile viewers changed the narrative. The resident physician who created the video was white, and the custodial staff member was black. The timing of the post also occurred in the wake of several high-profile news stories that had fomented racial tensions. The post was judged in court of public opinion, and regardless of intentions, the intern nearly lost their position in the residency program.

It's also important to view this cautionary tale with a lens of compassion. When viewing content on social media, do not be too quick to assume negative intent. This sort of reactionary commenting is certainly not restricted to the realm of social or political debate. Many commenters jump in to criticize content creators on a post intended for medical education to point out all the small ways in which the presenter's technique is imperfect or their interpretation of a study is misguided. We should all ask ourselves before reacting: "Am I certain I understand this person's intention and the context fully enough to engage in disparaging the post?" and "Would I feel comfortable saying this to the person's face?" If the answer is no, the remark is usually best kept to oneself rather than further fomenting hostilities that already abound on most social media platforms.

3. Compliance is Complex

We have all been obligated to complete more compliance training modules than we care to remember. One of the most problematic pieces of legislation pertaining to social media posts is HIPAA. Indeed a conservative, but not unreasonable position, would simply be to never post any content pertaining to patients. This is certainly the safest option to ensure HIPAA compliance and one that is almost universally recommended in compliance training.

Additionally, the notion of providing medical advice is another compliance consideration. Imagine that you are interested in creating content for patient or healthcare provider education. Perhaps you want to address common questions you encounter, such as when sutures should be removed from a repaired laceration or how to treat a partial thickness burn at home. It is logical to wonder if making a video about these topics while sharing an illustrative anecdote of a patient you have cared for is appropriate. Here, the considerations about the wisdom of making the post should extend beyond just protecting patient privacy. It is never advisable to give medical advice through posts on social media. Such activity is fraught with medicolegal risks, especially if any patient should act on your advice and suffer a negative outcome.

"It is never advisable to give medical advice through posts on social media."

This topic of compliance surrounding these issues is complex, but there are some simple ground rules that social media medical professionals can consider—albeit anecdotally, as the tips should not be construed as formal advice.

- Never post about specific patients you have cared for. We all have enough imagination, experience, and education to create hypothetical cases; we can also present cases that combine various details of a series of similar patients. We should be able to say with 100% confidence that the example we are posting was not any specific patient's story.
- Avoid speaking/writing in absolute terms, specifically avoiding the words "I recommend." To conceptualize this, revisit the suture example from above. Rather than saying "sutures on the arm are removed in 5-7 days," it would be more appropriate and defensible to say "in most cases, sutures on the arm are removed in 5-7 days, but this can vary depending on the patient's specific situation." The difference is subtle but important. It is also clearly true that guidance on any treatment decision requires consideration of the unique circumstances of each case.
- Never make a claim about any product without

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direct council or supervision from specialists in this space. This might seem obvious, but doing so with incorrect language can expose you to considerable liability if a patient or healthcare provider views your video and has a bad outcome related to a comment that might be construed as a product recommendation.

4. Creators Are a Community

Hopefully the stories above have not fully dissuaded you from engaging in social media entirely. It's indeed worth acknowledging one of the most positive aspects of healthcare-related social media as well: community. Healthcare influencers are more often and more appropriately labeled as creators, or digital opinion leaders (DOLs). This is because they create content with the goal of educating their audience rather than selling products or simply getting the most clicks or followers. Most clinicians who choose to dedicate their time and energy to content creation are doing so out of a passion for education. For some, like Dr. Glaucomflecken, it has even turned into a second career, but for most, it is simply a labor of love. These DOLs are the primary creators of what has been dubbed "edutainment," and by virtue of this shared mission, a community has emerged.

The online community of DOLs are fast replacing the group of users on X (formerly Twitter) who were at times known for aggression and petty bickering rather than furthering medical education and fostering useful forums for discussing controversies in clinical medicine. DOL content creators instead have largely moved to video based platforms such as Instagram, YouTube and TikTok and are refreshingly enabling much more positive interactions in the comments and discussion sections of their various posts.

Having worked with and advised a number of DOLs, I can say that this group of clinicians who voluntarily put themselves out there by creating video based content to educate and entertain their peers are generally supportive, industrious, creative, and invested in making a positive impact in the lives of fellow clinicians and patients alike. For those who might be considering creating content but are apprehensive about the reception or experience in general, I suggest taking confidence in knowing that this community has likely had the same feelings and will be there waiting to support you. For those who prefer to remain in the role of consumers of content, be mindful of the intentions and hard work of DOLs and consume their content with compassion. After all, these are your colleagues and they are making tremendous sacrifices to enrich the work and lives of their audiences.

5. Content is King

Before I was a consultant and adviser for content creators, I was a DOL myself. I still continue that role today and have more than 2 million followers across platforms. One of the most important lessons I've learned through this journey is that there is no magic formula for topic selection and no universally successful recipe for video scripting, camera positioning, or lighting. The truth is that content is king. Nothing is more guaranteed to woo new followers and keep their attention as compelling content.

"Just as none of us can earnestly say that we have acquired all there is to know about medicine, a creator can never reach a comprehensive understanding of how to best engage with their audience "

A natural follow-up question then is: What makes content compelling? This is indeed the hardest part of this work. Determining one's niche and finding one's unique voice requires a constant process of trial and error—creating posts, analyzing reactions, and revising strategy ad infinitum. In open platforms like social media, there are no formal gatekeepers. Rather, social media habitats are meritocracies where those who "edutain" in the most captivating fashion are rewarded. Everyone is equally free to create engaging content in their own creative fashion. It took years, but eventually I found my niche and the formula that worked for my goals and personality. The proof of this is in the audience of followers who I have been able to recruit and retain based on the value that they find in the content I create.

Each social media platform relies on algorithms that present material to the end user, which the algorithms predict the user will want to see. The beauty of these algorithms is "organic discovery," which refers to those experiences in which an amazing video might be suggested, even if the creator is rather unknown. For these creators, unfortunately, their excellent content alone is usually not sufficient to amass a large following. Creators who also devote energy into interacting with their followers to understand what they find valuable are the most likely to succeed.

In a way it's like the study of medicine itself because

perfecting content creation is endlessly iterative and never complete. Just as none of us can earnestly say that we have acquired all there is to know about medicine, a creator can never reach a comprehensive understanding of how to best engage with their audience. Understanding the value of this investment in continuous improvement in the quality of content is fundamental to achieving recognition among the countless would-be DOLs participating in social media content creation.

The majority of readers do not aspire to a life as a DOL or content creator. However, as discussed earlier, many patients and clinicians (perhaps yourself included) are now expanding their knowledge and practice by engaging with the posts from these social media creators. I can attest from my work that none of the more prolific clinician-creators on social media with large followings got to where they are accidentally. Just as some clinicians dedicate their efforts to research, hospital leadership, or other entrepreneurial endeavors, healthcare content creators dedicate their time and energy to producing educational and entertaining material—usually with noble motives.

Warren Buffett famously said, "In order to succeed, you must first survive." While successful creators have mastered their individual formula for compelling content, each of them have only been afforded the opportunity to do so by maintaining a vigilant awareness of compliance, context, and the enduring nature of every post. So whether you aspire to join the ranks of clinical DOLs or remain among the masses who are affected by their posts, remember that exceptional content is the final common pathway to success on social media, but also, regardless of your goals, posting conscientious content is the first and most important principle for clinicians who wish to survive and thrive in the age of social media. ■

References
1. GWI website. Connecting the Dots: 2024 Consumer Trends. Accessed at: https://www.gwi.com/connecting-the-dots
2. Von Muhlen M, Ohno-Machado L. Reviewing social media use by clinicians. *J Am Med Inform Assoc.* 2012;19(5):777–781.
3. Childs LM, Martin CY. Social media profiles: striking the right balance. *Am J Health System Pharm.* 2012 Dec;69(23):2044–2050.
4. Sermo Press Release. Accessed at: https://www.sermo.com/press-releases/survey-finds-57-of-u-s-physicians-have-changed-their-perception-of-a-medication-as-a-result-of-info-on-social-media/
5. NBC News website. Nurse Firing Highlights Hazards of Social Media in Hospitals. July 8, 2014. Accessed at: https://abcnews.go.com/Health/nurse-firing-highlights-hazards-social-media-hospitals/story?id=24454611

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URGENT INTERACTIONS

LETTERS TO THE EDITOR

In response to the September 2024 Case Report "Emesis Ad Nauseum: A Case Report of Cannabinoid Hyperemesis Syndrome in Urgent Care"

Dear Editor,

Kudos on the article, "Emesis Ad Nauseum," appearing in the September issue. With the use of cannabis on the increase, we are seeing a definite increase in patients presenting with acute onset severe vomiting associated with the overindulgence of edible cannabinoid products. The information the authors presented will be useful to clinicians encountering these patients, and a copy has been posted in both our urgent care center as well as our system's emergency departments for reference.
Thank you.

Steve Weinman, MSc, RN, CEN
St. Joseph's Health, Paterson, New Jersey

"Consider the 80/20 rule. Divide patients into low risk and high risk. For the 80% that are low risk, keep MDMs brief. For the 20% that are high risk, MDMs and related plans should be expansive."

— Joshua W. Russell, MD, MSc, ELS, FCUCM, FACEP
JUCM Editor in Chief

"If we don't gather adequate data, we will not be able to make an adequate decision."

—Michael Weinstock, MD
JUCM Senior Clinical Editor

"This case emphasizes that young, otherwise healthy patients can harbor dangerous cardiovascular pathology and why we must adhere to a systematic approach. All patients with chest pain or symptoms associated with acute coronary syndrome require a stat electrocardiogram, irrespective of age and risk factors."

—William C. Krauss, MD, FACEP
Kaiser San Diego Medical Center; Kaiser Permanente Bernard J. Tyson School of Medicine; Author of "Could This Young Patient Really Have a STEMI? A Case Report of a Spontaneous Coronary Artery Dissection" (Page 21)

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Mistaken Identity

Lou Ellen Horwitz, MA

For as long as I can remember, Urgent Care has defined itself in the context of something else. We're "more than primary care but less than emergency," and "we're like those drugstore clinics but we can do a lot more." Or "we fill a gap in on-demand access." I guess that is necessary when you are new and small and unknown.

The problem with this kind of definition is that it's so other-dependent. The way we talk about ourselves often sounds like it would be *better* if no one needed Urgent Care at all, and that continues to make it okay for us to be marginalized.

For example, there's a narrative out there that if we could fix the primary care access problem, there would be no need for Urgent Care. There's another that Urgent Care is doing *too good a job* because more people are getting care, so we are *overfilling* the gap. Both are wrong, but because we are letting ourselves only be defined in our relation to other aspects of healthcare, it's impossible for us to be properly valued. It perpetuates a sense that we exist only because another problem (or set of problems) can't be fixed. It puts us adjacent to the "real system" on the national healthcare org chart.

This is not just an industry problem. Over 2 decades, Urgent Care clinicians have worked to be understood and recognized as specialty providers but have been faced with a similar dilemma. Are we a separate and definable medical specialty that can stand alone, or can we only describe ourselves as the center of a Venn diagram where primary care and emergency medicine overlap? It's an understandable image and has worked well in introductory conversations, but it's still dependent on the fluctuating scopes and definitions of others.

I wonder if we've gotten so used to being the underdog, the red-headed stepchild, the gap-filler, and the unrecognized that we have inadvertently become the self-limited.

If you ask a patient why they come to Urgent Care, they probably no longer say, "I couldn't get into see my primary," or "I didn't want to go to the emergency room." Patients aren't burdened by our history. Patients come to Urgent Care because they were sick or hurt, it's awesomely convenient, and we are nice. For them it's very simple.

In my own life, I love that my favorite coffee place has thousands of locations because when I want coffee, it's uncomplicated and easy to get. I know it's going to be good. And that's just coffee. If you asked your patients, they'd love to have a good Urgent Care on every corner because when they or their loved one are sick or hurt, the last thing they want to do is spend time figuring out where to go for help. For them, Urgent Care is just awesome, period. Wouldn't it be lovely if everyone in the world could feel like that when they are sick or hurt?

So why should we be stuck defining ourselves in the context of others, and how do we break this little habit of ours? We need some new language, but it's going to take some work to figure out what it sounds like.

Let me give you an example from the Urgent Care Association's advocacy work. As you all know, we've finally gotten inclusion in official publications of the Centers for Medicare and Medicaid Services (CMS) via a request for information in their 2025 Physician Fee Schedule. This means that we have finally managed to get our foot in the door and our seat at one of their tables. This is our moment, and we have to make the most of it before it passes us by.

So, now that someone extremely important (CMS) has actually asked us what we want for ourselves, what do we ask for? We ask for a new Place of Service (POS) code that recognizes all that we really are and do (no offense, POS 20). We ask for a G-code that can be attached to every visit that compensates us for the ongoing investments we make to enable us to do all that we do. We ask to be recognized for the real role we play in today's healthcare system. We ask to be seen. ■

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

CONTINUING MEDICAL EDUCATION

Release Date: October 1, 2024
Expiration Date: September 30, 2025

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

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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 Institute for Medical and Nursing Education (IMNE) and the Institute of Urgent Care Medicine. IMNE is accredited by the ACCME to provide continuing medical education for physicians. The IMNE designates this journal-based CME activity for a maximum of 3 *AMA PRA Category 1 Credits™*.

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Urgent Care Diagnosis and Management of Distal Radial (Colles) Fractures (page 15)

1. **What is the typical mechanism of a distal radius fracture with dorsal angulation (Colles fracture)?**
   a. Direct blow to the wrist
   b. Overuse syndrome resulting in a stress fracture
   c. Pathologic process resulting in a fracture
   d. Fall onto an outstretched hand

2. **Where is the most common location of maximal pain for a patient with Colles fracture?**
   a. Over the distal radius
   b. Over the humerus
   c. Over the biceps tendon
   d. Over the scapula

3. **Which of the following conditions for Colles fracture should prompt referral to the emergency department or rapid orthopedic follow-up?**
   a. Intra-articular fracture
   b. Open fracture
   c. Fracture with significant swelling and concern for compartment syndrome
   d. Fracture with consideration of carpal-metacarpal dislocation
   e. All of the above

Could This Young Patient Really Have a STEMI? A Case Report of a Spontaneous Coronary Artery Dissection (page 21)

1. **How does spontaneous coronary artery dissection typically occur?**
   a. When an intramural hematoma develops within the wall of a coronary artery
   b. After a direct blow to the chest
   c. After a vigorous episode of vomiting
   d. All of the above

2. **In patients presenting to urgent care with chest pain or any other symptoms suggestive of acute coronary syndrome, what might be your initial diagnostic order?**
   a. X-ray
   b. Electrocardiogram
   c. Stress test
   d. White blood cell count

3. **How common is spontaneous coronary artery dissection among cases of acute coronary syndrome?**
   a. 1-4% of cases
   b. 5-12% of cases
   c. 15-20% of cases
   d. More than 20% of cases

Recognition and Management of Achenbach Syndrome (Paroxysmal Finger Hematoma) (page 25)

1. **Paroxysmal finger hematoma is characterized by which of the following?**
   a. Subcutaneous bleeding in the fingers
   b. Acute onset of finger swelling and pain
   c. Bluish-purple discoloration of fingers
   d. All of the above

2. **Management of paroxysmal finger hematoma most often involves which of the following?**
   a. Supportive care and reassurance
   b. Sugar tong splint
   c. Referral to orthopedic surgeon
   d. Transfer to emergency department

3. **How long does it typically take for paroxysmal finger hematoma to resolve?**
   a. 24 hours
   b. 3 to 5 days
   c. 10-14 days
   d. 3 weeks or more

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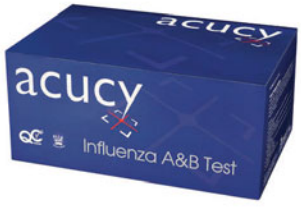

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Urgent Care Diagnosis and Management of Distal Radial (Colles) Fractures

Urgent Message: Fractures of the distal radius, commonly referred to as Colles fractures, most often occur after a fall onto an outstretched hand. Their immediate urgent care management may require only splinting or a same day emergency department visit depending on certain factors.

Josie L. Bunstine, BS; Clinton Hartz, MD

Citation: Bunstine JL, Hartz C. Urgent Care Diagnosis and Management of Distal Radial (Colles) Fractures. *J Urgent Care Med.* 2024; 19(1):15-19

Editor's Note: *While the images presented here are authentic, the patient case scenarios are hypothetical.*

Questions for the Clinician at the Bedside

1. What is a Colles fracture?
2. What are the common mechanisms for distal radius fracture (DRF)?
3. When should the immediate attempts at closed reduction be performed?
4. Can closed reduction be performed in the urgent care?
5. Is splinting without fracture manipulation and outpatient orthopedic follow up adequate care for all DRFs?
6. When is advisable for patients with a DRF to be immediately referred to an emergency department?

Clinical Scenario

A previously healthy, right hand dominant, 72-year-old woman presented to urgent care (UC) for left wrist pain immediately after falling onto her outstretched hand (FOOSH). On exam, there was a visible deformity, and she had facial wincing with even minimal attempts of movement of the left wrist. There were superficial abrasions over the palmar aspect of the hand and mild-moderate discomfort with palpation in this location. There was no tenderness over the anatomic snuffbox or the elbow. The skin was otherwise intact, her fingertip capillary refill was brisk in all fingers, and she had no sensory or motor changes.

X-rays (XR) of the left wrist were performed, which demonstrated a distal radius fracture (DRF) with dorsal angulation (ie, a Colles fracture) (**Image 1**). The carpal bones, including the scaphoid, and bones of the hand were intact, and there was no apparent ulnar styloid fracture.

DRF is the most common type of upper extremity fracture, accounting for over 15% of all fractures seen in the emergency department (ED).[1] And among DRFs, Colles fractures are the most common, representing more than 90% of DRF injuries.[2] Specifically, a Colles fracture is a distal metaphyseal fracture of the radius that occurs roughly 2.5cm proximal to the carpal articulation (ie, wrist joint).[1] It most often presents with dorsal displacement and angulation, classically described as the "dinner fork" deformity on XR (**Image 1**). This pattern was initially described by Irish surgeon Abraham Colles in 1814, who noted the extreme

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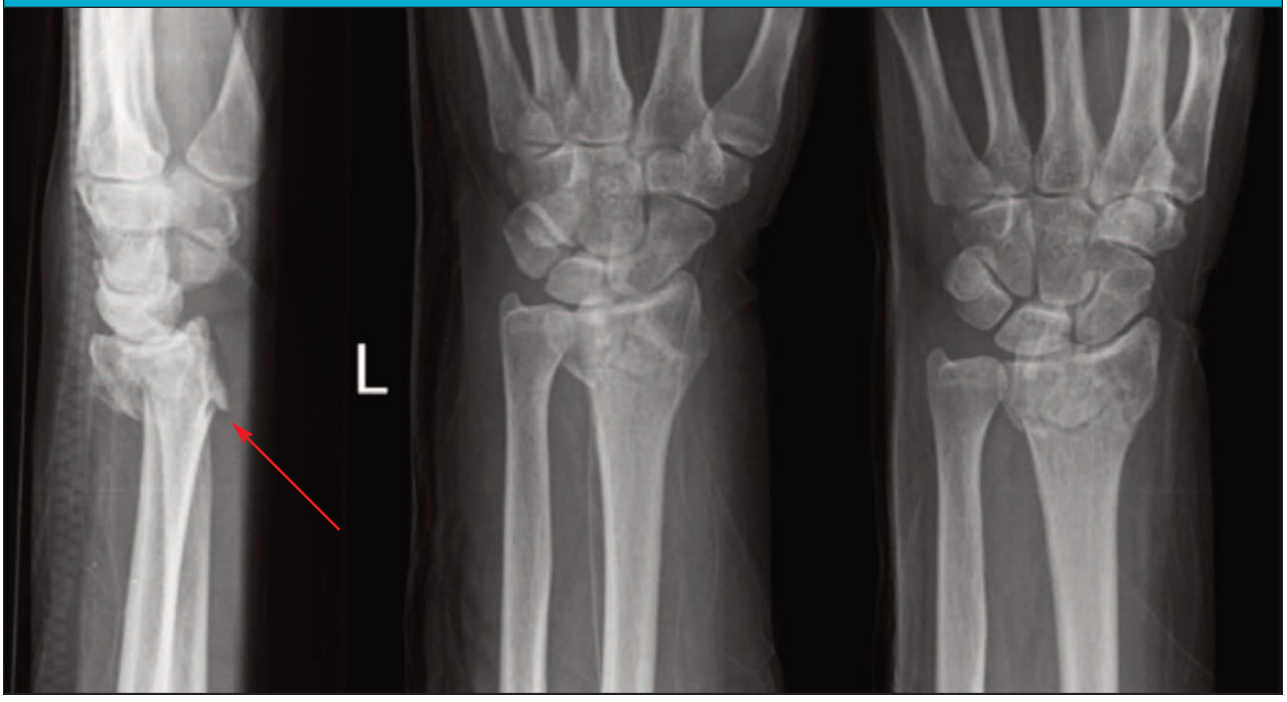
Image 1: Colles Fracture, Lateral, Oblique, Posteroanterior Views



frequency of the injury in his practice.[3,4] Although widely referred to as a Colles fracture, description of the fracture pattern without the use of eponyms may help enhance communication and avoid confusion.

Wrist Anatomy

The distal radius articulates with the scaphoid and lunate carpal bones. Injuries that involve the distal radius can also impact the carpal bones either resulting in fracture or ligamentous disruption with or without dislocation. The anatomical snuff box is a triangular depression evident on the dorsal radial aspect of the wrist with extension of the thumb. Tenderness with palpation of the anatomical snuff box should raise suspicion for concomitant scaphoid fracture. The pattern of vascular supply to the scaphoid is primarily retrograde (ie, distal to proximal). This facet of anatomy translates to higher risk of malunion and avascular necrosis with more proximal locations of scaphoid fractures. Tenderness with axial loading of pressure on the thumb is also useful when considering the possibility of scaphoid fracture.[5] It is prudent to assess and document the absence of tenderness with these maneuvers in patients presenting after a FOOSH mechanism.

History

DRFs are typically sustained after FOOSH injuries with a hyperextended, radially deviated wrist and the forearm in pronation.[2] Low energy mechanisms can still result in DRF, especially in older patients, and often result in only minimally displaced, extraarticular fractures.[1] High energy mechanisms of injury are more common in younger patients and may result in comminuted and/or displaced intra-articular fractures.[1] Risk factors for DRF include decreased bone mineral density, white ethnicity, prolonged steroid use, female gender, and early menopause.[1] DRF present with significant pain and swelling and a deformity of the distal arm may be evident. Typically, active range of motion (ROM) is severely limited. It is important to always inquire about the patient's dominant hand and their profession to inform treatment options and impact on the return to activities.

Physical Examination

As with any orthopedic complaint, examine the joint above and below the area of pain. Physical exam begins with inspection for swelling, deformity, abrasions, and/or lacerations. Palpate the areas of greatest pain in the wrist and move to surrounding structures, which may also be injured. The ROM assessment will be limited due to pain in the acute setting. Nonetheless, it is useful to ask the patient to range the wrist in flexion/extension, pronation/supination, and radial deviation/ulnar deviation. Surprisingly, uncompromised ROM

Image 2: Normal Wrist X-Ray, Posteroanterior View

Image 3: Normal Wrist X-Ray, Lateral View

Note normal wrist lateral XR shows proximally the radius juxtaposing with the lunate.

after a FOOSH injury may be the first clue that a DRF is unlikely. Finally, assess and document neurovascular status by commenting on radial and ulnar pulses, nail-bed capillary refill, and/or the presence of paresthesia.[6]

When considering location of maximal pain at rest, it is most commonly experienced over the distal radius, however, it is important to assess if there are other areas of pain with ROM to rule out additional pathology. Pain with palpation at the anatomic snuff box has a 96% sensitivity and a 39% specificity for scaphoid fracture.[7] Tenderness in the carpal bones, hand, elbow or shoulder may suggest associated injuries and compel additional XR acquisition. A complaint of a "clicking" sensation or pain on the dorsal aspect of radial wrist may indicate a scapholunate ligamentous injury.[8]

Imaging

Initial imaging in UC most commonly involves plain radiography. A 3-view wrist XR series including posteroanterior (PA) (**Image 2**), lateral (**Image 3**), and oblique views is usually appropriate, but a scaphoid view may be added as well in cases of concern for associated scaphoid injury.[2] If present, a DRF is often evident. However, DRF may be initially occult if non-displaced and in patients with lower bone mineral density. A 2015 study found that sensitivity of plain XR for DRF was as low as 67% when compared to computed tomography.[9] Ensure that each visualized carpal bone and the bones of the hand and forearm are inspected. Providing the radiologist with a detailed clinical history and location(s) of significant pain and tenderness is critical for minimizing the likelihood of missed injuries.[10]

Management In Urgent Care

Management of Colles fractures in UC includes consideration of the following:

- Whether any closed reduction is necessary
- Appropriate splinting technique for immobilization
- How to manage the pain acutely and after discharge
- Which indications necessitate immediate ED referral

Indications for immediate ED referral include the following:

- Excessively displaced fracture that cannot be reduced to <20 degrees dorsal angulation
- Open fracture
- Associated carpal-metacarpal dislocation
- Intractable pain

- Acute neurovascular compromise

If the fracture is nondisplaced or minimally displaced, not significantly angulated, not severely comminuted, and there is no evidence of neurovascular compromise, then a plaster or fiberglass splint may be applied without manipulating the wrist. Although short arm splints and casts are better tolerated by patients, they may compromise protection against loss of reduction.[11] The most effective and widely used method of splint immobilization is with a sugar tong splint to prevent forearm pronation/supination.[11] Sugar tong splints should be applied with the wrist in neutral to slight extension (10-20 degrees and the elbow at 90 degrees of flexion).[12] Splint material should be applied from the volar surface of the MCP joints along the volar surface of the forearm around the elbow and then along the dorsal surface of the forearm back to the dorsal surface of the metacarpophalangeal joint.[12] Cast immobilization is not recommended acutely as rigid circumferential material can create a tourniquet effect.[13]

Fracture displacement, angulation, and radial shortening have been show to affect outcomes after DRF.[14,11] Radial shortening >5mm, dorsal angulation >20 degrees, and articular displacement >2mm are associated with poorer functional results, and therefore post-reduction imaging should confirm the fracture manipulation has yielded a position within these parameters.[11,13,15] Per the American Academy of Orthopedic Surgeons (AAOS), patients <65 years who undergo operative repair for DRFs when either there is post-reduction radial shortening >3mm, dorsal tilt >10 degrees, and/or intraarticular displacement or step off >2mm have better functional outcomes.[16] Understanding these thresholds is important to allow UC clinicians the ability to provide some guidance about the likelihood of requiring surgery.

DRFs warrant outpatient referral to an orthopedic specialist for follow-up. Not all fractures of the distal radius will require surgery. If surgical intervention is undertaken, it is recommended that surgical fixation occurs within 72 hours for intra-articular DRFs and within 1 week for extra-articular fractures. This is why prompt follow-up with an orthopedic specialist, ideally within 72 hours, is especially important.[1,17]

Closed reduction in UC is reasonable and appropriate, if clinically indicated, when clinicians with appropriate training are caring for patients after an acute DRF. Evidence is mixed as to how much splinting alleviates pain after closed reduction.[18] However, splint immobilization of a DRF remains standard practice after closed reduction is attempted.[13]

In the ED, options for anesthesia prior to closed reduction attempts include intravenous regional anesthesia (ie, Bier block), hematoma block, regional nerve blocks, and intramuscular (IM) or intravenous (IV) administration of analgesics and/or sedatives for procedural sedation.[19] Though procedural sedation is unlikely to be available in UC settings, hematoma blocks offer a quick and effective approach to analgesia. In recent meta-analyses, there was no difference in pain severity during fracture reduction in adult patients between procedural sedation and hematoma block.[20] However, hematoma block obtained a larger reduction in pain severity compared to procedural sedation in adult patients after fracture reduction and for pediatric patients during fracture reduction.[20] Another study found that when comparing procedural sedation versus hematoma blocks, there was no significant difference in radiographic quality of the initial reduction between groups.[19]

Tips for achieving successful analgesia using a hematoma block include:

- Proceed by cleansing skin with iodine or chlorhexidine prior to a dorsal injection of 10ml of local anesthetic (2% lidocaine).
- Aspirate blood to confirm location of the hematoma.
- Apply straight traction or straight then volar traction to reduce the fracture.
- Confirm adequacy of reduction with a post-reduction XR.
- Assess and document neurovascular status before and after reduction.
- Ensure orthopedic follow-up within 72 hours after adequate reduction.[17]

For management of acute pain associated with the fracture, the AAOS recommends limiting opioids as able and employing a multimodal pain management strategy.[21] The safest initial analgesic option is acetaminophen. In addition, nonsteroidal anti-inflammatory drugs (NSAIDs) in standard doses for a short duration can be extremely helpful for managing pain and have been shown likely to not meaningfully impede fracture healing.[22,23]

If a patient is referred to the ED, a temporary splint and shoulder sling can help minimize pain in transit. Remind patients that they should refrain from eating if going to the ED as they may require some procedure with sedation to reduce the fracture.

Next-Level Urgent Care Pearls

- Specifically evaluate for scaphoid fracture, carpal-

metacarpal dislocation, and lunate or perilunate dislocation (especially in patients with higher mechanism injuries).

- While not routinely available in UC, the advanced imaging test of choice for suspected scaphoid fractures (with negative XR) is a magnetic resonance imaging (MRI) scan of the wrist. The sensitivity of MRI for scaphoid fracture is 96% with a specificity of 98%.[7]
- To reduce a Colles fracture, a hematoma block is a reasonable approach in the UC setting. There is no difference in radiographic quality of initial reduction between hematoma block and sedation.[19] The analgesia for a hematoma block is similar to procedural sedation.[20]
- Ensure the patient truly has an isolated DRF.

Red Flags and Legal Pitfalls

- Assess for open fractures as these will need emergent surgical intervention.
- Assess for other injuries such as a scaphoid fracture, lunate, or perilunate dislocation.
- Assess the joint above and the joint below to ensure there are no other fractures or dislocations.
- Consider compartment syndrome in patients with unexpectedly severe pain. While rare, it can occur with distal radius fractures. Document palpation of the forearm compartments in all forearm fractures. Half of patients may be able to be diagnosed by clinical grounds alone.[19]

Clinical Scenario Conclusion

In UC, the patient had an XR that confirmed a DRF fracture. The UC provider was able to reduce the fracture with the aid of a hematoma block, and the patient was splinted and referred to orthopedics. The patient was able to see the orthopedist the next day and was scheduled for surgery the following morning. The patient underwent open reduction with internal fixation of her DRF with a good functional outcome.

Takeaway Points

- A Colles fracture describes a specific DRF of the metaphysis with dorsal angulation.
- Refer to the ED or same-day orthopedic clinic when inadequate reduction is obtained in UC. Patients with open fractures, neurovascular compromise, or signs or symptoms of compartment syndrome require immediate ED referral.
- Clinicians in UC can reasonably attempt closed reduction with the use of available anesthesia and analgesia. This may include oral, IV/IM agents, as well as a hematoma block. ■

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References

1. Lim JA, Loh BL, Sylvestor G, Khan W. Perioperative management of distal radius fractures. *J Perioper Pract*. 2021;31(10):1750458920949463. doi:10.1177/1750458920949463
2. Egol KA, Koval KJ, Zuckerman JD. *Handbook of Fractures*. Wolters Kluwer; 2020.
3. Panthi S, Khatri K, Kharel K, et al. Radiological and Functional Outcome of Displaced Colles Fracture Managed with Closed Reduction and Percutaneous Pinning: A Prospective Study. *Cureus*. 2017;9(1):e960. Published 2017 Jan 6. doi:10.7759/cureus.960
4. Colles A. On the Fracture of the Carpal Extremity of the Radius. *Edinb Med Surg J*. 1814;10(38):182-186.
5. Li NY, Dennison DG, Shin AY, Pulos NA. Update to management of acute scaphoid fractures. J *Am Acad Orthop Surg*. 2023;31(15). doi:10.5435/JAAOS-D-22-01210
6. Young D, Papp S, Giachino A. Physical examination of the wrist. *Hand Clin*. 2010;26(1):21-36. doi:10.1016/j.hcl.2009.08.010
7. Gemme S, Tubbs R. What physical examination findings and diagnostic imaging modalities are most useful in the diagnosis of scaphoid fractures?. *Ann Emerg Med*. 2015;65(3):308-309. doi:10.1016/j.annemergmed.2014.10.029
8. Andersson JK. Treatment of scapholunate ligament injury: Current concepts. *EFORT Open Rev*. 2017;2(9):382-393. Published 2017 Sep 19. doi:10.1302/2058-5241.2.170016
9. Balci A, Basara I, Çekdemir EY, et al. Wrist fractures: sensitivity of radiography, prevalence, and patterns in MDCT. *Emerg Radiol*. 2015;22(3):251-256. doi:10.1007/s10140-014-1278-1
10. McBee M, McBee L. The Importance of Providing Clinical History for Radiology Studies in the Urgent Care Setting. *J Urgent Care Med*. 2024; 18(3): 17-19
11. Wulf CA, Ackerman DB, Rizzo M. Contemporary evaluation and treatment of distal radius fractures. *Hand Clin*. 2007;23(2):209-vi. doi:10.1016/j.hcl.2007.03.003
12. Habrat D. How to Apply a Sugar Tong Arm Splint. Merck Manual Professional Edition. February 2024. Accessed September 6, 2024. https://www.merckmanuals.com/professional/injuries-poisoning/how-to-splint-or-immobilize-an-upper-limb/how-to-apply-a-sugar-tong-arm-splint#Equipment_v54268115.
13. Boyd et al, Principles of casting and splinting. *Am Fam Physician*. 2009; 79(1):16-22, 23-24.
14. Walenkamp MM, Vos LM, Strackee SD, Goslings JC, Schep NW. The Unstable Distal Radius Fracture-How Do We Define It? A Systematic Review. *J Wrist Surg*. 2015;4(4):307-316. doi:10.1055/s-0035-1556860
15. Chhabra AB, Yildirim B. Adult Distal Radius Fracture Management. *J Am Acad Orthop Surg*. 2021;29(22):e1105-e1116. doi:10.5435/JAAOS-D-20-01335
16. American Academy of Orthopaedic Surgeons. Management of Distal Radius Fractures Evidence-Based Clinical Practice Guideline. www.aaos.org/drfcpg. Published December 5, 2020.
17. British Orthopaedic Association Audit Standards for Trauma. The Management of Distal Radius Fractures. https://www.boa.ac.uk/resource/boast-16-pdf.html. Published December 2017.
18. Löw S, Papay M, Spies CK, Unglaub F, Eingartner C. The Requirement for Closed Reduction of Dorsally Displaced Unstable Distal Radius Fractures Before Operative Treatment. *Dtsch Arztebl Int*. 2020;117(46):783-789. doi:10.3238/ arztebl.2020.0783
19. Alatishe KA, Ajiboye LO, Choji C, Olanrewaju OS, Lawal WO. The radiographic quality of conservatively managed distal radius fractures in adults using haematoma block versus intravenous sedation. *Eur J Orthop Surg Traumatol*. 2023 Apr;33(3):525-532. doi: 10.1007/s00590-022-03414-9. Epub 2022 Oct 15. PMID: 36242673.
20. Tseng PT, Leu TH, Chen YW, Chen YP: Hematoma block or procedural sedation and analgesia, which is the most effective method of anesthesia in reduction of displaced distal radius fracture? *J Orthop Surg Res*. 2018;13:1-7.
21. American Academy of Orthopaedic Surgeons. Management of Distal Radius Fractures Evidence-Based Clinical Practice Guideline. www.aaos.org/drfcpg. Published December 5, 2020.
22. Taylor IC, Lindblad AJ, Kolber MR. Fracture healing and NSAIDs. *Can Fam Physician*. 2014;60(9):817-e440.
23. Yates JE, Hadi Shah S, Blackwell JC. Clinical inquiries: do NSAIDs impede fracture healing? [published correction appears in J Fam Pract. 2011 Mar;60(3):120]. *J Fam Pract*. 2011;60(1):41-42

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Case Report

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Could This Young Patient Really Have a STEMI? A Case Report of a Spontaneous Coronary Artery Dissection

Urgent Message: It is important to quickly obtain an electrocardiogram in patients presenting with chest pain or other symptoms suggestive of acute coronary syndrome, even for those who are young and without traditional coronary risk factors.

William C. Krauss MD, FACEP

Citation: Krauss WC. Could This Young Patient Really Have a STEMI? A Case Report of a Spontaneous Coronary Artery Dissection. *J Urgent Care Med.* 2024; 19 (1): 21-23

Key Words: chest pain, spontaneous coronary artery dissection, acute coronary syndrome

Abstract

Introduction: Spontaneous coronary artery dissection (SCAD) is a rare cause of acute coronary syndrome (ACS) that can present as an ST-elevation myocardial infarction (STEMI). This disease entity disproportionately affects women, younger patients, and those without traditional cardiovascular disease risk factors—constituting a cohort that may be more apt to seek initial evaluation in the urgent care (UC) setting.

Clinical Presentation: A 22-year-old previously healthy man presented to a local UC center with chest pain that awoke him from sleep. He reported that the pain radiated to his jaw and made him feel short of breath.

Physical Exam: The patient appeared uncomfortable and diaphoretic, and his blood pressure and respiratory rate were elevated. He had a normal cardiopulmonary exam.

Case Resolution: A 12-lead electrocardiogram (ECG) was obtained in UC showing ST-elevations, and he was transferred to the adjacent emergency department (ED). In the ED, his pain was treated with sublingual nitroglycerin, and he received oral (PO) aspirin and intravenous (IV) heparin. He was taken immediately for emergent cardiac catheterization where coronary angiography revealed a spontaneous coronary artery dissection. The patient was managed conservatively without percutaneous coronary intervention (PCI) and subsequently discharged on aspirin, metoprolol, and clopidogrel.

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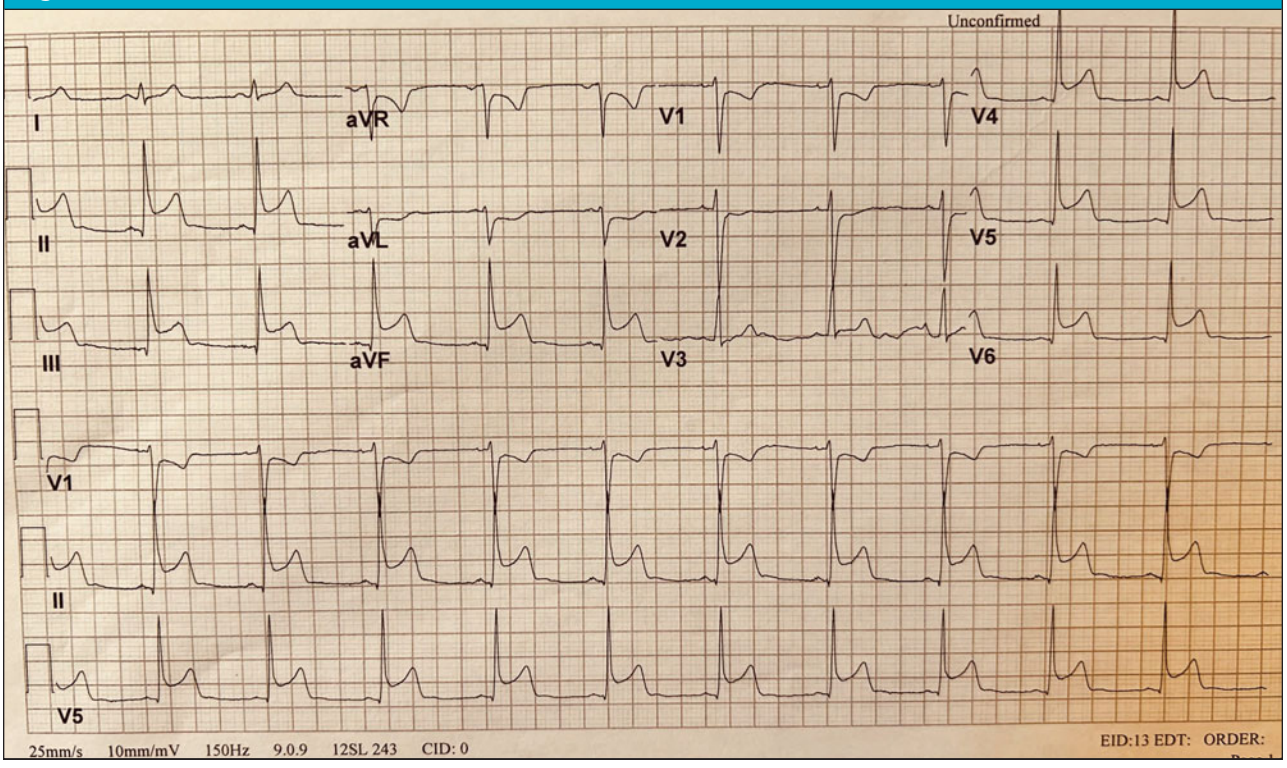
Figure 1.



Conclusion: Young patients without traditional cardiovascular risk factors who present with ACS can frequently have SCAD as an underlying etiology. It is important that age and absence of traditional risk factors for coronary artery disease do not dissuade UC clinicians from considering ACS or from screening patients with suggestive symptoms using a 12-lead ECG.

Introduction

Spontaneous coronary artery dissection occurs when an intramural hematoma develops within the wall of a coronary artery. It is not related to atherosclerosis, trauma, or an iatrogenic process (eg, coronary catheterization). It may subsequently progress to the development of an intimal dissection flap or expand to result in hemodynamically significant obstruction of the lumen resulting in an acute myocardial infarction (MI).[1,2,3] It is important to note that SCAD is a rare condition, but it occurs more commonly in women and younger patients.

Clinical Presentation

A 22-year-old previously healthy man presented to a UC center complaining of retrosternal chest pain that awoke him from sleep 16 hours prior to arrival. The pain radiated to his jaw and was associated with a sensation of shortness of breath. He denied pleuritic pain, abdominal pain, and back pain. He was a college student and did not use alcohol, tobacco, or illicit drugs. He reported no family history of early cardiovascular disease in his first-degree relatives. He took no prescription or over-the-counter medications and had no known allergies.

Physical Exam Findings

The patient appeared both uncomfortable and diaphoretic. His vital signs were significant for an elevated blood pressure of 160/100 and respiratory rate of 24. The remaining vital signs were normal. His lung, cardiac, abdominal, and neurological exam were normal.

Urgent Care Management

The patient had a 12-lead ECG (**Figure 1**) shortly after his presentation to UC. The clinician evaluating him interpreted the ECG as normal sinus rhythm with a ventricular rate of 65 beats per minute. There was 4-5 mm ST elevation observed in leads II, III, avF, and V4-V6, with ST depression in aVL, consistent with an inferior-lateral STEMI. He was immediately transferred to the adjacent on-site ED.

Emergency Department Evaluation and Management

In the ED, a repeat ECG was obtained and was unchanged. The cardiac catheterization lab was activated. While awaiting transfer to the catheterization lab, he had a chest x-ray and bedside echocardiogram which were both interpreted as normal. His laboratory studies were normal except for a high-sensitivity troponin I (hsTnI) of 10,000 pg/mL. His pain was treated with sublingual nitroglycerin. The cardiologist also recommended the patient receive PO aspirin and IV heparin prior to going to the catheterization suite. His vital signs remained stable, and his symptoms improved with nitroglycerin.

Diagnostic Assessment and Case Conclusion

In the cardiac catheterization laboratory, a coronary angiogram demonstrated a SCAD of the left circumflex artery, causing a subtotal occlusion of the obtuse marginal artery 2 branch. The patient was treated conservatively without PCI (ie, no stenting or angioplasty was performed) and, after a short and uneventful admission for cardiac telemetry, was discharged on aspirin, clopidogrel, and metoprolol. He was noted to be doing well at a subsequent outpatient cardiology follow-up visit 6 months after discharge.

Discussion

SCAD is defined as the development of an intramural hematoma of a coronary artery not related to atherosclerosis, trauma, or an iatrogenic process.[4] This may progress to a dissection flap or expand to occlude the coronary artery's lumen resulting in MI.[5,6,7]

SCAD is a relatively uncommon condition, accounting for 1-4% of all cases of ACS; 90% of those affected are women.[1] SCAD most commonly presents with ECG findings of STEMI (49%), followed by NSTEMI (44%), and unstable angina (7%).[1] Presenting complaints are similar to those of other causes of ACS, including chest pain, diaphoresis, dyspnea, vomiting, and dizziness.[5,6] Common risk factors for SCAD include female sex, emotional stress, pregnancy, connective tissue disorders, and stimulant drug misuse.[7] A notable risk factor for women who develop SCAD is fibromuscular dysplasia (FMD).[8] FMD is a rare idiopathic disease found in younger women often presenting as renovascular hypertension or early ischemic stroke and is diagnosed as a "string-of-beads" on vascular imaging. Coronary angiography remains the gold standard for the diagnosis of SCAD, and expert consensus guidelines recommend conservative management with long-term aspirin, beta blocker, and short-term clopidogrel.[8] Patients with SCAD have a favorable prognosis with a 99% 3-year survival rate.[9,4]

"It is important to quickly obtain an ECG in patients presenting to UC with chest pain or any other symptoms suggestive of ACS."

Takeaways for Urgent Care Providers

- Young patients without traditional risk factors for cardiovascular disease may still have ACS, which could be related to SCAD as an underlying etiology.
- It is important to quickly obtain an ECG in patients presenting to UC with chest pain or any other symptoms suggestive of ACS, even if they are young and devoid of traditional coronary risk factors.

Ethics Statement and Patient Perspective

The patient was unable to be contacted as he was lost to follow-up, therefore, certain demographics and some details of the case were changed to protect patient anonymity and confidentiality. ■

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References

1. Lewey J, El Hajj SC, Hayes SN. Spontaneous coronary artery dissection: new insights into this not-so-rare condition. *Annu Rev Med*. 2022;73(1):339-354.
2. Thompson EA, Ferraris S, Gress T, Ferraris V. Gender differences and predictors of mortality in spontaneous coronary artery dissection: a review of reported cases. *J Invasive Cardiol*. 2005;17l1):59-61.
3. Saw J. Spontaneous coronary artery dissection. *Can J Cardiol*. 2013;29(9):1027-1033.
4. Hembree IS, Aljadi A, Ibebuogu UN. Spontaneous coronary artery dissection: A comprehensive review. Current Problems in *Cardiol*. 2024; 49: 102681.
5. Wurdinger M, Cammann VL, Ghadri JR, Templin C. Spontaneous coronary artery dissection: a rare event? *Heart Fail Clin*. 2022;18l1):189-199.
6. Codsi E, Tweet MS, Rose CH, Arendt KW, Best PJM, Hayes SN. Spontaneous coronary artery dissection in pregnancy: what every obstetrician should kown. *Obstet Gynecol*. 2016;128(4):731-738.
7. Kim ESH. Spontaneous coronary-artery dissection. *N Eng J Med*. 2020;383 (24):2358-2370.
8. Adlam D, Oson TM, Combaret N, et al. Association of the PHACTR1/EDN1 genetic locus with spontaneous coronary artery dissection. *J Am Coll Cardiol*. 2019:73(1):58-66.
9. Saw J, Humphries K, Aymong E, et al. Spontaneous coronary artery dissection: clinical outcomes and risk of recurrence. *J Am Coll Cardiol*. 2017; 70:1148-1158.

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Recognition and Management of Achenbach Syndrome (Paroxysmal Finger Hematoma)

Urgent Message: By understanding the symptoms of paroxysmal finger hematoma, clinicians can reduce patient anxiety and decrease unnecessary testing, as the condition is generally mild and has a favorable prognosis.

Ernesto Sanz Martinez, MD; William H. Kranichfeld, MD; Yenny Ceballos, ARNP

Citation: Sanz Martinez E, Kranichfeld WH, Ceballos Y. Achenbach Syndrome: Diagnosis of Paroxysmal Finger Hematoma. *J Urgent Care Med.* 2024; 19(1): 25-29

Introduction

Paroxysmal finger hematoma (PFH), also known as Achenbach syndrome, is a vascular disorder of unknown etiology characterized by subcutaneous bleeding in the fingers, which presents as an acute onset of finger swelling, pain, and a bluish-purple discoloration. It predominantly affects women. Although the symptoms are benign and self-limiting, they can mimic those of more severe conditions, causing concern for patients. Diagnosis is typically confirmed through clinical evaluation. Generally, the symptoms resolve spontaneously within a week, and management involves supportive care and reassurance. Raising physician awareness of Achenbach syndrome could reduce patient anxiety and decrease unnecessary testing, as the condition is generally mild and has a favorable prognosis.[1,2,3,4]

Clinical Scenario

A 56-year-old previously healthy woman visited a local urgent care (UC) due to the sudden onset of bluish-purple discoloration accompanied by pain and swelling in her left middle finger. The symptoms developed unexpectedly while she was at work approximately 2 hours

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Figure 1. Finger discoloration with pain and swelling

earlier. She had no additional complaints and denied any history of trauma, spontaneous bleeding, palpitations, or cold-induced finger discoloration. Additionally, she reported being a nonsmoker with no personal or familial history of autoimmune diseases.

The physical examination indicated the presence of a purple skin discoloration (**Figure 1**) along with mild tenderness upon palpation. She exhibited a normal range of motion at the proximal and distal interphalangeal joints, normal capillary refill, and unimpaired 2-point discrimination. A point-of-care complete blood count (CBC) and x-ray performed at the UC center were both normal.

This overview synthesizes the etiology, pathogenesis, epidemiology, clinical picture, differential diagnoses, and available treatment options in this case, supported by the most reliable evidence.

Etiopathogenesis

Paroxysmal finger hematoma (PFH), also known as Achenbach syndrome, is a benign condition of unknown origin, first described by Walter Achenbach, MD, in the 1950s.[5] Its exact cause remains unclear, though it is believed to involve subcutaneous bruising due to venous, rather than arterial or arteriolar hemorrhaging. Reduced capillary resistance and decreased blood flow in the affected fingers have been observed, though these are likely consequences of blood infiltrating the tissues rather than the cause.[5] Increased vascular fragility, potentially triggered by minor trauma, has been proposed as a possible mechanism, however many cases occur without any identifiable trigger.[6]

The condition is not linked to thromboembolic or vasculitic processes. Associations have been reported with acrocyanosis, migraines, hypothyroidism, gastrointestinal disorders, and gallbladder disease.[7] Rare cases of PFH have also been noted after recovery from COVID-19, possibly due to COVID-19-induced endothelial damage in the finger vessels.[8]

The underlying mechanism is thought to involve a vasomotor disorder, decreased capillary resistance, and the infiltration of venous blood into the soft tissues.[4] Recent research has proposed a potential genetic predisposition for Achenbach syndrome, although further studies are necessary to explore this hypothesis.[2]

Epidemiology

A systematic literature review revealed that Achenbach syndrome primarily affected women, with a median age of 49.5 years.[9] Due to its sporadic nature and benign out-

come, the exact prevalence is challenging to determine. Although it appears to be a rare disorder (fewer than 100 cases have been reported), many more cases may exist that have never presented for medical attention.[10]

Clinical Picture

Patients most often present with a rapid onset of painful swelling and a distinctive blue-purple discoloration on the palmar side of 1 or more fingers. The ring finger is affected most often, followed by the middle finger, although any finger can be impacted. There seems to be a slight predominance of cases involving the right hand.[11] Notably, this discoloration often spares the distal segments and the nail bed, which allows for distinction when compared to conditions causing ischemia of one or more fingers.[5]

Key characteristics:

- **Onset:** Symptoms usually begin abruptly with swelling and pain in the affected digit(s).[7]
- **Coloration:** The blue or purple discoloration usually affects the proximal phalanx of the finger, distinguishing it from many other conditions that cause discoloration of the fingertip.[9]
- **Prodromal Symptoms:** Before discoloration, patients might experience pain, tingling, and itching that can start several minutes to hours beforehand.[5]
- **Duration and Resolution:** The discoloration and swelling typically resolve spontaneously within 3 to 5 days, with a median resolution time of 4 days.[9]
- **Clinical Course:** The overall course of this condition is benign with full resolution generally within 1 week of onset.[5]

Furthermore, while primarily affecting the fingers, episodes similar to those seen in the hands have occasionally been reported in the toes and even on the plantar aspects of the feet.[1] The unique aspect of this condition is that the lesions resolve quickly, bypassing the typical stages of ecchymosis resorption seen in common bruises.[2]

Diagnosis

The diagnosis of Achenbach syndrome can be made based on the history and characteristic appearance alone. Investigations, including duplex ultrasonography and radiography of the affected extremity, yield normal results.[2,3] While not generally clinically available, nail bed capillaroscopy, if performed, usually reveals multiple hemorrhages without any other abnormalities in capillary structure or blood flow.[4]

There are no laboratory tests that aid in the diagnosis of Achenbach syndrome. In one case series, no blood test, including CBC, prothrombin time, international normalized ratio, partial thromboplastin time, thrombophilia screening, and erythrocyte sedimentation rate showed any suggestive pattern across patients. In certain cases where there are non-classic features or more concerning associated signs or symptoms, it may be appropriate to pursue further diagnostic evaluation to exclude autoimmune, dermatologic, hematologic, or vascular disorders before arriving on a presumptive diagnosis of Achenbach syndrome.[3]

While Achenbach syndrome is almost exclusively a clinical diagnosis, it is also a diagnosis of exclusion. It is therefore prudent to consider a broad differential before assigning the diagnosis of PFH to a patient presenting with abnormal findings on finger examination.

Differential Diagnosis

1. Acute Ischemia Due to Embolic Digital Artery Occlusion

- **Description:** A sudden reduction in blood flow to the finger caused by embolic occlusion of a digital artery or its branches. Potential causes of acute ischemia include sequelae of thoracic outlet syndrome, atrial dysrhythmia, structural heart disease (eg, ventricular aneurysm, patent foramen ovale), atherosclerosis of limb arteries, or thrombophilia.[5]
- **Differentiation:** Unlike PFH, acute digital ischemia presents with more severe pain and other prominent signs including pale or blue discoloration of the distal phalanx, coolness, numbness, and loss of pulse and/or delayed capillary refill of the affected digit. This condition, if not promptly addressed, can result in ischemic necrosis of the distal digit, distinguishing it from the benign and self-resolving nature of Achenbach syndrome.[5]

2. Acrocyanosis

- **Description:** A non-paroxysmal, persistent, painless bluish-red symmetrical discoloration of the hands, feet, and face. Acrocyanosis can be divided into primary acrocyanosis, which is not due to an underlying disease, and secondary acrocyanosis, which is associated with underlying conditions such as hypoxemia, hematologic disorders, methemoglobinemia, etc. Primary acrocyanosis has no known treatments, but secondary forms may resolve if the cause is identified and addressed.[12]
- **Differentiation:** Unlike PFH, acrocyanosis is typically painless, persistent, and symmetric involving the distal most aspects of the digits of the hands and feet.[12]

3. Buerger's Disease (Thromboangiitis Obliterans)
- **Description:** Buerger's disease is a severe condition primarily affecting smokers and young men. It involves inflammation and thrombosis in small and medium-sized arteries and often irreversible tissue damage.[13]
- **Differentiation:** Unlike PFH, Buerger's disease causes recurrent and progressive symptoms that can lead to severe and permanent complications like ulcers and ischemic necrosis of the affected digits. Smoking is a significant risk factor for Buerger's disease, and its symptoms typically worsen with continued tobacco use with auto-amputation of the fingers occurring in some cases.[13]

"Vasculitis is often associated with a systemic autoimmune disease and therefore rarely will occur in isolation."

4. Digital Hematoma Due to Trauma (Physical Injury)
- **Description**: When a finger is injured, blood can accumulate under the skin leading to pain, swelling, and often visible bruising or discoloration.[14]
- **Differentiation**: History of injury differentiates PFH from traumatic hematoma/bruising.[14]

5. Gardner-Diamond Syndrome (Psychogenic Purpura)
- **Description:** Gardner-Diamond syndrome is a rare condition, predominantly affecting women, which is characterized by the sudden appearance of painful, swollen skin lesions which transform into bruises. While psychogenic purpura can involve the fingers, it more commonly involves more proximal areas of the extremities or torso.[3]
- **Differentiation:** Unlike PFH, the symptoms of psychogenic purpura often occur following emotional distress and can appear on any part of the body.[3]

6. Pernio (Chilblains)
- **Description:** Pernio, or chilblains, is a condition that results in itchy and painful lesions on the toes and fingers, typically after exposure to cold and damp conditions. Usually multiple or all digits are affected and exhibit reddish, brownish, or purplish spots. Skin breakdown or ulceration may also occur.[15]
- **Differentiation:** Unlike PFH, pernio typically affects the toes more than the fingers and occurs seasonally. The lesions usually heal when the extremity is removed from the cold environment. Pernio's dependency on cold exposure and its recurring nature differentiate it from the spontaneous, non-seasonal presentation of Achenbach syndrome.[15]

7. Raynaud's Phenomenon
- **Description**: Raynaud's phenomenon occurs recurrently and episodically. It is caused by arteriolar vasospasm, which results in pale or purple discoloration of the digits in response after exposure to cold, stress, or certain substances (eg, caffeine, nicotine).[16]
- **Differentiation**: Unlike PFH, Raynaud's phenomenon will affect multiple digits symmetrically, like pernio. Skin changes in color but with a faster onset and resolution than pernio.[16]

8. Vasculitis
- **Description:** Vasculitis is a general term for inflammation of blood vessels, and there are many forms. Vasculitis is often associated with a systemic autoimmune disease and therefore rarely will occur in isolation. Intense pain is also common with many forms of vasculitis.[5]
- **Differentiation:** In contrast to PFH, vasculitis is often progressive, especially if untreated, leading to wounds on the affected fingers. Additionally, as vasculitis is commonly a feature of a more systemic autoimmune disease, myriad associated symptoms are common such as arthralgia, fever, and rash.[17]

9. Dermatologic Manifestations of Infective Endocarditis
- **Description:** In patients with infective endocarditis (IE), septic emboli may occlude portions of the digital vasculature. Examination of the hands can reveal various clues to suggest this phenomenon. Osler's nodes are one finding associated with endocarditis. These are painful, purple nodules which are most commonly found on the tips of fingers and toes but can also appear on the thenar and hypothenar eminences. They can persist for a few hours to several days. Janeway lesions are painless, purple or brown macules which appear on the

palms, soles, and fingers and can last days to weeks.[18]

- **Differentiation:** PFH is an isolated disorder whereas the cutaneous findings associated with IE typically do not occur in isolation and are associated with other systemic symptoms, particularly a relapsing and prolonged fever.[18]

10. Herpetic Whitlow

- **Description:** Herpetic whitlow, also known as digital herpes simplex, is a painful viral infection on one or more fingers, often around the fingernails. It can be caused by both type I and type II herpes simplex virus (HSV). Herpetic whitlow is painful and presents as a group of small vesicles (fluid-filled blisters) and/or erosions with crusting. Like other forms of HSV infection, herpetic whitlow is acquired by contact with HSV lesions and may recur periodically in the same locations.[19]
- **Differentiation:** Herpetic whitlow is a very painful condition. The lesions often appear as small, fluid-filled blisters and sores, and may be accompanied by prodromal pain and/ or systemic symptoms like fever. Herpetic whitlow is typically much more painful than Achenbach syndrome and is more commonly mistaken for a paronychia based on whitlow's typical appearance of painful swelling commonly at the base of a fingernail.[19]

Treatment

In classic cases with little diagnostic uncertainty, follow-up within 2-3 days is reasonable if symptoms are not improving. Follow-up can be either with a primary care provider or with a recheck in urgent care. For atypical cases where PFH is a consideration but less certain, it is prudent for reassessment within 48 hours with primary care or a recheck sooner in UC if symptoms are becoming more severe. The mild pain that patients may experience can be mitigated with basic analgesics, such as non-steroidal anti-inflammatory drugs, and /or treated with topical over-the-counter analgesics and cold compresses. Recurrent cases may require further investigation.[1,5,7,9,13]

Prognosis

PFH has an excellent prognosis and full recovery without treatment is the expected course. Occasionally, episodes can recur in the same finger or other fingers. Patients recover fully after each episode without any appreciable or known risks for other serious conditions.[3,7]

Takeaway Points for Urgent Care

- PFH, or Achenbach syndrome, may bring patients to medical attention, particularly in UC, given its tendency toward sudden and unpredictable onset.
- It is important for UC clinicians to be familiar with the PFH diagnosis and recognize likely cases because it is a benign and self-resolving condition.
- Clinical diagnosis in cases without other concerning features can allow UC clinicians to appropriately reassure and discharge patients without further testing. ■

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References

1. Jiménez PR, Ocampo MI, Castañeda-Cardona C, et al. Achenbach's syndrome: Case report and systematic review of the literature. *Rev Colomb Reumatol* 2017; 24: 230–236.
2. Harnarayan P, Ramdass MJ, Islam S, Naraynsingh V. Achenbach's Syndrome Revisited: The Paroxysmal Finger Hematoma May Have a Genetic Link. *Vasc Health Risk Manag*. 2021 Dec 14;17:809-816. doi: 10.2147/VHRM.S342847.
3. Solomon AL, Ratchford EV. Vascular Disease Patient Information Page: Achenbach syndrome (paroxysmal finger hematoma). *Vascular Medicine*. 2024; 29(2):229-232. doi:10.1177/1358863X231223524.
4. Yie K. Achenbach Syndrome: A Benign Painful Blue Finger with Tip Sparing. *Vasc Specialist Int*. 2019 Dec;35(4):251-253. doi: 10.5758/vsi.2019.35.4.251.
5. Godoy A, Tabares AH. Achenbach syndrome (paroxysmal finger hematoma). *Vasc Med*. 2019 Aug;24(4):361-366. doi: 10.1177/1358863X19849627.
6. Carpentier PH, Maricq HR, Biro C, Jiguet M, Seinturier C. Paroxysmal finger haematoma—a benign acrosyndrome occurring in middle-aged women. *Vasa*. 2016 Jan;45(1):57-62. doi: 10.1024/0301-1526/a000496.
7. Aida F, Kasimzade F. Analysis of 24 patients with Achenbach's syndrome. *World J Clin Cases*. 2019; 7(10):1103–1110. doi:10.12998/wjcc.v7.i10.1103
8. Abrashev H, Ananiev J, Georgieva E. Paroxysmal Finger Hematoma—A Probable Vascular Disorder in Post-COVID-19 Condition: Two Clinical Case Presentations. *Medicina*. 2022; 58(7):915. https://doi.org/10.3390/medicina58070915
9. Kordzadeh A, Caine PL, Jonas A, Rhodes KM, Panayiotopolous YP. Is Achenbach's syndrome a surgical emergency? A systematic review. *Eur J Trauma Emerg Surg*. 2016 Aug;42(4):439-443. doi: 10.1007/s00068-015-0610-0.
10. Azarfar A, Beg S. Achenbach Syndrome: A Case Series. *Cureus*. 2022 Mar 3;14(3):e22824. doi: 10.7759/cureus.22824.
11. Khaira HS, Rittoo D, Vohra RK, Smith SR. The non-ischaemic blue finger. *Ann R Coll Surg Engl*. 2001 May;83(3):154-7.
12. Kurklinsky AK, Miller VM, Rooke TW. Acrocyanosis: the Flying Dutchman. Vasc Med. 2011 Aug;16(4):288-301. doi: 10.1177/1358863X11398519. Epub 2011 Mar 22. *Erratum in: Vasc Med*. 2011 Oct;16(5):409.
13. Cowen R, Richards T, Dharmadasa A, Handa A, Perkins JM. The acute blue finger: management and outcome. *Ann R Coll Surg Engl*. 2008 Oct;90(7):557-60. doi: 10.1308/003588408X318237.
14. Ramirez MA, Means KR Jr. Digital soft tissue trauma: a concise primer of soft tissue reconstruction of traumatic hand injuries. *Iowa Orthop J*. 2011;31:110-20.
15. Ratchford EV, Evans NS. Vascular Disease Patient Information Page: Pernio (chilblains). *Vasc Med*. 2021 Oct;26(5):576-578. doi: 10.1177/1358863X211023560.
16. Ratchford EV, Evans NS. Raynaud's phenomenon. *Vasc Med*. 2015 Jun;20(3): 269-71. doi: 10.1177/1358863X15579122.
17. Ponte C, Águeda AF, Luqmani RA. Clinical features and structured clinical evaluation of vasculitis. *Best Pract Res Clin Rheumatol*. 2018;32(1):31-51. doi:10.1016/j.berh.2018.10.001
18. Gomes RT, Tiberto LR, Bello VN, Lima MA, Nai GA, Abreu MA. Dermatologic manifestations of infective endocarditis. *An Bras Dermatol*. 2016 Sep-Oct;91(5 suppl 1):92-94. doi: 10.1590/abd1806-4841.20164718.
19. Shoji K, Saitoh A. Herpetic Whitlow. *N Engl J Med*. 2018 Feb 8;378(6):563. doi: 10.1056/NEJMicm1711479.

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ASD Services Fit With Existing UC Business Models

Urgent Message: Rapid growth in the autism spectrum disorder services sector may present an expansion opportunity for urgent care operators who take the initiative to develop the necessary infrastructure.

Alan A. Ayers, MBA, MAcc

Citation: Ayers A. ASD Services Fit With Existing UC Business Models. *J Urgent Care Med.* 2024; 19 (1): 33-36

As the prevalence of autism spectrum disorder (ASD) continues to rise—now affecting 1 in 36 children in the United States—demand for accessible services is greater than ever.[1] While long-term behavioral health services for those with ASD are typically a separate, specialized domain, urgent care providers might wonder if there is a business structure for offering ASD care as a separate line of business—particularly operators that focus on pediatric populations.

Delivering ASD care services requires a nuanced approach that involves evidence-based, comprehensive services and highly trained providers in coordination with a pediatrician or family physician. However, adding ASD care services adjacent to the urgent care model can meet the needs of a community, diversify revenue, strengthen patient relationships, and change the perception of urgent care to that of more comprehensive healthcare providers.

As the need for ASD care grows, urgent care operators might explore the potential business opportunity or at least be aware of community partners available for referral and collaboration.

ASD Services Models

The Centers for Disease Control and Prevention (CDC) estimates as many as 3 million Americans are on the autism spectrum, and at least 10 times as many children are now considered to have ASD compared to 40 years ago.[1] A significant part of the reason for the increase in prevalence is the greater awareness of the ASD diagnosis among clinicians and the advances in screening and diagnostic tools.[2] Services for those with ASD represents a care category projected to grow in the next decade and beyond.

According to August, 2024 data provided to *JUCM* from National Urgent Care Realty, more than 3,000 locations nationwide provide a scope of behavioral health services for children on the autism spectrum. Like the early years of urgent care, the behavioral health segment focused on autism services is highly fragmented today (**Table 1**). Also according to National Urgent Care Realty data examining the largest operators, 43% of rooftops

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are single-unit operators while 33% of rooftops are controlled by entities with more than 10 locations. It is expected that the behavioral health industry will see both organic growth in rooftops as well as consolidation of existing operators in the coming years.

And the behavioral health services have proven to be suitable clinical complements within the portfolios of urgent care owners and operators.

Little Spurs Pediatric Urgent Care in San Antonio and Dallas/Fort Worth, Texas, has launched a specialized autism center with 2 locations delivering services separately from its network of pediatric urgent care facilities. The Little Spurs Autism Centers offer comprehensive assessments, diagnosis, and applied behavioral analysis (ABA) therapy for patients/clients up to 21 years old. Additional services include individualized education program assistance to support children throughout their school years.

Notably, Little Spurs' Autism Centers leverage the company's existing urgent care branding. The ASD line of business offers strategic advantages beyond expanded revenue by positioning the urgent care brand as a comprehensive healthcare provider capable of meeting a wide range of community needs beyond acute illness and injury care. The expansion of services can also be a key differentiator in the competitive urgent care market. Building a business case for autism services starts with a thorough understanding of the diverse range of ASD interventions and support systems needed to deliver appropriate care and outcomes.

ASD Screening and Diagnosis

Medical and scientific literature has long supported early diagnosis as a critical factor in the effective management of ASD.[3] The Diagnostic and Statistical Manual of Mental Disorders 5th Edition from the American Psychiatric Association outlines the criteria for diagnosis, emphasizing a wide spectrum because there is significant variation in the type and severity of symptoms that people with ASD experience. Assessments like the Autism Diagnostic Observation Schedule, Second Edition (ADOS-2) is one tool used to diagnose ASD, and the CDC also offers a number of screening tools as well.[4]

"Once a diagnosis is established, clinics can serve their patients/clients by offering various therapeutic interventions that support development and functioning in everyday life."

Therapeutic Interventions

Once a diagnosis is established, clinics can serve their patients/clients by offering various therapeutic interventions that support development and functioning in

Table 1. ASD Services Providers With >20 Locations

Operating Entity	Center Count	Investment Firm
BlueSprig (Florida Autism Center, Trumpet, Fusion)	170	KKR
Hopebridge Autism Therapy Centers	106	Arsenal Capital Partners
Autism Learning Partners	76	FFL Partners
Behavioral Innovations	62	Tenex Capital Mgmt
Acorn Health	61	Ontario Teachers Plan
Proud Moments ABA	47	Audax Private Equity
ACES	38	General Atlantic
Center for Autism and Related Disorders	28	Blackstone Group
ChanceLight (Growing Minds Learning Center)	28	Halifax
ABS Kids	27	Morgan Stanley
Behavior Frontiers	27	Lorient Capital
Mosaic Pediatric Therapy	24	
Positive Behavior Support Corp.	22	

Source: National Urgent Care Realty data, August 2024

everyday life. Prime among these is ABA, which focuses on teaching essential life skills through positive reinforcement. This long-term approach has been shown to create meaningful behavior change over time.[5] Furthermore, ABA is tailored to each child's needs and evolves in response to their progress.

ABA is typically performed by a registered behavioral technician (RBT) under the supervision of a board certified behavioral analyst (BCBA), who is nationally certified and state-licensed with a master's degree or PhD in psychology or behavioral analysis. RBTs are the frontline therapists working with patients daily. As of July 2024, there were 69,000 BCBAs and 170,000 RBTs holding certification in the United States.[6]

In addition to ABA, other therapies support holistic autism care. Occupational therapy is a cornerstone of autism treatment that helps those with ASD develop skills for daily living, which might include eating, dressing, and personal hygiene, as well as skills for navigating environments that might cause distress. Speech therapy addresses both verbal and non-verbal communication skills.

For younger children, early intensive behavior intervention and the Early Start Denver Model (EDSM) have been shown to be effective.[7] These programs are designed for children under 5 years of age and combine play-based activities with structured teaching methods to promote appropriate cognitive and social development. Typically provided in a 1-to-1 setting, these forms of therapy are personalized for each child.

Educational Support Services

Beyond therapeutic interventions, educational support is a vital component of autism care, particularly for children of school-age years. Nearly all specialized autism clinics assist with individualized education plans and/or admission, review, dismissal programs—the structures that ensure children receive the necessary accommodations and tailored educational strategies they need to succeed within traditional school environments. Clinics must coordinate with school districts to ensure they can comply with policies and that their plans are compatible and effective.

Moreover, parental education and supportive services are just as integral to the child's success, given the parent's role in reinforcing therapy techniques at home and advocating for their child's needs.

Insurance Coverage and Accessibility

Navigating insurance coverage to ensure reimbursement and treatment accessibility is a critical consideration for any urgent care aiming to add ASD services. Many autism services, including ABA, are covered by most insurance plans. All 50 states mandate covered services for ASD to some extent.[8] However, the scope of coverage varies widely, and some insurance plans are exempt.

Insurance coverage may pose limitations associated with critical variables, such as the number of therapy hours covered, criteria for qualifying for coverage of specific services, and which types of providers may file claims. Typical urgent care businesses must be prepared to operationalize far more administrative and coverage processes for ASD services than what they routinely navigate with urgent care to ensure the line of business is financially sustainable.

Likewise, urgent care owners should be sensitive to the challenges families may face in securing coverage.

Is Today's ASD Yesterday's Urgent Care?

ASD services is currently one of the most active areas of healthcare services investment. Demand for services currently outstrips capacity due to heightened diagnostic awareness and expanded insurance coverage (all 50 states have passed laws regarding coverage).[8] There has been growth in the application of evidence-based behavioral therapy, and there are few barriers to entry. Additionally, the industry is highly fragmented making it ripe for consolidation.

Similar conditions existed for urgent care in 2010 driving the private equity thesis of platform growth, scale economies in clinical infrastructure and back-office support, and price-earnings multiple expansion. Today, about 17% of urgent care centers have private equity investment backing.[10]

In 2023, applied behavioral analysis programs generated $4 billion in revenue with a projected 4.8% growth rate.[11] Over the past 4 years, the ASD services industry has shifted from community non-profits and single unit "mom-and-pops" run by a single therapist to today's market with the 14 largest players (77% of which have private equity backing) controlling 24% of rooftops (**Table 2**).

"Assessments, therapy sessions, and follow-ups are best scheduled ahead of time with consideration for appropriate staffing."

Table 2. ASD Services Provider Size

Number of Operator Locations	Number of Operators	Number of Centers	Percent of Centers
>100	2	276	9%
75-100	1	76	3%
50-75	2	123	4%
40-50	1	47	2%
30-40	1	38	1%
20-30	6	156	5%
10-20	22	292	10%
5-10	50	317	10%
3-5	53	173	6%
2	108	216	7%
1	1,319	1,319	43%

Source: National Urgent Care Realty data, July 2024

Many encounter high deductibles, co-pays, coinsurance, and prior authorization limitations that can become barriers to care. Collecting the out-of-pocket payments within revenue cycle management processes would be similar to the processes used for collecting payment in urgent care.

Access

Unlike traditional urgent care services, which welcome walk-ins, ASD services require a more structured approach. Assessments, therapy sessions, and follow-ups are best scheduled ahead of time with consideration for appropriate staffing.

COVID-19 had a marked impact on recruiting and retention within the autism services space, consequently affecting most agencies' bottom lines; most business underperformance is due to staffing and supply restraints, not a lack of demand. Agencies that have been able to retain talent have and will continue to grow their businesses.

Referrals

While some families may seek out ASD services independently, many are referred by a primary care physician, pediatrician, or school. Urgent cares with a strong reputation in their community will find it easier to build a strong referral network and maintain the viability of the program.

Through the lens of urgent care, understanding and addressing the needs of the community is not just about offering a new service, it's about building a sustainable, patient-centered model that meets the growing demand for specialized ASD care.

Patient Expectations

In the urgent care setting, treatment typically addresses immediate concerns—something patients have come to expect. Effective autism care focuses on long-term developmental gains and quality-of-life improvements. ASD is a lifelong condition, and the trajectory of each person's development is unique, and not everyone will respond to interventions in the same way or at the same pace. As such, it's crucial to establish realistic expectations for the business and the clients/patients and their families.

The long-term benefits of comprehensive autism care are well documented. Research indicates that early intervention, particularly before age 5, can lead to more significant and sustained improvements in cognitive, language, and social skills.[9]

Conclusion

ASD care offers a potential revenue diversification opportunity for urgent care operators as well as an opportunity to fulfill an unmet need for care services in a community. By expanding, urgent care centers can enhance patient satisfaction and solidify their position as comprehensive healthcare providers. ■

References

1. Centers for Disease Control and Prevention. Data and Statistics on Autism Spectrum Disorder. May 16, 2024. Accessed August 15, 2024. https://www.cdc.gov/autism/data-research/index.html
2. Robison JE, Gassner D. There is no epidemic of autism. It's an epidemic of need. Stat. March 23, 2023. Accessed August 15, 2024. https://www.statnews.com/2023/03/23/autism-epidemic-cdc-numbers/
3. Fernell E, Eriksson M, Gillberg C. Early diagnosis of autism and impact on prognosis: a narrative review. *ds*013;5(1):33-43 https://doi.org/10.2147/CLEP.S41714
4. Centers for Disease Control and Prevention. Screening and Diagnosis of Autism Spectrum Disorder. Accessed August 15, 2024. https://www.cdc.gov/autism/hcp/diagnosis/screening.html
5. Autism Speaks Website. ABA. Accessed August 15, 2024. https://www.autismspeaks.org/applied-behavior-analysis#:~:text=More%20than%2020,show%20similar% 20benefits
6. Behavior Analyst Certification Board, Inc. Certificant Data. Accessed August 15, 2024. https://www.bacb.com/bacb-certificant-data/
7. American Speech-Language-Hearing Association website. Accessed August 15, 2024. https://www.asha.org/advocacy/state/states-specific-autism-mandates/#:~:text=Making%20effective%20communication%2C%20a%20human,Hawaii
8. National Conference of State Legislatures website. Autism and Insurance Coverage State Laws. Accessed August 15, 2024. https://www.ncsl.org/health/autism-and-insurance-coverage-state-laws
9. Eckes, T., Buhlmann, U., Holling, HD. *et al.* Comprehensive ABA-based interventions in the treatment of children with autism spectrum disorder – a meta-analysis. *BMC Psychiatry* **23**, 133 (2023). https://doi.org/10.1186/s12888-022-04412-1
10 .Ayers A. Private Equity Ownership in Urgent Care By Number of Centers, 2024. *J Urgent Care Med*. 2024; 18(7):33-34
11. Global Market Insights website. U.S. Applied Behavior Analysis Market. January 2024. Accessed at: https://www.gminsights.com/industry-analysis/us-applied-behavior-analysis-market

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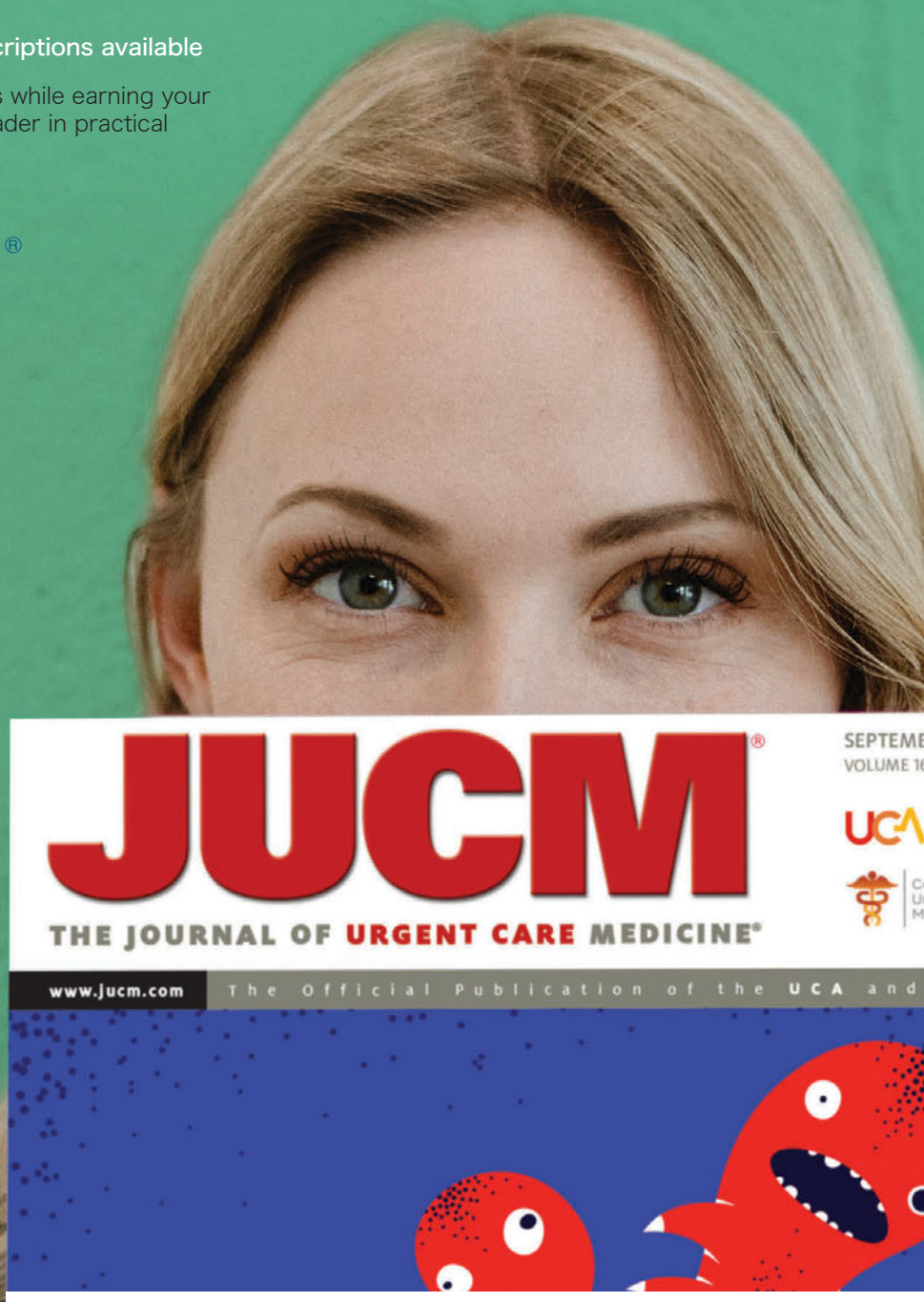

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Original Research

Development and Implementation of a Headache and Migraine Pathway in Pediatric Urgent Care: A Quality Improvement Initiative

Urgent Message: There are an estimated 250,000 visits annually associated with pediatric headaches in the United States, 84% of which are not treated according to best evidence-based practice (EBP). The development of an EBP headache and migraine pathway in a pediatric urgent care improved access to evidence-based guidelines and increased clinician confidence and knowledge regarding the diagnosis and management of headaches in children.

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Abstract

Introduction: Fewer than 20% of pediatric patients presenting with headache or migraine are appropriately diagnosed or treated. In this study, a pathway to bring evidence-based practices into a pediatric urgent care (PUC) clinic was developed determine if it would increase appropriate treatment of headaches and migraine presentations and improve provider confidence and knowledge.

Methods: The effectiveness of the intervention was evaluated by 2 methods. First, a pre- and post-intervention electronic health record (EHR) data analysis of total patient encounters during a 6-month period was performed to determine practice trends and outcomes. Additionally, an anonymous pre- and post-intervention survey was administered to physicians, nurse practitioners (NP), and physician assistant/associates (PA) to assess clinicians' level of confidence, perceived barriers, and knowledge about pediatric headaches. The pathway was presented to clinicians in a PUC monthly

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educational meeting. The presentation, which included explanation of the pathway, was also made available on the hospital intranet for clinicians to access after the meeting.

Results: Results included data analyzed from over 90,000 patient encounters. A total of 43 clinicians completed the survey. One percent of all patient encounters that were analyzed included a diagnosis of headache and/or migraine. In the post-intervention survey, clinicians reported a 10-20% increase in knowledge and 40% increase in confidence. Management practices of headache and/or migraine presentations, however, were unchanged after the intervention.

Conclusions: In this PUC educational intervention study, implementation of a headache/migraine provider pathway was associated with an increase in provider knowledge and confidence. While there was no significant change in diagnosis and management practice, the clinicians in the study practice setting were more adherent than comparable centers on average before the intervention. Implementation of a similar pathway in PUC settings may improve clinician confidence and knowledge of evidence-based care for pediatric headaches.

Introduction

There are an estimated 250,000 visits annually associated with pediatric headaches in the U.S. In 84% of cases, patients are not prescribed (or recommended) evidence-based medications.[1] The prevalence of headaches and migraines in the pediatric population is estimated at 50% and 9.1%, respectively; half of children with recurrent headaches will continue to have migraines as adults.[2]

Oskoui et al. established clinical guidelines for the treatment of acute migraines in children and adolescents.[3] This guideline was jointly developed by the American Academy of Neurology Institute (AANI) and the American Headache Society (AHS). It was adopted and accepted by the American Academy of Pediatrics (AAP),[4] American Academy of Neurology (AAN),[5] as well as the Child Neurology Society (CNS).[3] The guidelines include how to accurately assess and diagnose headaches and migraines in children, recommendations for abortive medications, treatment of associated symptoms, and education for headache prevention and home management.

The first step in headache management in children involves arriving at an accurate diagnosis. Having a solid basis for understanding headache syndromes and their diagnostic criteria in children and adolescents is key to appropriate headache management. According to a retrospective chart review by Minen et al., of the 93.6% of pediatric patients who presented with headache—including 78.25% with a self-reported history of headache or migraine prior to presentation—only 12.3% received the highest level of evidenced-based treatment.[6] There is extensive evidence on headache management ranging from expert opinion to systematic reviews,[3] yet it is clear that many clinicians are not adopting guideline-based practices.

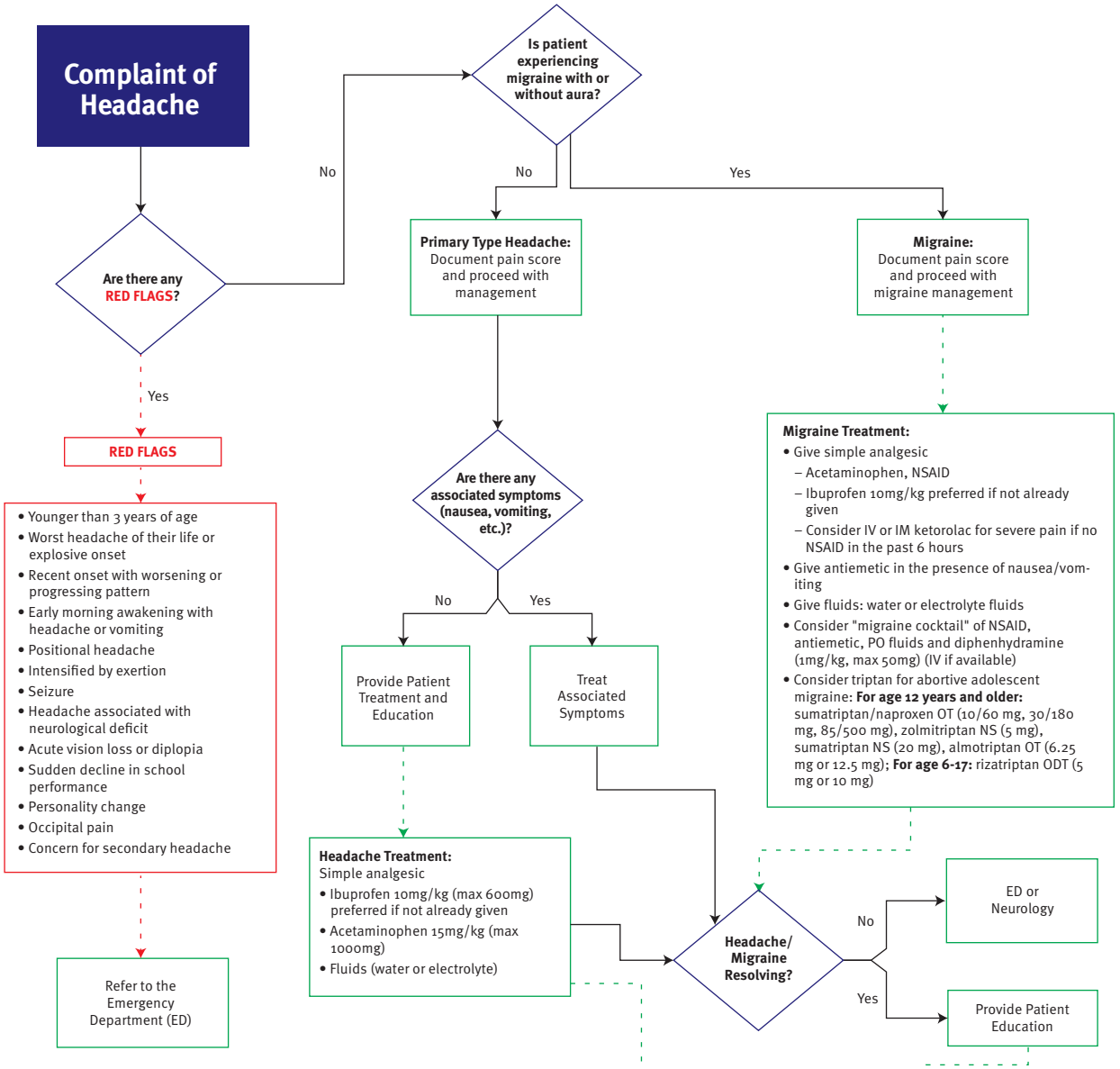
Headaches in children are expressed differently among various age groups, developmental stages, and cultures. Clinicians must understand these differences in pain presentations based on these factors. Children may describe pain from headaches as stabbing, squeezing, throbbing, or some form of dizziness, and 40% of all headache complaints affect uncertain locations of the head.[7] The International Headache Society (IHS) defines migraine without aura in children (age 18 and under) as at least 5 headaches over the past year lasting 2-72 hours in duration (if left untreated) with 2 of 4 additional features: 1.) pulsatile quality; 2.) unilateral, bilateral, or frontal; 3.) worsening with activity or limiting activity; 4.) moderate to severe in intensity AND are associated with either nausea, vomiting, photophobia, or phonophobia.[8] Migraine with aura comprises approximately 20% of migraines among children and is defined as having at least 2 attacks meeting the following criteria.

- One or more fully reversible aura symptoms (eg, visual, sensory, speech/language, motor, brainstem and retinal) AND
- At least 3 of the following: 1.) at least 1 aura spreading gradually over 5 minutes or more; 2.) symptoms occur in succession; 3.) each individual aura is 5-60 minutes in duration; 4.) at least 1 aura is unilateral; and/or 5.) aura is followed within 60 minutes by headache.[8]

Management

Approximately 75% of children have experienced a significant headache before the age of 15 years of age.[9] Despite the existence of evidence-based guidelines for management, guideline discordant treatment is common, and analgesia is often insufficient.[9] For acute headache treatment, the guidelines established by Oskoui et al. in 2019[3] suggest management with simple analgesics (non-steroidal anti-inflammatory drugs [NSAIDs] or acetaminophen) as first line.[10,11] In refractory head-

Figure 1. Headache/Migraine Pathway for the Pediatric Urgent Care Provider



Note: Provider discretion and consideration of exam and history is advised.
OT = oral tablet
ODT = orally disintegrating tablet
NS = nasal spray
NSAID = non-steroidal anti-inflammatory drugs

References
- Headache Classification Committee of The International Headache Society. The International Classification Of Headache Disorders, 3rd Edition. *Cephalgia*, 2018: 38(1), 1-211.https://-doi.org/10.1177/0333102417738202
- American Academy of Neurology (2019). Practice guideline update: Acute treatment of migraine in children and adolescents. Accessed at: https://www.aan.com/Guidelines/home/GetGuideLineContent/971
- Klein J, Koch T. Headache in Children. *Pediatrics in Review*. 2020: 41(4), 159-171.
- Oskoui M et al. Practice guideline update summary: Acute treatment of migraine in children and adolescents. *Neurology*. 2019: 93(11), 487-499.

aches, the addition of antiemetics (eg, ondansetron or promethazine) followed by triptans is recommended; the guidelines also emphasize the importance of early treatment.[12] A systematic review of emergency department (ED) treatment for pediatric headaches showed treatments like NSAIDs and dopamine receptor antagonists (eg, prochlorperazine) were effective abortive treatments in the acute setting.[13] In a 2016 systematic review, ibuprofen was found to be most effective at a dose of 10 mg/kg and superior to acetaminophen and placebo. In the same review, acetaminophen was found to be superior to placebo.[1] Based on data used to investigate NSAID use in one retrospective study, NSAIDs were considered the first line therapy for acute moderate intensity headache and triptans as the first line for high-intensity migraine attacks.[14] In children with a diagnosis of migraine, several triptans are approved by the Food and Drug Administration (FDA) for use in pediatric headache. Rizatriptan is approved for children 6-17 years of age and almotriptan, zolmitriptan nasal spray, and sumatriptan/naproxen are approved in ages 12-17 years.[15] In a qualitative systematic review conducted by Patniyot and Gelfand, sumatriptan nasal spray was the recommended treatment of adolescent migraines.[1]

Abortive therapies, which are central for the treatment of pediatric headaches, do not include opioids. Opioids, which can result in rebound headaches, are not recommended in any headache guidelines, yet continue to be utilized in acute care settings for children with severe headaches.[13] A 2019 study found that up to 1 in 6 children with severe headaches were prescribed an opioid for headache and/or migraine.[15]

Unlike opioids, there is support in the literature for the use of dopamine receptor antagonists (DRAs) as abortive therapies for pediatric migraines, as these agents have been shown to improve pain and reduce nausea. Commonly available DRAs include medications such as promethazine and metoclopramide.[1] In a 2020 inpatient study, Troy and Yonker found no difference between ondansetron and promethazine in children with migraine.[16] While not a DRA, 1 study showed that ondansetron had fewer side effects than DRAs and comparable efficacy for controlling nausea.[17] Antihistamines, specifically diphenhydramine, have been shown to reduce extrapyramidal effects that can occur with parenteral use of DRAs.[16] The addition of an anti-histamine may also improve relief of headache, but is also associated with increased risk of sedation.[5,8]

Evidence-based practice (EBP) refers to application of the highest quality evidence to inform clinical practice. The purpose of this quality improvement (QI) project was to develop and disseminate an evidence-based pediatric headache and migraine pathway to make EBP guidelines more readily accessible to clinicians in our institution and improve their confidence in caring for children presenting to PUC centers with headache.

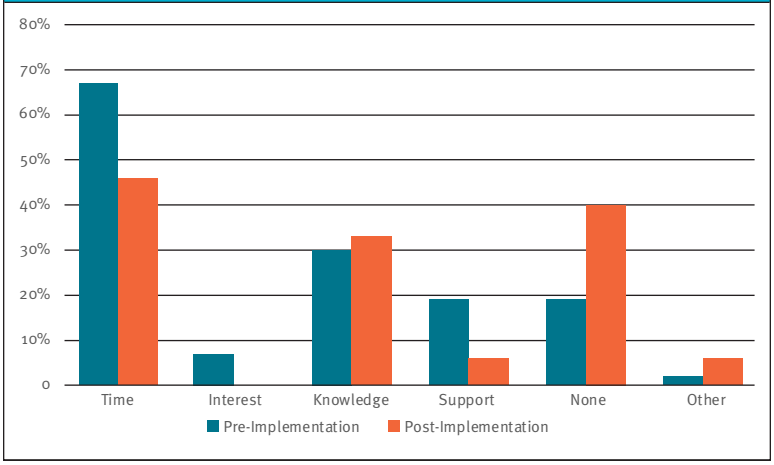
Methods

The QI project was completed in an outpatient PUC setting in Fort Worth, Texas. The project institution's UC centers are hospital-owned outpatient services and are comprised of 7 physical locations in the area with a combined annual volume of 150,000 patients. These clinics are staffed by over 80 physicians, NPs, and PAs. The clinician group is comprised of approximately 30% board certified pediatricians and 70% combined advanced practiced providers (APPs). This study was determined not to constitute human subject research by the Cook Children's Health Care System Institutional Review Board (IRB), along with the Missouri State University IRB, and need for review was waived. There were 2 arms to this project: evaluation of changes in clinician practice patterns; and evaluation of clinician perspectives regarding evaluation and management of pediatric migraines.

The authors completed a literature review and developed a pathway (**Figure 1**) by synthesizing the pre-existing guidelines established by AANI and AHS (adopted by CNS[3], AAP[4], and AAN[5]). The organization-specific pediatric headache and migraine pathway was developed to simplify access to EBP guidelines, including diagnostic criteria and management recommendations for children presenting with acute headache or migraine. After pathway development, the project leader presented the pathway and reviewed the most current evidence on the topic with the PUC clinicians in the group. The pathway itself was printed and posted in several PUC center physical locations and made available on the hospital intranet and via email. Clinicians were given the opportunity to complete a pre-intervention survey to evaluate their current practices. After 3 months, a post-intervention survey was administered to evaluate for satisfaction with the pathway and assess for change in confidence, knowledge, and guideline adherence.

To evaluate for changes in clinician practice in response to the intervention, patient data were retrospectively extracted in the 3 months prior to project implementation and then again during the 3 months post implementation. Data were extracted from EPIC, the organization's electronic medical record (EMR, utilizing diagnosis codes for headache and migraine. The dia-

Figure 2. Provider Perceived Barriers for Applying Evidence-Based Practice



gnoses search included any ICD-10 code subset of Headache R51* and Migraine G43*. Additional subsearch criteria were applied to the encounters to examine which of the medications available in clinic were administered (eg, acetaminophen, ibuprofen, ketorolac, diphenhydramine, fentanyl, hydrocodone, midazolam, and/or ondansetron) and prescribed for home use (eg, triptans).

To evaluate for changes in clinician perspectives, a 5-point Likert scale survey was administered pre- and post-intervention. Items included existing knowledge of EBP guidelines for diagnosis and management of pediatric headache and migraine, confidence in the ability to diagnose and educate families on the plan of care, use of society guidelines for medication management, documentation of pain scores, and recommendation for the patient to keep a headache log. An additional 7-question section of the survey listed symptoms and asked providers to select the appropriate diagnosis as "Headache," "Migraine without aura," "Migraine with aura," "Headaches and Migraines," "None," and "Unsure." In the post-intervention survey, access to the pathway was available if desired. Descriptive statistics (frequencies and percentages) were used to evaluate attitudes, beliefs and symptom responses. Statistical Package For Social Sciences (V. 25) was used to perform Wilcoxon signed rank test for ordinal data and the exact sign test for nominal data (involving dependent groups) to determine statistical significance (ie, $p < 0.05$) between pre- and postsurvey items.

Results

A total of 90,314 patient encounters were reviewed for inclusion among all 7 PUC centers. Pre-implementation data from the 3 months prior to implementation included 52,553 patient encounters. Among these, 513 met inclusion criteria diagnoses of headache, and 39 were included based on a diagnosis of migraine. During the 3-month post-implementation period, 40,781 encounters were reviewed, 326 met inclusion criteria based on diagnoses of headache, and 28 were included based on a diagnosis of migraine. Included encounters represent approximately 0.1% of all patient encounters during both time periods.

Headache management with acetaminophen, ibuprofen and/or ketorolac was provided in the PUC center 44% of the time in the pre-implementation period and 36% of the time post-intervention period. Migraine was treated with these same medications 64% of the time in both groups. No opioids were administered in the PUC center or prescribed for any patient encounter during either time period. Complementary therapies (ondansetron and/or DRA +/- diphenhydramine) discussed in the guidelines were used in 18% of the time pre-implementation encounters and 13% post-intervention for headache. The treatment of associated symptoms of migraine was completed 62% in the pre-implementation period and among 75% of patients post-intervention.

There were approximately 80 clinicians practicing in the UC centers during the project implementation period. A total of 43 of 80 clinicians completed the pre-survey and 33 of 80 clinicians completed the post-survey for a response rate of 41.3%. Of the respondents, 24% were physicians/pediatricians, and 76% were APPs. Also, 30% of clinicians reported <5 years of clinical experience.

On both pre- and post-surveys, 100% of providers reported they believed they use EBP, and 98% of clinicians reported that they intended to utilize the pathway. Pathways for the management of various diseases are available to providers on an as needed basis but were previously underassessed. A Wilcoxon signed rank test indicated there was a statistically significant increase ($Z = -2.33$; $p = 0.02$) in reported knowledge of simply accessing the pathway located on the intranet or through email and printed copy—from 71.2% to 93.9%. Pre-intervention, 39.6% of clinicians stated they "often" or "always" document pain scores. In the post-intervention survey, a statistically significant increase was noted in the proportion of clinicians who stated that they "often" or "always" document pain scores with 63.3%

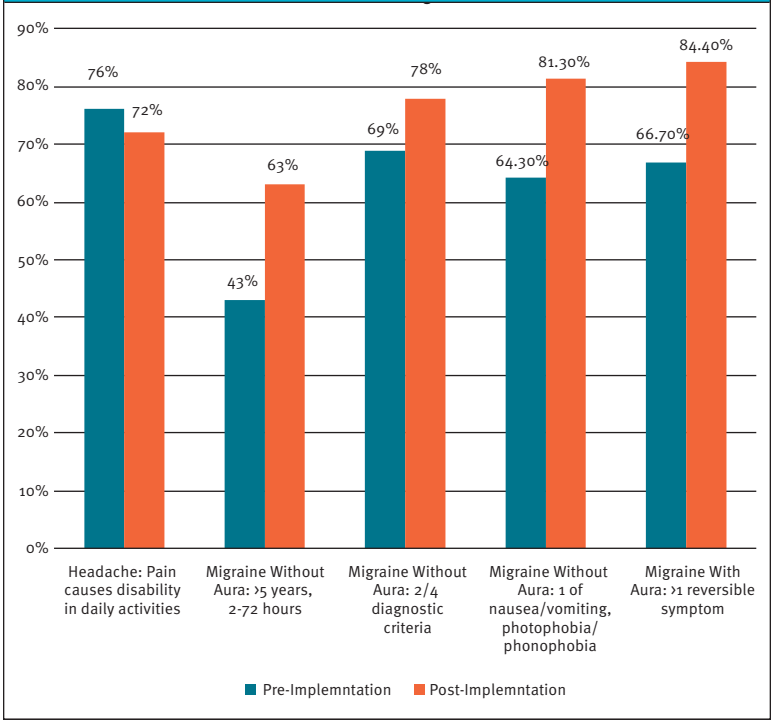
of respondents selecting these options (Wilcoxon Signed-Ranks Test, Z= -2.31; p= 0.021).

Perceived barriers to applying EBP also decreased. Time factors as an issue decreased from 67.4% to 45.5% (p>0.05), lacking interest in applying EBP decreased from 7% to 0% (p>0.05), and lacking support in applying EBP decreased from 18.6% to 6.1% (p>0.05). Overall, the proportion of providers reporting no perceived barriers increased by 21% (P>0.05) from the pre- to post-intervention surveys. (**Figure 2**)

The pre- and post-intervention surveys asked providers to rank how confident they were in their ability to diagnose headache and migraine and their ability to reference professional society guidelines for pediatric headache management. While there were no significant differences pre- and post-intervention, there was elimination of the providers' response of "Never" regarding these 2 areas in the post-survey.

An assessment of clinician knowledge was performed by matching the correct diagnosis with various symptoms/presentations of headache and migraine with and without aura, and statistical significance was assessed using an exact sign test for nominal data. There was an increase in migraine without aura diagnosis post-implementation with an increase from 43% to 63% of clinicians correctly identifying the criteria (eg, more than 5 headaches per year lasting 2-72 hours [p= 0.002]). There was also an increase from 69% to 78% of clinicians correctly identifying 2 of 4 criteria required for diagnosis of headache/migraine (p= 0.001). An increase was noted from 64% to 81% of clinicians identifying the significance of nausea, vomiting, photophobia/phonophobia as diagnostic criteria for migraine (p= 0.002). Clinicians correctly identifying the criteria for diagnosis of migraine with aura increased from 67% to 84%, however, this was not statistically significant (p>0.05). (**Figure 3**)

Figure 3. Knowledge Assessment of Providers Pre- and Post-Implementation



Discussion

Accurate diagnosis of the type of headache syndrome and appropriate management in children can present a challenge in the UC setting due to lack of prior patient relationship and time constraints. Prior to this project, it was unclear how much provider knowledge and/or confidence surrounding EBP guidelines for the treatment of pediatric headaches may have affected appropriateness of care for children presenting to our UC centers with acute headaches. We found that this provider group appropriately treated headaches between 36% and 44% of the time, which is far above the national average for guideline adherence of 14%.[1] This may be due to the practice environment since the project was conducted in a pediatric specialized network of UC centers. Given this level of clinician performance prior to project implementation, facilitating further improvements presented a challenge. Although the proportion of patient encounters where the treatment was appropriate did not change during the project, clinicians' level of confidence and knowledge increased during project implementation.

In the post-assessment survey, clinicians who participated showed an improvement in their ability to accurately diagnose migraine headaches. A greater proportion of clinicians reported confidence and ability to educate families after the project. The finding of an increase in knowledge and confidence among clinicians in evaluation and management of pediatric headaches after the project implementation suggests that the initiative may have influenced patient care and outcomes, although these were not directly assessed in this project.

Limitations

The findings of this project are limited in several ways. Data were extracted over less than a 1-year period. Given high seasonal variation in PUC presentations, it is likely that there was some heterogeneity in headache presentations between the pre- and post-implementation (eg, flu season versus summertime with higher rates of minor trauma). The survey response rate of clinicians was approximately 40%, therefore, we are unable to assess how this project may have influenced the majority of the clinicians who did not participate. It is possible, even likely, that there may be important differences in practice patterns between the clinicians who did and did not participate. As with any survey-based project, it is also uncertain to what extent clinicians reported honestly and engaged fully with the survey questions.

While the project screened over 90,000 patient encounters, the number of encounters meeting inclusion criteria was relatively small, particularly among patients diagnosed with migraine (n<50 for both periods). Additionally, given the retrospective nature of the project, chart inclusion capture was limited to patients given an encounter diagnosis of headache and/or migraine, not exclusive of overlap of additional illnesses or diagnoses. These entries can be recorded by clinical staff as a symptom and not a diagnosis, which can lead to erroneously included cases. Conversely, cases where headache and/or migraine may have been treated without updating the final diagnosis in the encounter would not have been included.

The study only looked at clinic-administered medications when assessing EBP guideline concordant care. Home medications are often given prior to arrival and, therefore, would not have been captured by our chart review methodology. Patients may also present with complaints of a headache or migraine that had since resolved and have a pain score of zero at the time of assessment. Such presentations would also not necessitate intervention on the part of clinician, but they would appear as not EBP guideline concordant care based on the project's methodology. Finally, this was conducted in a pediatric-specialized UC center, and it is unclear to what extent the findings may be generalizable to non-specialized UC practice settings.

Conclusion

Education and dispersion of an EBP headache and migraine pathway in our pediatric UC centers facilitated access to society guidelines for the diagnosis and management of children presenting with acute headaches. Clinicians' confidence and knowledge regarding appropriate care for pediatric headaches improved after implementing the interventions of this quality project as did familiarity with diagnosis criteria and appropriate management. The pathway we developed to support this quality improvement was well received by clinicians, and the pathway has been permanently added to our organization's clinical references. ■

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References

1. Patniyot IR, Gelfand AA. Acute treatment therapies for pediatric migraine: A qualitative systematic review. *Headache: The Journal of Head & Face Pain*, 2016;56(1):49-70. doi: https://doi.org/10.1111/head.12746
2. Yamanaka G, Morichi S, Suzuki S, et al. A review on the triggers of pediatric migraine with the aim of improving headache education. *J Clin Medicine*, 2020;9(11):3717. https://www.doi.org/10.3390/jcm9113717
3. Oskoui M, Pringsheim T, Holler-Managan Y, et al. Practice guideline update summary: Acute treatment of migraine in children and adolescents. *Neurology*, 2019;93(11): 487-499. https://doi.org/10.1212/WNL.0000000000008095
4. American Academy of Pediatrics. Acute treatment of migraine in children and adolescents: Statement of endorsement. *Pediatrics*, 2019; 144(5). https://doi.org/10.1542/peds.2019-2762
5. American Academy of Neurology. Practice guideline update: Acute treatment of migraine in children and adolescents. 2019; Accessed April 7, 2023. https://www.aan.com/Guidelines/home/GetGuidelineContent/971.
6. Minen MT, Zhou K, Miller L. A brief look at urgent care visits for migraine: The care received and ideas to guide migraine care in this proliferating medical setting. *Headache*, 2019;60(3): 542-552. https://doi.org/10.1111/head.13717
7. Kang BS, Lee J, Choi JH, Kwon JW, Kang JW. Clinical manifestations of headache in children younger than 7 years. *Korean Journal of Pediatrics*, 2018;61(11): 355-361. https://doi.org/10.3345/kjp.2018.06331
8. Klein J, Koch T. Headache in Children. *Pediatrics in Review*, 2020;41(4):159-171.
9. Rossi R, Versace A, Lauria B, et al. Headache in the pediatric emergency department: A 5-year retrospective study. *Cephalalgia*, 2018;38(11):1765-1772. https://doi.org/10.1177/0333102417748907
10. Marseglia GL, Alessio M, Da Dalt L, Giuliano M, Ravelli A, Marchisio P. Acute pain management in children: a survey of Italian pediatricians. *Italian Journal of Pediatrics*, 2019;45(1):1–12. https://doi.org/10.1186/s13052-019-0754-3
11. Petrelli T, Farrokhyar F, McGrathP, et al. The use of ibuprofen and acetaminophen for acute headache in the postconcussive youth: A pilot study. *Paediatrics & Child Health*, 2017;22(1):2–6. https://doi.org/10.1093/pch/pxw011
12. Thomas L, Strauss LD. *Pediatric migraine treatment options and further evaluation*. First Contact Headache In Primary Care: American Headache Society. 2021; Accessed April 7, 2023. https://americanheadachesociety.org/wp-content/uploads/2021/03/AHS-First-Contact-Pediatric-Migraine-Write-Up.pdf
13. Sheridan DC, Dhatt S, Narayan K, Lin A, Fu R., Meckler GD. Effectiveness of emergency department treatment of pediatric headache in relation to rebound headache. *Pediatric Emergency Care*, 2020;36(12):720-725. https://doi.org/10.1097/ pec.0000000000002027
14. Affaitati G, Martelletti P, Lopopolo M, et al. Use of nonsteroidal anti-inflammatory drugs for symptomatic treatment of episodic headache. *Pain Practice: The Official Journal of World Institute of Pain*, 2017;17(3):392–401.
15. Seng EK, Gelfand AA, Nicholson RA. Assessing evidence-based medicine and opioid/barbiturate as first-line acute treatment of pediatric migraine and primary headache: A retrospective observational study of health systems data. *Cephalgia*, 2019;29(8):1000-1009. https://doi.org/10.1177/0333102419833080
16. Troy E, Yonker M. ED and inpatient management of headaches in children and adolescents. *Curr Neurol Neurosci Rep.*, 2020;20:15-5. doi: https://doi.org/10.1007/s11910-020-01035-5
Talai A, Heilbrunn B. Ondansetron for acute migraine treatment in the pediatric emergency department. *Pediatric Neurology*, 2020;103:52-56.
17. Talai A, Heilbrunn B. Ondansetron for acute migraine treatment in the pediatric emergency department. *Pediatric Neurology*, 2020;103:52-56.

Public Perceptions of Artificial Intelligence Use in Healthcare

Take Home Point: Patient and healthcare workers surveyed were generally accepting of the use of artificial intelligence (AI) in medicine. Respondents did express some concern about the potential impact of AI on the accuracy of medical decision-making, however.

Citation: Thornton N, Binesmael A, Horton T, et al. AI in health care: what do the public and NHS staff think? The Health Foundation. Published July 31, 2024. Accessed September 5, 2024. https://www.health.org.uk/publications/long-reads/ai-in-health-care-what-do-the-public-and-nhs-staff-think

Relevance: AI is encountering rapid adoption within healthcare for various applications. This study aimed to elucidate opinions regarding the implementation of AI in patient care.

Study Summary: This was a survey commissioned by the Health Foundation of nationally representative members of the public (aged 16 years and older) and National Health Service (NHS) staff members in the United Kingdom (UK) to learn more about attitudes toward AI. The authors administered an online survey and included a booster sample of 200 UK adults at risk of digital exclusion surveyed through computer-assisted telephone interviewing.

In all, 7,201 members of the UK public aged 16 years and older and 1,292 NHS staff members responded. 54% of the public responded with support for the use of AI for patient care in applications like diagnosing illness and recommending treatment. A greater proportion (61%) supported the use of AI for administrative purposes like sending letters or planning staffing.

Amongst the NHS staff surveyed, 76% were in favor of implementing AI for patient care and 81% for administrative purposes. The two potential disadvantages of AI which were most feared by the public were "that healthcare staff won't question the AI system's decision, even if it is wrong" (30%) and that "AI decisions might not be accurate enough, meaning that the wrong decisions could be made" (28%). Transparency in AI decision making seemed particularly important for ≥65-year-old participants. Interestingly, the proportion of individuals who felt that AI would negatively impact health outcomes did not differ meaningfully according to the age of respondents.

Editor's Comments: This was a large survey of the perspectives of the public and healthcare workers in the UK–the main stakeholders–on the use of AI in patient care. The depersonalization of healthcare seems to be a particular concern raised in the study. It is critical that those who make policy decisions regarding the implementation of AI take the opinions of such stakeholders into consideration. This survey was limited to respondents in the UK. It is unclear how these opinions may be generalized to stakeholders in healthcare of other nations. ■

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Changing Management of Toddler's Fractures to Mirror Best Evidence

Take Home Point: In this quality improvement project, the intervention significantly increased the proportion of toddler's fractures which were treated without cast immobilization.

Citation: Chen S, Holstein J, Samora J. Reducing Rigid Immobilization for Toddler's Fractures: A Quality Improvement Initiative. *Pediatr Qual Saf.* 2024 Apr 3;9(2): e722. doi: 10.1097/pq9.0000000000000722

Relevance: Management of toddler's fractures has evolved with increasing evidence that cast immobilization does not offer benefit over the use of a simple walking boot. The inherent stability of the fracture pattern confers little risk of displacement during the healing process and therefore, non-casting appears to be a safe, and often preferrable, treatment option.

Study Summary: This was a quality improvement (QI) project conducted at a tertiary care pediatric hospital in Columbus, Ohio, to increase the proportion of patients with toddler's fractures treated without cast. The goal of the project was to change clinical practice by implementing evidence-based treatment for toddler's fractures to de-

crease overall costs and complications and increase patient and family satisfaction without compromising patient outcomes. The intervention involved education for orthopedic surgery residents, emergency department (ED), and UC clinicians to ensure standardization of the process by reinforcing recognition of toddler's fractures among all providers and emphasizing that cast immobilization was not necessary in the treatment of these stable injuries. Monthly unblinded compliance data were shared amongst the orthopedic attendings.

"This project will likely be of most value in guiding parents' expectations for the possibility of non-casting at orthopedics follow-up."

The authors noted that after the interventions were implemented, the average percent of patients with toddler's fractures treated without rigid cast immobilization increased from the baseline of 45.6% to 90% (P ≤ 0.001). There was a shift in the percentage of patients with toddler's fractures who were specifically treated in a boot during their first visit to the orthopedic clinics from 4.2% to 52% (P ≤ 0.001). There was also a decrease in the proportion of patients who required a 3-month follow-up visit from 93% to 65% (P ≤ 0.001). Additionally, by reducing the need for the follow-up visits, they reduced the need for follow-up radiographs and radiation exposure for patients from 65% to 13% (P ≤ 0.001).

Editor's Comments: This QI project reinforces the importance of continuing education around current evidence. While non-cast immobilization of toddler's fractures is gaining increasing supporting evidence for its safety, it is advisable for UC clinicians to consult with local orthopedics specialists to determine local practice preferences. As initial immobilization in UC centers usually involves non-circumferential splinting, this project will likely be of most value in guiding parents' expectations for the possibility of non-casting at orthopedics follow-up. ■

Leveraging Artificial Intelligence in Chest Pain Triage

Take Home Point: Use of an artificial intelligence (AI) algorithm designed for ED triage led to significant reductions in ED length of stay (LOS) for patients admitted to the hospital and time until critical cardiac procedures in this quality improvement study.

Citation: Hinson J, Taylor R, Venkatesh A, et. al. Accelerated Chest Pain Treatment with Artificial Intelligence-Informed, Risk-Driven Triage. *JAMA Intern Med.* 2024 Jul 22: e243219. doi: 10.1001/jamainternmed.2024.3219.
Relevance: Chest pain remains a common presentation to ED with over 8 million presentations annually in the United States (US). However, only 6% of these chest pain presentations are related to life-threatening conditions. AI offers promise in accelerating identification of this small, but possibly critically ill minority.

Study Summary: This was a multisite quality improvement study, comparing treatment intervals for adult patients with chest pain before and after implementation of an artificial intelligence (AI)–informed, outcomes-driven decision support system for ED triage (TriageGO; Beckman Coulter). TriageGO used machine learning algorithms to estimate probabilities for critical care, emergency procedures, and hospital admission using demographics, arrival mode, vital signs, chief complaints, and active medical problems as predictors. The system then translated outcome probabilities to recommended acuity levels according to the emergency severity index (ESI) (ie, 1-5, with lower values indicating higher acuity). Downstream protocols for diagnosis and treatment of chest pain remained consistent before and after intervention. The authors performed adjusted analyses using median regression models to limit confounding factors.

The authors analyzed 12,147 adult ED visits (6,188 before and 5,959 after implementation of the AI system). They found that after implementation of the AI triage tool fewer patients were assigned to high acuity levels 1 or 2 (1,317 [22.1%] vs 1,708 [27.6%]) or mid-acuity level 3 (3,263 [54.8%] vs 4,086 [66.0%]), and more were assigned to lower acuity with ESI 4 or 5 (1,379 [23.1%] vs 394 [6.4%]) ($x^2_4 = 771.6$; P < .001). Median time to emergency cardiovascular procedures was reduced by 205.4 minutes (95% CI, 23.0-387.8 minutes), including cardiac catheterization (by 243.2 minutes; 95% CI, 43.7-442.7 minutes).

Editor's Comments: The quality improvement project was limited as there was no randomization of patients as it was observational and therefore potential for confounding exists. The study also did not look at patient-oriented outcomes such as hospital length of stay or in-hospital or 30-day mortality. It was presumed that decreased time to cardiac procedures was for patient benefit, however, that is uncertain from this data and previous studies have shown that certain patients have worse outcomes if taken for emergent cardiac catheterization (eg, patients without acute coronary occlusion or ST-elevation myocardial infarction). The main value this AI offered from a chest pain triage utility standpoint that can be ascertained from the data presented definitively is that many patients with chest pain are overtriaged and given unnecessarily high ESI scores. This makes sense, given that over 90% of patients with chest pain presenting to the ED, do not have a serious diagnosis. While the use of this AI (and AI in general) for chest pain triage offers promise in more rapidly identifying critical patients with chest pain, it's greater utility for healthcare resource utilization is likely that it correctly identifies patients with chest pain who do not require ESI 1-3 designation and can be seen safely in a less urgent fashion.

Many ED systems currently have an automatic chief complaint designation ESI protocol and assign any patient with chest pain an ESI of no lower than 2. It is clear, however, that AI can offer a more individualized triage score for chest pain. Further studies are required to examine how this affects outcomes and resource utilization rates as this project focused predominantly on ED LOS. It is conceivable that these uses of AI may be able to identify patients at ED triage in the future who can safely be diverted to UC centers as well. ■

Continuous Performance Feedback—Help or Hinderance?

Take Home Point: Prioritizing person-mediated feedback yielded superior outcomes compared to computer-mediated feedback in terms of improvements in performance, motivation, and engagement.

Citation: Giamos D, Doucet O, Léger P. Continuous Performance Feedback: Investigating the Effects of Feedback Content and Feedback Sources on Performance, Motivation to Improve Performance and Task Engagement. *Journal Of Organizational Behavior Management*. https://doi.org/10.1080/01608061.2023.2238029

Relevance: Performance, motivation, and engagement are critical aspects of effective team membership in UC. Feedback may be delivered in a variety of ways; it's important for managers and team leaders to understand how deliver feedback to affect positive changes in these domains. This is especially important as poorly delivered feedback may be counterproductive and demoralizing, risking retention of staff.

Study Summary: This study was conducted to ascertain the effects of feedback content (ie, quantitative vs qualitative) and feedback source (ie, computer vs in-person), on subjects' task performance, motivation to improve, and task engagement in the context of continuous performance feedback. The 36 participants aged 18-41 years (mean age = 24 years) were divided into 2 groups: quantitative feedback; or qualitative feedback. Participants in the quantitative feedback group received a numerical rating based on their performance in various tasks, those in the qualitative group did not receive any. All participants received qualitative feedback from different sources: a computer (ie, pop-ups), or a person (ie,, verbally delivered from a person).

The authors found that feedback content has a positive effect on performance, with participants in the quantitative group performing better than those who only received qualitative feedback. Secondly, participants had higher levels of performance, motivation to improve, and task engagement when they received continuous performance feedback from a person rather than a computer. Person-mediated feedback may have had a more powerful effect on outcomes because it is accompanied by affective and social cues.

Editor's Comments: This study has many limitations including small sample size, limited diversity of participants, particularly in age, and simulated nature of the tasks. The study also only rated performance based on a single dimension of cognition, working memory and its setting in a laboratory is unable to recreate real-world work environments. However, the data do suggest that providing a combination of both quantitative feedback (eg, antibiotic prescribing rates, patients per hour, net promoter score) and qualitative feedback (eg, "patients don't feel you explain their diagnosis clearly") would likely be most effective. Furthermore, providing this feedback verbally rather than via e-mail or other digital communication seemed to improve engagement and motivation—2 highly desirable outcomes for managers. It is usually easier on supervisors, especially if overseeing a large and geographically dispersed staff, to provide feedback digitally. This paper suggests this convenience may come at significant cost and undermine the fundamental goals of providing feedback. ■

Can a Simple Nasal Spray Hold the Key to Curing the Common Cold?

Take Home Point: In this large UK based study, participants using nasal sprays or gels for respiratory illness treatment and prevention had shorter courses of illness and less antibiotic use. There was no difference in the frequency of respiratory infections (URI) between either nasal formulation or the control group. However, subjects randomized to receive health lifestyle education did have slightly fewer respiratory infections than the other groups.

Citation: Little P, Vennik J, Rumsby K, et. al. Nasal sprays and behavioral interventions compared with usual care for acute respiratory illness in primary care: a randomized, controlled, open-label, parallel-group trial. *Lancet Respir Med*. 2024 Aug;12(8):619-632. doi: 10.1016/S2213-2600(24)00140-1.

Relevance: Effective, low-cost, non-prescription interventions which can prevent or shorten the duration of symptoms of viral respiratory infections could have tremendous impact on population-level health metrics like healthcare utilization and missed workdays. There is some evidence that modifying the nasal environment which may hold promise in altering susceptibility to and recovery from viral URIs.

Study Summary: This was a randomized, controlled, open-label, parallel-group trial in UK based primary care study. Patients were included from both large and small general practice (GP) settings in both urban and rural locales. Participants were randomized to blocks of 4 trial groups (1:1:1:1). The 4 intervention groups were: usual care (ie, control group); gel-based nasal spray; saline nasal spray; or a digital intervention composed of educational content through a website which promoted physical activity and stress management. The gel-based spray was Vicks First Defense spray (Proctor and Gamble, Harrogate, UK), which contains a polymer and buffers nasal pH. The saline spray was Sterinase (Earol, Glasgow, UK), which had the method of delivery (a pump-action spray) identical to that of the gel-based spray without potential active excipients (eg, zinc or copper). The behavioral group had access to a health and stress management website and were provided with pedometers to help monitor activity.

The 332 GP practices participated over a 6-month period. From these practices, more than 13,000 participants with at least one co-morbidity were randomly assigned to either usual care (n=3,451), gel-based nasal spray (n=3,448), saline-based nasal spray (n=3,450), or the behavioral website intervention (n=3,450). The primary outcome was days of respiratory illness over a 6-month period. The investigators also compared proportion of patients who had a URI during the study, missed workdays, rates of adverse reactions, and rates of antibiotic use. The results were tracked by surveying the participants at the end of each month and again at the end of the entire 6-month study period. The participants were instructed to use the nasal spray at the first sign of illness or if they were concerned that they could have been exposed to someone with a contagious respiratory illness.

The authors found small but significant differences between groups in several measured outcomes. The control group and healthy lifestyle education groups had no significant difference in symptomatic days over the study period (8.2 vs. 7.4). The gel based nasal spray group had a significantly lower number of symptomatic days (6.4 days) as did the saline nasal spray group (6.5 days). Additionally, duration of illness in those who did have a URI was significantly lower in both the gel group (12.0 days) and saline nasal spray group (11.8 days) than the usual care group (15.1 days). Both nasal spray treatment groups also had small reductions in the proportion with prolonged respiratory illness (>2 weeks) and conversely slightly higher percentage with respiratory illnesses lasting <1 week.

The number of workdays lost was low in all groups (ie, <1 day on average) but slightly lower in the nasal spray groups. Both of the nasal spray intervention groups had significantly lower risk of receiving antibiotics during the study period (IRR=0.65 for the saline group and IRR=0.69 for the gel-based group. The group given access to exercise and stress reduction education interestingly also had significantly lower antibiotic use than the control group. Very low rates of adverse events were reported in any group, with the most common being headache reported by 7.8% of those patients using the nasal gel vs. 4.8% in the control group and 4.5% in the saline nasal spray group.

Editor's Comments: There's much to be said about this paper, and it's a complex enough study on perhaps the most common issue we face in UC that it's worth a detailed read. The use of randomization does limit the possibility of the many confounders that might introduce bias, however, there were differences in survey response rates between groups worth noting. Perhaps the most significant source of bias and questionably reliable data comes in the form of recall bias. Participants were asked monthly to recall their symptomatic days, which is difficult to have confidence in the accuracy of such an assessment. Furthermore, the similarity between the nasal gel and saline

spray in many regards suggests much of the difference may be related to placebo effect rather than a specific mechanism of the sprays. Participants randomized to groups other than the control group may have been more inclined to take other measures to prevent or shorten duration of illness (eg, washing their hands more often after a possible exposure to a virus).

"Consider using the data from this study with your patients to advocate for a nasal spray in lieu of an antibiotic."

Perhaps most noteworthy is the observation that both nasal spray groups and the healthy lifestyle education group used between 25-35% fewer antibiotics during the study period. This points to the importance of patients who are sick feeling that they are actively doing something (or taking something) they believe will address their illness. The patients who were randomized to the nasal spray groups and healthy lifestyle education groups sought medical care less and reported less belief in the value of antibiotics for their illnesses. These are perhaps the most salient findings. Equipping patients with benign interventions which may help to shorten and reduce severity of symptoms and specific education about maintaining healthy habits may be largely a placebo effect, but this is a less risky placebo to provide for simple URIs than a prescription for non-indicated antibiotics. Consider using the data from this study with your patients to advocate for a nasal spray in lieu of an antibiotic. Afterall, you can point to this study demonstrating its efficacy–because the patient's belief in your prescription and recommendations is likely what matters most. ■

Are Physicians Still the Best at Early Diagnosis of Sepsis?

Take Home Point: In this study, physician gestalt during the first 15 minutes after arrival of ED patients outperformed usual screening tools and an AI tool in identifying sepsis among critically ill, undifferentiated medical patients.

Citation: Knack S, Scott N, Driver B, et. al. Early Physician Gestalt Versus Usual Screening Tools for the Prediction of Sepsis in Critically Ill Emergency Patients. *Ann Emerg Med.* 2024 Mar 25: S0196-0644(24)00099-4. doi: 10.1016/j.annemergmed.2024.02.009

Relevance: Early identification and treatment of sepsis improves clinical outcomes. There are several scoring tools used to identify patients with possible sepsis which have been used over the years. The relative accuracy of these tools compared to clinician gestalt is a topic of frequent debate, especially given the increasing prevalence of pop-up alerts and alarms from the electronic medical record (EMR) intending to warn about the possibility of sepsis.

Study Summary: This was a single center ED based prospective study, based in an academic urban hospital in Minneapolis, Minnesota. The authors recorded the initial treating physician's ST-elevation myocardial infarction for sepsis in patients and compared them with screening tools, including SIRS, qSOFA, SOFA, and MEWS, which were calculated retrospectively. Additionally, a machine learning model for variable selection called Least Absolute Shrinkage and Selection Operator (LASSO) was also compared. The clinicians were physicians or senior residents who completed a visual analog scale (VAS) response indicating their suspicion of sepsis at ≤15 minutes and then again at 60 (+/-15) minutes after the patient presented to the ED.

The authors identified 275 patients (11%) out of the 2,484 patients screened who ultimately had a discharge diagnosis of sepsis. They found that physician gestalt within 15 minutes of ED arrival outperformed other sepsis screening methods, including the AI/machine learning algorithm. Physician gestalt remained superior to all scoring systems for up to 1 hour. The area under curve (AUC) for physician gestalt was 0.90 compared to 0.84 for LASSO (the AI algorithm) and 0.67 for SIRS, SOFA and qSOFA scores.

Editor's Comments: This was an ED based study with emergency medicine physicians. It is unclear to what extent these results would be generalizable to UC and non-physician clinicians. Initial assessment of potentially critically ill patients relies on many pieces of data which are difficult to quantify (eg, the degree to which a patient appears acutely ill or toxic). Given the limited objective data points available in the first hour of patient presentation, it is unsurprising that an experienced emergency physician outperforms algorithms that rely on qualitative data points. This study suggests that in an ED setting physician judgment should trump score-based predictions of sepsis when it comes to treatment decisions. Further research about the ability of non-physician and UC clinicians in comparison to these models would be helpful to determine if such models may improve early recognition of sepsis in UC settings. ■

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CLINICAL CHALLENGE: CASE 1

Challenge your diagnostic acumen: Study the following x-rays, electrocardiograms, and photographs and consider what your diagnosis might be in each case. While the images presented here are authentic, the patient cases are hypothetical. Readers are welcome to offer their own patient cases and images for consideration by contacting the editors at editor@jucm.com.

30-Year-Old With Foot Inversion Injury

Figure 1.

A 30-year-old man presents to urgent care with lateral ankle pain and swelling after a foot inversion injury he sustained while hiking. A mortise view x-ray of the ankle is ordered.

Review the images and consider what your diagnosis and next steps would be. Resolution of the case is described on the following page.

Acknowledgment: Images and case provided by Experity Teleradiology (www.experityhealth.com/teleradiology).

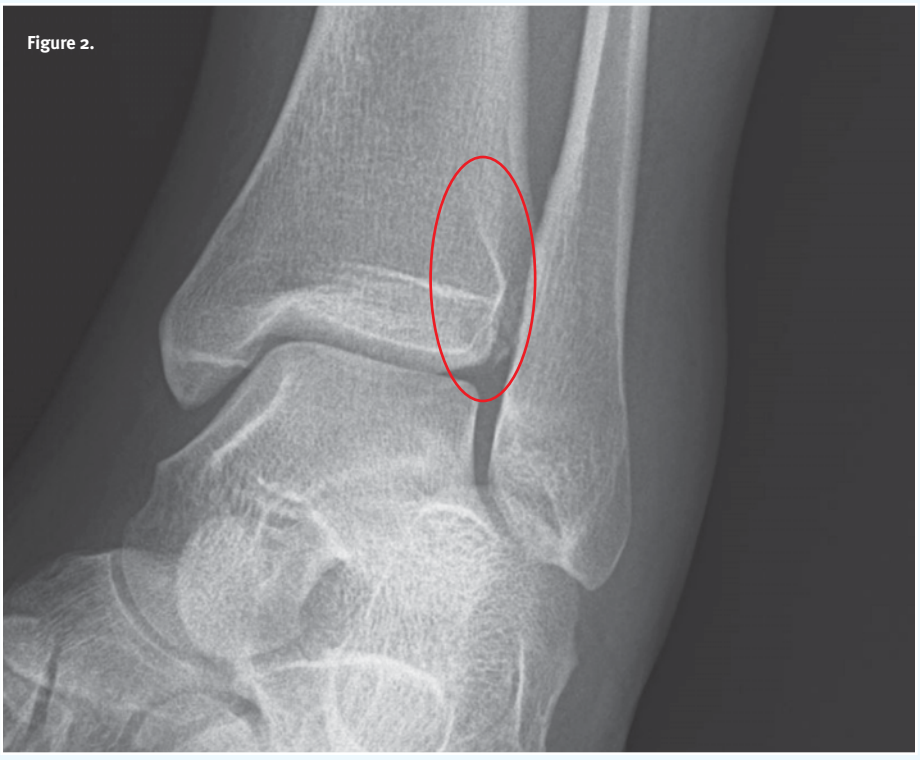


Figure 2.

Differential Diagnosis

- Lateral ankle sprain
- Fracture of the distal fibula
- Fracture of the lateral base of tibia at the syndesmosis

Diagnosis

The correct diagnosis in this case is a fracture of the lateral base of tibia at the syndesmosis. The image reveals fragmentation of the lateral base of the tibia at the syndesmosis with diffuse ankle swelling. Syndesmosis injuries occur when there is a disruption of the distal attachment of the tibia and fibula. These injuries occur commonly, especially with athletic activity. There are 4 classic fracture fragments: medial malleolus; anterior malleolus; lateral malleolus; and posterior malleolus.

What to Look For

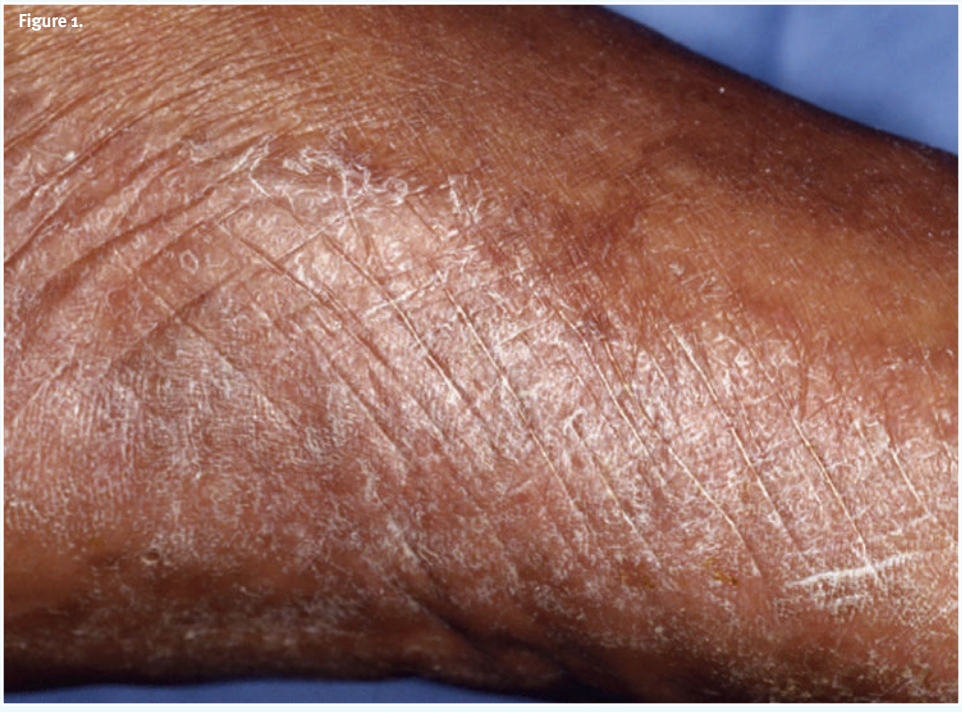
- The syndesmosis is the articulation between the distal tibia and fibula and is comprised of 2 ligaments:
  - The anterior-inferior tibiofibular ligament, which originates from anterolateral tubercle of tibia and inserts on anterior tubercle of fibula
  - The posterior-inferior tibiofibular ligament, which originates from posterior tubercle of tibia and inserts on posterior part of lateral malleolus
- Evaluation of x-ray should inspect the origination and insertion points of these ligaments for disruption as a result of injury

Pearls for Urgent Care Management

- Evaluate for neurologic or vascular compromise
- Initial treatment includes splint immobilization (ankle at 90 degrees)
- Pain management should include ice, elevation, and pain medications
- Stable joint patterns likely will heal with immobilization alone
- Unstable joint patterns likely will require surgical intervention, and orthopedic referral is indicated

38-Year-Old With Foot Rash

Figure 1.



A 38-year-old man presents to urgent care for a pruritic rash that developed on his feet over the last week. The rash is worse on his left foot than the right. He frequently works out and showers at the gym before going to work. On examination, fine, powdery, scaly plaques are seen on his soles and insteps. He otherwise appears well and has no systemic symptoms.

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

Acknowledgment: Image and case presented by VisualDx (www.VisualDx.com/jucm).

THE RESOLUTION

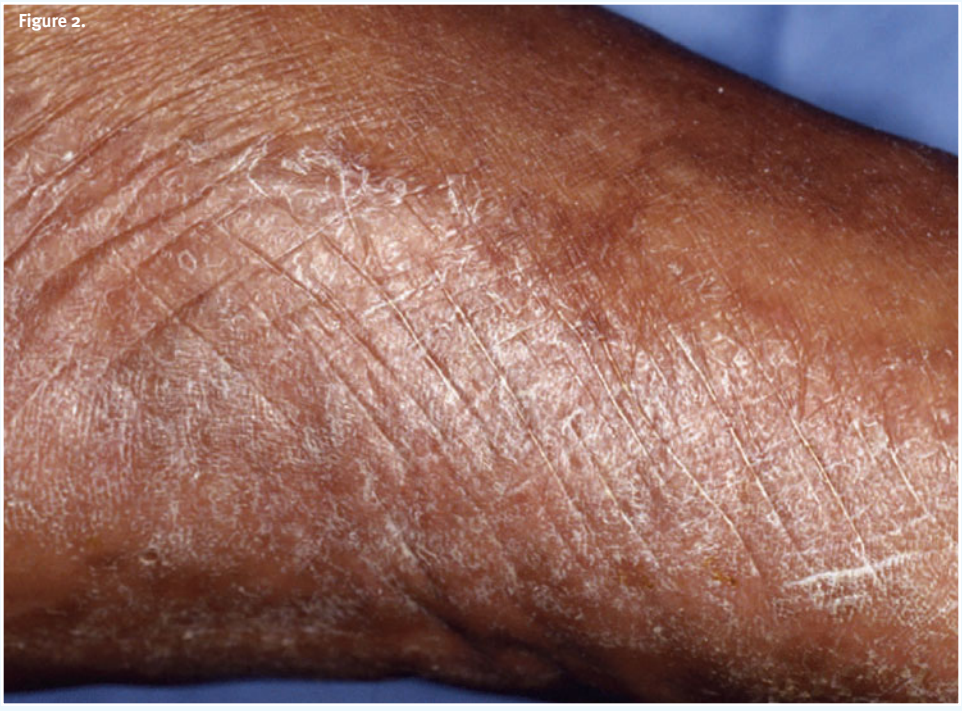


Figure 2.

Differential Diagnosis

- Allergic contact dermatitis
- Candidiasis
- Pitted keratolysis
- Tinea pedis

Diagnosis

The correct diagnosis in this case is tinea pedis, more commonly known as "athlete's foot," which is a localized, superficial fungal infection. The dermatophytes responsible for most cases of tinea pedis include *Trichophyton rubrum*, *Trichophyton mentagrophytes*, and *Epidermophyton floccosum*. The condition is more common in men and in athletes who use community showers in locker rooms and/or wear occlusive footwear that creates humid conditions around the foot.

What to Look For

- Tinea pedis has a varied clinical presentation but most often involves the web spaces and soles of the foot
- The rash may be asymptomatic or have varying degrees of pruritis
- *Trichophyton rubrum* may present with a red, scaly, moccasin-like plaque on the sole
- Interdigital cracking and maceration may be present and lead to secondary bacterial infection

Pearls for Urgent Care Management

- Consider performing a KOH (potassium hydroxide) evaluation for confirmation of the diagnosis
- Initial treatment should be with an antifungal agent with antidermatophyte activity
- Examples include azoles, allylamines, ciclopirox, butenafine, and tolnaftate

CLINICAL CHALLENGE: CASE 3

16-Year-Old With History Of Orchiopexy

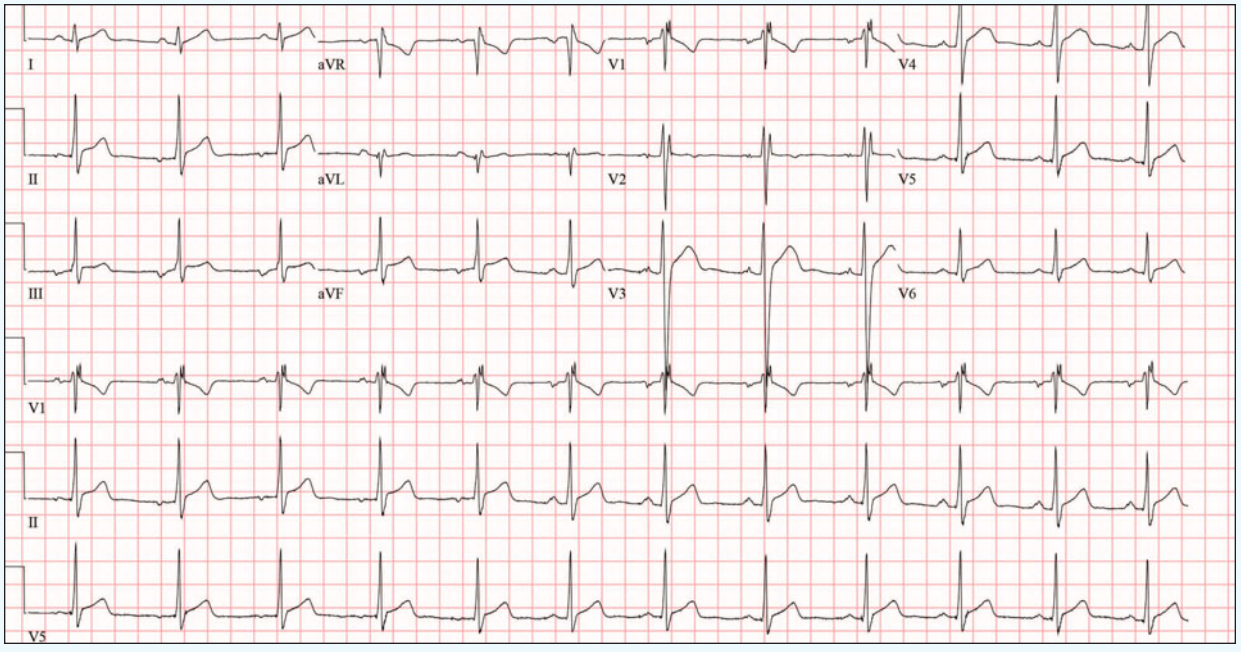


Figure 1: Initial ECG

A 16-year-old male with a history of orchiopexy presents with syncope. He denies chest pain or shortness of breath. An ECG is obtained.

View the ECG captured above and consider what your diagnosis and next steps would be. Resolution of the case is described on the next page.

Case presented by Catherine Reynolds, MD, McGovern Medical School at UTHealth Houston.

Case courtesy of ECG Stampede (www.ecgstampede.com).

ECG STAMPEDE

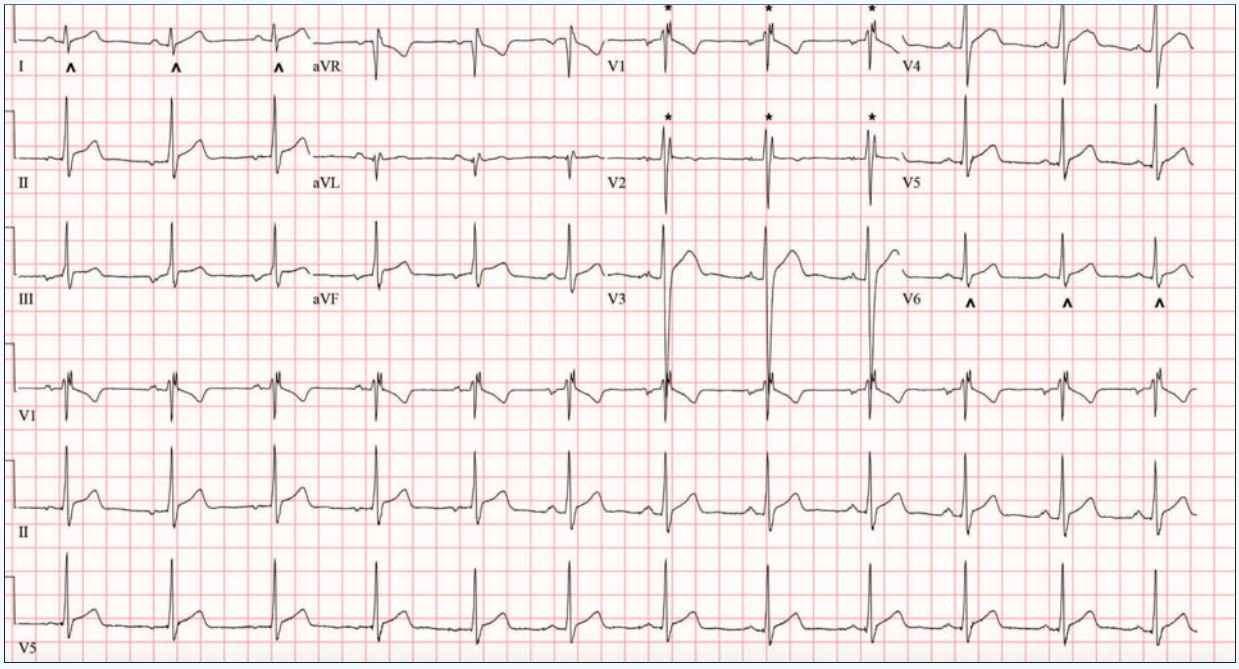


Figure 2: rSR' pattern in V1-V2 (asterisks) and wide/slurred S wave in the lateral leads (I, V6) (arrowheads) indicates the presence of a right bundle branch block morphology. QRS duration less than 120 msec makes this an incomplete right bundle branch block.

Differential Diagnosis

- ST-elevation myocardial infarction (STEMI)
- Left ventricular hypertrophy (LVH)
- Right bundle branch block (RBBB)
- Incomplete right bundle branch block (iRBBB)
- Left bundle branch block (LBBB)

Diagnosis

The diagnosis in this case is incomplete right bundle branch block. The ECG reveals a regular rhythm at a rate of 70 beats per minute. There is a normal axis. The axis of the p wave appears to be different in the first 5 beats, likely from an ectopic atrial focus, whereas the remaining beats appear to be sinus. The QRS complex duration is between 100-110 msec. There is an rSR' pattern in V_1-V_2 and a wide/slurred S wave in the lateral leads (I, V6). The RBBB morphology with a QRS duration less than 120 msec indicates the presence of an incomplete right bundle branch block. There are no signs of ischemia.

Discussion

With a right bundle branch block, conduction through the right bundle is compromised, while the left bundle is unaffected. As the ventricles depolarize, conduction passes through the left bundle normally, across the left ventricle and through the myocardium to depolarize the right ventricle. Electrocardiographically, this creates a normal appearing early part of the QRS followed by a second R-wave (R') in the anterior precordial leads, and a slurred S-wave in lateral leads as the conduction moves slower through the right ventricle.[1] This slower-than-normal conduction results in a wide QRS (greater or equal to 120 msec). RBBB can be caused by a variety of problems including ischemia, fibrosis, calcifications, infiltrative disease, electrolyte disturbance, or impaired vascular supply.

Alternatively, an incomplete right bundle branch block has the same morphology as a right bundle branch block but with a QRS duration less than 120 msec. It is relatively common, especially in young people and males, but can affect people of all ages. One study on Swiss military conscripts with a mean age of 19 found an iRBBB prevalence of 13.%.[2] While a RBBB has many dangerous causes, causes of iRBBB are most commonly benign. Often, iRBBB in the young, healthy population results from exercise-induced right ventricular remodeling and increased right ventricular free wall thickness, especially in athletes doing endurance exercise.

Because iRBBB is rarely pathologic, the clinical context is important to consider. Rare causes of iRBBB are structural abnormalities like atrial septal defect or conduction defects like Brugada syndrome or pre-excitation. In cases with a negative personal and family history and normal physical exam, iRBBB does not need further evaluation. However, if abnormalities are found on clinical exam, a

THE RESOLUTION

"A patient with iRBBB and a negative personal and family history for cardiac disease, as well as a normal physical exam, does not need further evaluation."

transfer should be initiated to further evaluate for cardiac disease.[2]

What to Look For

- RBBB is defined by RSR' in V_1 or V_2, S-wave of greater duration than R-wave or 40ms in leads I and V6, and QRS duration greater than or equal to 120 msec.
- An incomplete RBBB shares the same morphology as a RBBB, but with a QRS duration less than 120ms.

Pearls for Initial Management, Considerations for Transfer

- Incomplete right bundle branch block is typically benign but should be interpreted in the clinical context.
- A patient with iRBBB and a negative personal and family history for cardiac disease, as well as a normal physical exam, does not need further evaluation.
- Patients with an iRBBB and abnormalities on clinical exam that could be related to cardiac disease should be transferred to a hospital for cardiology consultation and an echocardiogram.

References

1. Surawicz B, Childers R, Deal BJ, Gettes LS. AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram. Part III: Intraventricular Conduction Disturbances A Scientific Statement From the American Heart Association Electrocardiography and Arrhythmias Committee, Council on Clinical Cardiology; the American College of Cardiology Foundation; and the Heart Rhythm Society. *J Am Coll Cardiol.*

2. Kobza R, Cuculi F, Abächerli R, Toggweiler S, Suter Y, Frey F, et al. (December 2012). Twelve-lead electrocardiography in the young: physiologic and pathologic abnormalities. *Heart Rhythm.* 9 (12): 2018–2022.

3. Floria M, Parteni N, Neagu AI, Sascau RA, Statescu C, Tanase DM (June 2021). Incomplete right bundle branch block: Challenges in electrocardiogram diagnosis. *Anatolian Journal of Cardiology.* 25 (6): 380–384.

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ICD-10-CM: What's New for 2025

Phyllis Dobberstein, CPC, CPMA, CPCO, CEMC, CCC

We are heading into fall, and fall starts with updates to the ICD-10-CM codes. The most recent changes went into effect on October 1, 2024. There is no grace period. Because ICD-10-CM codes are date-specific, claims prior to date of service October 1, 2024, need to use the codes for that time period, switching over to the update on the exact day.

While ICD-10-CM codes are updated semi-annually, the major updates occur in October. Changes include 252 new codes, 36 code deletions, and 13 code revisions. There are several things to ask yourself each time an update comes out.

- **Guidelines***:* Have the rules changed? The official ICD-10 guidelines for fiscal year 2025 are found on the Centers for Medicare & Medicaid Services website.[1] Narrative changes appear in bold text, items underlined have been moved since the prior version, and italics are used to indicate revisions to headings.
- **Revisions***:* Does the code mean the same thing as it did last year? Revisions are important because they involve a change in *description* versus a change in *code number*.
- **Deleted Codes***:* Do you need to document with more detail? Deletions are usually done in combination with the creation of new codes when digits are added to an existing code to be even more specific.
- **New Codes:** Should you be using a completely different code now? Sometimes, instead of the addition of digits, a brand new category may be created in a completely different section of the ICD-10-CM code set.

Let's review some of the changes that may be pertinent to urgent care.

ICD-10 Changes for Urgent Care

New codes were added for presymptomatic diabetes for early-stage type 1 diabetes that predates the onset of symptoms.

- E10.A0 Type 1 diabetes mellitus, presymptomatic, unspecified
- E10.A1 Type 1 diabetes mellitus, presymptomatic, Stage 1
- E10.A2 Type 1 diabetes mellitus, presymptomatic, Stage 2

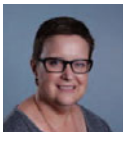
"Sometimes, instead of the addition of digits, a brand new category may be created in a completely different section of the ICD-10-CM code set."

Under eating disorders, there are several new codes for anorexia nervosa, restricting type (F50.010-F50.019), binge eating/purging type (F50.020-F50.029), bulimia nervosa (F50.20-F50.25), and binge eating disorder (F50.810-F50.819). Also new are F50.83 for pica in adults and F50.84 for rumination disorder in adults.

There are several new codes for diseases of the musculoskeletal system and connective tissue. New 6-character codes were added to specify the location of pain under thoracic, thoracolumbar, and lumbosacral intervertebral disk disorders (M51). Under synovitis and tenosynovitis (M65), several 5th- and 6th-character codes were added to allow the practitioner to specify the location of the unspecified synovitis and tenosynovitis.

An exclusion note was added to ICD-10-CM N39.0 (urinary tract infection, site not specified). If the urinary tract infection is of a specified site, use one of the following: cystitis (N30.-); pyonephrosis (N13.6); or urethritis (N34.-).

One new code was added for anosognosia (R41.85). Patients with this condition are unaware of their health conditions or problems, often due to dementia or Alzheimer disease. Additionally, 2 new social determinants of health codes for insufficient health insurance coverage (Z59.71) or welfare support (Z59.72) were added.



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The change expected to impact urgent care the most is changes to report body mass index (BMI) for pediatric patients. Two codes were added for identifying pediatric BMI percentiles. BMI pediatric codes are used for patients age 2 to 19 years of age and are based on the growth charts published by the Centers for Disease Control and Prevention.
The descriptions for this range of codes are now:

- Z68.51 BMI pediatric, less than 5th percentile for age
- Z68.52 BMI pediatric, 5th percentile to less than 85th percentile for age
- Z68.53 BMI pediatric, 85th percentile to less than 95th percentile for age
- Z68.54 BMI pediatric, 95th percentile for age to less than 120% of the 95th percentile for age
- Z68.55 BMI pediatric, 120% of the 95th percentile for age to less than 140% of the 95th percentile for age
- Z68.56 BMI pediatric, greater than or equal to 140% of the 95th percentile for age

Remember to document and code as specifically as you can for a clean claim from the start. With clean claims, revenue cycle management accelerates, and administrative burdens decrease. ■

Reference

1. Centers for Medicare & Medicaid Services website. FY 2025 ICD-10-CM Coding Guidelines. 2024. Accessed at: at https://www.cms.gov/files/document/fy-2025-icd-10-cm-coding-guidelines.pdf

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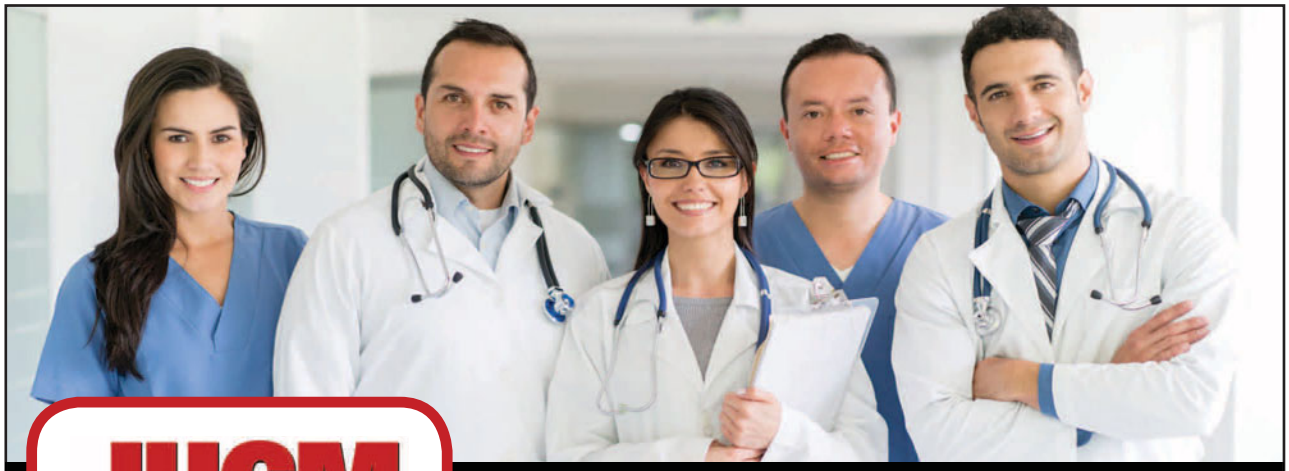

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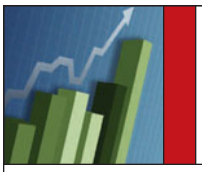

DEVELOPING DATA

Few Misused Rx Drugs Are Prescribed in Urgent Care

■ Alan A. Ayers, MBA, MAcc

DRUG CLASSES		
Opioid Pain Relievers	**Stimulants**	**Depressants**
~1 in 1,000 0.11% of total prescriptions written	~5 in 1,000 0.51% of total prescriptions written	~6 in 10,000 0.06% of total prescriptions written
88.7% of centers had no prescriptions written	85.5% of centers had no prescriptions written	81.1% of centers had no prescriptions written
Examples: Dilaudid, Lorcet, Lortab, OxyContin, Percocet, Percodan, Tylox, Vicodin	Examples: Adderall, Concerta, Ritalin	Examples: Librium, Valium, Xanax

According to the United States Department of Justice, the most common prescription drugs that are misused fall into 1 of 3 categories:

- opioid pain relievers/narcotics;
- depressants; and
- stimulants.

Experity EMR data encapsulating 17,526,083 prescriptions written at 3,037 urgent care centers from January 1 to August 20, 2024, shows the vast majority of urgent care centers do not prescribe these medications at all, and of those that do, these medications represent a very small percentage of total prescriptions written by those practices.

For example, accounting for all forms and dosages of the stimulant drugs amphetamine/dextroamphetamine (Adderall) and methylphenidate (Concerta, Ritalin), only 14.5% of urgent care centers provided even 1 prescription, meaning 85.5% did not prescribe these medications at all. And of those who did provide prescriptions, these drugs constituted only 0.5% of all prescriptions written, which is equal to approximately 5 in 1,000 prescriptions. The Department of Justice states: "An estimated 36 million U.S. residents aged 12 and older abused prescription drugs at least once in their lifetime. ■

Alan A. Ayers, MBA, MAcc is President of Urgent Care Consultants and Senior Editor of *The Journal of Urgent Care Medicine.*

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