

# JUCM<sup>®</sup>

THE JOURNAL OF **URGENT CARE** MEDICINE<sup>®</sup>

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 COLLEGE OF  
URGENT CARE  
MEDICINE

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The Official Publication of the **UCA** and **CUCM**

CLINICAL **cme**

## Nonfatal Drowning:

*The Danger Lingers  
Long After the Patient's  
Out of the Water*

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of Breath, but Long on Risk



#### Original Research

What's at Stake When the  
Provider and the Radiologist  
Disagree About a Child's X-ray?





# Ticks don't know the meaning of "Social Distancing."

Sofia 2 Lyme FIA: **CLIA-waived**  
**Results in minutes**, at your **point-of-care**

With kids home and parents looking for things to do that include "social distancing," more families will take to the outdoors. The only thing, ticks don't play by the same rules, so Lyme disease could end up on the rise. **When patients aren't feeling well, anxiety levels could be especially high – and now more than ever they'll ask to be tested.** Sofia 2 Lyme FIA uses a finger-stick whole blood sample to provide accurate, objective and automated results in as few as 3 minutes, getting practitioner and anxious patient on a path to treatment much sooner.

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## LETTER FROM THE EDITOR-IN-CHIEF

# The Unvaccinated Aren't the Enemy



Taylor wore her embroidered sorority sweatshirt and a mask below her nose when she came to see me. She was 19 and had just finished her freshman year at the local university. Her story was cliché, as well: cough, runny nose, and sore throat “that wouldn’t go away.” She’d been sick for 8 days and she’d come in to get antibiotics. This isn’t a story about antibiotic stewardship, though.

“Have you been tested or vaccinated for COVID?” I asked her after forcing myself to sit mute and listen for the 90 seconds I know I’m supposed to give every patient.

She stared at me scornfully and paused as our initial cordial rapport vaporized.

“No.”

From the combination of her expression and the tone of that single word, I could tell how the rest of the interaction would go. As I began to explain that COVID was (currently) the most likely cause for her symptoms, I was interrupted with predictable rhetoric. I can’t recall Taylor’s exact argument, but it had all the conspiracy catchphrases: hoax, microchips, and “guinea pigs.”

I’d wager that we all have had many similar encounters recently with the half-masked and *unvaxxed*. Given the vaccine’s effectiveness in preventing symptomatic infection and the current surfeit of available vaccines in the U.S., the majority of patient’s arriving with COVID symptoms nowadays are willfully unvaccinated. While a rare few may have come to this position based on a careful review of the available data weighed against their personal risk profile, most have not. Most have chosen not to receive the vaccine based on a variety of beliefs, generally with strong political overtones. The skepticism and distrust abound as they describe notions of nefarious plots involving government–pharma collusion.

I cannot deny that these patients are exceptionally frustrating to care for on many levels. Their convictions in these alternate beliefs commonly lead to conflictual interactions. On a practical level, it’s hard to deliver safe care as they try to steer clinical conversations into discussions about political ideology at every turn. Most significantly, though, the refusal of eligible patients to get vaccinated is undeniably drawing out the pandemic and

putting vaccine-ineligible individuals (eg, children) at risk.

At first glance, this seems highly reprehensible. And if this behavior were willful, then it would be. However, we must remember that in the worldview held by most of the COVID antivaxxers the threat of the virus is overblown and the vaccine is the real danger. It is reminiscent of Hanlon’s Razor: “Sufficiently advanced ignorance is indistinguishable from malice.” This seems true. It is highly unlikely that the roughly 45% of Americans electing to forego vaccination are making this choice to terrorize our nation’s children.

So, if we cannot blame the antivaxxers for their intentions, we can at least find them at fault for their ignorance, right? While I confess that in my more exhausted moments I do just that, I don’t think it’s entirely fair. The vast majority of “information” consumed, not only related to the pandemic but on any given topic, is now delivered through social media or other platforms using similar user retention tactics.

Facebook, Instagram, YouTube and other ad-supported, public internet-based forums have created sophisticated algorithms to keep users engaged with their devices. This insidious phenomenon is articulated in detail in the 2020 documentary, *The Social Dilemma*. Because we humans prefer to hear the opinions of those who we agree with, these platforms’ artificial intelligence (AI) engines quickly learn our beliefs through our preferences and what keeps our attention. Our feeds become echo chambers, preferentially exposing us to “news” and opinions which corroborate our existing worldview. The result: we all end up being fed a different version of reality. And with these viewpoints being repeated to us ad nauseum, our beliefs become reinforced exponentially. It’s like adding rebar to concrete.

So, while it would have been convenient to blame Taylor, not only for her own current misfortune (her COVID test was positive), but also for our nation’s ongoing collective misfortune, it misses the mark. It’s like blaming an addict for their substance use or an obese person for their weight. Certainly, there’s some personal responsibility, but there were larger and more villainous forces at play leading to her current state of suffering.

Now, unlike overweight and addicted patients, the antivaxxers personal choice has a more palpable and direct impact on their communities at large, regardless of their individual culpability for that choice. This is why mandatory vaccination

*“Advice from healthcare providers is often more impactful than we realize, especially if we can muster sharing it from a place of concern and compassion.”*

for eligible citizens is not only appropriate, but necessary. This may be the land of the free, yet we require seatbelts and heavily restrict indoor smoking. Similarly, vaccination is undeniably a matter of not only individual wellbeing, but most importantly from a policy standpoint, public safety. Recognizing this, President Emmanuel Macron of France recently outlined his rationale for compelling French citizens to be vaccinated. As the U.S. remains far and away the world leader in COVID-19 infections, American leadership would be wise to follow suit.

Without such a mandate and with the rise of the Delta variant, I fear that the pandemic will smolder for many months to come. In the meantime, for our own sanity and burnout prevention, when seeing an infected and unvaccinated patient it would behoove us to realize that they're suffering on several levels. Most obviously, they're afflicted with unmitigated COVID itself. Ho-

wever, they're simultaneously facing intense cognitive dissonance as their personal reality and the false narrative they've been fed and subscribed to are now undeniably at odds. And people aren't the best versions of themselves when they're going through that. So, try to show them some grace. This isn't malice, just ignorance. Ignorance resulting from a broken and pervasive system perpetuating unfettered propagation of misinformation. Our patients aren't the con artists who've come up with the conspiracy theories, they are the ones who've fallen victim to it.

Victimized or not, until some version of a vaccine mandate arrives, we still must encourage these patients to get vaccinated (if they're fortunate enough to recover). By virtue of showing up in our UC, they've put at least a modicum of trust in us. Counseling them about vaccination is not only the right thing to do because we are all officers of public health, but given the echo chamber effect of fake news and science, we are often the sole counterpoint and voice of reason they're exposed to. And direct advice from healthcare providers is often more impactful than we realize, especially if we can muster sharing it from a place of concern and compassion. After all, the unvaccinated are indeed the ones suffering the worst of the pandemic now. ■



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So, if you've ever had a situation arise in your urgent care center and thought *somebody should write an article about this*, maybe you should be that "somebody." Describe it in an email to [editor@jucm.com](mailto:editor@jucm.com) and we'll help you get started.

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\*JUCM has garnered 17 awards in the prestigious American Society of Healthcare Publication Editors annual awards competition.

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## CLINICAL

### 11 Evaluation of Nonfatal Drowning in Urgent Care

One of every parent's worst nightmares is all too often a real-life occurrence, but it's not just children who are at risk for drowning incidents. Nonfatal drownings take place with alarming regularity, and victims are likely to present to the nearest available healthcare facility—which could be your urgent care center.

*Tracey Quail Davidoff, MD, FCUCM*

## HEALTH LAW & COMPLIANCE

### 15 Employee Confidentiality Cannot Extend to Employment Terms—Including on Social Media



Nondisclosure agreements have become de rigueur among urgent care providers and managers. There are limits to what they can cover, however.

*Alan A. Ayers, MBA, MAcc*

## ORIGINAL RESEARCH

### 19 Discrepancy Rates in Radiograph Interpretations between Pediatric Urgent Care Providers and Radiologists



Few urgent care centers have round-the-clock access to pediatric radiologists, leaving initial reads to the treating provider. How often do those opinions coincide with subsequent review?

*Anne McEvoy, MD; Paul Mullan, MD, MPH; Lauren Paluch, MPA, PA-C; Brynn Sheehan, PhD; Jiangtao Luo, PhD; Turaj Vazifedan, DHSc; Joel Clingenpeel, MD; Theresa Guins, MD; Jeffrey Bobrowitz, MD; and Allison Wood, DO*

## PEDIATRIC URGENT CARE

### 29 An Urgent Care Approach to Syncope in Children and Adolescents



The differential for syncope is wide open for any patient. What's concerning for adults may not be

so for children—but it's important to remember that the inverse is also true. Downplaying the potential threat because of the patient's age could be a costly mistake.

*Nehal Bhandari, MD, FAAP and Abbas Zaidi, MD, FAAP*

## CLINICAL

### 35 Best Practices for LGBTQ-Friendly Urgent Care



Whether it's due to implicit or explicit bias, underinformed providers, or outright discrimination, LGBTQ patients are more likely to experience inadequate healthcare encounters, leaving many at risk for poor outcomes—and hesitant to seek care at all.

*Benjamin Silverberg, MD, MSc, FAAP, FCUCM*

## CASE REPORT

### 44 Pulmonary Eosinophilia: Putting the Pieces Together



Shortness of breath could be due to something as nonthreatening as a seasonal allergy, or the symptoms of a life-threatening event. Similarly, the term "pulmonary eosinophilia" covers a lot of territory. Zeroing in on what it all means to a particular patient in a timely manner is essential to their prospects for a good outcome.

*Derick Stackpole, PA-C*

## NEXT MONTH IN JUCM

No matter how diligent you are, how high the standard of care is, or how experienced your providers are, there's a good chance you'll be involved in a lawsuit at some point. Knowing what to expect from the outset will help you steel your nerves for the daunting process and increase your chance for a favorable outcome. Reading *Getting Served: The Dos and Don'ts of Litigation* in the October issue of *JUCM* will be a great start.

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## JUCM CONTRIBUTORS

The fact that summer is starting to wind down has nothing to do with the chance that someone will present to your urgent care center after a nonfatal drowning. Yes, the beaches are emptying out and the town pool will be closing soon, but a surprisingly high number of incidents take place in other bodies of water—and even in the home, among people of all age groups. The details may vary widely, but the potential for injury and death are there regardless. That's why your team has to be prepared in any season.

In this issue's cover article, **Tracey Quail Davidoff, MD, FCUCM** provides an overview of the risk factors for fatal and nonfatal drownings, as well as the types of injuries patients are likely to present with after such an event. It's not a given that the patient needs to be transferred to a higher-acuity setting, either. You can read *Evaluation of Nonfatal Drowning in Urgent Care* starting on page 11.

Dr. Davidoff is an attending physician at Advent Health Centra Care and a member of JUCM's Editorial Board, as well as a frequent contributors to the journal.

Just as it would be a mistake to assume drowning victims are all children, it could be a dangerous error to forget that children experience syncope just as adults do. *Approach to Syncope in Children and Adolescents* (page 29) uses the actual case of a 12-year-old girl who presented with syncope to examine the wide-ranging possible causes, and the potential consequences. We appreciate authors **Nehal Bhandari, MD, FAAP** and **Abbas Zaidi, MD, FAAP** taking the initiative to share their expertise on this subject. Drs. Bhandari and Zaidi are colleagues at Emory University School of Medicine.

Younger patients are also at the center of this month's original research article. *Discrepancy Rates in Radiograph Interpretations between Pediatric Urgent Care Providers and Radiologists* (page 19) starts with the premise that it's unlikely for urgent care centers to have constant access to a radiologist's opinion. Yet, when a child presents with an injury the time to wait for one is often an unreasonable luxury. This study considers how often there are discrepancies between the findings of the initial provider and the radiologist who gets a look at the images later on. The authors, **Anne McEvoy, MD; Paul Mullan, MD, MPH; Lauren Paluch, MPA, PA-C; Brynn Sheehan, PhD; Jiangtao Luo, PhD; Turaj Vazifedan, DHSc; Joel Clingenpeel, MD; Theresa Guins, MD; Jeffrey Bobrowitz, MD; and Allison Wood, DO** are all affiliated with Children's Hospital of the King's Daughters and Eastern Virginia Medical School.

In the September case report, **Derick Stackpole, PA-C**

describes the case of a 29-year-old man who presented with a long history of breathing issues—including weeks of those problems worsening. Is his conditions worsening, or is he not receiving the most appropriate treatment? Read *Pulmonary Eosinophilia: Putting the Pieces Together* (page 44) to find out—and learn a valuable lesson that could assist you with your own patients in the future. Mr. Stackpole practices at Carilion Clinic.

Speaking of longstanding health issues, did you know that people in the LGBTQ community are more likely than most other patients to have unaddressed illnesses and mental health conditions? That's because too many providers are underinformed, or because the patients are hesitant to see a healthcare professional because of previous unpleasant encounters. In *Best Practices for LGBTQ-Friendly Urgent Care* (page 35), **Benjamin Silverberg, MD, MSc, FAAP, FCUCM** explains that the nuances of how you interact with every patient, regardless of orientation and down to the words you choose, can affect the quality of care you're able to provide. Dr. Silverberg is an associate professor in the Departments of Emergency Medicine and Family Medicine at West Virginia University, and the medical director of the Division of Physician Assistant Studies in the Department of Human Performance at West Virginia University.

Words matter in the legal aspect of running an urgent care center, too—especially if you or your employees have signed confidentiality agreements. How far can they extend, and what are the consequences of violating them? Read *Employee Confidentiality Cannot Extend to Employment Terms—including on Social Media* (page 15) by **Alan Ayers, MBA, MAcc** to find out. Mr. Ayers is president, Experity Networks and senior editor, practice management for JUCM.

If you have questions about the current state of EM coding and reimbursement (which is highly likely), don't miss **Monte Sandler's** *Revenue Cycle Management* column, which starts on page 57.

Finally, in *Abstracts in Urgent Care* (page 25), **Ivan Koay, MBChB, FRNZCUC, MD** reviews articles on pain from digital nerve blocks, use of corticosteroids in children, treating patients who present with back pain, and the safety of COVID-19 vaccination in lactating patients. Dr. Koay is an urgent care physician based in Dublin, Ireland, as well as an examiner and trainee supervisor for the Royal New Zealand College of Urgent Care Education Faculty for the Urgent Care Medicine Fellowship, Royal College of Surgeons Ireland. ■

# THANK YOU

For setting the example in tough times.

Urgent care organizations have been leaders and heroes in the fight against COVID19. We are proud and humbled by those of you whose commitment to quality and safety remained steadfast, despite the most extenuating of circumstances.

UCA Accredited organizations having an initial or a re-accreditation modified survey during the pandemic deserve *above and beyond* recognition. We salute you and encourage your industry colleagues to do the same:

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Statesboro Urgent Care  
STAT-MD Urgent Care  
Texas Urgent Care & Imaging Center  
U.N.I. Urgent Care  
Urgent Care for Children  
Urgent Care of NJ  
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WellStreet Urgent Care  
West Isle Urgent Care  
Western New York Immediate Care  
WestMed Urgent Care  
Your Doc's In





# Invictus

■ LOU ELLEN HORWITZ, MA

Get an English major as your CEO, and eventually you're going to get some poetry. "Invictus" is about bravery and determination in the face of whatever comes. If you want to see it in real life, just look around your centers—or look in the mirror. It's talking about you.

One of the things that helps us to keep getting up when we get knocked down is the helping hands of others. Or a look in our direction that shows us another person who understands what we are going through and believes that we will get up. Or a reminder that the most important step isn't the first one—it's the next one.

This is the moment in all great movies when things look their worst. The hero has delivered the knockout punch and is gasping for breath and the audience has exhaled...then the ominous music begins because the knocked-out villain has begun to stir. It's then that the hero realizes they have to strap up and go back in one...more...time. And you know then that they will truly be victorious.

Heroes don't just show up. They show up over and over and over. When the hard things come—like a pandemic—they don't close, they stay open. When the pandemic rears its head again, just when the heroes thought the battle was finally dying down, they strap on their weapons, pull each other up, and get back to it.

I'm talking about you, urgent care.

There are no words that can adequately express what urgent care's performance through COVID-19 is going to mean to our industry and specialty in the long term, because that is what we haven't seen yet, but I'm pretty hopeful and you should be too. The hero doesn't stand up to get the credit, but it sure feels great when they do get it—and it is past time for your turn.

I should also mention that I've had the privilege of seeing this in the UCA team as well. Our staff and volunteers have risen up, stayed focused on putting members and urgent care

first, figured out what that means in the time of COVID-19, handled hard choices, and taken the chances that needed to be taken. It's a great group of people and I can't wait for you to meet them when we can get our band back together—at long last—in Las Vegas.

The cancellation of the Convention has been hard to take for all of us, but we are already using this "found time" to move forward faster on the initiatives that will mean the most to urgent care: advocacy, public relations, partnerships, and advancing the specialty. There is much to come on all of these and we hope you will get involved. We are also working on more marvelous member benefits, and look forward to launching those sooner than expected.

I will leave you, for now, with the poem.

Out of the night that covers me,  
Black as the Pit from pole to pole,  
I thank whatever gods may be  
For my unconquerable soul.

In the fell clutch of circumstance  
I have not winced nor cried aloud.  
Under the bludgeonings of chance  
My head is bloody, but unbowed.

Beyond this place of wrath and tears  
Looms but the Horror of the shade,  
And yet the menace of the years  
Finds, and shall find, me unafraid.

It matters not how strait the gate,  
How charged with punishments the scroll,  
I am the master of my fate:  
I am the captain of my soul.

– William Ernest Henley – 1849-1903 ■



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



# CONTINUING MEDICAL EDUCATION

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**Expiration Date:** August 31, 2022

## Target Audience

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

## Learning Objectives

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

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- **Michael B. Weinstock, MD**  
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### Evaluation of Nonfatal Drowning in Urgent Care (page 11)

1. Which of the following terms is recommended by the World Health Organization in describing a patient who survived a drowning incident?
  - a. Near drowning
  - b. Nonfatal drowning
  - c. Passive drowning
  - d. Secondary drowning
2. For children between 1 and 4 years of age, which of the following is the most common water source for drowning incidents?
  - a. Household buckets
  - b. Natural bodies of water such as lakes and oceans
  - c. Natural disaster-related exposure to water
  - d. Swimming pools
3. Urgent care patients whose symptoms are improved after a nonfatal drowning, have normal vitals, have an oxygen saturation  $\geq 95\%$ , and who have a safe discharge plan:
  - a. Can be discharged immediately
  - b. Should be admitted for overnight observation
  - c. Should be observed for 4 to 6 hours following the incident before being discharged
  - d. Should be transferred to an emergency room via EMS for further evaluation

### Employee Confidentiality Cannot Extend to Employment Terms—Including on Social Media (page 15)

1. Nondisclosure agreements often signed by providers and management can apply to all but which of the following?
  - a. A company's business strategies
  - b. Salary history
  - c. Intellectual property
  - d. Market research regarding new locations

2. The National Labor Relations Act (NLRA), designed to protect the rights of both employees and employers, covers:
  - a. Healthcare facilities
  - b. Manufacturers
  - c. Retailers
  - d. All of the above
3. The right of employees to espouse viewpoints their employer may find objectionable online without fear of dismissal is limited by:
  - a. The NLRA
  - b. The parameters of the nondisclosure agreement they signed when they joined the company
  - c. Whether the commentary would be deemed offensive by any reasonable person
  - d. It depends on the state in which their position is located

### Pulmonary Eosinophilia: Putting the Pieces Together (page 44)

1. Which of the following should be included in the differential diagnosis for shortness of breath?
  - a. Pneumonia
  - b. Chronic conditions such as COPD
  - c. Pulmonary eosinophilia
  - d. All of the above
2. Pulmonary eosinophilia is defined by:
  - a. Peripheral blood eosinophilia
  - b. Increased eosinophils on bronchoalveolar lavage
  - c. Lung biopsy with lung tissue eosinophilia
  - d. Any one of the above
3. Initial therapy for chronic eosinophilic pneumonia is:
  - a. Prednisone 0.5 mg/kg/day continued for 2 weeks after symptoms resolve
  - b. Prednisone 10 mg daily for 3 days
  - c. Decadron injection 1 mg/kg
  - d. Decadron injection 0.5 mg/kg



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# Evaluation of Nonfatal Drowning in Urgent Care

**Urgent message:** Lingering warm weather continues to have patients eager to pursue outdoor activities, including swimming in pools, freshwater lakes, and oceans. Those who have suffered and survived a drowning episode may seek care or reassurance at the local urgent care center.

TRACEY QUAIL DAVIDOFF, MD, FCUCM

Citation: Davidoff TQ. Evaluation of nonfatal drowning in urgent care. *J Urgent Care Med.* 2021;15(11):11-14.

## Case Presentation

A 4-year-old Hispanic male without significant past medical history is found by his mother flailing in the pool, coughing and choking for an unknown period of time. He is removed from the pool and does not seem to be struggling to breathe but continues to cough periodically. He has no apparent injuries. He presents to urgent care with isolated coughing. He vomits once, mostly water. He is acting appropriately for an active 4-year-old boy, playing and interacting with family.

Vital signs are as follows: HR 120, RR 18, BP 90/65, PO<sub>2</sub> 95% on room air. There are no outward signs of trauma. There is no dyspnea, retractions, or accessory muscle use for breathing. His lung exam reveals faint crackles in the midlung zone but good inspiratory effort, no wheezing, and no rhonchi. He coughs once during the exam. The heart and abdomen exams are normal.

What would be your next step in evaluating this patient?

- A. Reassure the mother that the child is fine and no further workup is required
- B. Send the patient to the emergency department immediately by EMS
- C. Observe the patient for an hour. If there is no change, he may be discharged
- D. Start the patient on steroids immediately to prevent ARDS

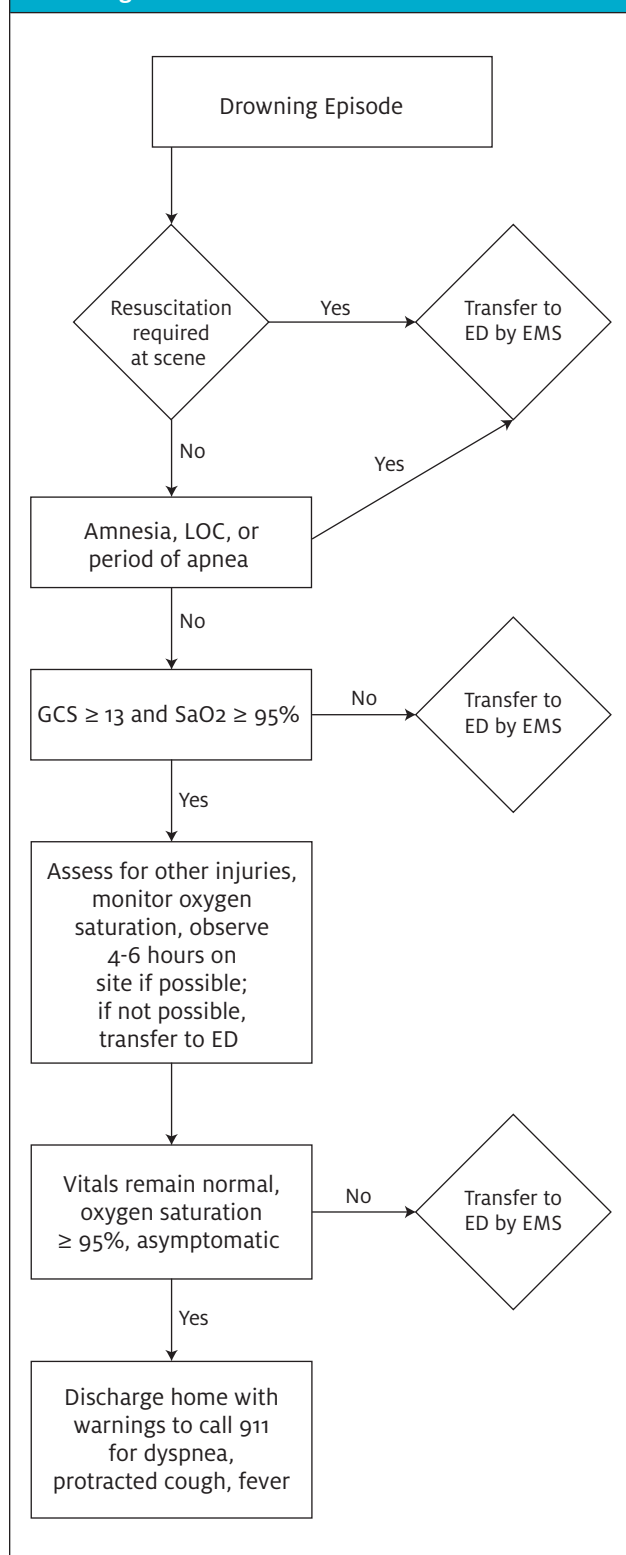


- E. Order a chest x-ray. If normal, discharge; if abnormal, send to the hospital

## Discussion

The World Health Organization defines drowning as “the process of experiencing respiratory impairment from submersion or immersion in liquid.” Other terms include near drowning, as well as wet, dry, passive, secondary, and silent drowning; these are no longer recommended as they are confusing and make research

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**Figure 1. Urgent Care Management of Non-fatal Drowning**

and statistic tracking difficult.<sup>2</sup> More recent terminology endorses the use of “fatal drowning” and “nonfatal drowning” as defined as death or survival following the episode. This terminology was developed by the World Health Organization and accepted by the American Heart Association to improve consistency in reporting and research.<sup>1,2</sup>

Drowning accounts for approximately one half million deaths annually worldwide, with likely several hundred times that many for nonfatal drowning episodes.<sup>3</sup> Low- and middle-income countries account for more than 90% of these deaths.<sup>4</sup>

The U.S. reports approximately 4,000 drowning deaths per year. Drowning has surpassed motor vehicle crashes as the most common injury-related cause of death in children.<sup>4</sup> About 20,000 children seek medical attention for drowning in U.S. emergency departments annually.<sup>5</sup> As many cases of nonfatal drowning go unreported, it is likely that the true scope of the problem is vastly underestimated.

In the U.S., bathtubs account for 55% of drowning deaths in children less than 1 year of age, with large household buckets accounting for 16%. In children between 1 and 4 years of age, swimming pools are the most likely site of drowning; in children aged 4-20, natural bodies of water are most common. In older populations, natural disasters such as hurricanes or tsunamis are more common causes of drowning.<sup>5</sup>

The following increase the risk for drowning:

- Inadequate adult supervision, intentional or unintentional, abuse
- Risk-taking behavior
- Use of drugs and alcohol
- Hypothermia
- Concomitant stroke, MI, or trauma
- Seizure disorder, developmental or behavioral disorders, dementia
- Undetected primary cardiac arrhythmia, including familial polymorphic VT, congenital long QT syndrome, Brugada syndrome
- Hyperventilation prior to a shallow dive

Drowning begins with a sensation of panic followed by loss of the normal breathing pattern, breath-holding, air hunger, and struggle by the victim to keep their head above water level. The reflex to inspire eventually occurs, and hypoxemia ensues either by aspiration of liquid or reflex laryngospasm when liquid contacts the lower respiratory tract. Hypoxemia will sequentially affect every organ system, with eventual cerebral hypoxia and death.

Despite earlier beliefs that fresh water and salt-water

drownings were physiologically different, researchers have determined that this distinction is no longer important. Both types of drowning result in the same physiologic changes, organ dysfunction, and hypoxia.<sup>6</sup> More water than could possibly be aspirated would be necessary for salt water to have any significant difference vs fresh water. Biologic materials such as bacteria, fungus, mud, algae, or chemical contaminants may be of concern and should be considered based on history.

The largest impact on survival of drowning victims is immediate rescue and resuscitation by bystanders at the scene.<sup>2</sup> Less than 6% of all rescued persons require medical attention, and <0.5% require CPR.<sup>7</sup> Unlike other causes of cardiac arrest where restoring circulation is considered most important, in drowning, ventilation is considered most important and should be initiated as soon as the victim is in shallow water or on a stable surface. If the patient does not respond to two rescue breaths with chest rise, then CPR should be performed with an automated defibrillator, if possible.

Cervical spinal cord injury is uncommon in nonfatal drowning unless there is a mechanism of injury or clinical signs and symptoms consistent with injury. An example of this would be diving or a fall from height. As routine cervical spinal cord immobilization can interfere with airway and respiratory management, this is no longer recommended unless a strong index of suspicion is present for spinal injury.<sup>4,6</sup>

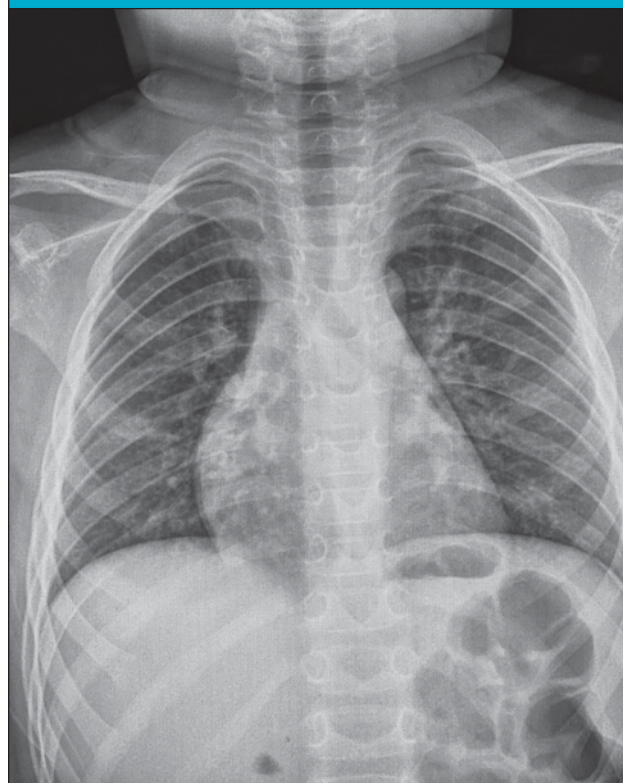
Hypothermia is a concern in drowning episodes and depends on the temperature of the water and length of time of exposure. This may be less of a concern in patients well enough to present to urgent care, but should still be addressed. Passive warming with blankets for mild hypothermia is recommended.

Risk factors for mortality or significant morbidity following drowning include age <3, submersion for more than 5-10 minutes, and CPR for more than 10 minutes without return of spontaneous circulation.<sup>5</sup> If rescue breathing was not required, complete recovery without long-term effects regardless of symptoms at presentation usually occurs in 48 hours in all patients.<sup>8</sup> The exception to this would be patients that have significant aspiration of chemicals or biologic matter resulting in ARDS, which is fortunately rare.

### **Urgent Care Management (see Table 1)**

Most patients who will seek care at an urgent care center following an episode of drowning will arrive in stable condition, awake, alert, and with normal neurologic function. Nearly all of these patients will do well with no decompensation of respiratory function and no per-

**Figure 2. Chest x-ray of the patient described in this article.**



manent neurologic disability.<sup>8</sup> Conversely, patients with more severe symptoms, positive physical findings, and abnormal vital signs are at higher risk of morbidity and mortality.

The patient should be evaluated by a provider as soon as possible upon arrival to the urgent care center. Vital signs, including pulse, blood pressure, respiratory rate, temperature, and pulse oximetry should be obtained. Continuous pulse oximetry is recommended. Infrared or tympanic thermometers, commonly used in urgent care, should not be used if hypothermia is suspected as they are less accurate and may not register lower temperatures.

### **Indications for Transfer**

Patients with amnesia for the event, loss of or depressed consciousness at any point, or an observed period of apnea which required artificial ventilation should be transferred by ambulance for evaluation at the emergency department *even if they are currently asymptomatic*.<sup>8</sup> They should be given oxygen if hypoxic or dyspneic and should be warmed if hypothermic.

The majority of patients will have one or more epi-



**Take-Home Points**

- Drowning episodes should be defined as fatal or nonfatal drowning, not with previously used terms such as near, dry, wet, secondary, passive, or silent drowning.
- Patients presenting to urgent care following nonfatal drowning should be evaluated immediately by a provider, starting with vital signs.
- Patients who required resuscitation on scene, have amnesia for the event, had a loss of consciousness, or a period of apnea should be sent immediately to the nearest emergency department by EMS *even if they are currently asymptomatic*.
- Patients whose symptoms are improved, have normal vitals, have an oxygen saturation  $\geq 95\%$ , and who have a safe discharge plan may be discharged after 4-6 hours of observation following the drowning episode.

sodes of vomiting due to swallowing water when struggling to breathe. This is self-limited, rarely if ever requires treatment, and resolves spontaneously. Patients who have altered mental status and vomiting are at risk for aspiration of gastric contents and advanced airway protection with intubation and mechanical ventilation may be required.

Chest radiographs should be ordered only if there are abnormal lung findings or hypoxia. These films should be interpreted cautiously in the urgent care setting as they may be falsely negative in the early time period after a drowning episode. Initial water in the lungs may be misinterpreted as pneumonia.<sup>4</sup> Any radiographic abnormalities found warrant evaluation in the emergency department. Chemistry and hematologic studies are usually normal in the early drowning period and not required in UC if the patient is stable.<sup>4,8</sup>

Patients with a normal Glasgow Coma Scale score and an oxygen saturation of  $\geq 95\%$  on presentation are at low risk for complications and should be observed for 4 to 6 hours in a clinical setting. If this is not possible in urgent care, the patient should be sent to the ED for observation. Most patients who decompensate will do so within the 4- to 6-hour time period.

If at the end of the observation period the patient is asymptomatic the pulmonary exam is normal and the oxygen saturation remains  $\geq 95\%$ , the patient can be safely discharged with little to no risk of complications.<sup>8</sup> Long-term survival with no morbidity in these patients is 99%–100%.<sup>7</sup> Discharge instructions should include careful observation by a responsible adult and warnings to call 911 for mental status changes, fever, protracted cough, and dyspnea.

**Additional Resources**

For more information on water safety measures, consult:  
The AAFP clinical policy statement on Residential Pool Safety at: <https://www.aafp.org/about/policies/all/residential-pool.html>  
The WHO Global Report on Drowning at: [https://www.who.int/water\\_sanitation\\_health/diseases-risks/risks/global-report-on-drowning/en/](https://www.who.int/water_sanitation_health/diseases-risks/risks/global-report-on-drowning/en/).

Steroids have not been demonstrated to prevent ARDS and improve outcome in these patients and are not recommended.<sup>5</sup>

In cases of pediatric drowning, neglect or abuse needs to be considered, with referral to children's services if warranted.

**Case Resolution**

The provider in this case ordered a chest x-ray based on the abnormal lung exam and borderline hypoxia. Bilateral hilar pulmonary infiltrates consistent with drowning were visible and confirmed by radiology (see **Figure 2**). Although the patient continued to remain asymptomatic and the oxygen saturation 95%, he was transferred by ambulance to the nearest children's hospital. He was observed overnight and discharged in the morning with no complications.

**Prevention**

Drowning is a significant public health problem worldwide. It is estimated that over 85% of drowning episodes could be prevented.<sup>4,7</sup> In the U.S., children are at significant risk. This can be mitigated with adequate supervision, physical barriers to water, swimming instruction, and public education measures. Providers should educate the public, especially parents of small children, about safe practices around pools and bodies of water. ■

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# Employee Confidentiality Cannot Extend to Employment Terms—Including on Social Media

**Urgent message:** Nondisclosure agreements that are commonly required of management and providers to protect a company's business strategies, intellectual property, and human capital generally cannot prohibit employees from sharing their own pay, benefits, working conditions, or conditions of employment even on social media.

ALAN A. AYERS, MBA, MACC

Many companies expect and even demand confidentiality of proprietary information. In the urgent care industry, this includes growth and development plans (ie, market research on new locations), operations manuals, patient and other customer lists,<sup>1</sup> marketing plans, financial data and other performance metrics, and insurance contracts, along with other information unique to a business that would benefit competitors or be used to damage the company if disclosed inappropriately.

A common issue in every business—including urgent care centers—is employees who discuss their pay with one another or post their salaries on public websites. This is not limited to staff but can include highly compensated physicians, physician assistants, and nurse practitioners. Needless to say, when these comparisons are made it can disrupt the workforce and cause inefficiencies and low morale.

Because of this, many urgent care owners and managers ask if an employer can include discussions of pay, benefits, working conditions, and other aspects of the workplace in a confidentiality agreement. This article will examine what is legally permitted and/or what must be excluded from confidentiality agreements.

A confidentiality agreement (also called a nondisclosure agreement or an NDA) is a legally binding contract where an employee promises to keep proprietary information confidential and refrain from disclosing this information without authorization.<sup>2</sup>



## The Parameters of the National Labor Relations Act

Congress enacted the National Labor Relations Act (NLRA) in 1935 "to protect the rights of employees and employers, to encourage collective bargaining, and to curtail certain private-sector labor and management practices, which can harm the general welfare of workers, businesses and the U.S. economy."<sup>3</sup>

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*“Disclosure” is no longer just face-to-face or private email communication but includes publicly-accessible online forums including reviews left on popular career websites and discussions on social media “walls.”*

The NLRA applies to most private-sector employers, including manufacturers, retailers, private universities, and healthcare facilities.<sup>4</sup> Note that both employees at union and nonunion workplaces have protections under the Act.

The NLRA states that employees have the right to unionize, to join together to advance their interests as employees, and to refrain from such activity.<sup>5</sup> It also makes it unlawful for an employer to interfere with, restrain, or coerce employees in the exercise of their rights.<sup>5</sup>

An employee may seek remedy for an employer’s violation of Section 8(a)(1) by filing an unfair labor practice (ULP) charge with the National Labor Relations Board (NLRB).

#### The Test for Protection under the Act

Whether a given action is protected under the NLRA depends in large part on whether its primary purpose is to fulfill one of the Act’s stated objectives.

Whether an employer’s policy violates the NLRA depends on 1) whether and to what level the policy interferes with the ability of employees to exercise their rights under the Act; and 2) whether the employer has any legitimate business justifications for enforcing such a policy.<sup>6</sup>

The NLRA protects employees’ right to talk about the terms and conditions of their employment, including discussing their wages with coworkers. And employees have the right to discuss possible unlawful conduct in the workplace, such as illegal harassment, discrimination, and workplace safety violations.<sup>7</sup>

#### Social Media

Social media is a major concern today, and in some

states employees have the right to engage in lawful conduct during their off-hours, some of which may affect the way the employer’s social media policies are developed. Moreover, employers must take care to not violate the NLRA when disciplining employees for their social media activities.<sup>7</sup>

An employee’s social media posts may be considered a protected concerted activity if the employee is discussing working conditions and other labor relations matters. In 2017, the U.S. Court of Appeals for the Second Circuit affirmed the NLRB’s determination that the employer violated Sections 8(a)(1) and 8(a)(3) of the NLRA by discharging an employee since his conduct was not so “opprobrious” or critical as to lose the protection of the NLRA.<sup>8</sup> The Court applied the “totality of the circumstances” test for evaluating an employee’s use of social media, which includes considering the following factors:

1. any evidence of antiunion hostility
2. whether the conduct was provoked
3. whether the conduct was impulsive or deliberate
4. the location of the conduct
5. the subject matter of the conduct
6. the nature of the content
7. whether the employer considered similar content to be offensive
8. whether the employer maintained a specific rule prohibiting the content at issue
9. whether the discipline imposed was typical for similar violations or proportionate to the offense.<sup>8</sup>

In fact, an employer should not conclude that extremely foul language—even when directed at the family of the business owner or a manager—is enough to take the speech beyond the NLRA’s protection. In determining whether conduct is so opprobrious that it loses NLRA protection, courts may consider whether profanity is commonplace in that workplace.<sup>9</sup> Moreover, courts will also likely make a distinction between opprobrious conduct that happens in real-time before customers or coworkers and that which that occurs on social media—giving more tolerance for the latter.<sup>10-12</sup>

#### Confidentiality Agreements in Urgent Care as a Condition of Employment

In general, employers should be aware of making a confidentiality agreement too broad. This is where an employer can run into trouble and courts may strike down as unreasonable and unenforceable in full or limit the scope of an overly broad confidentiality agreement.<sup>13,14</sup>



**Take-Home Points**

- Urgent care owners should be cautious in making a confidentiality agreement or NDA a condition of employment
- Consult with legal counsel to make certain that an urgent care's confidentiality agreement or NDA is not overly restrictive as to geographic territory, duration, or the scope of activities.
- NDAs can reflect:
  - Provisions that define the nature and scope of the protected information
  - The measures the receiving party must take to safeguard the information
  - The circle of people with access to the information
  - How the receiving party can use the information
  - What must be done with the information once the relationship ends
  - The remedies available if the receiving party breaches the NDA

NDAs can include provisions that define the nature and scope of the protected information, the measures the receiving party must take to safeguard the information, the circle of people with access to the information, how the receiving party can use the information, what must be done with the information once the relationship ends, and the remedies available if the receiving party breaches the NDA.<sup>15,16</sup>

However, an NDA that is overly restrictive as to geographic territory, duration, or scope of activities will be invalidated by the courts.<sup>17,18</sup> For example, under Maryland state law, there are four elements that must be satisfied for a restrictive covenant to be enforceable:

1. the employer must have a legally protected interest
2. the covenant must not be wider in scope and duration than is reasonably necessary to protect the employer's interest
3. the covenant cannot impose an undue hardship on the employee
4. the covenant cannot violate public policy.<sup>19-22</sup> ■

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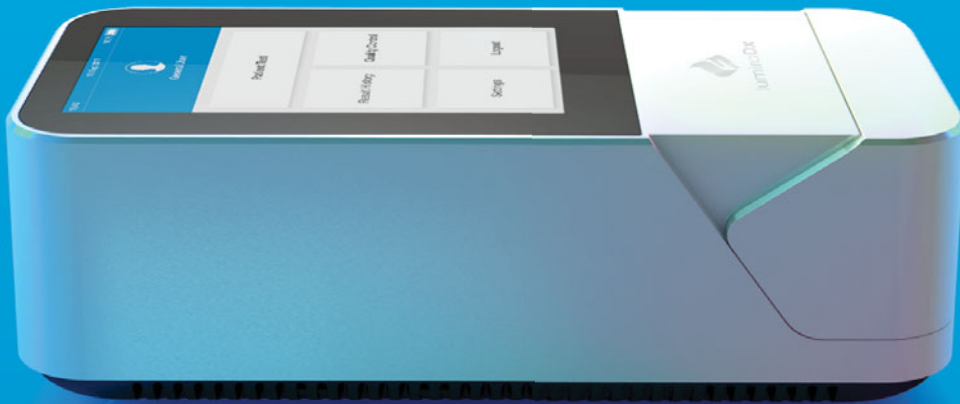
*There is no constitutional right to free speech in a private business; nonetheless, employers must be cognizant of federal and state laws that protect workers' speech in certain circumstances.*

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# Discrepancy Rates in Radiograph Interpretations between Pediatric Urgent Care Providers and Radiologists

**Urgent message:** Many pediatric urgent care centers lack 24/7 pediatric radiologist coverage and rely on the urgent care provider for initial interpretation and subsequent clinical management. If misdiagnosed, this could represent a potential patient safety concern.

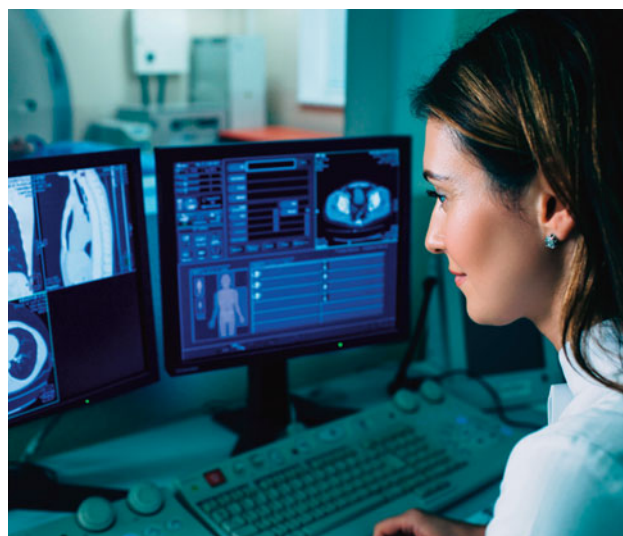
ANNE MCEVOY, MD; PAUL MULLAN, MD, MPH; LAUREN PALUCH, MPA, PA-C; BRYNN SHEEHAN, PHD; JIANGTAO LUO, PHD; TURAJ VAZIFEDAN, DHSC; JOEL CLINGENPEEL, MD; THERESA GUINS, MD; JEFFREY BOBROWITZ, MD; and ALLISON WOOD, DO

Citation: McEvoy A, Mullan P, Paluch L, Sheehan B, Luo J, Vazifedan T, Clingenpeel J, Guins T, Bobrowitz J, Wood A. Discrepancy rates in radiograph interpretations between pediatric urgent care providers and radiologists. *J Urgent Care Med.* 2021;15(11):19-22.

## Introduction

There has been an increase in the number of patients utilizing urgent care facilities as families seek to lower healthcare costs, increase convenience, and avoid long wait times and overcrowding typically seen in the emergency department.<sup>1</sup> The number of pediatric urgent care centers has been increasing in many metropolitan areas, offering a new method of delivering medical care to parents with acute care needs for their children.<sup>2</sup>

Most urgent care centers have the capability of performing plain radiographs to evaluate common pediatric conditions, including pneumonia and fractures. Often, pediatric EDs or pediatric urgent care centers do not have pediatric radiologist coverage during all operating hours and therefore must rely on the expertise of the ordering provider for initial interpretation of radio-



graphs.<sup>3</sup> The variety of providers with differing roles and levels of expertise in a pediatric urgent care center (eg, advanced practice providers [APPs], board-certified pediatricians, and pediatric emergency medicine phys-

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**Table 1. Total and Clinically Significant Discrepancies**

	False positive (%)	False negative (%)	Total discrepant (%)	Clinically significant discrepant (%)	Total film number
Chest	142 (3.0)	166 (3.5)	308 (6.5)	129 (2.7)	4,712
Upper extremity	395 (6.5)	272 (4.5)	667 (11.0)	444 (7.3)	6,075
Lower extremity	361 (5.8)	276 (4.4)	637 (10.2)	357 (5.7)	6,270
Clavicle	4 (2.0)	3 (1.5)	7 (3.4)	2 (1.0)	203
Total	902 (5.2)	717 (4.2)	1,619 (9.4)	932 (5.4)	17,260

**Table 2. Discrepancies and Change in Management**

Film	Change in follow-up (%)	Change in therapy (%)	Return for evaluation (%)	Total with any change in follow-up, therapy, or return for evaluation (%)	Total of films ordered
Chest	45 (0.1)	108 (2.3)	12 (0.3)	129 (2.7)	4,712
Upper extremity	395 (6.5)	201 (3.3)	34 (0.6)	458 (7.5)	6,075
Lower extremity	328 (5.2)	103 (1.6)	21 (0.3)	343 (5.5)	6,270
Clavicle	2 (1.0)	0 (0)	1 (0.5)	2 (0.1)	203
Total	770 (4.5)	412 (2.4)	68 (0.4)	932 (5.4)	17,260

icians) could contribute to variations in the accuracy of radiograph readings.

Numerous studies have evaluated the discrepancy rates in the reading of plain radiographs between emergency physicians and radiologists in adult and pediatric ED settings. In ED studies involving pediatric patients, the discrepancy rate has ranged from 1% to 28%.<sup>4-11</sup> Clinically significant discrepancy (CSD) rates, defined as a radiographic discrepancy requiring a subsequent change in medical management, have ranged from 0.41% and 6.3%.<sup>4-11</sup> In several studies, chest radiographs were shown to be the most commonly misinterpreted study.<sup>4,6-10</sup> Pediatric orthopedic radiographs were also frequently misinterpreted between 8% and 21% of the time, by non-radiologists due to the presence of growth plates.<sup>4-11</sup> One study delineated that the discrepancy rate was higher in less experienced physicians.<sup>6</sup>

The main aim of the current study was to describe the overall discrepancy rate and the CSD rate in pediatric chest and orthopedic radiographs between pediatric urgent care providers and pediatric radiologists and to compare the discrepancy rates of physicians and APPs.

## Methods

This observational, retrospective study reviewed plain radiographs (chest, clavicle, upper extremity, and lower extremity), ordered between the hours of 17:00 and 23:00 from January 2016 to December 2018. Data were

collected from four pediatric urgent care centers within one children's health network. The centers are located approximately 10 to 25 miles away from a tertiary academic, freestanding children's hospital in a metropolitan area in the United States. Other imaging modalities (eg, computed tomography, magnetic resonance imaging, ultrasound) as well as pelvic, abdominal, and spinal x-rays were excluded. Patients were excluded if they were transferred to the ED due to clinical condition.

Pediatric APPs, board-certified pediatricians, or board-certified pediatric emergency physicians were responsible for providing the preliminary reading on plain radiographs and determining the initial plan of care and follow-up. On the following morning, a board-certified pediatric radiologist reviewed all films and placed a final read within the chart. If there was a discrepancy in readings, the radiograph study was placed in an electronic discrepancy folder within the computer system. Each day, the urgent care provider in charge at each center reviewed this folder, then notified the family of the discrepancy and discussed whether any changes in management were required. The pediatric radiologist's interpretation was used as the gold standard. The urgent care provider then documented the discussion with the family in the EHR, including any changes in management or follow-up recommendations.

Three research team members divided the sample of all discrepant charts, in which a radiology discrepancy

**Table 3. Physician vs APP and Discrepancy**

	Total discrepancies (%)		Clinically significant (%)	
	Physician	APP	Physician	APP
Chest	176/2,650 (6.6)	132/2,062 (6.4)	75/2,650 (2.8)	54/2,062 (2.6)
Upper extremity	305/2,778 (11)	362/3,297 (10.9)	190/2,778 (6.8)	254/3,297 (7.7)
Lower extremity	284/2,626 (10.8)	353/3,644 (9.7)	159/2,626 (6.1)	198/3,644 (5.4)
Clavicle	4/98 (4.1)	3/105 (2.9)	1/98 (1.0)	1/105 (1.0)
Total	425/8,152 (5.2)	850/9,108 (9.3)	425/8,152 (5.2)	507/9,108 (5.6)
APP, advanced practice practitioner				

was identified during the study period, and reviewed every chart. If the chart indicated that the urgent care provider noted the correct diagnosis or documented the correct finding in the medical decision-making section, these cases were excluded from chart review analysis. True discrepancies were denoted as a false positive (ie, the abnormality was noted by the urgent care provider but not by the pediatric radiologist) or a false negative (ie, the abnormality was noted by the pediatric radiologist but not by the urgent care provider). Charts were then reviewed to determine whether there was a required change in clinical management including any changes in follow-up, changes in therapy, or returns for evaluation. If the family could not be reached, or if there was not a clear statement as to how clinical management changed, it was designated as not documented. If review of a discrepant patient's chart revealed that the patient was deceased at the time of the chart review (all charts were reviewed at a minimum of 1 year after the index urgent care center visit), it was recorded as potentially related to the care received in the urgent care center if the death occurred within 1 year of the index visit.

Data were presented as frequencies and percentages. Chi-square test or Fisher's Exact test were used to compare the rate of discrepancy between APPs and physicians. A 5% sample of the true discrepancies was randomly selected for inter-rater reliability among research members performing chart review. Fleiss' kappa was performed to determine inter-rater reliability. All statistical tests were performed using R 3.6.3 (Vienna, Austria). All statistical tests were two-sided, and  $p < 0.05$  was considered as statistically significant.

This study was approved by the Institutional Review Board (IRB) at Eastern Virginia Medical School.

## Results

A total of 17,282 radiographs were performed between the times of 17:00 and 23:00 during the study period at

the four pediatric urgent care centers. There were 22 films that were excluded from analysis, as these patients were directly transferred from urgent care to the ED. Of the remaining 17,260 films, there were 4,712 chest films, 203 clavicle films, 6,270 lower extremity films, and 6,075 upper extremity films; of these, the interpretations were provided by physicians ( $n=8152$ , 47.2%), physician assistants ( $n=6,104$ , 35.4%), and nurse practitioners ( $n=3,004$ , 17.4%). The mean patient age was 9.1 years (SD 5.1 years); 50.1% were female. Prior to conducting discrepancy analyses, 78 (5%) charts were reviewed by three research team members to assess inter-rater reliability. There was a moderate degree of agreement between reviewers with a kappa score of 0.77.

A total of 1,706 films were designated as discrepant. After chart review, 87 of these films were found to not be true discrepancies, leaving a total of 1,619 true discrepancies for with an overall discrepancy rate of 9.4%. Of the discrepancies, there were 902 false positives (5.2%) and 717 false negatives (4.2%) (Table 1). Of the 1,619 discrepant films, 1,346 (83.1%) had documentation of whether change in follow-up was required and 1,016 (62.8%) had documentation of whether change in therapy was required. Total CSD rate was 5.4% ( $n=932$ ); none resulted in any mortality (Table 2).

The total number of discrepancies by physicians was comparable with APPs and did not differ significantly. Similarly, the CSD rate was comparable and no statistically significant differences were noted (Table 3).

## Discussion

With both the number and utilization of pediatric urgent care centers increasing, it is important to evaluate the ability of urgent care providers to accurately interpret radiographs when pediatric radiologists are not available.

This retrospective study is the first one that we are aware of to evaluate the discrepancy rate and CSD rate among chest, clavicle, upper extremity, and lower ex-

tr extremity radiographs between pediatric urgent care providers and pediatric radiologists. Current study findings suggest an overall discrepancy rate of 9.4%, which is comparable to other studies that have evaluated discrepancies among pediatric radiographs (ranging from 1% to 28%, *Med* 11.9%).<sup>4,11</sup> The CSD rate of 5.4% was also comparable to previous studies which range from 0.4-6.3% (*Med* 1.3%).<sup>4-11</sup>

One difference when comparing the current study to previous work is that the current study only included chest, upper extremity, lower extremity, and clavicle radiographs, whereas other studies also included axial skeleton and abdominal radiographs.<sup>4,8,9-11</sup> Notably, the axial and abdominal radiograph discrepancy rates in these studies were generally lower than the discrepancy rates of the other films.<sup>4,8,9-11</sup>

In previous research, chest radiographs were found to be the most frequently discrepant with a range of 10% to 41.7% (*Med* 25.3%).<sup>4,6-10</sup> Our study, however, found upper extremity radiographs to have the highest discrepancy rate (3.9%) as well as the highest CSD rate of 7.3%. This was followed by lower extremity (3.7% and 5.7%, respectively), chest (1.8% and 2.7%), and clavicle (0.04% and 1%). These findings may be explained due to differences in frequency of radiograph type ordered; however, it is also important to note the continual challenge in interpreting pediatric orthopedic radiographs, specifically due to the presence of growth plates as well as subtle signs that could indicate an underlying occult fracture.

## Limitations

Limitations of this study include a study cohort that was limited to a network of pediatric urgent care centers associated with a single tertiary care pediatric health system. Despite the multiple pediatric urgent care centers included, data may not be generalizable to other pediatric urgent care practices and systems. Given that this was a retrospective study, it is unknown whether providers (either within the same provider role or between different roles) had discussed radiograph interpretations among each other prior to the management and discharging of patients. In addition, despite there being no documentation of mortality within 1 year of urgent care visit, it is possible that patients who died could have presented to another facility during that time frame. However, our facility is the only children's hospital in the region and receives all critically ill patients as transports from the regional emergency departments, so this is unlikely. Furthermore, documentation of change in management was clearly noted in the majority

of patient charts; however, there were charts that could not be included in our analysis due to lack of a clear description as to how clinical management did or did not change. This is a common limitation in data abstraction in retrospective studies and occurred in a limited number of charts.<sup>12</sup> When documentation was provided, the kappa score showed moderate inter-rater reliability, which strengthened our study's findings.

## Conclusion

Of the studies that have evaluated discrepancy in the pediatric population, the low rate of clinically significant findings has allowed emergency physicians to safely disposition patients without leading to significant morbidity or mortality. In addition to similar discrepancy and clinically significant rates, this study found there were no statistically significant differences in rates between physicians and APPs. These findings suggest that a pediatric urgent care center, without continuous radiologist coverage, can provide relatively low discrepancy rates for pediatric patients requiring radiographs. Findings also provide supportive evidence for urgent cares to operationalize their staffing and consultative services in a model that provides high-value care to the patient population being served. ■

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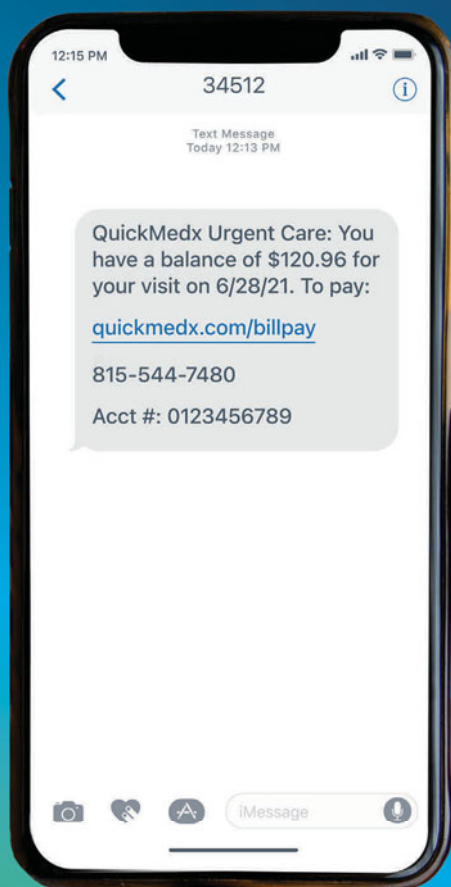
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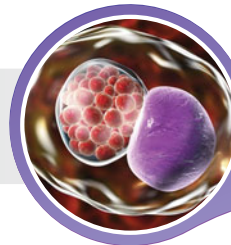
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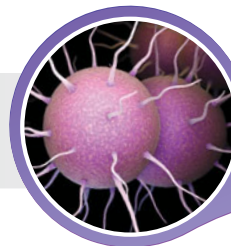
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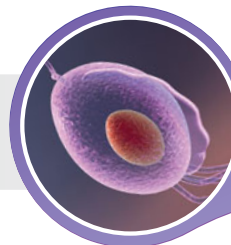
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# ABSTRACTS IN URGENT CARE

- Cooling Pain from Digital Nerve Blocks
- Safety of Corticosteroids in Children
- Predicting the Course of Pediatric CAP
- Is Tranexamic Acid Helpful for Epistaxis?
- Drug Therapy for Sciatica
- Imaging May Not Correlate with Lumbar Pain
- COVID-19 Vaccination in Lactating Patients

■ IVAN KOAY, MBChB, FRNZCUC, MD

## Applying Ice Reduces Pain from Digital Nerve Blocks

**Take-home point:** Use of an ice pack applied prior to the administration of a digital nerve block reduces pain from local anesthetic injection.

**Citation:** Rasooli F, Sotoodehnia M, Nejati A, Payandemehr P. The assessment of ice pack effect in pain reduction during digital nerve block: a randomized clinical study. *Turk J Emerg Med.* 2020;20(2):81-5.

**Relevance:** Ironically, administration of local anesthetic is the most uncomfortable part of caring for finger injuries. It is worthwhile to understand how this discomfort can be minimized.

**Study summary:** This was a prospective, randomized, non-blinded trial performed on parallel groups of patients presenting to two university hospitals in Tehran, Iran. One hundred patients, all candidates for digital nerve blocks, were randomized into the control group or intervention group. The intervention group had ice packs applied to the affected digit prior to nerve block procedure being performed while the control group did not.

The authors found that there was a dramatic reduction in mean needle stick (1.5 vs 6.8) and infiltration associated (2.7 vs 8.5) pain scores in patients who had the ice packs applied prior to nerve block procedure being performed. There was also significantly higher patient satisfaction in the intervention group.

**Limitations:** Small, single-center study with unblinded design. ■



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## Questioning the Safety of Oral Corticosteroid Bursts in Children

**Take-home point:** There was a two-fold increase in risk of GI bleeding, sepsis, and pneumonia within a month of prescribing oral corticosteroids in children.

**Citation:** Yao T, Wang J, Chang S, et. al. Association of oral corticosteroid bursts with severe adverse events in children. *JAMA Pediatr.* 2021;175(7):723-729.

**Relevance:** Corticosteroid bursts are among the most commonly prescribed medications in children and are often used for conditions where there is limited evidence of benefit because they are considered very safe. This study questions the safety of this practice. Clinicians prescribing corticosteroid bursts to children should weigh the benefits against the risks of severe adverse events

**Study summary:** This was a retrospective review of medical records of children prescribed a short course of oral steroids, up to 14 days, from the National Health Insurance Program in Taiwan. The review covered 99% of the Taiwanese population. The authors focused on four severe adverse events—gastrointestinal (GI) bleeding, sepsis, pneumonia, and glaucoma, after initiation of a corticosteroid burst.

The authors found that in the 5-year period reviewed, 42% of the 4,542,623 participants younger than 18 years had received at least one course of oral corticosteroids. Common indications for prescribing steroids included acute respiratory tract infections and allergic diseases, which accounted for 65% of all cases. Corticosteroid bursts were associated with a 1.4- to 2.2-fold increase of GI bleeding, sepsis, and pneumonia within the first month after receiving the prescription. There was no increased risk of glaucoma found. These effects were observed between 30 and 90 days postadministration of the steroid treatment. The vast majority (91%) of patients were healthy and without any previous comorbidities.

*“Using evidence-based therapies in patients presenting with low back pain ensures a large number of patients are treated with the most effective medications with least risk for adverse events.”*

**Limitations:** This was a retrospective study based in Taiwan. Additionally, the authors did not consider that the co-prescribing of antibiotics and medication compliance was not known. Duration of steroid prescriptions included was up to 14 days, which is somewhat longer than most steroid bursts commonly prescribed. ■

## Clinician ‘Gestalt’ in Community-Acquired Pneumonia (CAP)

**Take-home point:** Clinicians have only fair ability to discriminate which children with CAP would develop severe complications.

**Citation:** Gao H, Ambroggio L, Shah S, et. al. Predictive value of clinician “gestalt” in pediatric community-acquired pneumonia. *Pediatrics*. 2021;147(5):e2020041582.

**Relevance:** Over-reliance on clinical “gestalt” may potentially increase risk for complications in children presenting with CAP. The use of evidence-based risk stratification tools can help reduce this risk in low-medium risk patients.

**Study summary:** This was a planned analysis of a prospective cohort study of children with CAP who presented to the ED at Cincinnati Children’s Hospital Medical Center. The enrolled patients were initially assessed by a clinician. The researchers subsequently asked the clinicians for their clinical impressions, including the probability of the child developing severe complications of CAP which included respiratory failure, empyema or effusion, lung abscess or necrosis, metastatic infection, sepsis or septic shock, and death.

Severity outcomes occurring after the ED visit were assessed through abstraction from the electronic health record and manual record review.

The authors found that of the 1,075 patient enrolled, 37 developed a severe complication. ED clinicians had only fair ability to discriminate those who went on to develop complications from those who did not. The more experienced clinicians had higher discriminatory capabilities than those with less experience. Clinicians also were found to underestimate the severity of CAP in this study.

**Limitations:** The study did not track the decision-making pro-

cess of the clinicians in detail. There was no explicit definition for disease severity, therefore differing criteria may be used by other clinicians. ■

## Tranexamic Acid May Not Be Helpful for Epistaxis

**Take-home point:** Tranexamic acid (TXA) performed no better than placebo when used for control of anterior epistaxis.

**Citation:** Ruben A, Appelboom A, Stevens KN, et al. The Use of Tranexamic Acid to Reduce the Need for Nasal Packing in Epistaxis (NoPAC): Randomized Controlled Trial. *Ann Emerg Med*. 2021;77(6):631-640.

**Relevance:** The ability to control bleeding in epistaxis without the need for nasal packing is important for patient comfort. Prior studies have suggested that TXA may be an effective adjunct to aid in hemorrhage control for epistaxis.

**Study summary:** This was a pragmatic, 1:1 block randomized, double-blind, placebo-controlled trial in 26 EDs across the United Kingdom. Patients that had ongoing bleeding from anterior epistaxis which had already been treated with direct pressure and ice therapy were randomized to receive either TXA or placebo applied topically. Any further therapy was done at the discretion of the treating physician—cautery, nasal packing, or other topical application. The authors found no statistically significant difference in the rate of need for anterior nasal packing between the TXA and placebo groups.

**Limitations:** Recruitment of patients was only done during the hours of work of a participating research nurse, potentially giving rise to selection bias. ■

## Pharmacotherapy for Low Back Pain and Sciatica

**Take-home point:** Ketoprofen gel, IV acetaminophen and IV morphine showed some benefits in the treatment of low back pain, while corticosteroids did not show benefit.

**Citation:** Oliveira CB, Amorim HE, Coombs DM, et. al. Emergency department interventions for adult patients with low back pain: a systematic review of randomized controlled trials. *Emerg Med J*. 2021;38(1):59–68.

**Relevance:** Low back pain is among the most common UC complaints. Using evidence-based therapies ensures a large number of patients are treated with the most effective medications with least risk for adverse events.

**Study summary:** This was a systematic review of randomized



controlled trials for patients with nonspecific low back pain and/or sciatica presenting to EDs where study interventions were administered, and patient-reported outcomes were measured during the visits. Fifteen papers were identified as suitable for review and included. The authors found that ketoprofen gel showed significant effects in reducing pain intensity in patients with low back pain compared with placebo. IV morphine and acetaminophen were both more effective in treating sciatica than placebo. They also noted that corticosteroids were not effective in the treatment of nonspecific low back pain or sciatica. ■

**Limitations:** Systemic review method used by the authors relied on the methodology of the original investigators. Endpoints were immediate pain relief. Pain relief at follow-up was not examined. Additionally, the medications and formulations may not be available in certain urgent care centers.

### Lumbar Radiographic Abnormalities Correlate Poorly with Back Pain Severity

**Take-home point:** Changes found on plain lumbar radiography provide limited value in the decision-making process for treatment of low back pain.

**Citation:** Chen L, Perera R, Radoj IM, et al. Association of lumbar spine radiographic changes with severity of back pain-related disability among middle-aged, community-dwelling women. *JAMA Netw Open*. 2021;4(5):e2110715.

**Relevance:** Lumbar x-rays are among the most requested tests by patients; however, multiple guidelines (eg, Choosing Wisely, ACR Appropriateness Criteria) advise of their inutility for the majority of patients with low back pain.

**Study summary:** This was a population-based prospective study using data from the Chingford 1000 Women Study, an ongoing longitudinal study of musculoskeletal disease in the general population of the UK. In this study, participants had lateral lumbar spine imaging taken at year 9 of the study, and back pain assessment questionnaires were done at that time and subsequently at year 15. The authors found no evidence to support an association between a higher number of segments with lumbar radiographic changes (K-L grade, osteophyte, and disc space narrowing) and more severe back pain-related disability scores. These results remained unchanged after accounting for potential interactions with confounders, such as age, BMI, and smoking status.

**Limitations:** This is an observational study of women only. Additionally, 98% of the study population were Caucasian. ■

*“The authors found the COVID-19 mRNA vaccines were immunogenic in all participants compared with controls. There was also detection of binding and neutralizing antibodies in infant cord blood, suggesting efficient transplacental transfer of maternal antibodies.”*



### COVID-19 Abstract Immunogenicity of COVID-19 mRNA Vaccines in Pregnant and Lactating Women

**Take-home point:** Vaccination with COVID-19 mRNA vaccines results in detectable antibodies in the fetal cord blood and breast milk samples.

**Citation:** Collier A, McMahan K, Yu J, et. al. Immunogenicity of COVID-19 mRNA vaccines in pregnant and lactating women. *JAMA*. 2021;325(23):2370-2380.

**Relevance:** mRNA vaccination strategy is newly applied for SARS-CoV-2. There is significant interest and concern for the effects of these vaccines in the setting of pregnancy and breastfeeding.

**Study summary:** This was a prospective cohort study of pregnant and lactating women who received mRNA vaccination for SARS CoV-2 in Israel. Patients recruited were given either one of the two commercially available mRNA vaccines, mRNA-1273 (Moderna) or BNT162b2 (Pfizer-BioNTech). All participants provided blood, some provided infant cord blood at delivery, and some provided breast milk.

A total of 103 participants were recruited, of which 30 were pregnant; 16 were lactating; and 57 were neither pregnant nor lactating. Additionally, 70 women 18 to 45 years of age who tested positive for COVID-19, including 60 pregnant women, were used as control participants.

Unsurprisingly, the authors found the COVID-19 mRNA vaccines were immunogenic in all participants compared with controls. There was also detection of binding and neutralizing antibodies in infant cord blood, suggesting efficient transplacental transfer of maternal antibodies. This could suggest that maternal COVID-19 vaccination in pregnancy may confer protection for neonates who are currently ineligible for vaccination. Maternal vaccination also elicited binding and neutralizing antibodies in breast milk.

**Limitations:** This was a small study in an ethnically homogeneous population with unrandomized design. It is unclear to what extent the levels of antibodies in cord blood and/or breast milk prevent or mitigate risk of COVID-19 and its complications in infants. ■

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# An Urgent Care Approach to Syncope in Children and Adolescents

**Urgent message:** Syncope in pediatric patients may be attributed to a wide variety of sources. As such, it is essential to keep a broad differential and to eliminate potentially life-threatening etiologies.

NEHAL BHANDARI, MD, FAAP and ABBAS ZAIDI, MD, FAAP, FAAC

## Case Presentation

A 12-year-old previously healthy female presents to urgent care with several episodes of “blacking out” over the past 4 days. Each episode has occurred when she stands up from a sitting or supine position and lasts a few seconds. She reports feeling dizzy when this happens. The episodes do not appear to be related to exercise. She states that she has only had one bottle of water in the last 24 hours. She has also had intermittent frontal headaches for the last 4 days and left-sided tinnitus for the last 3-4 months. Earlier this week, she was diagnosed with vasovagal syncope and instructed to increase fluid and electrolyte intake and to follow up with her primary care physician. With a repeat episode, mom brought her to urgent care for further evaluation.

She denies chest pain, palpitations, difficulty breathing, phonophobia, or photophobia. No head injury.

## Vital Signs

BP 120/78

HR 53

Temp 36.8° C

RR 18

O2 100%

## Physical Exam

The patient is overall well-appearing, sitting up in the exam bed and on her phone.



## Cardiac Exam

Regular rate and rhythm without murmurs, rubs, or gallops, 2+ radial and femoral pulses, cap refill <2 seconds.

## Abdomen

Soft, nontender, no hepatosplenomegaly.

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**Table 1. Essential syncope work-up**

- Thorough history of event and thorough cardiac family history
- Complete physical exam including cardiac and neurologic exam
- Orthostatic vital signs
- Continuous cardiac monitoring, if possible\*
- EKG

\*Orthostatic vital signs should be obtained if there is concern for volume depletion, postural orthostatic tachycardia syndrome POTS, and in patients with underlying eating disorders.

### Neuro

She is alert and oriented x 4, pupils are equal, round, and reactive to light, cranial nerves 2–12 are intact, full strength in all four extremities. Gait not examined per patient's request as she was worried about precipitating a syncopal episode. The remainder of her exam is grossly normal.

### Overview

Syncope is an abrupt, transient loss of consciousness due to decreased blood pressure and cerebral blood flow. It is a common presenting complaint in pediatric emergency departments (ED) that accounts for as many as 3% of all ED visits in children.<sup>1</sup> Girls are impacted more often than boys.<sup>2</sup> As many as 30% to 50% of children will have had at least one syncopal episode by the time they reach 18 years of age.<sup>3</sup>

The etiology of syncope varies by age and may be due to circulatory, cardiac, metabolic, neurologic, situational, or even psychiatric processes. While syncope in pediatric patients is most commonly benign, especially in an adolescents, an organized approach is necessary in order to avoid missing serious and life-threatening etiologies (Table 1).

### Differential Diagnosis

#### Cardiac

Cardiac etiologies of syncope may be life-threatening and require prompt recognition of the underlying cardiac disorder and subsequent disease-specific management. The differential for cardiogenic syncope can be divided into two main categories: arrhythmias and structural abnormalities.

Arrhythmias include Brugada syndrome, prolonged QT syndrome, AV block, Wolff-Parkinson-White, catecholaminergic polymorphic ventricular tachycardia (CPVT), etc.

Structural abnormalities include hypertrophic cardiomyopathy, left-sided obstructive lesions including

aortic stenosis, pulmonic stenosis, dilated cardiomyopathy, etc.<sup>1</sup>

The history features that most suggest a possible underlying cardiac etiology include palpitations, syncope occurrence with exercise, and a family history of sudden death or cardiomyopathy. Syncope that is induced by exercise is particularly worrisome and mandates urgent referral and investigation.<sup>4-6</sup>

Peak exercise increases catecholamine release and cardiac work, creating the substrate for potential lethal arrhythmias. By contrast, the period immediately following exertion is associated with vasodilation and shifting autonomic states, making noncardiogenic syncope more likely. The timing of a syncopal event (during vs postexercise) is an important distinguishing factor. It is also important to discern if palpitations or chest pain were present before the episode.<sup>7</sup>

Asking a detailed family history helps to discern life-threatening arrhythmias that are caused by genetic conditions (Table 2). It is important to ask about a history of sudden cardiac death in a relative 50 years or younger or any unexplained deaths, drowning, or fatal motor vehicle accidents. Further cardiac questioning should include whether there is a family history of pacemakers/implanted defibrillators, cardiomyopathy, prolonged QT syndrome (or congenital deafness which can be associated with prolonged QT), or congenital heart disease.<sup>1</sup>

#### Neurologic

Syncope must be differentiated from an event that was precipitated by a seizure. Myoclonic extremity movements that occur at the same time as syncope suggest an underlying seizure disorder. However, one should note that anytime there is cerebral hypoperfusion, convulsive movements are possible. This is known as convulsive syncope. This is different from epilepsy as the myoclonic movements occur after loss of consciousness and tonus instead of at the same time as syncope. This may be difficult to discern on the basis of history alone.<sup>4</sup>

Seizures are more likely to occur in the supine position compared with vasovagal syncope. Jaw locking is also more common. It is essential to determine if there was a postictal period, loss of bowel or bladder control, or tongue biting, as these features make seizures more likely.<sup>4</sup>

Persistent neurologic deficits or failure to return to neurologic baseline are red flags that indicate etiology more serious than benign syncope. A thorough neurologic exam must be done for all patients presenting with syncope. Any focal neurologic findings on exam should prompt immediate neuro-imaging and/or neurology consultation.



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### Postural Orthostatic Tachycardia Syndrome

POTS is a type of autonomic dysfunction in which patients are intolerant to positional changes which lead to development of excessive tachycardia. A subset of patients will present with a constellation of symptoms that are associated with lightheadedness, dizziness, palpitations, and sometimes syncope. The diagnostic criteria for POTS is evolving, but an increase in heart rate of 30 beats per minute or more or over 120 bpm within the first 10 minutes of standing, in the *absence* of orthostatic hypotension is generally considered diagnostic. It is important to also get a detailed review of systems as POTS can involve multiple organ systems and can have a constellation of symptoms.<sup>8-12</sup>

### Neurocardiogenic (Vasovagal)

The most common cause of pediatric syncope is vasovagal (also known as autonomic, neurocardiogenic, or reflex) syncope.<sup>3</sup> It accounts for nearly 80% of cases of pediatric syncope.<sup>2</sup> Patients may have a prodrome followed by a syncopal episode that lasts 1 minute or less. Prodrome features may include dizziness, feeling overheated, nausea, or changes in vision. Vasovagal syncopal episodes are often followed by a stressor such as emotional distress or prolonged standing.<sup>13</sup> Therefore, it is important for the patient and witnesses to describe the episode in detail, as well as the position of the patient prior to the syncopal episode. This type of syncope does not typically occur while supine.<sup>4</sup> It is also important to find out whether the patient had anything to eat or drink that day as reflex syncope is often triggered by dehydration and fasting.

Situational syncope, which falls under the category of vasovagal syncope, can occur after micturition, defecation, hair grooming, sneezing, or coughing.<sup>2</sup>

### Psychogenic

Psychogenic syncope frequently occurs in times of stress or high emotion and is unlikely to occur in children under 10 years of age. These psychogenic episodes may be a manifestation of underlying conversion disorder.<sup>1</sup> Self-resolving syncope that lasts longer than 10 minutes is unlikely physiologic and likely suggests a potential psychological etiology.<sup>4</sup>

### Other (Hematologic, Metabolic, Drug Use, Pregnancy)

While these conditions are uncommon in pediatrics, any situation resulting in blood loss, fluid shifting, or severe electrolyte abnormalities can contribute to neurocardiogenic, neurologic, or cardiac syncope.

Anemia may be present in menstruating adolescents.

It is important to ask adolescent female patients about their last menstrual periods and the number of daily pads used to evaluate for excessive blood loss. Gastrointestinal blood loss is uncommon in children, but any patient with abdominal discomfort should be asked about stool color to screen for a possible upper or lower GI source.

The likelihood of a metabolic cause in an otherwise healthy child is low, but any patient who has renal insufficiency or other metabolic chronic disease may be more likely to have a syncopal episode because of a fluid-electrolyte imbalance.

Lastly, drug use and pregnancy are important potential causes in adolescent patients.

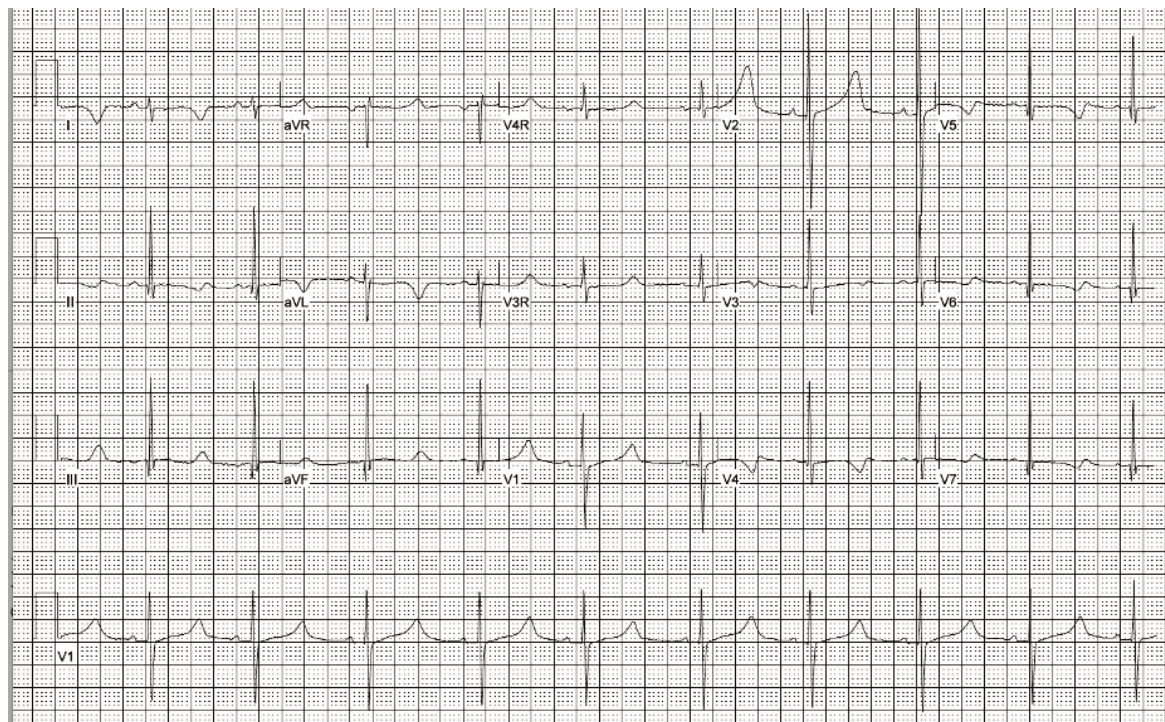
### History and Exam Pearls

Most patients are asymptomatic by the time they are evaluated, and most will have a normal physical exam. It is unlikely that another syncopal episode will occur during evaluation. Therefore, a detailed history of the syncopal event as well as thorough past medical history and family history are essential.<sup>4</sup> The history should provide clues to discern possible neurologic, cardiac, or neurocardiogenic causes. It is important to ask about cardiac symptoms, if the episode occurred during exercise, if there was a prodrome before the event, if there was any extremity jerking, and how long it took the patient to return to neurologic baseline.

### Vital Signs

Orthostatic vitals (supine, sitting, and standing) should be obtained if there is concern for volume depletion or if the patient has an underlying eating disorder. A patient is considered to have orthostasis if there are any of the following: increase in pulse by  $\geq 10$  beats per minute, decrease in systolic blood pressure by  $\geq 20$  mmHG, or decrease in diastolic blood pressure by  $\geq 10$  mmHG. This indicates hypovolemia and a potential fluid deficit of 10 to 15 mL/kg. However, positive orthostatic vitals do not rule out other causes of syncope. When possible, it is recommended that patients stay on continuous cardiac monitoring to evaluate heart rate and rhythm.<sup>2</sup>

A straightforward supine or seated cardiac examination can be insufficient to elicit a murmur from a previously undiagnosed myopathy or the dynamic physiology associated with postural orthostatic tachycardia syndrome. Therefore, the physical examination should include a dynamic auscultation, vital signs, and evaluation of other exam features such as signs of connective tissue disease and neurological abnormalities. It is important to include assessment of capillary refill, pulses in upper and lower extremities, and evaluation for lower

**Figure 1.**

EKG in an adolescent male showing a normal sinus rhythm, with a normal P and QRS axis but with a prolonged QTc (551 msec) interval and non-specific ST-T wave changes.

extremity edema as well as hepatomegaly. Muffled heart sounds and a friction rub are characteristic of acute pericarditis. A systolic ejection murmur that increases in intensity with standing or with Valsalva is suggestive of hypertrophic cardiomyopathy.<sup>2</sup>

## Diagnostics

### EKG

Electrocardiography is an important tool in the evaluation of syncope to determine if a potential cardiac etiology is present. This is a routine component of the syncope evaluation even when no residual symptoms or exam abnormalities are present. Abnormalities on EKG may fully explain the episodes or indicate the need for additional testing. It is important to note that when combined with a noncontributory history and examination, a normal EKG is very effective at excluding cardiac etiologies.

The QT interval, which varies with heart rate, must be measured closely. The Bazett formula ( $QTc = (QT)/(\sqrt{RR})$ ) is commonly used.<sup>2</sup> The upper limit of a corrected QT interval (QTc) is generally 450 milliseconds.<sup>2</sup> QTc values of 470 milliseconds or longer are

especially concerning for prolonged QT syndrome (**Figure 1**). In patients with prolonged QT syndrome, syncope is often related to torsades de pointes and death is due to ventricular fibrillation.<sup>2</sup>

ST elevation in V1 and V2 may be suggestive of Brugada syndrome. Large amplitude QRS waves with LVH and narrow Q waves are often seen in hypertrophic cardiomyopathy.<sup>2</sup> Wolff-Parkinson-White syndrome is characterized by a pre-excitation delta wave as well as conduction abnormalities such as AV block and ventricular hypertrophy.<sup>1</sup>

Additional cardiac testing which may be considered in conjunction with cardiology consultation includes echocardiogram, exercise stress testing, and ambulatory ECG monitoring (eg, Holter or event monitoring).

### Laboratory Evaluation

Serum labs are rarely necessary in the work-up of syncope in previously healthy pediatric patients. While hypoglycemia is a potential etiology for syncope, serum glucose levels are often normal by the time a patient is evaluated.

Adolescent patients, however, are a special population

**Table 2. Family history red flags suggestive of cardiac disease**

- Sudden cardiac death under the age of 50
- Any unexplained death
- Pacemakers/implanted defibrillators
- Cardiomyopathy
- Prolonged QT syndrome
- Congenital deafness
- Congenital heart disease

that may require more testing than younger children. All adolescent females should be screened for pregnancy.<sup>1</sup> Serum or urine drug screens can be considered if there is clinical suspicion for drug use. Common disorders such as anemia and moderate iron deficiency, particularly in adolescent females with menstrual cycle irregularities, can be easily screened with a set of complete blood count and iron studies. Other considerations include thyroid disorders which should be based on clinical suspicion. Stable patients can also be referred to their primary care providers for thyroid and iron studies if these are not easily obtainable in the urgent care setting.

For patients with underlying chronic medical problems (type I diabetes mellitus, anorexia, renal insufficiency, etc.), it may be helpful to obtain screening labs that include a metabolic panel and urinalysis.

#### Other diagnostics

Other diagnostic testing that may be helpful when coordinated through outpatient follow-up includes stress testing, tilt table, electroencephalography, etc. There is no role for chest radiography in the acute setting unless otherwise indicated.

#### Management and Follow-Up

ED referral is necessary for patients who have focal neurologic or cardiac findings, significant metabolic abnormalities, multiple red flags, or a neurologic exam that fails to return to baseline.

Outpatient cardiology follow-up is recommended for patients who have mild EKG abnormalities, family history red flags (Table 2), or if the syncopal episode occurred with exercise. These patients should not participate in sports until cleared by cardiology.

Outpatient neurology follow-up is recommended if there is concern for possible seizure-like activity in a patient who has returned to baseline and has a normal neurologic exam.

Patients with single isolated episodes of syncope that are likely due to a neurocardiogenic etiology do not re-

*“Adolescent patients are a special population that may require more testing than younger children. All adolescent females should be screened for pregnancy. Serum or urine drug screens can be considered if there is clinical suspicion for drug use.”*

quire extensive work-up or subspecialty referral. These patients should be instructed to lie supine with their lower extremities elevated in order to increase blood flow to the heart if they ever feel symptoms of pre-syncope again. Reflex syncope can be treated by hydration and increasing salt intake. Exercise may also be beneficial. Diuretics such as alcohol and caffeine should be avoided to prevent dehydration. These patients should be instructed to follow up with their primary care physician after discharge from the ED or urgent care.

#### Case Conclusion

The patient's syncope was presumed pathologic because of associated headache, tinnitus, bradycardia, and multiple syncopal episodes. The patient was referred to the ED where a head CT showed hydrocephalus and a subsequent MRI revealed a ganglioglioma obstructing her ventricular drainage. She was admitted for surgery and initiation of chemotherapy. ■

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# Best Practices for LGBTQ-Friendly Urgent Care

**Urgent message:** LGBTQ individuals are subject to implicit and explicit bias in our society, ranging from microaggressions and antagonistic legislation to overt discrimination and harassment. This can inhibit willingness to seek medical care—and, subsequently, lead to worse health outcomes. Given the more accessible, episodic nature of urgent care, understanding how word choice and other subtle cues communicate our competency in working with LGBTQ patients can help us engender trust more quickly.

BENJAMIN SILVERBERG, MD, MSc, FAAFP, FCUCM

## Introduction

The goals for treating LGBTQ patients (lesbian, gay, bisexual, transgender, and queer or questioning individuals) are the same as for anyone else: to facilitate physical health and social and emotional well-being. However, often due to negative previous experiences in healthcare settings (and even negative expectations for subsequent care) it can be as challenging as it is essential to create a strong, healthy therapeutic relationship with a new LGBTQ patient.

## Background

Development of sexual orientation and gender identity and expression (SOGIE) is a rite of passage for all individuals, usually coinciding with puberty. This is why it is important to not make assumptions even when working with children and adolescents. In the second decade of life, some individuals may feel something is “different” but not be able to quite put a finger on why (though it may have something to do with attraction, gender identity, or both). In middle adolescence (age 14-17), individuals may experiment sexually, which can lead to self-labeling.<sup>1</sup>

Sex and gender are frequently conflated. They are, however, separate concepts. *Sex* is based on genetics and/or anatomic features at birth. Thus, a newborn is



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commonly labelled as a boy or a girl. *Gender*, on the other hand, is based on binary sociocultural expectations of what a “feminine” or “masculine” person looks like and does. A *cisgender* individual has gender identity and/or expression that match societal expectations of

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the sex assigned at birth; *transgender* individuals do not. Some individuals do not identify with or express themselves as either gender. To be sure, such concepts are not new; other cultures and groups have recognized *gender non-conforming* (GNC) or *gender diverse* individuals for hundreds of years, if not longer.<sup>2</sup>

Other dimensions of oneself include sexual identity (eg, straight, gay, lesbian, bisexual, pansexual, same-gender-loving), sexual orientation and emotional/physical attraction, and sexual behavior—eg, men who have sex with men [MSM], women who have sex with men [WSM], etc. Sexual behavior—what people *do*—and identity (how people view themselves and present themselves to the world) are not always the same. Similarly, *attraction* is not necessarily synonymous with *behavior*. Further, sexual orientation can be dynamic, especially as a person figures out their identity over time.

As in other arenas, word choice matters; the challenge is that preferred words can change over time. Words fall out of favor or get repurposed. For example, “tranny” and “transgendered” are not accepted, but “queer” has been reclaimed. In fact, *queer* has become a catch-all term for identities that are not heterosexual or cisgender. Be aware, however, that because the word has a history of being used as a slur, certain generations may still bristle at hearing this.

### LGBTQ Population Size

Estimating the size of the LGBTQ population can be difficult. Epidemiologic research often omits explicit questions about sexual orientation and gender identity, especially in younger age groups. Thus, the population may be “invisible” unless you ask the right questions. That said, whether you are aware of it or not, you *are* seeing patients who meet these descriptions. Approximately 11 million American adults identify as LGBTQ. Such estimates are usually obtained through self-report conducted by advocacy groups. Collecting data like these is important, because if you don’t count someone, you’re telling them they don’t count.<sup>3-9</sup>

### Population Stresses

Social context encompasses a number of areas that lead to negative health outcomes for LGBTQ individuals: lack of positive role models, internalized phobias (ie, self-loathing), social stigma, loss of family support, discrimination, isolation, and even denial of healthcare services. These result in negative physical and emotional outcomes. Higher rates of homelessness, unemployment, victimization, and adverse childhood experiences (ACEs) lead to chronic stress.<sup>10</sup>

*What is ‘normal?’*

*Ethnocentrism* is the belief that one’s own culture is superior to all others. It sows the seeds of bias and preconceived notions, and furthers the idea that one’s own customs are “the only way to do things.” In the context of LGBTQ populations, it can lead to the expectation that heterosexuality is the default—in other words, heteronormativity. (Similarly, if it is expected that everyone is cisgender, cisnormativity develops. Recoil against gay or transgender populations, then, is homophobia or transphobia, respectively.) As humans, we are not defined by just one aspect of our identity. *Intersectionality* is how race, nationality, sexual orientation, gender identity, religion, disability, and the like play off one another, especially in the context of discrimination.

### Health Disparities

The U.S. Centers for Disease Control and Prevention defines *health disparities* as “Preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially-disadvantaged populations.”<sup>11</sup> Though certain aspects of health may actually be *promoted* by LGBTQ subpopulations, overemphasis can tip the scales into dysfunction—for example, a gay man who values physical fitness and idealizes a certain body type may find himself experiencing body dysmorphia and develop an eating disorder. Alcohol and other drugs—which may be normalized in certain LGBTQ social venues—are sometimes used to self-medicate against loneliness and depression. Substance use is linked to higher-risk sex and sexually transmitted infections, suicide attempts, and motor vehicle accidents.

Parental rejection, such as blaming the child for being bullied, is linked with negative health outcomes, especially depression and attempted suicide. An estimated 20% to 50% of homeless street youth are LGBTQ, and they may engage in “survival sex” for money, food, shelter, and/or drugs. The incidence of new HIV infections is highest in MSM, especially in younger men and men of color.<sup>12</sup>

LGBTQ seniors also experience health disparities: social and systemic isolation, and increased rates of poverty, for example. Further, older gay, lesbian, bisexual, and transgender men and women are less likely to be offered appropriate screening for cancer.<sup>1,3,5,8,12-15</sup>

Per recent, biennial Youth Risk Behavior Surveys (YRBS), about a third of LGB students have been bullied on school property, and 15% or more have been threatened or experienced violence in various settings.<sup>16</sup> The 2019 Canadian Trans Youth Health Survey reveals even higher numbers.<sup>17</sup>

Rates may be higher still for those who cannot “hide” or “blend in” as easily. Perpetrators may be peers, of course, but also family members, teachers, coaches, employers, or even police: The victim may not know where to turn (or whom to trust) for help.

Lesbian, gay, and bisexual youth are two-to-three times more likely to attempt suicide than their heterosexual peers. Lack of family/community support, family conflicts, violence/victimization (eg, feeling unsafe at school/bullying), gender nonconformity, early sexual debut, and other mental health issues (eg, substance use) fuel this.<sup>14,18</sup> Per the Williams Institute (2014), 45% of trans-identified youth, 46% of transmen, and 42% of transwomen reported at least one suicide attempt, to date. Those who have been rejected by an authority figure reported the highest suicidality, 60%. However, appropriate use of a transgender person’s chosen name is linked to reduced depressive symptoms and suicidal ideation.<sup>19</sup>

Perhaps surprisingly, despite all of these stressors, LGBTQ individuals tend to be resilient. Not so surprisingly, many LGBTQ individuals have come to dread healthcare visits because they have had poor experiences in the past. This can lead to avoidance and undermine development of a strong patient-provider relationship.

Whereas professional societies such as the American Academy of Pediatrics (AAP) have advocated for LGBTQ populations for many years, individual providers and health systems have been slower to consider the unique needs of these groups. To be sure, recent surveys have revealed that one in three transgender respondents have had a negative experience with a healthcare provider in the preceding year. Some report having been verbally harassed or even refused medical treatment. One in four actually had to teach their provider about transgender healthcare.

Insurance coverage is often an issue for transgender individuals, made all the more difficult by higher rates of unemployment in this community. Consequently, urgent care clinics (and/or emergency departments) may become their primary places of medical care. When visiting a new provider, it can be upsetting for LGBTQ individuals to have to “come out” all over again, with regard to sexual orientation and/or gender identity, especially if they experienced rejection in the past.<sup>3,6,8,14,20</sup>

Experiencing discrimination in healthcare settings is associated with delays in testing and treatment, fewer provider visits, decreased preventative health services, delays in filling prescriptions, and decreased patient satisfaction overall.

## The Urgent Care Visit

### Opportunities to Improve Care

Sex discrimination in federally funded healthcare facilities is specifically prohibited by the Affordable Care Act. But we can do better than simply avoiding discrimination. We can work to make our clinics safe and welcoming to all people. We can train our front desk staff to tactfully navigate potentially awkward situations. We can rewrite inequitable policies.

The clinical space is a domain where we can work to display cultural humility. Two other areas that are not always considered involve follow-up: patient satisfaction surveys (are you doing a good job fixing systemic issues in giving good care?) and tracking health outcomes (such as HIV testing and alcohol misuse). You cannot easily improve what is not measured.<sup>21</sup>

### *The front desk*

Sometimes there will be a discrepancy between a patient’s presented gender and what is on their identification card, health documentation, or medical chart. Some, but not all, medical records have a place for a patient’s chosen name. Typically it is best to ask someone, “What would you like to be called?” (accepting that this may differ from the patient’s legal name). Most transgender individuals recognize that their legal name needs to be used in certain documents, but calling someone by the name that doesn’t reflect their gender identity is “deadnaming.” This can be very offensive, especially after someone has corrected the speaker.

Additionally, it is typically best to ask someone what pronouns they use. Some medical practices use wearable buttons indicating personal pronouns or have staff simply state their own pronouns before asking.

Unfortunately, some medical records are limited in how they list a patient’s chosen name or pronouns, and autogenerated letters may utilize the wrong honorific or pronouns. Misgendering a transgender individual is like a bee sting: It hurts, but the more it happens, the bigger the reaction. Things a cisgender, heterosexual person might take for granted every day are a challenge for LGBTQ individuals, and since they may even *expect* care to be insensitive, they are already in a defensive position. That said, conversations about names and pronouns should be handled discretely, so as not to “out” someone in the waiting room.

Remember, too, that handoffs of care are not just between you and a consultant, but also among your own staff. It can be frustrating for patients when staff fail to communicate already-disclosed gender identity information to one another.<sup>5</sup>

**Table 1. Recommended Subtopics within a Sexual History**

- Partners (who is involved and what is their gender identity)
- Practices (types of sexual activity, including body parts and toys)
- Protection from STIs (consistency of safer sex practices; HPV vaccination; HIV PrEP)
- Past history of STIs
- Pregnancy (if it is not desired, how is it being avoided)
- Preferences (preferred language for body parts)
- Pleasure (is sexual contact arousing, satisfying, and free from discomfort)
- Partner violence (is sexual contact consensual)

### Public areas

In addition to common areas being clean, include representation of your patients in posters, brochures, and magazines. Visual clues like rainbow pins or equality stickers will be noticed by those who “need to know.” Proactively address confidentiality concerns and post statements on nondiscrimination and visitation rules. Use gender-neutral terms on forms and in addressing individuals.

If possible, have an accessible, single-use, all-gender restroom facility for patients. Many transgender and nonbinary individuals avoid public bathrooms. Consequently, they may avoid eating or drinking at healthy intervals; this can lead to episodes of hypoglycemia, dehydration, urinary tract infections, or other kidney problems.<sup>20</sup>

Be aware of appropriate and welcoming places to refer patients to when needed for mental healthcare, for example, or management of gender-affirming hormone therapy. OutCare, which also provides continuing medical education for clinicians, has a directory of self-identified LGBTQ-competent healthcare providers. The Gay and Lesbian Medical Association (GLMA) and the Human Rights Campaign’s (HRC) Healthcare Equality Index are other places to look to help expand your network.<sup>1,2</sup>

### The exam room (and beyond)

In the exam room, or even more generally the clinical space (eg, x-ray suite, phlebotomy room), there are several principles of good communication that apply for working with pretty much any patient population. First, make sure the patient is comfortable with whomever else is in the room, and allow them to decline the pres-

ence of anyone not directly responsible for their care (for example, trainees).

Providers and other staff can build rapport by setting a respectful and honest tone. In the patient interview, use open-ended questions to avoid simple yes/no responses that may imply there is a “correct” answer. “Tell me more” is a wonderful way to show you are listening and interested. Similarly, normalizing language that makes personal questions seem more general can be helpful.

Again, word choice matters, but it’s sometimes challenging because slang is always changing. If appropriate, echo back the patient’s word choice. If you are not sure what they mean, seek clarification. “Can you explain it to me?” is not meant to preclude your own research and study of, for example, gender-affirming hormone therapy, but a way to further engage with your patient.

If you misspeak and misuse a word or make an incorrect assumption, acknowledge it, apologize, and move on. Ignoring the issue won’t make it go away and offering profuse and repeated apologies only amplify the error. Ultimately, patients are seeking medically knowledgeable care, and in some cases, the exam room may be the only place they can ask questions and get accurate information. Less than a third of LGBT adolescents felt they had an adult they could talk to about personal problems, for instance. *Remember that you don’t need to know a patient’s sexual orientation or gender identity to create a safe space for them to disclose relevant health information.*<sup>2,5</sup>

Assumptions to try to avoid include misgendering or mis-assuming the nature of a relationship or family structure. Sometimes in urgent care we do have continuity with patients, so remember that some aspects of their identity may change with time. Self-identification does not always align with behavior. For instance, an individual may have had same-sex or opposite-sex “experimentation” when they were younger but determined their sexual orientation later in life. Gender identity and expression do not imply a particular sexual orientation or practice. Similarly, acknowledging one risk (such as not using condoms) doesn’t necessarily imply the patient has other risky behaviors (such as IV drug use).<sup>2,6</sup>

### Difficult Topics

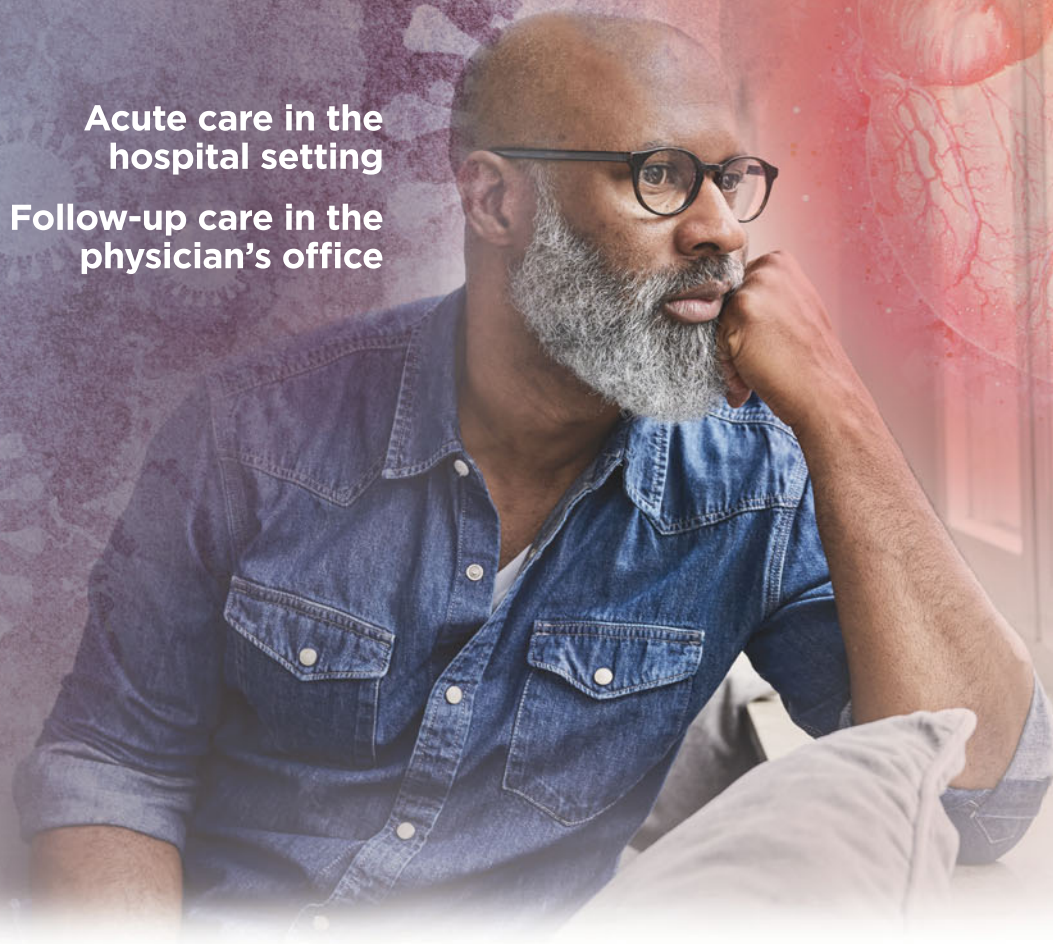
#### Confidentiality

Confidentiality is often a big worry for adolescents—in general, they fear disclosure of sexual activity, let alone sexuality. But this is also true whenever we’re asking personal information. Some patients don’t want a “paper trail” and may not be truthful on forms. Con-



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\*Data sources on file at Quidel.

**Table 2. Resources for Patients and Families****For LGBTQ+ youth and/or their parents:**

- Parents, Families, and Friends of Lesbians and Gays (pflag.org)
- The “It Gets Better” Project (itgetsbetter.org)
- The Trevor Project (thetrevorproject.org)
- GLBT National Health Center (glbthotline.org)
- Out2Enroll (<https://out2enroll.org/>)

**General LGBTQ+ resources:**

- Gay, Lesbian, and Straight Education Network (glsen.org)
- Human Rights Campaign (hrc.org)
- Lambda Legal (lambdalegal.org)
- The Fenway Institute (fenwayhealth.org/the-fenway-institute)

**Table 3. Resources for Providers**

- American Academy of Family Physician’s LGBT Health Toolkit ([www.aafp.org/family-physician/patient-care/care-resources/lgbtq.html](http://www.aafp.org/family-physician/patient-care/care-resources/lgbtq.html))
- World Professional Association for Transgender Health (wpath.org)
- UCSF Center of Excellence in Transgender Health ([transhealth.ucsf.edu](http://transhealth.ucsf.edu))
- UCSF LGBT Resource Center ([lgbt.ucsf.edu](http://lgbt.ucsf.edu))
- Services and Advocacy for GLBT Elders ([sageusa.org](http://sageusa.org))
- Gay and Lesbian Medical Association ([glma.org](http://glma.org))
- National LGBT Health Education Center ([LGBTthehealtheducation.org](http://LGBTthehealtheducation.org))
- TransLine ([protect-health.org/transline](http://protect-health.org/transline))

versely, they may wonder why they were asked certain questions if their answers are never addressed during the interview. These questions can be framed in the context of risk: “I ask these questions because I’m trying to determine what tests, if any, we should perform today.” Consider mentioning the role of the medical record as well: “Everything you tell me is between you, me, and the computer—unless you tell me you’re going to hurt yourself or someone else.” A patient may express some uncertainty about their sexuality and/or gender identity to you, but not be ready for others to know about their doubts yet, for example. This is a form of “testing the waters.”<sup>1</sup>

*The sexual history*

The stated reason for the visit is not always the patient’s real chief concern. LGBTQ health includes, *but is not defined by*, sexual health. Thus, STI screening should be based on behavior, not identity (ie, names/labels). Seek the patient’s permission to discuss sexual health topics, if appropriate. The CDC has suggested five different elements in taking a sexual history (the so-called “5 Ps”), and the National LGBT Health Education Center has suggested three more, as shown in **Table 1**.<sup>22,23</sup>

*The physical exam*

As with any patient, do not ask about—or perform unnecessary examination of—body parts not relevant to the chief concern. If necessity of an aspect of the exam is not obvious, consider explaining why you are doing what you are doing. Physical examination should be relevant to what anatomy the patient has, regardless of their gender presentation. In most institutions, a staff member chaperones intimate exams. This is probably a

good habit to get into, regardless of the sex and gender of the patient and the provider. If possible, allow patients to self-collect or self-swab vaginal and anal/rectal test specimens.

*Considerations related to gender affirmation*

Though not every transgender individual wants to—or can afford to—undergo medical and surgical treatment (eg, puberty-blockers, onabotulinumtoxin A), knowing trustworthy consultants (eg, endocrinologists) in your area is helpful. Mental health support is probably needed in all phases of coming out and gender-affirmation.

Social and medical affirmation (previously known as transition) can lead to unique considerations for our transgender patients. Binding one’s breasts to achieve a more masculine contour can lead to skin irritation and breakdown and reduce lung expansion, causing dyspnea or even lung infections. Taping or tucking male genitals can also lead to skin problems or hernias. Injection of silicone or other substances can lead to skin infections or worse, especially when the chemicals are not of medical-grade for humans. In the same way that some people who can’t afford a prescription for an antibiotic may use medications intended for pets, sometimes animal hormones are used. These illicit injections are also unmonitored by healthcare professionals, so supraphysiologic doses could be administered unintentionally. Even appropriately dosed and administered hormones potentially carry risks, such as cardiovascular disease, hypertension, hyperlipidemia, liver dysfunction, breast cancer, and uterine cancer. Further, there is a lack of clinical evidence as to what the long-term health effects of hormone therapy will be.<sup>8,14</sup>

It bears emphasizing that *testosterone is not birth con-*

### Suggested Reading

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trol. One way to broach the topic in a respectful way would be to ask, “I would like to order an x-ray for you. If there’s any chance you could be pregnant, we will need to check a pregnancy test first. Is that OK with you?”

### Other Sources of Information

Many professional societies and health entities have their own LGBTQ resources. The American Academy of Family Physicians has an LGBT health toolkit, for example. The World Professional Association for Transgender Health (WPATH) and the UCSF Center for Excellence in Transgender Health are renowned resources for information on transgender health. Services and Advocacy for GLBT Elders (SAGE) is an organization that focuses on older LGBTQ individuals. The National LGBT Health Education Center has free CME on LGBTQ health issues. Resources for patients, their families, and providers are listed in **Table 2** and **Table 3**.

### Conclusion

Whether you identify as an LGBTQ individual or an ally, be engaged in your community. Allow its members to tell you what it needs. Healthcare providers can often dictate what happens in their own practices. Self-evaluation is important, as you work at every level of the socioecological model (ie, individual, interpersonal, organization, community, and societal levels) to improve care. As you would with any other group, keep learning

so you can provide timely, relevant health information. Lead by example: Challenge offensive language and learn if you yourself have misspoken. We can do better to be inclusive of all our patients. ■

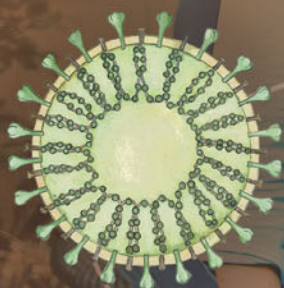
*Adapted and updated from “Providing the Best Care for LGBTQ+ Patients in UC,” presented electronically for the Urgent Care Association’s 2020 annual conference.*

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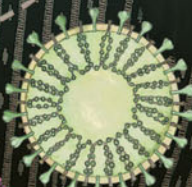


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# Similar to Past Flareups Pulmonary Eosinophilia: Putting the Pieces Together

**Urgent message:** Pulmonary eosinophilia is a generic term for a heterogeneous group of disorders that result in increased eosinophils within the pulmonary parenchyma. Ultimately, the patient here was treated with an extended course of glucocorticoids to treat his chronic eosinophilic pneumonia until he could follow up with his hematologist/pulmonologist.

DERICK STACKPOLE, PA-C

## Case Presentation

The patient is a 29-year-old male with history of pulmonary eosinophilia, degenerative disc disease, and asthma who presents to an urgent care center with increased shortness of breath, nonproductive cough, and dyspnea on exertion. He states his symptoms are, “similar to my past flareups I have had over the last year.” He reports his asthma was well controlled until these episodes started, and he was recently diagnosed with “a lung condition.” When asked about pulmonary eosinophilia listed in his chart he replies, “That sounds right.” He was prescribed a pocket pulse oximeter by his pulmonologist, and he noted a reading of 87% while at work earlier today. The patient was receiving injections of mepolizumab (Nucala) until 6 months ago, but he had to discontinue the course secondary to an insurance lapse.

The patient was seen 18 days ago at the same urgent care by another provider and given a breathing treatment with ipratropium bromide and albuterol sulfate (DuoNeb). His SpO<sub>2</sub> improved from 90% to 93%. At that time, he was referred to the emergency department, where he received another breathing treatment. He was discharged home with a 12-day taper of glucocorticoids.

He states symptoms initially improved after the first few days of taking the steroid, but the dyspnea and cough returned after tapering down to 20 mg.

The patient works in construction and reports expo-



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sure to heavy particles during demolition. He is intermittently compliant with his respiratory mask while on the job site. He self-reports a 3-year pack history of smoking cigarettes (quit 8 years ago).

## Physical Exam

### Vitals

Temperature: 98.6° Fahrenheit

**Author affiliations:** Derick Stackpole PA-C, Carilion Clinic. The author has no relevant financial relationships with any commercial interest.

Blood pressure: 136/86  
Heart rate: 89 bpm  
SpO<sub>2</sub>: 93% on room air

General: Sitting on exam table in NAD  
HENT: TMs without bulging, erythema, or effusion. Posterior OP clear.  
Cardiac: HR 90 bpm, no murmurs, rubs, or gallops.  
Pulmonary: Course and diffuse wheezing bilaterally with bibasilar crackles.  
Abdomen: Soft, nontender, no guarding or masses  
Musculoskeletal: Moving bilateral upper and lower extremities through FROM without difficulty.

### Shortness of Breath: A Few Things to Consider

The differential diagnoses for shortness of breath is wide and includes both acute illness (eg, viral bronchitis) and chronic conditions such as chronic obstructive pulmonary disease (COPD) and pulmonary eosinophilia. COVID-19 has also added a new diagnostic difficulty. The majority of patients with underlying chronic conditions will be aware of their diagnosis as well as their baseline status. For those patients who are stable and presenting with risk factors and symptoms for chronic disease, appropriate outpatient follow-up with either a primary care physician or referral to pulmonology should be made to ensure further testing and evaluation.

Viral bronchitis is characterized by acute onset of persistent cough lasting between 1 and 3 weeks in the absence of COPD. This cough can be accompanied by sputum production, and a productive cough does not necessarily correlate with bacterial etiology.<sup>1</sup> Wheezing and rhonchi can be present as well; however, rales should raise suspicion for bacterial pneumonia and a chest x-ray should be obtained. Currently, any patient presenting with a respiratory tract infection should be tested for COVID-19, but the Infectious Diseases Society of America has also set priorities where testing is limited which include hospitalized patients and those at high risk, like healthcare workers and first responders.<sup>2</sup>

Patients with increased shortness of breath in the setting of COPD need to be risk stratified. If the patient is maintaining their O<sub>2</sub> saturation without an increase in oxygen requirement or does not have red flag symptoms such as cyanosis, altered mental status, or edematous extremities, they can safely be treated outpatient. However, those with significant comorbidities, like heart failure and diabetes mellitus, or previous hospitalization should be considered for further evaluation and treatment in the emergency department.<sup>3</sup>

In short, do not ignore abnormal vital signs and over-

all clinical picture.

### Overview of Pulmonary Eosinophilia

Eosinophils are white blood cells that participate in both innate and acquired immunity. They produce pro-inflammatory cytokines and other proteins that contribute to vascular permeability and contraction of smooth muscles. They also present antigens to T helper cells, leading to their activation and migration to sites of inflammation.<sup>4</sup> *Pulmonary eosinophilia* is a generic term for a heterogeneous group of disorders that result in increased eosinophils within the pulmonary parenchyma. The condition is defined by one of the following findings: peripheral blood eosinophilia (absolute eosinophil count  $\geq 500$  eosinophils/mcL) with abnormal imaging, increased eosinophils on bronchoalveolar lavage (BAL), or lung biopsy with lung tissue eosinophilia.<sup>5</sup> A list of these disorders is discussed in further detail later in this article, and two were ultimately considered as the most likely cause of the patient's presentation and helped determine management.

*“Common symptoms of idiopathic acute eosinophilic pneumonia include nonproductive cough, dyspnea, and fever with other nonspecific symptoms such as myalgias, pleuritic chest pain, and fatigue. Auscultation of the lungs reveals bibasilar inspiratory crackles and occasional rhonchi.”*

### Idiopathic Acute Eosinophilic Pneumonia

First described by Badesch, et al, idiopathic acute eosinophilic pneumonia (AEP) typically presents with a febrile illness and associated hypoxemia.<sup>6</sup> AEP usually occurs in young healthy males (average age 30 years). Common symptoms include nonproductive cough, dyspnea, and fever with other nonspecific symptoms such as myalgias, pleuritic chest pain, and fatigue.<sup>7</sup> Auscultation of the lungs reveals bibasilar inspiratory crackles and occasional rhonchi.<sup>7</sup> Alveolar damage results from fibroblast proliferation leading to collagen production and widening of the alveolar septae that ulti-



mately weakens and leads to alveolar collapse.

The disease has a strong association with smoking tobacco.<sup>8</sup> Water pipe use, including with tobacco and marijuana, has been associated with the disease secondary to the increased volume of smoke inhaled and concentration of particles.<sup>9</sup> It is also known to develop after environmental exposures to inhaled contaminants such as sand and dust. Chest x-ray may show reticular or ground-glass opacities. With disease progression, bilateral diffuse mixed ground-glass opacities will be present. CT is not required for diagnosis. Confirmation of diagnosis is made with lung biopsy; however, a lung biopsy is not necessary if history and bronchoalveolar lavage (BAL) are consistent with diagnosis.<sup>10</sup> It can be distinguished from chronic eosinophilic pneumonia by its lack of peripheral eosinophilia and more acute presentation with high fever.

### Chronic Eosinophilic Pneumonia

Chronic eosinophilic pneumonia (CEP) is an idiopathic disorder characterized by polymorphonuclear eosinophils within the lung interstitium and the alveolar spaces.<sup>10</sup> CEP is rare and women are twice as likely as men to develop the disease.<sup>11</sup> It predominately affects patients in the third and fourth decades of life and has a strong association with asthma, which is present in approximately 50% of cases.<sup>12</sup> Most patients present with vague symptoms such as cough, fever, shortness of breath, wheezing, and weight loss. They will typically present less acutely without overt respiratory failure. Patients with CEP often experience approximately 4–5 months of symptoms before the correct diagnosis is made. Physical exam typically reveals diffuse wheezing, and crackles are present in approximately 38% of cases.<sup>13</sup>

There is no specific laboratory marker for chronic eosinophilic pneumonia, but in the setting of the symptoms described above usual laboratory studies include complete blood count with differential, blood urea nitrogen, creatinine, hepatic function tests, and urinalysis. Peripheral blood eosinophilia is common, with elevated eosinophil counts >6%.<sup>12</sup> The classic finding on both chest x-ray and CT consists of bilateral peripheral or pleural nonsegmental, consolidative opacities termed “photographic negative.”<sup>14</sup>

### Medications and Toxins

The clinical presentation for pulmonary eosinophilia associated with medication and toxin exposure varies and ranges from chronic cough to drug reaction with eosinophilia and systemic symptoms (DRESS). Common medications to consider include NSAIDs, antibiotics,

(like sulfonamides), ACE inhibitors, and amiodarone, but many others have been implicated.<sup>15</sup> Environmental factors, including heavy metals and other particulates associated with building materials also appear to play a role.<sup>16,17</sup> The history plays an important role in diagnosing and ruling out these potential causes.

### Eosinophilic Granulomatosis with Polyangiitis (Churg-Strauss Syndrome)

This is a vasculitis that typically presents in the setting of asthma, sinusitis, and peripheral blood eosinophilia ( $\geq 1500/\text{mCL}$ ). It presents more commonly with extrapulmonary manifestations on the skin and affects other organs such as heart and kidneys. Antineutrophil cytoplasmic antibodies (ANCA) are found in less than 50% of cases, and a tissue biopsy will usually confirm the disease. There is some overlap between chronic pulmonary eosinophilia and Churg-Strauss syndrome.<sup>18</sup> The work-up for this diagnosis is beyond the urgent care setting, but it is important to keep it on the differential in order to place appropriate referral.

### Parasitic Infection

Infections caused by organisms such as *Ascaris* and *Toxocara* will present with peripheral blood and BAL eosinophilia. Helminth infection is a broad topic and is beyond the purview of this article but must always be considered in this setting. Again, good history-taking will include or exclude this differential diagnosis based on recent travel or residence in a high-risk area.

### Bacterial vs Viral Pneumonia

Bacterial and viral pneumonia will have similar symptoms; however, a chest x-ray will typically show no reticular or ground-glass opacities. Take a good history to exclude environmental causes. A complete blood count will usually be without eosinophilia, but eosinophilic pneumonia can occur with exposure to certain drugs and toxins as discussed previously.<sup>19</sup>

### Work-Up and Diagnosis

Bacterial/viral pneumonia and elimination of possible drug and toxin exposures lie within the capabilities of the urgent care setting. The need for further bloodwork, imaging, and possible BAL require referral to other specialists (eg, pulmonology, hematology, infectious disease). However, the important takeaway is to perform a thorough history and physical exam, recognizing which patients need immediate referral to an emergency department and those who can safely be treated and referred on an outpatient basis. This patient's  $\text{O}_2$  saturation was



stable and he was resting comfortably without signs of respiratory distress. He was speaking in full sentences without difficulty or accessory muscle use. Therefore, it was deemed safe to treat him outpatient.

*“Bacterial/viral pneumonia and elimination of possible drug and toxin exposures lie within the capabilities of the urgent care setting. The need for further bloodwork, imaging, and possible BAL require referral to other specialists (eg, pulmonology, hematology, infectious disease).”*

### Case Discussion and Treatment

Despite the nonspecific diagnosis of pulmonary eosinophilia listed in his chart, on further review of his record this patient had had a previous CT with consolidative opacities and peripheral eosinophilia. A subsequent BAL confirmed pulmonary eosinophilia. These findings, along with a previous history of asthma and treatment with mepolizumab, pointed towards CEP. However, the patient's smoking history and occupation in construction with exposure to heavy particulates had contributed to this multifaceted presentation.

Ultimately, both AEP and CEP are treated similarly. Initial therapy for CEP is prednisone dosed at 0.5 mg/kg a day continued for 2 weeks after symptoms resolve. Due to frequency of relapses in these patients, therapy is typically continued for 3 months and can be continued for up to 9 months.<sup>20</sup> For AEP, an oral dose of prednisone is started between 40 and 60 mg per day and again continued for 2 weeks after resolution of symptoms. After this, the dose is reduced by 5 mg each week until cessation.<sup>21</sup> The monoclonal antibody mepolizumab has started to be used to treat CEP with successful reduction in use of glucocorticoids.<sup>22</sup>

Due to his initial improvement on a 12-day taper of corticosteroids with a starting dose of 60 mg and subsequent relapse when tapering down to 20 mg from 40 mg, a 3-week course of 0.5 mg/kg a day of prednisone was initiated. The risks and benefits of an extended course of steroids was discussed, and the patient opted for treatment. His insurance had recently been reinstated and he had follow-up with his hematologist in 2 weeks for reassessment.

It is rare to initiate such a long course of glucocorticoid maintenance therapy in an urgent care center, especially without a definitive diagnosis. The findings on CT, results of the BAL, and previous medication regimen made it likely that he suffered from CEP. His history of asthma, previous tobacco abuse, and occupation all likely contributed to his condition and acute episodes. This condition had been undertreated and required a much longer course of steroids than previously prescribed in the ED. Since he had initial improvement on the higher dose of corticosteroids and close follow-up with hematology, initiation of an extended course was deemed to be appropriate in this setting. This would help prevent relapse or and unnecessary bounceback. ■

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## A 31-Year-Old with Cough and Decreased Breath Sounds



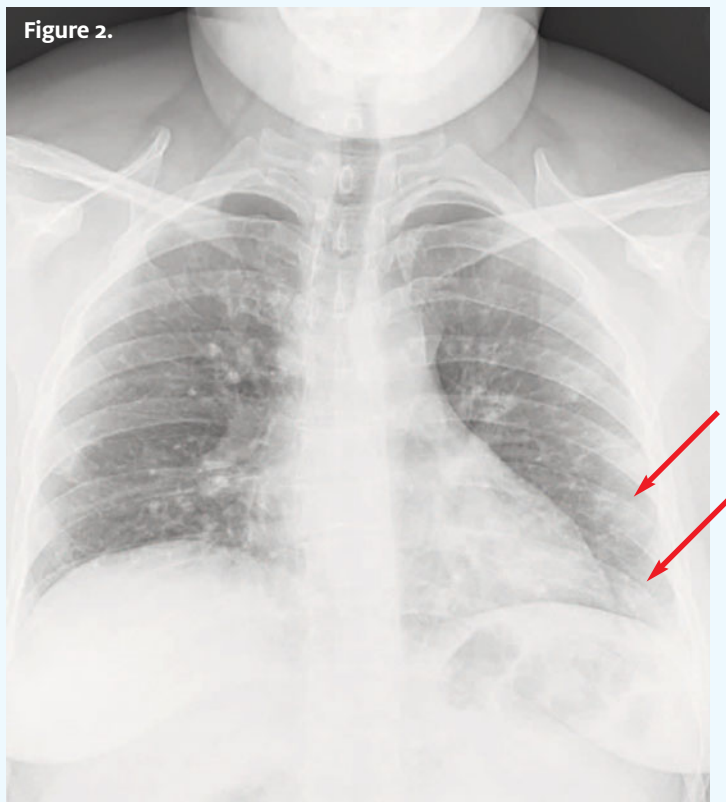
### Case

The patient is 31-year-old woman who presents with new-onset cough and decreased breath sounds to the lower lobes.

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

## THE RESOLUTION

Figure 2.

**Differential Diagnosis**

- COVID-19 infection
- Multifocal unilateral pneumonia
- Lymphomatoid granulomatosis
- Pulmonary alveolar proteinosis

**Diagnosis**

Patchy peripheral infiltrates are noted at the left lung periphery beginning in the left midlung and extending inferiority to the left base. There are no definite infiltrates on the right.

This patient was diagnosed with multifocal unilateral pneumonia which may be bacterial, but could also represent an atypical viral infection such as COVID-19.

**Learnings/What to Look for**

- The only definitive diagnosis of COVID-19 remains viral testing. As imaging findings have significant overlap with other disease entities, chest x-ray can only serve as a supplement to clinical suspicion

**Pearls for Urgent Care Management**

- If clinical suspicion is high, recommendations are to forgo imaging and instead obtain viral testing

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





## A 71-Year-Old with Diabetes and Discoloration of the Skin



### Case

The patient is a 71-year-old female with type 2 diabetes who calls attention to a rash on her shins during an annual physical. The rash appears to be pink, atrophic scars surrounded by hyperpigmented patches. They have developed since her last physical. She denies discomfort but is concerned as to what could have caused them.

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

## THE RESOLUTION

Figure 2.

**Differential Diagnosis**

- Diabetic dermopathy
- Lichen planus
- Necrobiosis lipoidica
- Stasis dermatitis

**Diagnosis**

This patient was diagnosed with diabetic dermopathy, also known as shin spots. This is the most common cutaneous finding in patients with diabetes mellitus, presenting in up to half of diabetic patients.

**Learnings/What to Look for**

- While there is no clear variation of incidence between diabetic dermopathy in patients with noninsulin-dependent diabetes mellitus vs insulin-dependent diabetes mellitus, a correlation exists between presence of skin lesions and the presence of microangiopathic complications (retinal, neuropathic, and/or nephrogenic)

- Incidence increases with age (seen more often in patients older than 50 years of age)
- Although located bilaterally, the distribution of lesions is asymmetric in appearance
- Lesions do not itch or cause pain
- Poor long-term blood sugar control, which increases the risk of diabetic microangiopathic complications, is seen in diabetic dermopathy

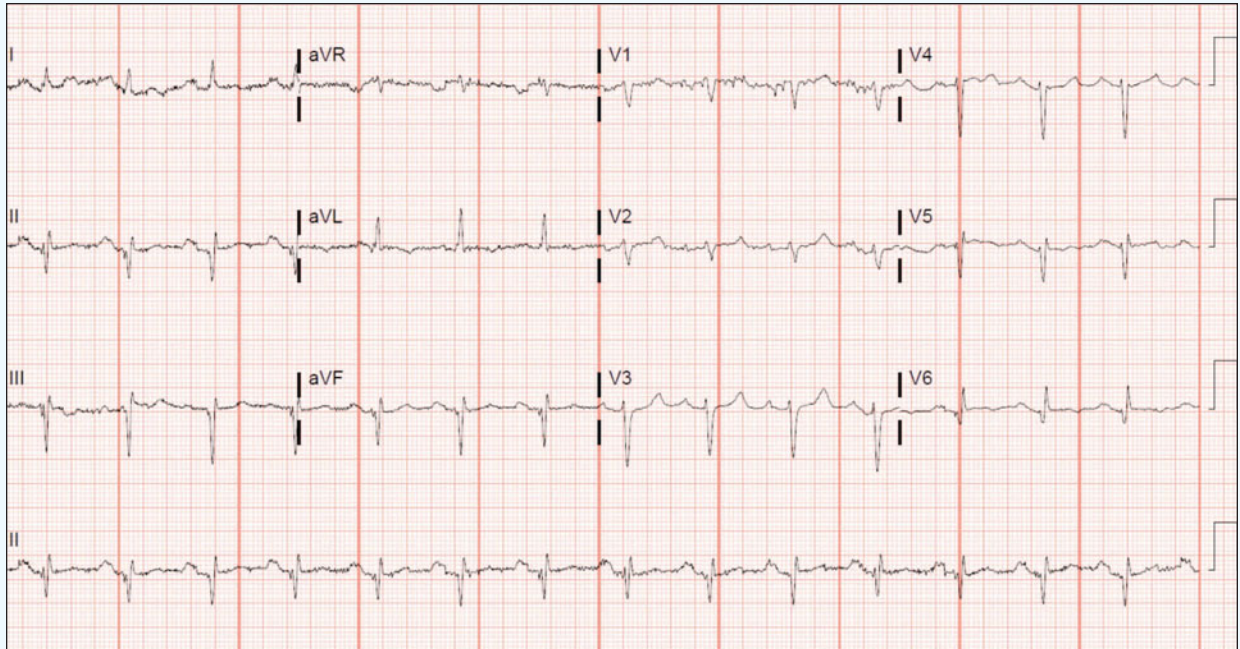
**Pearls for Urgent Care Management**

- Diabetic dermopathy is self-resolving, though lesions may take months or up to a year to resolve (or be “permanent”)
- Moisturizer may be recommended if patches are dry or scaly
- Patients should be counseled on maintaining adequate blood sugar testing and control

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



# A 57-Year-Old Female with Cardiological History and Shortness of Breath



The patient is a 57-year-old female with a history of coronary artery disease, congestive heart failure, and left ventricular thrombus on warfarin who presents with shortness of breath. She denies any bleeding, bruising, dark-colored stools, chest pain, fever, cough, or leg pain.

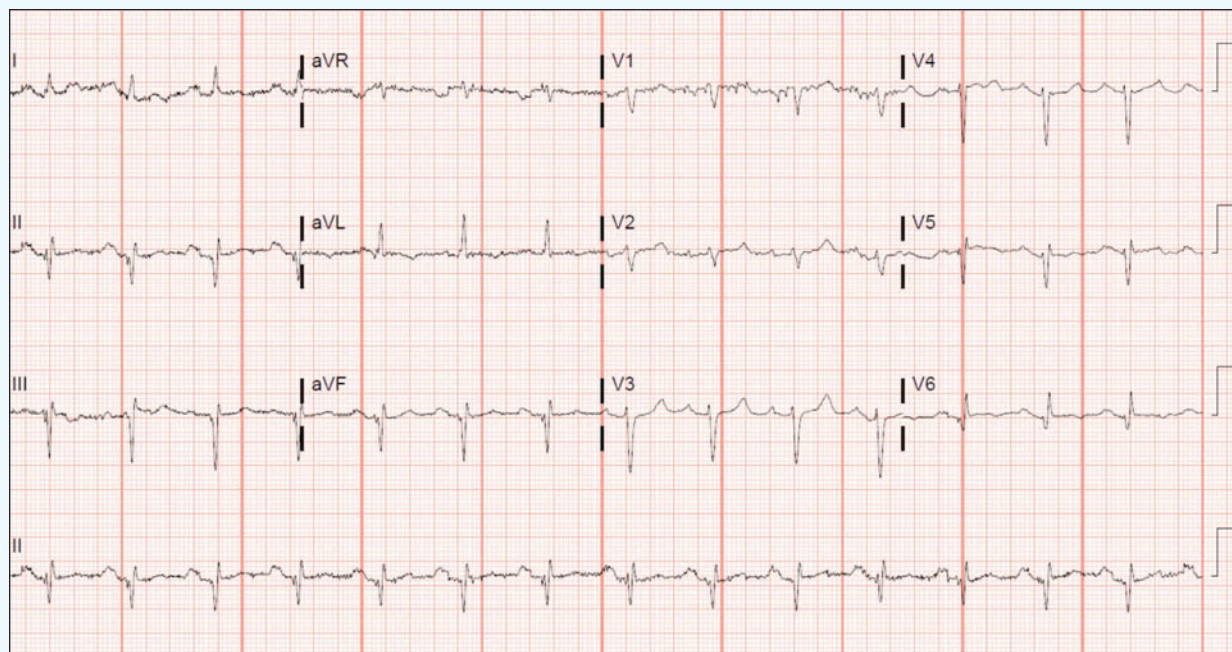
On evaluation, the patient's vital signs are normal. She is breathing comfortably and speaking in complete sentences.

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

*(Case presented by Tom Fadial, MD, The University of Texas Health Science Center at Houston.)*



## THE RESOLUTION



## What Does This ECG Show?

- Acute inferior STEMI
- Left axis deviation (LAD)
- Left bundle branch block
- Left ventricular hypertrophy
- Paced rhythm

## Diagnosis

The ECG reveals a sinus rhythm at a rate of 84 beats per minute. There is left axis deviation, first-degree AV block, and a narrow QRS and normal QT interval. There are no signs of acute ischemia. The diagnosis is left axis deviation (LAD).

## Learnings/What to Look for

The QRS axis describes the direction of the vector of ventricular depolarization and normally lies between  $-30^{\circ}$  and  $+90^{\circ}$  or generally in the direction of lead II ( $+60^{\circ}$ ). The QRS axis can be estimated using a quadrant method with lead I and aVF as the x and y axes, respectively. Begin by determining the predominant direction of the QRS complex in leads I and aVF (ie, mostly positive or mostly negative). Limb lead vectors are shown in **Figure 1**.

For example, along the x axis (using lead I), a mostly positive QRS complex points rightward. Along the y axis (using lead aVF), a mostly positive QRS complex points downward. Together, the combined forces point to the quadrant between  $0^{\circ}$  and  $+90^{\circ}$ .

Our patient has a mostly positive QRS in lead I and a mostly negative QRS in lead aVF. The resultant vector points up and to

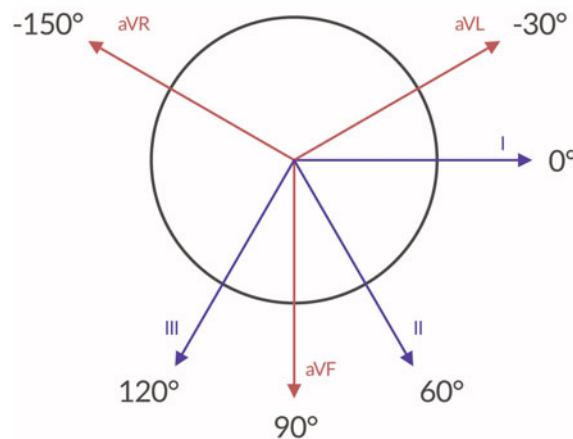


Figure 1. Limb lead vectors.

the right or left axis deviation. Each quadrant is named (see **Figure 2** and **Figure 3**) and has a differential diagnosis of possible etiologies. The possible causes of left axis deviation include:

1. Left ventricular hypertrophy
2. Left bundle branch block
3. Paced rhythm
4. Ventricular ectopy
5. Left anterior fascicular block
6. Ventricular pre-excitation



## THE RESOLUTION

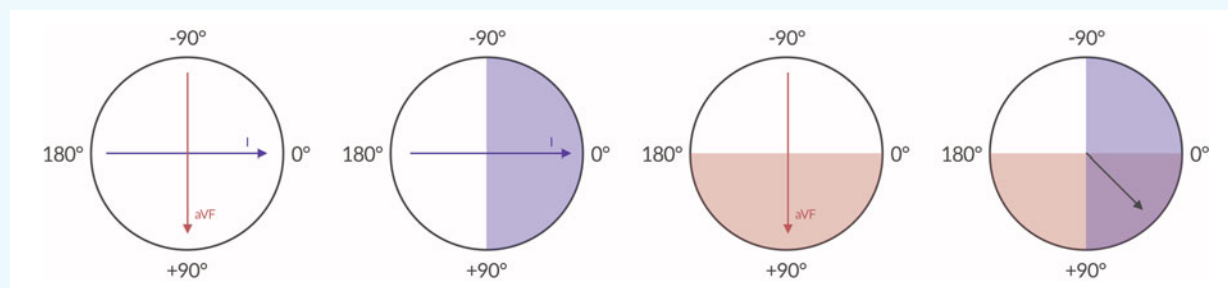


Figure 2. The quadrant method.

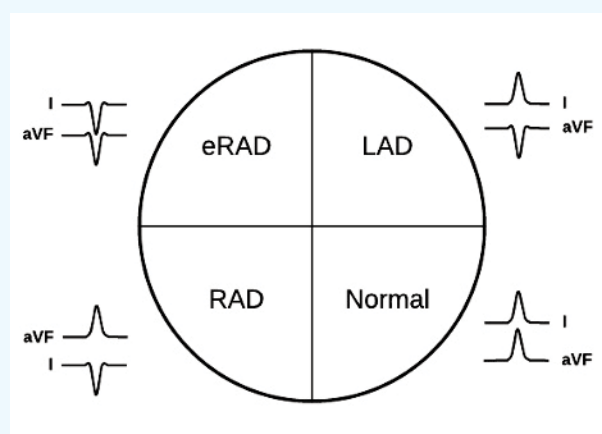


Figure 3. LAD, left axis deviation; RAD, right axis deviation; eRAD, extreme right axis deviation.

#### 7. Prior inferior myocardial infarction (inferior Q waves)

Left axis deviation may be caused by more depolarizing myocardium drifting forces further leftward as in left ventricular hypertrophy. Mechanical processes altering the heart's position such as pregnancy or ascites can similarly deflect forces leftward. Conduction abnormalities interrupting the propagation of ventricular contraction along the normal axis including left bundle branch block, left anterior fascicular block, and preexcitation

syndromes (like Wolk-Parkinson-White) can cause left axis deviation. Finally, a loss of viable myocardium, particularly involving the inferior wall, is a cause of left axis deviation. Our patient's ECG shows large Q waves in the inferior leads (II, III, aVF), indicative of prior inferior myocardial infarction, causing a left axis deviation.

#### Pearls for Urgent Care Management

- The determination of QRS axis is a critical component of the systematic approach to ECG interpretation.
- An abnormal ECG axis is not independently pathologic but should prompt a hunt for the cause.
- Common causes of left axis deviation include:
  - Left ventricular hypertrophy
  - Blocks: left bundle branch block, left anterior fascicular block
  - Ventricular pre-excitation
  - Prior inferior myocardial infarction

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**Acknowledgment:** JUCM appreciates the assistance of ECG Stampede ([www.ecgstampede.com](http://www.ecgstampede.com)) in sourcing content for electrocardiogram-based cases for *Insights in Images* each month.

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# What the #\$\$%^ Is Happening with EM Coding and Reimbursement?! – Part II

■ MONTE SANDLER

In the May issue of *JUCM*, we outlined what we were seeing with E/M coding levels utilizing the new AMA guidelines vs 2020 and 2019 levels. As COVID-19 visits steadily declined from January through June, we began to see a return to more “normal” urgent care visits. That was short-lived. July’s sharp increase in visit volumes was again driven by COVID-19!

Here’s the update we promised.

As a reminder, we saw E/M levels decline in January and the first part of February vs 2020 levels, with slow and steady recoveries since. Most of the decrease and subsequent increase was attributed to a learning curve associated with the drastic change in the way codes are derived compared with the old rules, and training providers to document their medical decision making in its entirety.

Since March we have continued to see more recovery to pre-2021 levels, as seen in **Figure 1**.

During 2020, new patients accounted for 49.9% of total UC visits, a 28% increase from the historical 39% average. In 2021, new patients are still higher than the historical average, but have declined to 45.6% of UC visits while existing patients have risen to 54.4%. Much of the increase in existing patients this year could be related to the new patient surge in 2020, driven by the demand for COVID testing. As urgent care centers were at, or nearing, their peak in terms of visit volumes last fall, they were performing roughly 725,000 COVID tests per week, about 10% of the total in the U.S. at that time, according to a Vox profile.<sup>1</sup>

As we explained in the May article, the amounts Medicare allowed for established patient E/Ms in 2021 increased approx-

*“We believe providers can benefit from continued training on the new E/M guidelines. There still appear to be many who do not even realize a change took place!”*

imately 20%, helping to soften the blow of both the degradation in average E/M weights and the shift back to a majority of established patients.

We have seen these increased payments from Medicare, as anticipated. We continue to monitor the large commercial payers for similar adjustments. Further, we remain hopeful that commercial payers continue to utilize Medicare guidance and pricing in setting their fee schedules—or a multiple thereof—and follow suit by increasing their established patient E/M allowable amounts, as well.

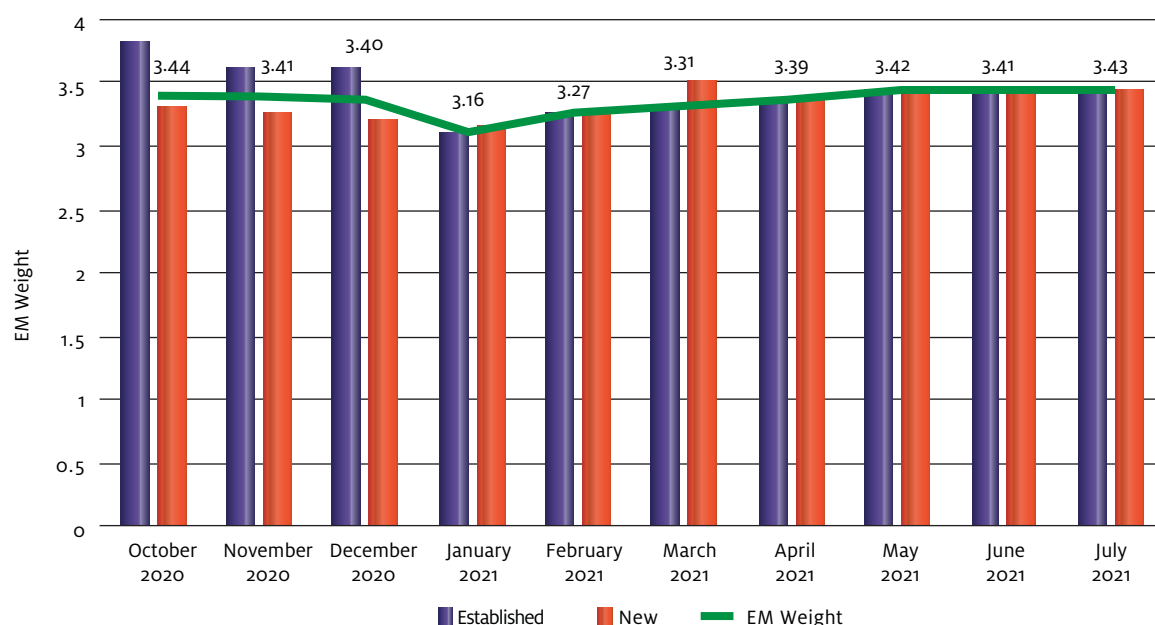
Unfortunately, our return to a more “normal” life has not materialized. During Fourth of July weekend, many of us celebrated with our vaccine shields and faces unmasked. It felt kind of normal. Little did we know, our new normal would again be interrupted by an unwanted and uninvited guest, the Delta strain, which at the time accounted for a minority of all COVID-19 cases, compared with over 80% today per CDC estimates.

The Delta strain has derailed any normalization of urgent care for the time being, and possibly forever. COVID-19 surge number 4 has been monopolizing many areas in the United States. During the last 3 weeks of July, UC visit levels took off in certain areas like Richard Branson and Jeff Bezos—straight to space and out of Earth’s atmosphere.



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

Figure 1. Year-Over-Year EM Weight Trending and Volume by Service Month



*“We encourage all urgent care centers to be diligent with insurance follow-up on unpaid claims. We have seen accounts receivable grow as the staffing levels in billing departments are not adequate to follow-up and resolve claims as a result of the record-setting volumes.”*

As for the per-visit reimbursement, we believe providers can benefit from continued training on the new E/M guidelines. There still appear to be many who do not even realize a change took place!

There are only two things in life that are certain: death and taxes. So, while we don't know what will happen industrywide with E/M codes, we do have some suggestions for surviving and thriving in this COVID-dominated environment.

1. Continue to educate providers on the documentation requirements for the new E/M coding guidelines
2. Be sure you are utilizing your real-time insurance eligibility application.

3. Enroll in uninsured COVID-19 testing reimbursement programs.
4. Implement a credit-card-on-file program to handle any balances due from patients after insurance has processed.
5. Utilize e-statements or text message balance reminders to facilitate easier payments from patients.

*It is essential to not overlook the last two items above and assume that patient responsibility is no longer an issue due to COVID-19.* Many clinics have become lax in enforcing time-of-service and patient balance protocols during the public health emergency due to pronouncements by many payers that cost-sharing will be waived for patients receiving COVID-19 tests. While those policies are valid, they can be overridden to the extent an employer-funded plan's policy differs. In 2020, a record 67% of working Americans were insured under self-funded plans.

We encourage all urgent care centers to be diligent with insurance follow-up on unpaid claims. We have seen accounts receivable grow as the staffing levels in billing departments are not adequate to follow-up and resolve claims as a result of the record-setting volumes.

We will keep you posted as we continue to monitor this situation. ■

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**\*Lifetime Warranty on LED Bulbs**

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# Meet the New Urgent Care Boss— Not the Same as the Old Boss

**B**ack in the day, you probably would have been right to assume that the closest urgent care center was founded, owned, and run by a physician. Many other practices (primary care, pediatric...) would have been the same. Well, times have changed in a big way. The mavericks who simply wanted to find a better, more sensible way of practicing medicine and wound up creating a new industry are now employees of national and regional health systems and academic medical cen-

ters, along with most of their peers in other practice settings—in such numbers that self-employed physicians are now a minority in the United States. According to a study released by the Physicians Advocacy Institute, the trend is not only continuing but picking up speed (perhaps due to the shaky economic circumstances brought on by the COVID-19 pandemic). See the graph below for more details. ■

**U.S. PHYSICIANS EMPLOYED BY HOSPITALS OR CORPORATE ENTITIES,  
JANUARY 2019—JANUARY 2021**



Adapted from COVID-19's Impact On Acquisitions of Physician Practices and Physician Employment 2019-2020 Physicians Advocacy Institute per research conducted by Avalere Health. Available at: [http://www.physiciansadvocacyinstitute.org/Portals/o/assets/docs/Revised-6-8-21\\_PAI-Physician-Employment-Study-2021-FINAL.pdf?ver=K6dyoekRSC\\_c59U8QDnV-A%63D%63D](http://www.physiciansadvocacyinstitute.org/Portals/o/assets/docs/Revised-6-8-21_PAI-Physician-Employment-Study-2021-FINAL.pdf?ver=K6dyoekRSC_c59U8QDnV-A%63D%63D). Accessed August 2, 2021.

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