

# JUCM<sup>®</sup>

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## Human Trafficking: Recognize the Signs, Know How to React

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# Conquering the Fear of Penicillin Allergy: The Boogeyman of Urgent Care



I had time to see one more patient as my shift was winding down. “Wound check. That should be a quick one,” I said to myself.

Famous last words. I soon learned that the young woman with the dog bite on her hand was returning for her fourth visit in as many days for the same issue.

She sat fidgeting on the exam table and was visibly irritated when I walked in the room. “It’s getting worse,” she said, holding her hand to my face before I had the chance to introduce myself. I hadn’t seen her before, but suddenly I felt responsible for her frustration.

Upon first glance, her hand was admittedly quite swollen. I asked her about how she’d been taking the antibiotics as I waited for her chart to load on my computer screen.

“Which ones?” she asked as she upended her purse, allowing a pile of pill bottles to spill onto her lap. Clearly, this wasn’t the “in and out” wound check case I’d planned for.

She went on to explain how her antibiotics had been changed at each visit. I nodded and tried to follow her narrative of the reasoning behind each change in prescription while stealing glances at the notes from her prior visits: doxycycline, clindamycin, ciprofloxacin, metronidazole, trimethoprim/sulfamethoxazole. She also mentioned she’d had “a little diarrhea.” I was surprised it wasn’t more.

As she continued to recount the saga, in the back of my mind I wondered why she wasn’t started on amoxicillin-clavulanate at the first visit. Then the obvious hit me as my eyes moved to the top of her chart. “Allergies: Penicillin,” appeared in glaring red and foreboding font. Of course.

The simplest and most effective treatment for dog bite prophylaxis, as is the case for so many other conditions, involves the use of one of penicillin’s many cousins.<sup>1</sup> And, as is also frequently the situation, my colleagues had been discouraged from prescribing the first-line antibiotic because of an allergy alert.

The modern EMR can feel like an overprotective parent at times—always hovering and ready to swoop in at the first sign of roughhousing on the playground. These alerts were created under the auspices of patient safety, but



often have unintended consequences like those I bore witness to that evening. And nowhere is this more commonly problematic than when a patient reports an allergy to penicillin.

If you feel like you’ve lived some variation of this scenario in the last week, there’s a reason: penicillin allergy is by far the most common drug allergy patients cite. In fact, over 10% of Americans carry a label for this sensitivity.<sup>2</sup> However, this is a vast overestimation of the reality of the situation. In fact, studies using skin testing have found that less than 1 in 10 patients who reported a penicillin allergy actually had a true IgE-mediated hypersensitivity reaction on formal challenge.<sup>3</sup>

This is where the problem begins. What other condition do we allow to propagate inaccurately in patient’s records 90% of the time?

The circumstances that allow this to occur so frequently are worth examining. When we enter an allergy in the medical record, we are, in effect, assigning a diagnosis. When we “verify allergies,” as most EMRs compel us to with each visit, we are affirming these allergic diagnoses.

This process is most commonly initiated by a nonprovider staff member who reviews the patient-reported allergies and list of medications at check-in. This verification process relies on historic entries and patient reports en-

*"In recent years, several validated decision aids have been developed to categorize a patient's risk of a dangerous reaction to a penicillin antibiotic based on their answers to several simple questions."*

tirely. It is then incumbent on the clinician evaluating the patient to confirm the accuracy of the information with the patient.

Some of you may object at this point as to our culpability, citing that this responsibility should fall on the shoulders of patients' primary care providers. A reasonable argument. Given the pace of UC evaluations, certainly a complete review of allergies, medications, and the problem list is often impractical. Moreover, based on the scope of the issues we are addressing in UC, this is generally acceptable. For example, in a patient presenting with a laceration, there is scarcely a cogent argument supporting the necessity of verifying their dose of levothyroxine or ensuring that they're still taking a statin. That's because these details of their history shouldn't conceivably affect management.

However, many cases are different, especially when it comes to the common UC decision-point of antibiotic selection.

We practice in a fortunate era where evidenced-based guidelines exist for the treatment of most bacterial infections. This is coupled with the added benefit of EMR verifications which reduce the risk of errors in dosing and ensure that patients haven't had adverse reactions to the medications we prescribe.

Unfortunately, these alerts have led to the lamentable, unintended consequence of prescription paranoia. Many EMR alerts resemble the one I experienced while caring for the woman with the infected dog bite: bright red, large font, multiple exclamation points.

Occasionally, these alerts prevent a dangerous prescription. However, more often the alerts occur with low-probability, minor, or even theoretical interactions. For example, when prescribing a product with dextromethorphan for several days to a patient taking an SSRI, a cautionary message may appear to warn clinicians about the possibility of serotonin syndrome. This would be highly improbable if taking these medications at appropriate doses<sup>4</sup>; however, the alert will typically appear foreboding enough so as to dissuade most providers from prescribing.

Concerning antibiotic choice, such advisories commonly appear when prescribing cephalosporins to patients who

have a reported penicillin allergy and vice versa, despite abundant evidence that cross-reactivity between these classes has been drastically overestimated.<sup>3,5</sup> This level of caution is even more clearly excessive given what we reviewed earlier about the frequency with which penicillin allergies are spurious.

Prescription paranoia extends to the other end of the bedside, as well. Patients tend to remember that they have a "penicillin allergy" above almost anything else in their health history, including things like organ transplants and open-heart surgery.

This is likely because the label of penicillin-allergic is frequently assigned in childhood. Kids receive amoxicillin for ear infections and strep throat, and adverse reactions ranging from rash, to vomiting, to diarrhea commonly occur. This occasion often serves as the genesis of the initial diagnosis of "allergy" to the drug. Understandably, well-meaning parents then attempt to ingrain a fear of penicillin in their children in the same way they repeatedly caution them about strangers with candy and crossing the road without looking. Having been conditioned as to the dangers of penicillin from a young age, many patients labeled as such cling tightly to this belief.

This creates a bidirectional boogeyman phenomenon whereby both the patient and clinician share an exaggerated and irrational fear of this highly useful class of antibiotics. This paranoia would not be problematic if situations calling for the use of penicillins were rare or if there were usually equally effective and well-tolerated alternatives. But that's not the case.

Inaccurate penicillin allergy can be quite consequential; I witnessed this firsthand while caring for the frustrated woman with the infected hand. In fact, a number of studies have shown that a penicillin allergy label increases patient's overall healthcare costs and the likelihood of adverse medication reactions.<sup>6-8</sup> This is because alternative antibiotic regimens often have lower efficacy and have a broader spectrum of activity when used in the treatment of conditions for which a penicillin antibiotic is the recommended first-line therapy. More diarrhea, more money, and fewer cures.

So, how can we combat this epidemic of inappropriate medication allergy diagnoses? Well, we must first disarm the penicillin allergy boogeyman in our own minds. This is best achieved by familiarizing ourselves with the robust findings within the allergy and immunology literature on this topic.

In addition to the rarity of true penicillin hypersensitivity (again, present in fewer than 10% of patients reporting an allergy), it's also worth noting that 80% of patients will outgrow even a real penicillin immune-mediated reaction

after 10 years.<sup>2</sup> Moreover, life-threatening allergic reactions (ie, anaphylaxis) are exceedingly rare even in patients with bona-fide penicillin allergies when the antibiotic is administered orally. In fact, a UK database revealed only one confirmed report of fatal allergic reaction in over 100 million doses of orally administered amoxicillin.<sup>9</sup>

Secondly, we must be more precise with our language. It's an unfortunate but ubiquitous practice to categorize any unpleasant medication reaction ranging from minor expected side effects (eg, drowsiness with diphenhydramine) to life-threatening idiosyncratic reactions (eg, Stevens-Johnson syndrome) as an "allergy." One of the foundational practices of good medicine is using precise language, yet we conflate these adverse reactions in the chart and in patient's minds. This is an odd practice indeed.

When discussing our diet, for example, it's universal to make distinctions between a peanut allergy and feeling bloated after eating pasta or dizzy after drinking four martinis. These are all unpleasant reactions to what we've consumed, but the mechanism and consequence of the reactions are quite different.

When we use imprecise language to describe medication intolerances, patients become understandably confused about which medications they must avoid vs medications that can be taken occasionally and with caution.

Finally, we need to analyze each "penicillin allergy" for veracity when the opportunity arises.

As previously mentioned, patients who carry this label face higher healthcare expenses and worse outcomes than patients without a documented intolerance to penicillin. Given that 90% of patients labeled as penicillin-allergic actually are not, it would be a net win for patient safety if we asked every patient with an alleged penicillin allergy to determine its veracity.

This would be impractical during most UC shifts. What we can do instead, however, is question penicillin allergies each time we find ourselves compelled to reach for a second-line antibiotic. For example, when treating otitis media, it may be slightly faster to simply write for a Z-Pak, but this option has become increasingly ineffective with rising rates of *Streptococcus pneumoniae* resistance. Instead, it's better for the patient both in that moment and also for future encounters to examine their penicillin allergy.

Thankfully, in recent years, several validated decision aids have been developed to categorize a patient's risk of a dangerous reaction to a penicillin antibiotic based on their answers to several simple questions.

The easiest tool to use among these is the PEN-FAST rule, which is available on MDCalc.com. Based on a patient's answers to three questions, risk of serious reaction can be categorized from very low (<1%) to high (50%).<sup>10,11</sup>

Patients with very low or low risk of adverse reactions can be reassured and prescribed a penicillin safely. For clinicians and/or patients who are still skittish, administering a test dose of oral amoxicillin, for example, while the patient is in UC can offer a more palatable option. For patient categorized as medium- to high-risk based on the PEN-FAST tool, referral to an allergist for formal assessment (usually with skin testing) will result in the majority of patients being cleared for safe use of beta-lactam antibiotics when indicated.<sup>12</sup>

I'm not unique in my concern for this problem. The Centers for Disease Control and Prevention and the Infectious Diseases Society of America have identified de-labeling inappropriate penicillin allergies as an important patient and public health issue. They've even created a Penicillin Allergy Awareness Day to highlight the issue (September 28, if you'd like to mark your calendar). This is because penicillins remain highly useful and, often, reasonably narrow-spectrum antibiotics for a wide range of infections. We owe it to our patients to minimize potential harms and maximize benefits for the treatments we prescribe.

It's time to call out inappropriate penicillin allergy labels for what they are in the vast majority of cases and disarm and demystify the boogeyman. Using the PEN-FAST tool, it doesn't take very much time either. When we fail to do this, we perpetuate an irrational fear in the minds of our patients. We'll also be serving our colleagues by sparing them the frustration of having to see our bounceback cases for treatment failure and/or adverse reactions to whatever alternative antibiotics they may have received under the incompletely informed auspices of patient safety. ■

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## 13 Human Trafficking in the Urgent Care Setting: Recognizing and Referring Vulnerable Patients

Chances are you've unknowingly treated at least one patient who was a victim of human trafficking at the time. Understanding the red flags may sharpen your awareness and put you in a position to render even more aid the next time one presents.

*Preeti Panda, MD*

**CASE REPORT**

### 23 An Itchy Back with New Moles: A Case Report of Occult Malignancy



Patients may present with complaints they're quick to dismiss as annoyance or aesthetic concerns. Understanding which could be signs of serious illness in the urgent care center is crucial.

*Joshua Russell, MD, MSc, FCUCM, FACEP*

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*Kristin Hrabowy, DO; Jenna Santiago-Wickey, DO; Brianna Promutico, DO; Godwin Dogbey, PhD; and Elizabeth Gignac, DO, FACOEP*

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*Alan Ayers, MBA, MAcc*

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Persistent sore throat that is nonresponsive to treatment could be a sign of life-threatening infection. Don't let previous diagnosis by another provider dissuade you from taking a thorough history.

*Vitoria Regina Nunes Maia, MS and Lindsey E. Fish, MD*

**IN THE APRIL ISSUE OF JUCM**

Women presenting to urgent care with abnormal uterine bleeding (AUB) may be most aware of its effects on their physical, emotional, sexual, and professional lives. While most causes are benign, care must be taken to exclude malignancy such as endometrial or cervical cancer. Properly employed, ultrasound can facilitate rapid diagnosis and appropriate decisions regarding management of AUB.

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The term *human trafficking* conjures up images that are as disturbing as they are familiar—children toiling away in hidden sweatshops, young women lured into the country with promises of a new life and gainful employment only to be forced into prostitution, individuals of all ages sold into slave labor.... Certainly you would know if you treated patients living in such destitution, and you'd probably react accordingly by trying to help them seek help somehow.

The thing is, those lurid associations may represent only a small fraction of men, women, and children who are victims of human trafficking. The big picture is far more complex—and the problem more common—than most of us could ever imagine. And the frequency with which they present to urgent care centers and emergency rooms when a medical need arises would almost certainly surprise you. Which raises the questions: Would you be able to recognize these patients, and would you have the wherewithal to help them?

This issue's cover article, *Human Trafficking in the Urgent Care Setting: Recognizing and Referring Vulnerable Patients* (page 13) by **Preeti Panda, MD** will help you find answers and prioritize patients' wide-ranging (and sometimes conflicting) needs.

Dr. Panda comes to us from the departments of Emergency Medicine and Pediatric Emergency Medicine at the Stanford University School of Medicine.

Even more common are patients who present to urgent care with sore throat. That doesn't mean their diagnosis will be any more straightforward, however, as illustrated in both *Key Signs and Symptoms of Severe Illness in Urgent Care: Cervical Necrotizing Fasciitis and Necrotizing Mediastinitis* (page 43) by **Vitoria Regina Nunes Maia, MS** and **Lindsey E. Fish, MD** and *Negative RADT and Bacterial Growth on Throat Culture* (page 27) by **Kristin Hrabowy, DO**, **Jenna Santiago-Wickey, DO**, **Brianna Promutico, DO**, **Godwin Dogbey, PhD**, and **Elizabeth Gignac, DO**.

The first of those articles focuses on the importance of establishing a prompt diagnosis and implementing timely management in order to boost the chances for good outcomes and minimizing those for mortality. Ms. Nunes Maia is affiliated with the Federal University of Western Bahia, Barreiras, Bahia, Brazil and Dr. Fish with Denver Health and Hospital, Denver CO and the University of Colorado School of Medicine. She also serves as editor of *JUCM's* *Insights in Images* section.

The second article is drawn from research conducted

to help inform timely, appropriate treatment, including appropriate utilization of antibiotic agents to minimize risk for antibiotic resistance. Drs. Hrabowy, Santiago-Wickey, Promutico, and Gignac are colleagues at UNC Health Southeastern. Dr. Gignac is also affiliated with Campbell University School of Osteopathic Medicine, where Dr. Dogbey is a biostatistician.

Sometimes, "common" is in the eyes of the beholder. To the patient, a new, itchy mole on the back may seem as mundane as a hangnail. To the astute urgent care provider, however, it bears close scrutiny, as in the cases presented in *An Itchy Back with New Moles: A Case Report of Occult Malignancy* (page 23) by **Joshua Russell, MD, MSc, FCUCM, FACEP**. Dr. Russell should be a familiar name, as he serves as *JUCM* editor-in-chief. In addition, he is a clinical educator at the University of Chicago Pritzker School of Medicine and staff physician at Northshore University Health & Legacy-GoHealth Urgent Care.

The prognosis for the urgent care industry is far brighter for 2023. In *Urgent Care Growth Is Poised to Continue in 2023* (page 35), **Alan A. Ayers, MBA, MAcc** explains why the momentum with which the industry closed 2022 is likely to continue this year. Mr. Ayers is president of Experity Networks and senior editor, practice management, for *JUCM*.

One thing that you can count on from year to year: Effective revenue cycle management is the foundation of every provider's and practice's livelihood. Especially under current conditions, the titular question *Are You Chasing Profitable Growth, or Just Growth?* (page 55) is relevant and demands an answer. We thank **Heather Real**, senior consultant with Experity Consulting, for sharing her expertise.

Finally, we also appreciate the efforts of **Ivan Koay MBChB, MRCS, FRNZCUC, MD** to keep us up to speed on urgent care-relevant content published elsewhere. This month, he summarizes articles discussing the accuracy of dipsticks in diagnosing urinary tract infections in infants, vestibular suppressants and vertigo, management of sudden-onset headaches, hemorrhage in elderly patients on anticoagulation, detecting skull fractures in children, and episodic wheezing in children. Dr. Koay is an urgent care physician and medical lead, Urgent Care Center, London, UK, and Head of Faculty na hÉireann Royal New Zealand College of Urgent Care. Abstracts in *Urgent Care* begins on page 39.

Remember, you can earn up to 3 *AMA PRA Category 1 CME Credits* by answering questions relating to select articles in this issue. Turn to page 10 for details. ■

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# Driving Change

■ LOU ELLEN HORWITZ, MA

When we came up with the theme for the 2023 Urgent Care Convention, we knew it needed to be about change. Why? Because deep down I think all of us are sick of how things have been in Urgent Care. We are sick of the extremes of either being marginalized/ignored/ forgotten or singled out and picked on. We don't understand why the things that seem so clear to us—ie, the value Urgent Care can bring to healthcare by keeping people out of the ED and filling the access gaps in primary care—seem so hard to grasp for others.

There are some words for our phenomena that I think may be helpful in transitioning from where we are to where we need to be. The first one is a schoolyard term, but is perfectly adult: bully. To bully is to seek to harm, intimidate, or coerce (someone perceived as vulnerable). The second has become trendy of late: gaslight. To gaslight is to manipulate someone, using psychological methods, into questioning their powers of reasoning (or even their sanity).

If you have been in a payer contract renegotiation recently, these probably feel familiar.

As we were initially thinking about *change* as a Convention theme, it was in reaction to the roller coaster of the pandemic. When you are on a roller coaster, you are not in control. Everything is happening *to* you and you are just holding on. Sometimes it's terrifying and sometimes it's exciting, but no one wants to ride a roller coaster all day every day for years. At some point you want to be back in the driver's seat of your life, and that's where our Driving Change theme began. In the intervening months, however, our thinking on that theme has continued to evolve.

When I think about why Urgent Care has become such a target, I think about June 2020 when I returned to the UCA CEO seat. One of the early conversations I had with our Board of Directors was about how Urgent Care had spent most of our history flying under the radar—on pur-

pose. No one was looking for new licensing or special regulations, so we kept our heads down and got great at doing Urgent Care. Then we got left out of everything during the pandemic, and decided it was time to lift our heads up and start talking about what all of you were doing—and we started getting *on* the radar.

It's become clear to all of us what happens when you get on the radar. You become a target, because you are perceived as a threat. And guess what? Urgent Care *is* a threat. We are a threat to complacency in delivering care. We are a threat to barriers to access. We are a threat to concealment of what healthcare should cost.

Sometimes Driving Change does not mean doing something differently—it means keeping the pedal down on what you already know is right and steering through the course that you are on. It means slowing down to understand a change in the road then accelerating out of the curve. It means learning to see obstacles coming and swerving before they arrive.

These two metaphors—showing up on a radar and steering a course—have something in common: They are isolating. When you lift up out of the herd or become a new blip on a radar or are in the front of a road race it can be a lonely business and all of a sudden everyone is coming for you.

I believe they are coming for us because they are scared. They are scared of what we can do and that we continue to exist successfully through difficult odds year over year over year. And we don't just exist, we push and we experiment and we problem solve and we continue to have full centers with happy, well-taken-care-of patients.

I would love to continue this dialogue when we are together at the Convention later this month. I'm starting to believe that for Urgent Care, Driving Change is not about doing things differently. We have—for the most part—figured “things” out. Driving Change for Urgent Care is now about persistence, not backing down, owning our blip on the radar, standing up and staying up, honing our ops and clinical skills, and keeping the pedal right where it is. *On the floor.* ■



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



# CONTINUING MEDICAL EDUCATION

**Release Date:** March 1, 2023

**Expiration Date:** February 29, 2024

## Target Audience

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

## Learning Objectives

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

## Accreditation Statement



This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Institute for

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

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### • Joshua W. Russell, MD, MSc, FACEP

*Member reported no financial interest relevant to this activity.*

### • Michael B. Weinstock, MD

*Member reported no financial interest relevant to this activity.*

### • Alan A. Ayers, MBA, MAcc

*Member reported no financial interest relevant to this activity.*

### • Steve Weinman, MSc, RN, CEN, TCRN

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## CONTINUING MEDICAL EDUCATION

JUCM CME subscribers can submit responses for CME credit at [www.UrgentCareCME.com](http://www.UrgentCareCME.com). Quiz questions are featured below for your convenience. This issue is approved for up to 3 AMA PRA Category 1 Credits™. Credits may be claimed for 1 year from the date of this issue.

### Human Trafficking in the Urgent Care Setting: Recognizing and Referring Vulnerable Patients (page 13)

- 1. What percentage of trafficked individuals have accessed healthcare services during trafficking?**
  - a. 90%
  - b. 60% to 95%
  - c. 22% to 29%
  - d. There has been no study of trafficked individuals accessing healthcare services
- 2. Peak age of entry into trafficking among children occurs:**
  - a. Between 5 and 10 years of age
  - b. Among preteens (10 to 12 years of age)
  - c. In the early teens
  - d. In the mid- to late teens
- 3. The first priority when treating a patient whom you suspect could be the victim of trafficking is:**
  - a. Address immediate medical concerns
  - b. Screen for human trafficking red flags
  - c. Interview the patient in a room apart from their companion
  - d. Consult with law enforcement or social services professionals

### An Itchy Back with New Moles: A Case Report of Occult Malignancy (page 23)

- 1. Lesar-Trélat Sign (LTS) is a paraneoplastic condition associated with:**
  - a. Adenocarcinomas of the stomach
  - b. Adenocarcinomas of the colon
  - c. Adenocarcinomas of the breast
  - d. Any of the above
- 2. LTS precedes the diagnosis of underlying malignancy in:**
  - a. 18% of cases
  - b. 22% of cases
  - c. 30% of cases
  - d. 68% of cases

### 3. Lesions associated with LTS may appear anywhere on the body, but are most likely to occur:

- a. On the scalp
- b. On the face and neck
- c. On the trunk
- d. On the extremities

### Urgent Care Growth Is Poised to Continue in 2023 (page 35)

- 1. Hospital systems may be unable to prioritize expansion into urgent care for which of the following reasons?**
  - a. Higher baseline labor costs
  - b. Inflation
  - c. Growing fears of a recession
  - d. All of the above
- 2. The final quarter of 2022 saw a large (12% to 28%) spike in:**
  - a. Single-unit operator de novo locations
  - b. 2- to 4-unit de novo locations
  - c. 5- to 9-unit de novo locations
  - d. 10+ unit de novo locations
- 3. Which of the following is considered to be the preferred urgent care operating model of providers, patients, and payers at this time?**
  - a. Pediatric
  - b. Orthopedic
  - c. Limited
  - d. Traditional

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# Human Trafficking in the Urgent Care Setting: Recognizing and Referring Vulnerable Patients

**Urgent message:** As it is common for human trafficking victims to present to urgent care, providers should be able to understand and identify common red flags in the patient presentation, history, and physical exam; treat immediate medical concerns; and know how to refer and safely provide resources for suspected cases.

Preeti Panda, MD

Citation: Panda P. Human trafficking in the urgent care setting: recognizing and referring vulnerable patients. *J Urgent Care Med.* 2023;17(6):13-22.

Key words: Human trafficking, child trafficking, exploitation, public health

## Case Presentation

A 15-year-old male presents to the urgent care clinic for evaluation after a fall. He states he fell off his bike earlier today onto his right arm. He is unaccompanied on today's visit. When questioned about his parents and living situation, he states he lives with his mother but fights with her frequently, and is currently staying with a friend. His vitals are normal for his age. On examination you note tenderness to the distal radius. The extremity is neurovascularly intact and no other signs of injury are noted. Away from the room, the nurse notifies you they were able to obtain consent to treat from the patient's mother over the phone, and notes his mother seemed concerned that he had not been home for several days. X-rays of the right upper extremity reveal a nondisplaced buckle fracture of the distal radius. After a splint is placed, you talk to the patient about his discharge disposition. On further questioning, he reveals his friend is an older man who is known to his family, and that he would like to return to the man's home



upon discharge. He also requests no paperwork be given to him documenting his urgent care visit today. When discussing outpatient medical follow-up for his injury, he states that it will be difficult for him to make the appointment and asks if it is absolutely necessary. After leaving the room, you feel uneasy about your patient's social situation, and suspect there is more to the story.

**Author affiliations:** Preeti Panda, MD, Department of Emergency Medicine, Stanford University School of Medicine. The author has no relevant financial relationships with any commercial interests.

At this time, it feels unsafe to discharge your patient to his friend, but the next steps are unclear.

### Introduction

Human trafficking is a pervasive public health issue affecting children and adults in communities across the United States. Human trafficking is legally defined as the recruitment of individuals for labor or commercial sex acts through use of force, fraud or coercion, for purposes of involuntary servitude.<sup>1,2</sup> More simply put, it is the unjust exploitation of individuals for a profit by a trafficker.

For a case to qualify as human trafficking, all three elements of *acts*, *means*, and *purpose* must be present.

*Acts* refers to a trafficker's recruitment of the person into trafficking; *means* refers to the manipulation and exploitation of the individual through force, fraud or coercion; and *purpose* refers to the sex or labor service the person is forced to provide.<sup>3</sup> Children below the age of 18 engaged in commercial sex acts are by default acknowledged as trafficked persons, with no need to prove force, fraud, or coercion.

The International Labour Organization estimates 50 million individuals are trafficked globally, about a quarter of whom are children.<sup>4</sup> Roughly 7 million individuals are trafficked in high-income countries such as the U.S.<sup>4</sup> Domestically, this issue is present in all 50 states, and in big and small cities.<sup>5,6</sup>

In 2020, the National Human Trafficking Hotline identified almost 17,000 cases of human trafficking in the U.S. across various sex and labor industries.<sup>7</sup> Prevalence estimates in the United States are limited due to the hidden nature of this crime, and true prevalence of human trafficking in the U.S. is likely much higher than the reported cases.

Trafficked individuals can experience a range of medical problems and have unique medical needs. They may experience acute conditions or exacerbations of chronic health issues as a direct result of their trafficking situation, and often suffer from long-lasting effects of physical and psychological trauma experienced during trafficking into survivorhood.<sup>8-10</sup> Trafficked individuals frequently seek healthcare, both while trafficked and as survivors.<sup>11,12</sup> It is, therefore, well established that healthcare providers play an important role in recognizing and intervening for trafficked individuals.

### Trafficking and Urgent Care

This is especially relevant to urgent care providers. Studies have demonstrated that almost 90% of trafficked individuals have accessed health services during traf-

ficking, with reported ranges of 22%-29% of victims presenting to urgent care settings.<sup>12,13</sup> An additional 60%-95% of survivors have utilized emergency department services, which are often inclusive of fast-track and urgent care areas, and certain studies combine ED and urgent care data.<sup>12-14</sup>

Unfortunately, trafficked individuals are commonly missed by medical providers, with one study demonstrating 90% of trafficked individuals had presented to various healthcare settings prior to being identified.<sup>8</sup> Medical professionals also have low rates of reporting human trafficking—only making up about 3% of over 50,000 calls made to the National Human Trafficking Hotline (NHTH) in 2020—further highlighting the need for improved education and awareness.<sup>6</sup>

To best serve patients who may have been trafficked, urgent care practitioners should understand common ways trafficked individuals may present to urgent care settings and be prepared to refer potential victims to appropriate services.

This review article provides a framework for urgent care providers to be able to: 1) understand and identify common red flags in the patient presentation, history, and physical exam; 2) treat immediate medical concerns; 3) know how to refer and safely provide resources for suspected cases.

### Overview of Human Trafficking

#### Patient Characteristics

The ability to recognize trafficking in the medical setting starts with understanding characteristics of trafficked individuals, patient risk factors, and the nature of exploitive situations. Statistics on demographic characteristics of trafficked individuals are limited and likely an under-characterization of the full scope. However, the existing data can be used as a general proxy of sociodemographics.

While the average reported age of globally identified victims is 27, human trafficking affects individuals of all ages—inclusive of children below 8-years-old to adults over 50-years-old. Peak ages of entry into trafficking among children are mid-to-late teens.<sup>15</sup>

Human trafficking affects individuals across genders, as well. In 2020, the NHTH reported that 85% of sex trafficking victims were female, 8% were male, and 1% were gender minorities (ie, individuals who do not identify as cisgender male or female). Of individuals who experienced labor trafficking, 58% were females 43% were male, and 0.1% were gender minorities. This parallels pooled global estimates, which show 70% of identified victims are female, 25% are male, and 5% are

gender minorities.<sup>16</sup>

Male and gender-minority victims likely represent a higher portion of the trafficked population than the data indicate; however, they have historically not been well-identified due to lack of awareness, focus on female victims, and stigma preventing disclosure.<sup>17</sup>

While trafficked individuals are often thought of as international victims brought into the United States, U.S. citizens comprised 40% of all trafficking cases and 60% of sex trafficking cases reported to the NHTH.<sup>6</sup>

Of note, per definitions of human trafficking, individuals do not need to cross state or international lines to be considered trafficked—the designation of trafficking is centered on the presence of exploitation.<sup>3</sup>

Though race, ethnicity, and socioeconomic status of trafficked individuals in the U.S. have not been systematically studied on a large scale, existing data demonstrate that trafficking affects individuals across races and ethnicities, and can affect individuals above and below the poverty line.<sup>13,14,18</sup> Organizations providing direct services to trafficked individuals have reported that human trafficking disproportionately affects minority populations and those living in poverty.<sup>19,20</sup>

#### Risk Factors

While it is possible that an individual from any background can be trafficked, patients at greatest risk include those who have experienced prior trauma, including physical, sexual, or psychological abuse, intimate partner violence, and other sexual violence.

Adults and children experiencing housing instability, homelessness, and financial instability are at higher risk of human trafficking.<sup>7</sup>

Children with these vulnerabilities have often spent time in group homes or homeless shelters, or frequently run away from home. Furthermore, children who have been involved with county services, including child protective services and the juvenile justice system, are at higher risk of trafficking.<sup>21</sup>

The LGBTQ population is at an increased risk for experiencing trauma, abuse, and employment discrimination, among other contributing factors, which increases their risks of being exploited.<sup>22</sup>

Refugees, immigrants, and undocumented individuals are vulnerable due to instability regarding their economic and legal status, as well as from prior history of trauma.

Substance abuse and dependence is a risk factor due to increased likelihood of housing and financial distress, as well as ease of means of control for traffickers.

Finally, individuals with mental health problems, dis-

abilities, and special needs are also a vulnerable population at increased risk of exploitation.<sup>23</sup>

#### Traffickers and Means of Control

Understanding the nature of perpetrators and coercive relationships is important in learning to screen for human trafficking in the clinical setting. Traffickers can be of any age, gender, racial, or ethnic background. They could be employers, friends, intimate partners, family members, and groups or coalitions, including gangs.

While the existence of familial trafficking may be surprising, this is unfortunately common. Trafficking by a family member is the most commonly identified victim-recruiter relationship involving child victims, with 31% of cases reported to the NHTH involved trafficking by family members.<sup>7,24</sup>

Traffickers employ methods of control to both recruit victims and prevent them from leaving. The most common are psychological abuse, threats, false promises, physical abuse, and inhibition of financial independence. Physical and sexual violence, restriction of medical care, use of illicit substances, and withholding of personal necessities are common methods of control that may contribute to health problems of trafficked individuals.<sup>24</sup> While traffickers may restrict movement, this is usually not through physical bondage, but instead through threats, psychological abuse, and other aforementioned means of control.

#### Types of Trafficking

Twenty-five distinct industries affected by human trafficking in the U.S. have been categorized. Examples of industries affected by sex trafficking include escort services, massage businesses, strip clubs, and pornography. Industries affected by labor trafficking are more broad, and include domestic work, construction, traveling sales crews, agriculture and food services, and others.<sup>25</sup> Globally, domestic work, agriculture, and construction are among the industries most reported to involve labor trafficking.<sup>24</sup>

To facilitate a more tangible understanding of characteristics of human trafficking victims, traffickers, and means of control, see **Tables 1A** and **1B**.

#### Unique Healthcare Needs of Trafficked Individuals

Trafficked individuals have unique healthcare needs and may present to healthcare settings for a variety of conditions.<sup>12</sup> They may experience acute conditions as a direct result of their trafficking situation or may have existing chronic conditions exacerbated by trafficking.

Table 1A. Example Scenarios of Human Sex Trafficking	
Scenario	Methods of Control
A woman is groomed by her boyfriend for a period of time with love, gifts, and support. He then asks her to engage in sexual acts with his “friends” to help him earn money because he is in a tough place financially. It is initially framed as temporary but continues more often, and the nature of their relationship gradually changes as he becomes more controlling and abusive.	<ul style="list-style-type: none"> <li>• <i>Financial</i>: The boyfriend (trafficker) keeps all the money she earns, only giving her a small allowance.</li> <li>• <i>Psychological</i>: The trafficker threatens to stop loving her if she stops helping him, and to tell her friends what she has been doing. He doubts her love and commitment to him whenever she asks to stop.</li> <li>• <i>Abuse</i>: The trafficker beats her if she does not comply, and states it is her fault for making him more stressed about his financial situation.</li> </ul>
A child’s mother has a personal history of abuse and sexual violence, and struggles with drug addiction and financial instability. Her drug dealer requests to engage in sexual acts with her 8-year-old son in exchange for drugs, to which she complies.*	<ul style="list-style-type: none"> <li>• <i>Psychological</i>: The mother (trafficker) normalizes these activities from her own experiences, and tells the child it is important to keep this secret so they stay safe. The child loves their mother, and as a minor has no other financial or emotional support system.</li> </ul>
A young woman from the Philippines is promised work abroad to help support her family. The recruiter brings her to the U.S. and withholds her passport. They require her to work in an illicit massage business.	<ul style="list-style-type: none"> <li>• <i>Legal</i>: The business owner (trafficker) withholds legal documents and threatens deportation or jail time.</li> <li>• <i>Financial</i>: The trafficker forces her to work until she pays off a “debt”; food and shelter are provided but no additional money is given.</li> <li>• <i>Abuse</i>: The trafficker employs psychological and physical abuse, withholds basic necessities and limits medical care.</li> </ul>
A 14-year-old transgender male runs away from home to escape physical abuse. He meets other homeless youth who introduce him to an older couple who will give him food and shelter in exchange for sexual favors for them and their “friends.”**	<ul style="list-style-type: none"> <li>• <i>Financial</i>: The child has no financial support system, or other means of obtaining shelter and food.</li> <li>• <i>Abuse</i>: The older couple (traffickers) employ psychological abuse by capitalizing on his lack of existing family support and need for love and emotional support.</li> </ul>
Scenarios adapted from the Polaris Project and the National Center on Child Trafficking. <sup>38,39</sup> *Presence of force, fraud or coercion are not required when a child is trading sexual acts for anything of value	

Survivors also experience long-term health sequelae years after leaving exploitation.

While traumatic injuries, sexual health problems, and mental health issues are intuitive health consequences of human trafficking, health issues of trafficked individuals can span multiple systems.<sup>10,26–28</sup> Potential presenting health complaints, and their respective underlying risk factors from situations of human trafficking, are highlighted in **Table 2**. They include many conditions commonly treated in the urgent care setting. Urgent care providers may also see higher-acuity complaints that require referral to a higher level of care. Trafficked individuals may have limited access to healthcare, with constraints on which health facilities are nearby or have accessible hours, making urgent care a potentially convenient option.<sup>11</sup>

### Approach to Potentially Trafficked Patients in the Urgent Care Setting

The approach to comprehensive evaluation of a potentially trafficked patient in the urgent care setting includes treatment of urgent medical concerns, screening,

and safe referral.

#### Treat Immediate Medical Concerns

The first priority is to address any immediate medical concerns. Necessary medical care should not be delayed, and screening for human trafficking if red flags are present should be incorporated after the plan for treating urgent medical complaints is in place.

In urgent care settings, acute medical problems may need escalation of care and referral to an emergency department. Patients may also require forensic exam for assault, which is time-sensitive and varies by institution. In these cases, emergent care should not be delayed. Direct verbal handoff of concerns for trafficking should be performed confidentially to the accepting provider, and mandated reporting should be performed by the urgent care provider if indicated.

#### Screening for Signs of Human Trafficking

A patient may exhibit signs, or red flags, of human trafficking during the history and physical exam. These potential indicators should be considered in conjunc-

Table 1B. Example Scenarios of Human Labor Trafficking	
Scenario	Methods of Control
A man from Guatemala is recruited for a legal farming job in the U.S. and promised a temporary visa. On arrival, the recruiter states he has to pay off the debt for his visa costs, and is also charged for shelter, food, and transportation provided by the recruiter, adding to his debt. All of his salary goes towards paying off this debt, and he is required to work long hours without days off.	<ul style="list-style-type: none"> <li>• <b>Financial:</b> The job recruiter (trafficker) fraudulently increases the amount of debt owed and takes 100% of wages, barring him from achieving any financial independence.</li> <li>• <b>Legal:</b> The trafficker withholds temporary visa and legal documents from the worker, and threatens jail time for entering illegally.</li> <li>• <b>Abuse:</b> The trafficker employs methods of psychological abuse, including threatening his family abroad and blacklisting him from local work in the area.</li> </ul>
A homeless 15-year-old girl who ran away from home due to abuse is approached by an adult who offers her a job selling items door-to-door. She agrees and is required to sell a minimum quota each day, but is never given wages.	<ul style="list-style-type: none"> <li>• <b>Financial:</b> The job recruiter (trafficker) withholds wages and states they are using all the money for the child’s food and shelter.</li> <li>• <b>Abuse:</b> The trafficker employs threats of violence and keeps the child isolated. The child lacks an emotional support system and does not feel they have anywhere else to turn.</li> </ul>
A Native-American male teenager is recruited by a local casino owner to sell illicit substances and sexual favors to customers. The boy is provided basic necessities, cash, and designer items for his services. The boy’s family is struggling financially.*	<ul style="list-style-type: none"> <li>• <b>Financial:</b> The trafficker provides financial incentives that the boy in turn provides to his family.</li> <li>• <b>Abuse:</b> The trafficker capitalizes on the shame the child feels for engaging in these acts, and threatens to tell the community what he is doing if he leaves.</li> </ul>
Scenarios adapted from the Polaris Project and the National Center on Child Trafficking. <sup>38,39</sup> *Presence of force, fraud or coercion are not required when a child is trading sexual acts for anything of value	

tion with the aforementioned historical risk factors and patient characteristics that are commonly seen in trafficked populations.

*Potential indicators of human trafficking*

Red flags for human trafficking during the history include late presentation to care, history inconsistent with pattern of injury, and concern for unsafe working conditions. Patients who have experienced trafficking may have frequent utilization of urgent care and emergency department services, lack of primary care, and repeated exacerbations of chronic disease with poor medication compliance, as a result of withholding of basic necessities and medical care.<sup>29</sup>

Individuals experiencing exploitation may be accompanied by their trafficker. This person may be introduced as a family member, friend, significant other, or their relationship may be ambiguous. In cases of child trafficking, a much older companion who is either a significant other or nonguardian can be a red flag.<sup>30</sup>

It is important to keep in mind that traffickers span all ages and demographics, and that traffickers may be family members of the patient. A patient who is fearful of their companion, or a companion who exerts significant dominance and control during the patient encounter should raise an index of suspicion for an exploitive or abusive situation. Further, as noted, traffickers

**Potential Indicators of Human Trafficking on Physical Exam**

- Poor hygiene or, in contrast, expensive possessions (designer items, large amounts of cash and hotel keys) despite history of homelessness or running away
- Tattoos or branding (may represent money, a person’s name, or the sign of a gang or organization)
- Signs of physical abuse, including cigarette burns, old bruises, scars
- Fearful or combative demeanor
- Discomfort with undressing or cooperating with physical exam (which may be secondary to prior trauma or presence of trafficker at the health encounter)

may be unwilling to let the patient go to other areas such as radiology, or to the bathroom, without them.<sup>27</sup>

Red flags on physical exam include a general fearful or combative demeanor of the patient, including refusal to undress or cooperate with standard aspects of the physical exam. These actions may be due to the patient’s prior trauma, previous traumatic experiences with the healthcare system, or fear of abuse being identified by the provider with or without the trafficker present.

Physical exam may reveal poor hygiene, or conversely a patient may be very well groomed with expensive

Table 2. Common Health Ailments of Trafficked Individuals <sup>10,12,26–28</sup>		
Health Domain or System Involved	Possible Health Problems	Trafficking-Specific Risk Factors
Constitutional	<ul style="list-style-type: none"> <li>• Fatigue</li> <li>• Dizziness</li> <li>• Weight Loss</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate living conditions</li> <li>• Deprivation of basic necessities</li> <li>• Sleep deprivation</li> <li>• Inadequate nutrition</li> </ul>
Sexual, reproductive, and genitourinary	<ul style="list-style-type: none"> <li>• Pregnancy complications (preterm labor, pregnancy loss)</li> <li>• Unwanted pregnancy (forced abortion, unsafe abortion)</li> <li>• Pelvic and vaginal pain</li> <li>• Pelvic inflammatory disorder</li> <li>• Dyspareunia</li> <li>• Dysuria</li> <li>• Vaginal discharge</li> <li>• Vaginal bleeding</li> <li>• Traumatic GU injuries</li> <li>• Foreign bodies</li> </ul>	<ul style="list-style-type: none"> <li>• Sexual assault and violence</li> <li>• Physical violence experienced during pregnancy</li> <li>• Lack of choice or control regarding safe sex practices</li> </ul>
Infectious disease	<ul style="list-style-type: none"> <li>• Sexually transmitted infections</li> <li>• Urinary tract infections</li> <li>• Hepatitis</li> <li>• HIV/AIDS</li> <li>• Skin infections (cellulitis, abscess)</li> </ul>	<ul style="list-style-type: none"> <li>• Sexual assault and violence</li> <li>• Inadequate working conditions</li> <li>• Lack of choice or control regarding safe sex practices</li> <li>• Poor hygiene</li> <li>• Deprivation of basic necessities</li> <li>• Substance use as means of control or escape</li> </ul>
Trauma musculoskeletal	<ul style="list-style-type: none"> <li>• Blunt traumatic injuries, including contusions, sprains, fractures, bruising and abrasions (acute and chronic)</li> <li>• Penetrating traumatic injuries, including stab wounds, puncture wounds, gunshot wounds, and lacerations</li> <li>• Strangulation</li> <li>• Burns, including cigarette burns and branding</li> <li>• Traumatic brain injury (mild and severe)</li> <li>• Back pain (acute and chronic)</li> <li>• Joint pain (acute and chronic)</li> <li>• Myalgias (acute and chronic)</li> </ul>	<ul style="list-style-type: none"> <li>• Physical violence and abuse from traffickers or solicitors of their services</li> <li>• Torture</li> <li>• Physical restraining, bondage, or confinement</li> <li>• Dangerous working conditions</li> <li>• Repetitive physical tasks</li> </ul>
Neurologic	<ul style="list-style-type: none"> <li>• Headaches</li> <li>• Memory problems</li> <li>• Cognitive problems</li> <li>• Conversion disorder</li> <li>• Seizures</li> <li>• Nonepileptic seizures</li> </ul>	<ul style="list-style-type: none"> <li>• Physical violence</li> <li>• Long-term blunt force trauma and repeated head injury</li> <li>• Dangerous working conditions</li> <li>• Psychological and emotional abuse</li> </ul>
Gastrointestinal and nutrition	<ul style="list-style-type: none"> <li>• Malnutrition</li> <li>• Abdominal pain (acute and chronic)</li> <li>• Irritable bowel syndrome</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate nutrition</li> <li>• Physical violence</li> <li>• Psychological and emotional abuse</li> </ul>
Cardiorespiratory	<ul style="list-style-type: none"> <li>• Difficulty breathing</li> <li>• Palpitations</li> <li>• Chest pain</li> </ul>	<ul style="list-style-type: none"> <li>• Physical violence</li> <li>• Psychological and emotional abuse</li> </ul>
Dermatologic	<ul style="list-style-type: none"> <li>• Rashes</li> <li>• Sores, ulcers</li> <li>• Burns, branding, and tattoos</li> <li>• Scars</li> <li>• Scabies, bedbugs</li> </ul>	<ul style="list-style-type: none"> <li>• Poor hygiene</li> <li>• Inadequate living conditions</li> <li>• Withholding of medical care</li> <li>• Physical violence</li> <li>• Methods of control by traffickers</li> </ul>
Psychological	<ul style="list-style-type: none"> <li>• Anxiety</li> <li>• Depression</li> <li>• Post-traumatic stress disorder</li> <li>• Suicidal ideation</li> <li>• Attempted suicide</li> <li>• Somatic symptom disorder</li> <li>• Substance use</li> </ul>	<ul style="list-style-type: none"> <li>• Psychological and emotional abuse</li> <li>• Physical and sexual trauma</li> <li>• Isolation</li> <li>• Substance use as means of control or escape</li> <li>• Other methods of control, including fraud and deception</li> <li>• Inadequate living conditions</li> <li>• Deprivation of basic necessities</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• Poisoning from various toxic substances, eg, tobacco poisoning, pesticide poisoning</li> <li>• Sunburn or poisoning</li> <li>• Heat stroke</li> <li>• Frostbite</li> </ul>	<ul style="list-style-type: none"> <li>• Dangerous working conditions</li> <li>• Lack of appropriate protective equipment</li> <li>• Inadequate living conditions</li> <li>• Deprivation of basic necessities</li> </ul>
Other	<ul style="list-style-type: none"> <li>• Exacerbation of pre-existing chronic illnesses or progression of pre-existing disabilities; eg, poorly controlled asthma or COPD with frequent exacerbations, poorly controlled type I diabetes with frequent presentation for DKA</li> </ul>	<ul style="list-style-type: none"> <li>• Withholding of medical care</li> <li>• Inadequate living conditions</li> <li>• Deprivation of basic necessities</li> </ul>

possessions despite a social history of homelessness or running away.

If signs of physical abuse are present, providers should consider the larger picture to evaluate if other signs of exploitation are present. Traffickers may engage in “branding” a victim with a tattoo or burn, which may represent the trafficker’s name, gang or organization name, sexually explicit language, or representations of money to signify the individual as their property.<sup>31</sup>

When present, red flags for human trafficking should prompt providers to ask additional screening questions to determine if the patient is at risk of being exploited. **Table 3** offers sample screening questions.

Several human trafficking screening tools have been validated for specific subpopulations of human trafficking, and may be used at the bedside to aid in screening for individuals at risk of human trafficking. Depending on your patient population, these screening tools may be useful for your practice setting or specific patient scenario and can be referenced accordingly. (See **Table 4**.)

Overall, providers should take steps to ask additional clarifying questions to determine the patient’s overall risk of exploitation and assist with informing next steps.

*Best practices for trauma-informed interviewing*

Trafficked individuals have experienced complex trauma and have complex relationships with those who are exploiting them; this is referred to as trauma bonding. Trauma-informed interviewing techniques should be considered to establish a safe space and build rapport.

During screening, efforts should be made to interview the patient alone. If needed, providers should collaborate with their team to identify creative ways to separate a patient from their companion if they are unwilling to step out of the room. For example, a nurse or medical assistant can help facilitate escorting the patient to a private area on the way to leave a urine sample or obtain an x-ray. Providers should use their own judgment in situations where the accompanying individual is combative in leaving the patient alone, and balance separating the patient with considerations of their safety following the visit. A certified medical interpreter should be used when indicated.

Limits of confidentiality based on state-specific mandated reporting laws should be clearly communicated to the patient prior to safety assessments. Providers should ask screening questions in a nonjudgmental manner and take time to listen to the patient’s concerns. Regardless of risk, the patient’s wishes should be respected outside the limits of mandated reporting. Over-

**Table 3. Sample Screening Questions and Validated Screening Tools<sup>27,30,40</sup>**

**Safety Questions**

- Do you feel safe?
- Have you been physically harmed at home or work?
- Are you currently experiencing physical or sexual abuse at home or at work?
- Have you had any thoughts of hurting yourself?

**Trafficking-Specific Questions**

- Have you been forced to do anything you do not want to do?
- Has anyone asked you to do a job without getting paid, or being minimally paid?
- Have you been threatened if you try to leave, or has anyone threatened your family?
- Has anyone ever asked you to have sex or sell anything in exchange for something you wanted or needed (money, food, shelter, or other items)?
- Has anyone taken sexual/revealing pictures or videos of you and sold or shared them?
- Where do you eat and sleep? When was the last time you ate or slept?
- Have you been denied food, water, sleep, or medical care?
- Has your ID or documentation been taken from you?
- Tell me about your tattoos/scars/jewelry

all, the healthcare team should make efforts not to re-traumatize trafficked and at-risk patients during the health encounter.<sup>32,33</sup>

A definite disclosure of human trafficking should not be the goal of patient screening. The provider’s responsibility is to create a safe space for the patient, determine risk of human trafficking, and provide appropriate resources. The factors leading to disclosure are complex, and often have significant implications for patient safety. Disclosure of exploitation is therefore less common than encountering patients with risks and red flags. Victims of human trafficking and those with red flags both benefit from connection to resources.<sup>33,34</sup>

**Safe Referral**

After urgent medical issues have been addressed, the next step is to facilitate safe referral and/or provide resources. These steps should be taken for any individual for whom there is a clinical suspicion of human trafficking, regardless of disclosure or confirmation.

The approach to referral and resource provision for suspected human trafficking varies by location and institution. The following are common resources or protocols providers can look to for guidance:

**1. Health System Protocol**

Your health system or organization may already have a protocol or clinical pathway in place detailing what to do in cases of suspected human traf-

**Table 4. Validated Screening Tools**

Screening Tool Name	Target Population	Screening Tool Length	Source
Short Screening Tool for Child Sex Trafficking	Child sex trafficking	6 questions	Kaltiso et al <sup>41</sup>
Quick Youth Indicators for Trafficking (QYIT)	Trafficking amongst homeless young adults	4 questions	Chisolm-Straker et al <sup>42</sup>
Rapid Appraisal for Trafficking (RAFT)	Adult sex and labor trafficking	4 questions	Chisolm-Straker et al <sup>43</sup>

ficking. This guidance may be co-located with protocols on other forms of violence, including child abuse and intimate partner violence. If protocol information is unavailable, consulting with locally available specialists (eg, child abuse physician, social worker, or sexual assault nurse examiners affiliated with an emergency department) may be useful for providing guidance.

**2. Community Agencies**

Your health network may have a relationship with a local human trafficking task force, child protection agency, or law enforcement group responsible for handling cases of suspected trafficking. These groups may be helpful in providing guidance on next steps and patient resources.

**3. National Human Trafficking Hotline (NHTH)**

Regardless of whether an institutional protocol exists or not, any person, including providers, can call the NHTH. This nationally available service operates via phone, text, or chat, and allows any person to report a suspected case. Agents will walk clinicians through next steps and can provide information on local law enforcement, nongovernmental agencies, safe transportation, and patient resources. Providers can call by themselves, or with the patient present if they give consent. Providers are encouraged to call for further guidance where next steps are unclear. The NHTH website includes a referral directory where providers can search by zip code for local agencies providing services that may be of benefit to the patient.

**4. State-Mandated Reporting Laws**

Providers should be familiar with state-mandated reporting laws concerning human trafficking, child abuse, suicidal ideation, and other threats to patient well-being. Some states require suspected cases of child trafficking to be reported to child protection agencies. Clinicians should follow their state

protocols when applicable, and be clear with patients regarding limits to confidentiality.

In cases of confirmed trafficking, clinicians should discuss possible next steps collaboratively with the patient. Providers should inform patients of options to contact their local agency or national hotline regarding options for safe transportation, housing, and legal services. Providers can make the call alone or with the patient present. The patient’s wishes and preferences should be respected. Exceptions to confidentiality include harm to self/suicidal ideation, children experiencing human trafficking in states with mandated reporting, and when ongoing child abuse is identified. All of these require reporting to the appropriate institutional official or county agency.

When patients with confirmed trafficking decline reporting, or in cases of suspected human trafficking without definite disclosure, clinicians should take steps to provide resources to patients.

Primarily, the provider should emphasize that the urgent care is a safe space that they may return to in the future should they need help. Other local health systems, including emergency departments, may also be highlighted as places the patient can utilize. Based on the nature of the encounter and answers to screening patients, the provider should attempt to identify additional resources that may benefit the patient.

From a medical standpoint, patients should be given referrals or information on connecting with mental health and primary care services. Other resources to pass along to patients include local agencies, safe housing, food banks, and legal services. These resources may be found by consulting a health system protocol, expert consultant, or social worker, or through the NHTH referral directory.

The NHTH can also be contacted by providers for purposes of identifying and responsibly providing resources while keeping the patient’s identity confidential. Importantly, providers can educate patients on how to contact the NHTH in the future.

Clinicians should practice shared decision-making

with the patient regarding how contact information for services can be provided. Providers should be aware that printed materials and information on the patient's mobile device may be accessible to their trafficker, which could put the patient at increased risk.

Responding to cases of potential human trafficking in the UC setting can be challenging. Providers are likely to encounter situations where next steps are unclear. In these cases, providers should prioritize the safety of the patient first, and consult local resources or the national hotline for recommendations.

The urgent care setting can also pose unique challenges regarding patient disposition. UC centers often have limited access to resources such as social workers or forensic examiners, and suspected cases may require transfer to a higher level of care. Urgent care settings may also have limited capacity to board patients.

As consulting with community agencies or the NHTH and determining patient disposition may take time, providers should collaborate with their nursing staff to identify a safe space for patient boarding once medical concerns have been addressed.

#### Documentation

Chart documentation should be focused on objective and medically relevant details of the patient encounter. Providers should avoid phrases that can introduce doubt into the situation—for example, phrases such as “allegedly”—and use objective language in their history and assessment.

Any physical exam findings indicative of abuse or branding should be clearly documented.<sup>27</sup> In cases where there is no definite disclosure of human trafficking but red flags are present, urgent care providers are encouraged to document the red flags and their suspicion of exploitation. As trafficked individuals can present to care multiple times before leaving their situation, the patient may present to the urgent care site in the future. This documentation can be very useful in alerting providers seeing the patient in the future to create a safe space for the patient, continue to watch for red flags, ask appropriate screening questions, and provide resources.

It is important that concerns of human trafficking are documented in a protected area of the chart. Many health systems now have patient portals, which can allow patients and families to view provider notes. Urgent care clinicians should consult with their leadership teams to identify how to create confidential notes which may be used to document sensitive situations, including suspected human trafficking.

Human trafficking-related ICD-10 codes were instituted in 2018, and may be used to document suspected or confirmed trafficking.<sup>35</sup> Utilization of these codes have the potential to improve trauma-informed care for the patient's future visits by alerting future providers to the history, and to benefit research-and-response efforts in the healthcare setting.<sup>36</sup> However, clinicians should take steps to enter patient coding confidentially, and be careful in utilizing these codes if they cannot be hidden in the electronic medical record and could be printed on patient materials or viewed in online patient portals.<sup>37</sup>

#### Case Follow-Up

The patient's buckle fracture seems consistent with the mechanism of injury you obtained from the history. A fall off a bike may truly be the reason he sustained the injury, but other red flags during the encounter (unstable home situation, running away, older adult “friend,” wary about paperwork, and not wanting medical follow-up) prompted further investigation into whether he was being exploited.

You have established rapport with the patient, and state that you would like to ask additional questions regarding his social situation. You disclose that you can keep the conversation confidential unless someone is harming him, exploiting him, or if he has thoughts of harming himself. With his permission, you begin to ask him screening questions.

At first he states he feels safe at home with his mother and his friend. When asked if anyone has made him do something he does not want to do, or if he has exchanged sex for anything of value, he is initially quiet.

On further questioning, he tells you his friend sometimes asks him for sexual favors in exchange for food and a place to sleep. He starts to share more but then states he is not ready to talk about it. He says he does want help and agrees to talk to the human trafficking hotline. You notify your nurse that you are boarding the patient for 1-2 hours while you figure out disposition.

After calling the hotline with the patient present, the agent facilitates connection to the local human trafficking task force and child protective services agency for mandated reporting. Safe transport is arranged for the patient to the local pediatric emergency room, where the task force and protective services will perform a comprehensive assessment and determine safe patient placement. Prior to transport, you provide a confidential verbal handoff to the receiving physician at the pediatric emergency department.

## Conclusion

Recognizing human trafficking in healthcare settings can be challenging and requires an index of suspicion. It is important for urgent care providers to understand the nature of human trafficking and presenting signs. Recognizing red flags for human trafficking, creating a safe space for patients, and providing resources can make a significant impact on trafficked individuals, regardless of their definite disclosure of exploitation.

To best serve patients experiencing human trafficking, urgent care providers and staff should take steps to familiarize themselves with local resources and policies for confidential electronic medical record documentation. ■

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# An Itchy Back with New Moles: A Case Report of Occult Malignancy

**Urgent Message:** Urgent care is a likely destination for patients presuming that a new mole or other dermatologic issue is benign. Providers must maintain a wide differential and consider prospective diagnoses that could ultimately prove to be more ominous (or even life-threatening).

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Key words: paraneoplastic syndrome, gastric cancer, seborrheic keratosis, case report

## Abstract

**Introduction:** Lesar-Trélat sign (LTS) is an infrequent paraneoplastic phenomenon associated with an array of malignancies. Given that the primary manifestation is a seemingly benign dermatologic issue, such patients may choose urgent care as their initial site of clinical evaluation.

**Clinical presentation:** A 43-year-old man with no significant past medical history presented to UC with complaints of itching and “moles” appearing across his back for the past 2 months. He also had some vague upper abdominal pain and unintentional weight loss.

**Physical exam:** The patient’s skin exam revealed diffuse hyperpigmented ovoid lesions consistent with seborrheic keratoses (SK) restricted to his back. He was prescribed hydrocortisone 2.5% cream and referred to a dermatologist.

**Case resolution:** Several weeks later, the patient saw a



dermatologist who prescribed a higher-potency steroid. His symptoms persisted, however. His increasing abdominal pain eventually led him to present for care in the emergency department. After computed tomography of his abdomen and esophagogastroduodenoscopy (EGD), he was diagnosed with metastatic gastric ade-

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*“Early identification of paraneoplastic conditions is a crucial clinical skill to allow for the most rapid referral, diagnosis, and treatment of the underlying malignancy.”*

nocarcinoma. Unfortunately, the patient died of complications of his cancer diagnosis several months after his UC presentation.

**Conclusion:** Awareness of the potential clinical significance of LTS and its association with occult malignancy may lead to earlier referral, cancer identification, and improved prognosis for afflicted patients.

### Introduction

Lesar-Trélat Sign (LTS) is a paraneoplastic condition involving rapid appearance of multiple SK and is associated with a variety of solid organ malignancies, most commonly adenocarcinomas of the stomach, colon, and breast.<sup>1</sup> LTS can also occur in cases of hematologic malignancy. It is nonspecific, however, and can also occur in benign conditions, such as pregnancy.<sup>2</sup> Given the seemingly innocuous nature of multiple moles, patients and clinicians alike may initially underappreciate the potential gravity of the phenomenon.

### Clinical Presentation

A 43-year-old man with no significant past medical history sought care at his local UC center due to itching and associated “moles” that had appeared across his upper back over the prior 2 months.

His symptoms began with pruritus across the thoracic portion of his back, for which he had tried over-the-counter diphenhydramine with some initial relief. Several weeks later, however, the pruritus became more severe and he began noticing the dark spots appearing on his back.

The moles were restricted to his back and he had had no prior instances of skin lesions. The patient had taken some photographs with his smartphone which confirmed there were no lesions present on the back just 3 months earlier.

He denied any prominent family history of related

Figure 1.



conditions. He worked as a software engineer and denied alcohol and drug use. He was sexually monogamous with his wife.

On review of symptoms, he was otherwise asymptomatic except for occasional postprandial abdominal pain, for which he used famotidine with minimal relief.

### Physical Exam Findings

The patient had normal vital signs when he presented to UC. He was well appearing and had an unremarkable cardiopulmonary and abdominal exam. His skin exam revealed numerous, diffuse SK distributed across his thoracic back (similar to the pattern seen in **Figure 1**). The SK were restricted to the posterior trunk and the remainder of his skin exam was within normal limits.

### Urgent Care Management

The provider caring for the patient in UC realized this was an atypical presentation, with a larger number of SK presenting so rapidly and with an unusual degree of pruritus. Hence, in addition to prescribing a short course of 2.5% topical hydrocortisone cream, a dermatologist referral was made for follow-up.

### Case Continuation and Timeline

The patient saw a dermatologist several weeks later. They prescribed a high-potency steroid, but the patient's itching continued to progress as did his upper abdominal pain. Additionally, he began to develop progressive fatigue and had 5 kg unintentional weight loss.

### Diagnostic Assessment and Case Conclusion

Approximately 1 month after the dermatologist visit, the patient presented to the emergency department for severe abdominal pain and vomiting. He underwent computed tomography of the abdomen and pelvis, which demonstrated severe gastric thickening with gastric outlet obstruction and multiple heterogeneous lesions in the liver.

The patient was admitted to the hospital and had an upper endoscopy with biopsies that revealed gastric adenocarcinoma; this was confirmed to be stage IV given the presence of liver metastases.

Before he began chemotherapy, he suffered a massive gastrointestinal hemorrhage, which required intensive care unit admission. Unfortunately, due to multiple subsequent complications, the patient died just 2 weeks after his initial cancer diagnoses.

### Discussion

Leser-Trélat Sign (LTS) is a paraneoplastic condition involving rapid appearance of multiple SK and is associated with a variety of malignancies, most commonly adenocarcinomas of the stomach, colon, and breast.<sup>1</sup> LTS can be seen in cases of hematologic malignancy, as well, but also in benign conditions, such as pregnancy.<sup>2</sup> In the 1800s, Leser and Trélat described angiomas associated with underlying malignancy.

A century later, Hollander noted that the rapid appearance of SK occasionally preceded the diagnosis of certain cancers, most commonly gastric cancer.<sup>3</sup>

Lesions can occur anywhere on the body, but most commonly occur on the trunk (~20% of cases). Patients usually become aware of the lesions because of associated pruritus, which occurs in approximately half of cases.<sup>2</sup>

The etiology of LTS is uncertain, but it is thought to be most likely that the SK appear due to high levels of circulating growth factors secreted by the associated neoplasm.<sup>3</sup>

LTS precedes the diagnosis of the underlying malignancy in 68% of cases,<sup>4</sup> as occurred in the case presented. When identified, LTS warrants rapid referral to a primary care provider who can coordinate a work-up,

*“An urgent care assessment which leads to an earlier diagnosis of malignancy can dramatically influence a patient’s treatment options and, thus, prognosis.”*

which generally includes comprehensive bloodwork (eg, complete blood count, metabolic panel, etc.) as well as screening upper and lower endoscopy.<sup>3</sup>

### Key Take Away for Urgent Care Providers

LTS represents one of many paraneoplastic syndromes that can initially present in urgent care, often with mild symptoms that may seem innocuous. Early identification of paraneoplastic conditions is a crucial clinical skill to allow for the most rapid referral, diagnosis, and treatment of the underlying malignancy.

With rare exceptions, metastatic cancer is incurable.<sup>5</sup> Therefore, an urgent care assessment which leads to an earlier diagnosis of malignancy can dramatically influence a patient’s treatment options and, thus, prognosis.

### Ethics Statement and Patient Perspective

Informed consent for publication was obtained from the deceased patient’s wife. She stated that she was hopeful that sharing her husband’s story may increase clinician awareness for this condition. ■

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# Negative RADT and Bacterial Growth on Throat Culture

**Urgent message:** “Sore throat” is among the most common presenting complaints in urgent care. Accurate diagnosis featuring proper use of diagnostic tools is essential to ensure timely, appropriate treatment, including appropriate utilization of antibiotic agents to minimize risk for antibiotic resistance.

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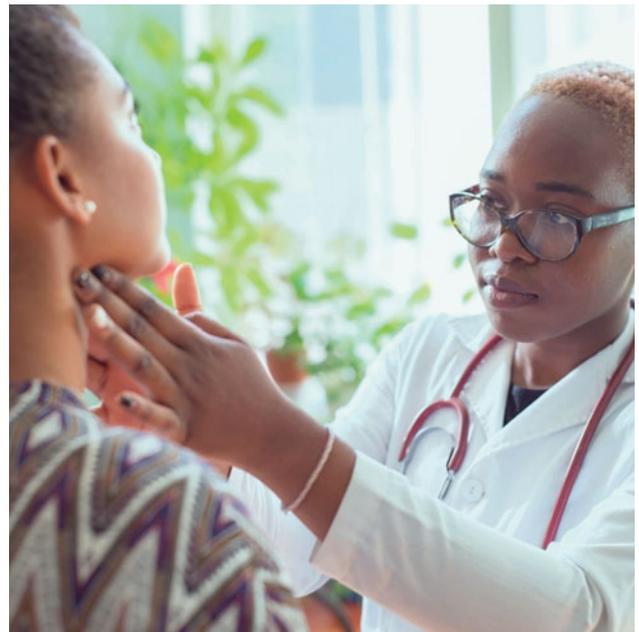
## Abstract

The primary purpose of this study was to evaluate the prevalence of bacterial growth on throat culture despite a negative rapid antigen detection test. The secondary aim was to determine how often throat cultures were performed, the percentage of positive RADT, the prevalence of GAS by season and gender, whether GAS or other bacteria grew after a negative RADT and the associated prevalence, and the types of bacteria other than GAS that grew in culture.

## Introduction

Acute pharyngitis is one of the most common complaints that physicians encounter in the emergency department (ED). In 2010, approximately 1.8 million ED visits involved acute pharyngitis. Among patients 15 years old or younger, it accounted for about 2.8% of all ED visits. That is roughly 700,000 cases out of the 1.8 million visits.<sup>1</sup>

Although most cases of acute pharyngitis are viral, bacteria still account for a proportion of cases that require antibiotic treatment. The symptoms of bacterial and viral pharyngitis tend to overlap.



Factors associated with a bacterial infection include sudden-onset sore throat, fever, tonsillopharyngeal or uvular edema, patchy tonsillar exudates, cervical lymphadenitis, exposure to Group A *beta hemolytic streptococcus* (GAS), or scarlatiniform skin rash and/or strawberry tongue, in the absence of viral symptoms.<sup>2</sup>

The viral symptoms of pharyngitis can include coryza, conjunctivitis, cough, hoarseness, anterior stoma-

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**Table 1. Frequency of RADT Tests Performed by Season**

Season	Frequency	Percentage
Fall	1,091	28.4
Winter	1,578	41.1
Spring	757	19.7
Summer	410	10.7
Total	3,836	100

titis, discrete ulcerative lesions or vesicles, and diarrhea.<sup>3</sup> GAS is the most common cause of bacterial pharyngitis, representing about 20%-30% of cases in pediatrics and 5%-15% in adults.<sup>4</sup> Although bacterial pharyngitis is mostly a benign illness, it can lead to complications that affect long-term health, such as acute rheumatic fever, rheumatic heart disease, and post-streptococcal glomerulonephritis.<sup>2</sup> Hence, treatment of GAS is imperative to prevent these potential complications.

Infection with GAS can result in an autoimmune condition called acute rheumatic fever. This can further affect heart valves, leading to rheumatic heart disease.<sup>5</sup>

The treatment of GAS may not always prevent rheumatic fever, but there is a much higher occurrence of it when the bacterium is not completely eradicated. This commonly occurs in low-income countries where aggressive treatment with appropriate antibiotics is not available.<sup>4</sup> In such countries, rheumatic heart disease remains the most common acquired heart disease in children, adolescents, and young adults; it accounts for roughly 233,000 deaths per year worldwide.<sup>5</sup> In higher-income countries, acute rheumatic fever and heart disease are rare, with less than 10 cases per year per 100,000 children. The difference is largely due to differences in living conditions, hygiene, increased antibiotic usage, increased access to primary care providers and changes in GAS epidemiology.<sup>5</sup>

The Infectious Diseases Society of America and the American Heart Association recommend using clinical judgment to determine who should be tested for GAS. If the need for GAS testing is unclear, the Centor criteria can be applied. Centor criteria includes age, presence of exudate or tonsillar edema, tender or swollen anterior cervical lymph nodes, presence of temperature >100.4°F and whether a cough is present. It is generally recommended to perform a rapid antigen detection test (RADT) if the modified Centor score is ≥2. The criteria should be used as a clinical tool to guide whether patients would benefit from an RADT.<sup>2</sup>

In order to perform an RADT, specific test swabs are

**Table 2. Frequency of Positive and Negative RADT**

RADT	Frequency	Percentage
Positive	662	17.3
Negative	3,173	82.7
Missing	1	0
Total	3,836	100

used to collect a sample from the tonsillar and posterior pharyngeal mucosal surfaces. The GAS cell wall antigens are then extracted and detected using immunoassay, with results typically available within 10 to 60 minutes.<sup>6</sup> It is generally recommended to treat symptomatic patients with antibiotics if RADT is positive. The specificity of most available RADT is high (88% to 99%), and false positive tests are uncommon. In adults with suspected GAS pharyngitis, an RADT is usually sufficient to make the diagnosis, and additional testing such as throat cultures are not needed.<sup>5</sup>

The sensitivity of RADT in adults is moderate (77% to 92%), varying with the specific assay that is used. Because of this, the diagnosis of GAS pharyngitis could be missed if follow-up throat culture is not performed.

Overall, GAS accounts for 15% to 30% of pharyngitis in children between 5 and 15 years of age. During winter and early spring, GAS accounts for up to 35% to 40% of cases in children and adolescents. In pediatric patients, the diagnosis of GAS pharyngitis is made by a positive RADT, throat culture, or molecular assay. If initial RADT is negative a follow-up throat culture is recommended, since RADT may be falsely negative in up to 30% of cases.<sup>3</sup>

If initial testing with molecular assay is negative, it is not necessary to perform a throat culture, since molecular assays have a high sensitivity.

Timely treatment of GAS pharyngitis in the pediatric population is necessary to prevent suppurative complications and acute rheumatic fever, prevent disease transmission, and reduce duration and severity of symptoms. It is vital to confirm the diagnosis of GAS pharyngitis prior to the initiation of antibiotics in order to prevent unnecessary antibiotic treatment in patients with viral pharyngitis.<sup>3</sup>

The confirmatory throat culture takes roughly 24 to 48 hours to result. The sensitivity of throat culture is between 90% and 95%, and the specificity ranges from 95% to 99%.<sup>2</sup> It is generally recommended to not empirically treat with antibiotics while awaiting throat culture results. The short delay in treatment does not appear to correlate with an increased risk of acute rheumatic fever in adults. However, it is unknown whether this short delay is asso-

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**Table 3. Frequency of Throat cultures Performed**

Throat culture performed	Frequency	Percentage
Yes	3,168	82.6
No	666	17.4
Total	3,834	99.9
Missing	2	0.1
Overall Total	3,836	100

**Table 4. Throat Culture Results After Negative RADT**

Throat culture result after negative RADT	Frequency	Percentage
GAS +	10	0.3
GAS -	3,158	82.3
Total	3,168	82.6
Missing (+ RADT)	668	17.4
Overall Total	3,836	100

ciated with increased risk of other complications, such as the development of a peritonsillar abscess.

If the clinical suspicion of GAS pharyngitis is high and the testing results are not readily available, it is reasonable to initiate treatment with antibiotics until results return. If the diagnosis of GAS pharyngitis is not confirmed, it is recommended to discontinue antibiotics. PCR-based assays have a higher sensitivity than RADT or culture, but are not routinely available in the ED.<sup>2</sup>

The question of whether to treat all patients with sore throat with antibiotics is controversial. GAS has an asymptomatic carrier rate of up to 20%. Due to increasing rates of antibiotic resistance and potential for side effects and allergic reactions to antibiotics, it is recommended to avoid prescribing them for mild viral self-limiting illnesses.<sup>4</sup> Antibiotic treatment is not recommended for chronic asymptomatic GAS carriers or GAS carriers with superimposed viral infections.<sup>7</sup> Ultimately, the decision to treat patients with antibiotics is made clinically by the provider, with the above factors taken into consideration.

The primary purpose of this study was to evaluate the prevalence of bacterial growth on throat culture despite a negative RADT. The secondary aim was to determine how often throat cultures were performed, the percentage of positive RADT, the prevalence of GAS by season and gender, whether GAS or other bacteria grew after a negative RADT and the associated prevalence, and the types of bacteria other than GAS that grew in culture. This information is critical to help guide clinicians regarding when to prescribe antibiotics to prevent their overuse and to reduce antibiotic resistance.

**Materials And Methods**

**Study Design, Setting, and Selection of Participants**

This was a retrospective cross-sectional study conducted at a rural community hospital ED in Lumberton, NC. This facility has a volume of roughly 61,000 patients annually. The study setting was UNC Health South-eastern ED, involving review of medical records from

November 5, 2017 to October 31, 2018. The medical chart review spanned 12 months in order to incorporate all four seasons of the year. Eligibility was based on whether the patient had received a rapid antigen detection test, also known as rapid strep test, for suspected pharyngitis. Due to the large number of patient records meeting the inclusion criteria, those who were less than 10-months-old were excluded. Moreover, a randomization was performed to select a representative study.

**Study Variables**

The primary outcome of this study was the prevalence of bacterial growth on throat culture in the presence of a negative RADT. In addition, we assessed for the percentage of throat cultures performed, percentage of positive RADT, and prevalence of GAS by season and gender, whether GAS or other bacteria grew after a negative RADT and the associated prevalence, and the types of bacteria other than GAS that grew in the culture.

**Data Analysis**

For ease of analysis, a randomization generator was applied to select a representative sample size from the high volume of medical records that met the inclusion criterion. Descriptive statistical analyses involving frequencies/percentages and a Chi-squared test for difference in proportions were performed. Data was analyzed using SPSS (IBM, Chicago, version 26).

**Results**

**Demographics**

A total of 3,836 medical records of unique patients were included in the study. The mean age was 26.4 years old with a standard deviation of 21.1 years. Out of the total, 1,577 (41.1%) patients were male. Since the study was designed over a 12-month time course, the frequency of testing in each season was performed. The majority of rapid strep testing occurred in the winter, followed by fall, then spring, and lastly summer. **Table 1** demon-

Table 5. Throat Culture That Grew Bacteria Other Than GAS		
Throat culture growing bacteria other than GAS	Frequency	Percentage
Yes	29	0.8
No	3,136	81.8
Total	3,168	82.6
“Missing”/ Positive RADT	668	17.4
Overall Total	3,836	100

strates the frequency and percentage of overall testing performed by season.

Of the total 3,836 RADT performed between November 5, 2017 and October 31, 2018, 662 returned positive and 3,173 returned negative, with one missing data point (Table 2). Throat cultures were performed on 3,168 (82.6%) samples out of 3,834 RADT. No throat cultures were performed on 666 (17.4%) of the RADT because 662 of them resulted positive (Table 3). There was a total of 3,168 throat cultures performed. Of those negative RADT with a throat culture result, 10 (0.3%) were found to grow GAS and 3,158 (82.3%) did not (Table 4).

Twenty-nine of the 3,168 throat cultures grew bacteria “other than GAS,” accounting for 0.8% of overall throat cultures. The most common bacterium that grew out “other than GAS” was Group A *beta hemolytic streptococcus*, also known as *Streptococcus pyogenes*. In fact, GAS grew out in 27 of the 29 throat cultures (93.1%) considered not to be bacterium other than GAS, representing 0.85% of overall throat cultures performed (Table 5). The other two growths were the bacterium *E coli* and normal respiratory flora.

Combined with the 0.3% of positive GAS on throat cultures discussed above, the overall rate of GAS growth on throat culture despite a negative RADT was 1.15%. A statistically significant difference in proportions of throat cultures positive for bacteria despite a negative RADT, with GAS, was observed, with winter season representing the most and summer the least ( $p < 0.001$ ).

The majority of the positive throat cultures for bacteria was done in the winter, (62.1%), followed by fall (17.2%), spring (13.8%), and summer (6.9%). A Chi-squared test of goodness-of-fit for proportions demonstrated a statistically significant difference in proportions of throat cultures performed, with winter season representing the most and summer the least ( $p < 0.0001$ ).

Regarding RADT, out of the 662 patients that tested positive, 287 (43.4%) were males and 375 (56.6%) were females. This difference in the proportion of females that tested positive for GAS on RADT compared to males was statistically significant ( $p = 0.001$ ).

By season, it was observed that the majority of positive RADT in patients occurred in the winter, with 300 (45.3%), followed by spring with 158 (23.9%), then fall with 132 (19.9%), and lastly summer with 72 (10.9%). Furthermore, for patients who tested positive for GAS on RADT, there was a statistically significant difference in their proportion by season, with winter being the most frequent and summer being the least ( $p < 0.001$ ).

## Discussion

The primary purpose of this study was to determine the prevalence of bacterial growth on throat culture despite a negative RADT. A total prevalence rate of 1.15% was obtained for the growth of GAS on throat culture despite a negative RADT. This comprised a 0.3% incidence of GAS growth on throat culture and a 0.85% incidence for other bacterial growth. Out of the 29 throat cultures that were positive for bacteria after a negative RADT, 93% grew GAS. Other bacteria that grew on throat culture included *E coli* and normal respiratory flora.

An observational study<sup>8</sup> discussed controversy regarding whether there is need for routine backup testing after a negative RADT.

Out of the 15,555 adult patients who had a negative RADT and follow-up DNA probe test, 6% (933) had a positive DNA probe. From the 933 patients who had a positive DNA probe after negative RADT, 48% (448) had received an antibiotic at the time of the visit and 52% (485) received an antibiotic prescription within an average of 2.3 days of the visit.

One reported complication, for a patient with a negative RADT who did not receive the DNA probe and developed a peritonsillar abscess, was observed. Overall, management was only altered in 3% of patients who had to return for antibiotic treatment. A high rate of inappropriate antibiotic prescriptions was demonstrated, with 56% of patients receiving an antibiotic, while only 19.5% had confirmed strep throat.

The false negative rate of RADT for the diagnosis of GAS was found to be 6%. The benefit of backup testing in adults is questionable due to the high cost, antibiotic delay, and low rate of suppurative complications.<sup>8</sup>

For a pediatric population, a study investigated the impact of RADT, throat culture, and point-of-care (POC) polymerase chain reaction (PCR) on the decision to

treat children with antibiotics for pharyngitis at a large pediatric clinic.

This chart review conducted at a single site during the fall and winter of 2016 to 2017 consisted of a total of 110 of 255 samples (43.1%) that were GAS positive. It involved tests from patients of 3 to 18 years of age. It was shown that RADT results were less specific and throat culture results were less sensitive than reported in established literature. This has led to increased rates of inappropriate antibiotic prescription habits and use. POC PCR had high sensitivity and specificity and rapid turnaround times, which led to more appropriate antibiotic use.<sup>9</sup>

It is generally recommended to obtain throat cultures despite a negative RADT in the pediatric population. In a 2012 IDSA guideline, a backup throat culture in children with a negative RADT is recommended to prevent complications such as peritonsillar abscess, rheumatic fever, and poststreptococcal glomerulonephritis.<sup>10</sup> Although these complications are rare in the U.S., they can be prevented if antibiotics are started within the first 9 days of infection.<sup>11</sup>

It is valuable to know which specific test is being performed because each test has a different sensitivity. Backup cultures are recommended when lateral-flow RADT is used because it has a wide variety of sensitivity.<sup>10,11</sup> Optical immunoassays or molecular tests have a much higher sensitivity and lower rate of false negative tests; therefore, these do not require a backup culture to be performed in pediatric patients. In general, if a backup culture is not performed, patients should be advised to return for a throat culture and further testing if symptoms persist for more than 5 days.<sup>10,11</sup>

The RADT and confirmatory throat culture are not as specific or sensitive compared with other testing options. The POC PCR test would be a more optimal test; however, it is not currently available for use in the emergency department due to its high cost. Hence, the RADT and throat culture are still the most widely used methods of testing for GAS in the ED.

It is imperative that clinicians follow the guidelines for treatment of GAS pharyngitis. A study concluded that antibiotic use for sore throat remains common, and many clinicians do not follow current guidelines for diagnosis of GAS pharyngitis. Antibiotic use overall was frequent (49.3%), but less so in combination with RADT plus throat culture (31.2%) or nucleic acid amplification test (NAAT) alone (34.5%). Antibiotic use was significantly higher with RADT alone (53.4%) or no test (57.1%). Furthermore, it was found that the diagnosis of GAS pharyngitis using RADT plus culture or NAAT alone was associated with lower use of antibiotics.<sup>12</sup>

In clinical application, all patients who test positive for GAS, either on RADT or confirmatory throat culture, should receive antibiotic treatment to eradicate the bacterium in order to prevent long-term complications.

According to the recommendations by American College of Physicians, it is recommended to treat empirically with antibiotics if the patient has a Centor score of 4 or higher, despite the RADT or throat culture results.<sup>13</sup> Clinicians should avoid prescribing antibiotics for patients with viral pharyngitis in order to help prevent further antibiotic resistance. It is necessary that clinicians follow through with positive throat cultures and treat patients with appropriate antibiotics. Patient follow-up to return for treatment is crucial; patients lost to follow-up may not receive the treatment they need if results return after they are already discharged.

Whenever bacteria other than GAS grow on throat culture, it is important that patients be treated with an antibiotic that targets each specific bacterium. If patients are treated empirically up front with antibiotic coverage for GAS prior to results of culture, the antibiotic prescribed may not eradicate the bacteria if it is a different type other than GAS.

Regarding the seasons, winter had the highest proportion of GAS and other bacterial pharyngitis, and summer had the lowest. As demonstrated in literature, GAS pharyngitis is more common in late winter and early spring.<sup>14,15</sup>

Females, more than males, proportionally, tested positive for GAS on RADT. The mean age for this study was 26.4 years. The most frequent age that grew out bacteria on throat culture despite a negative RADT was 27 years old, and all patients were below the age of 53 years. This is consistent with literature showing that most cases of GAS in adults occur by the age of 40 years and decline afterwards.<sup>7</sup> Group A *beta hemolytic streptococcus* accounts for about 5% to 15% of adult cases and 20% to 30% of cases in pediatric patients.<sup>4</sup> A 2010 meta-analysis found that symptomatic children 5 to 15 years of age are more likely to have throat cultures positive for GAS infection compared with younger children (37% vs 24%).<sup>16</sup> Additionally, the 2012 IDSA guideline stated that GAS infection is uncommon in children younger than 3 years.<sup>10</sup>

### Limitations

There are multiple limitations in this study. One is the specificity and sensitivity of the RADT test itself. Although the RADT test is highly specific (95%), the sensitivity can vary from 70% to 90%. This is dependent on the RADT sample collection technique, sample site,

and antigen load.

Throat culture of the posterior pharynx using sheep blood agar is the gold standard for diagnosis. The throat culture sensitivity depends on the culture atmosphere and media additives, which are not standardized.

As this was a retrospective study, the RADT were obtained by multiple nurses with different levels of training, at least some of whom might have been unaware of the recommended site for testing. Therefore, the sample could have been collected from the incorrect location, thereby affecting the results of the test, and potentially yielding inaccurate results.

Throat cultures were obtained on every patient who received an RADT. For every RADT performed, a throat culture was automatically reflexed to be obtained. According to the literature, it is recommended that a second swab be obtained for throat culture analysis and that the RADT swab should not be used for culture.<sup>2</sup> However, at this rural ED, the same swab is used for both the RADT and the throat culture.

Another limiting factor is that the amount of growth on the culture is unable to distinguish colonization from active infection.<sup>17</sup>

Another limitation could be the difficulty in ensuring adequate patient follow-up when results are pending at time of discharge in rural populations. For example, those with a negative RADT and pending throat culture at time of discharge may have difficulty returning for treatment for positive throat culture. A high proportion of the population in the location of the rural ED studied face challenges with transportation and finances, which make follow-up visits less likely to occur.

In areas where patients face these challenges, each provider may approach treatment differently. If it is thought that the patient will not be able to return for treatment if throat culture returns positive after a negative RADT, some providers may treat the patient upfront with antibiotics, while still awaiting the results. Other providers may be willing to wait for the results to return before prescribing the patient antibiotics, and verify that the patient is able to return for treatment. Since the course of treatment is determined by the clinician, patients will not all be treated with the same method.

## Conclusion

The overall rate of bacterial growth on throat culture despite a negative RADT was small. Hence, the likelihood that bacteria would grow on culture despite a negative RADT is very low. Therefore, antibiotics should be reserved for patients with a positive RADT or throat culture, or a high index of suspicion despite a negative RADT. Overall,

a study such as this should provide information that empowers clinicians to decrease the number of antibiotic prescriptions for sore throat primarily due to viral pharyngitis in order to avoid antibiotic resistance. Clinicians are encouraged to restrict antibiotic treatment for patients with confirmed GAS or highly suspicious histories and exams for bacterial pharyngitis. ■

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# Urgent Care Growth Is Poised to Continue in 2023

**Urgent message:** Urgent care operators of all sizes are poised for continued growth in 2023. In this post-COVID environment, look to shifting de novo ownership trends, a slowing of health system activity, and independent entrepreneurs regaining their courage as the driving factors.

Alan A. Ayers, MBA, MAcc

The COVID-19 pandemic is no longer the primary driver of decision-making for urgent care operators. While its impact over the past few years cannot be understated, other factors are now responsible for propelling the industry forward.

Operators continue to seek new ways of connecting with patients beyond upper respiratory visits in suburban settings. Moreover, widespread challenges facing the healthcare industry are once again changing the landscape of urgent care ownership.

Despite these challenges, urgent care is poised for another year of growth in 2023. However, a look at the data shows how the growth engine has evolved since 2020.

Today, operators with 10+ units represent nearly 50% of new rooftops. This segment has been growing consistently due to strong financials and private equity funding, allowing these centers to thrive throughout the pandemic and capitalize on increased volumes.

Meanwhile, as the industry sees slowed activity by health systems, independent operators will have plenty of opportunities to differentiate themselves from the competition by focusing on new populations, new payers, and new services.

As normalcy returns and the healthcare industry's familiar challenges reclaim center stage from the COVID-19 pandemic, urgent care will continue to adapt, with growth forecast for 2023.



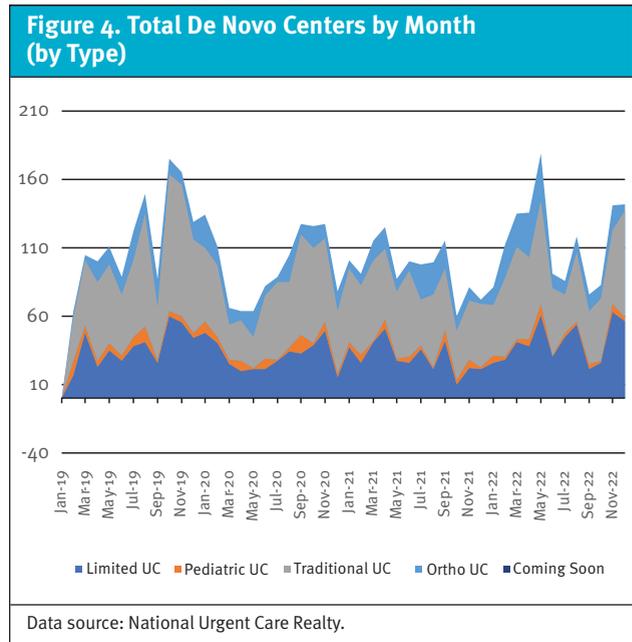
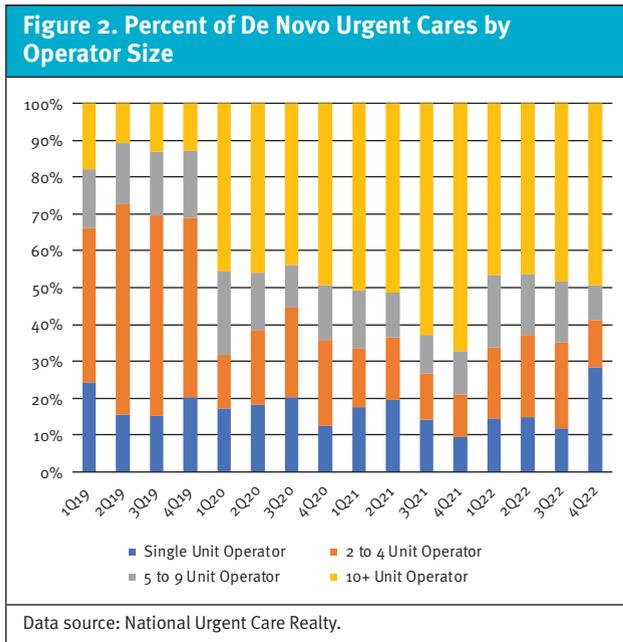
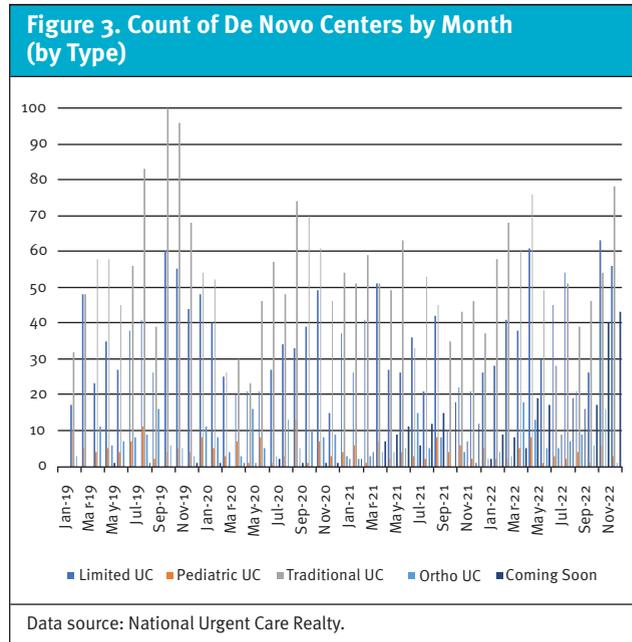
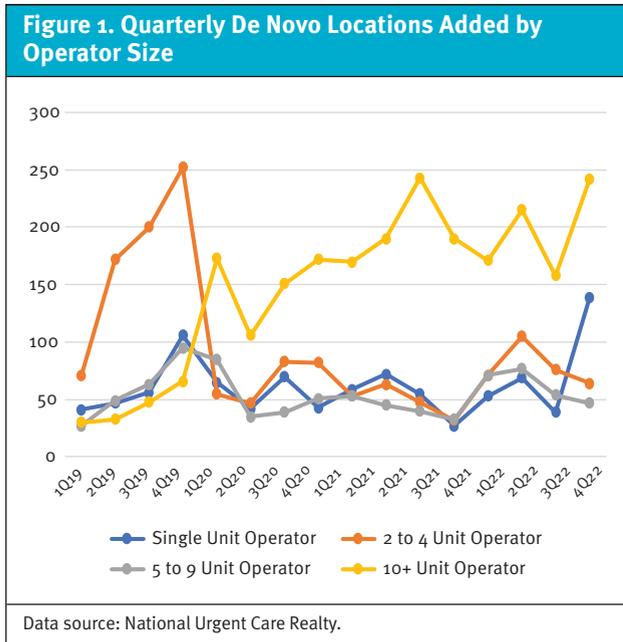
## Opportunities for Growth at All Scales

Before the pandemic, urgent care's growth engine was the two- to four-center operator. With many operators opening a second location and settling happily into "growth mode," this segment accounted for the majority of new rooftops added.

But the pandemic brought about many changes starting in 2020. Though COVID-19 would eventually lead

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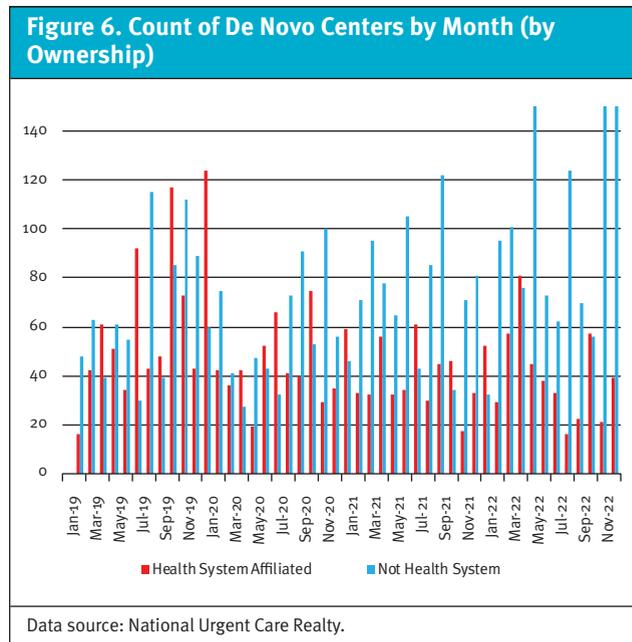
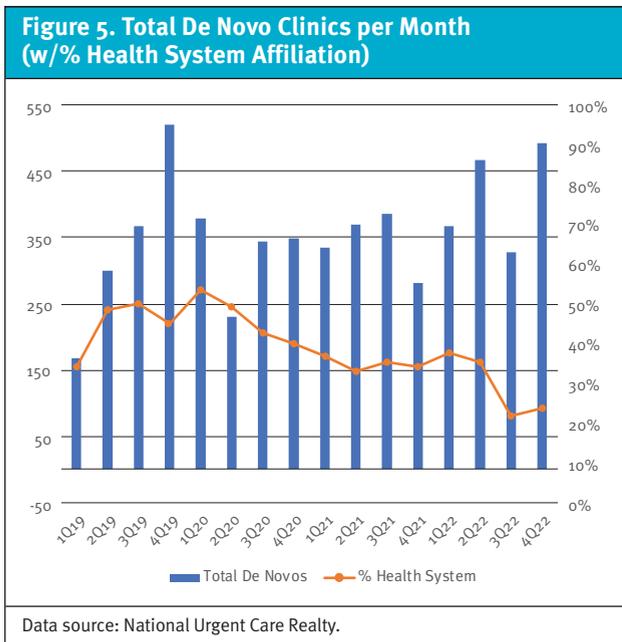
to a surge in demand for testing, vaccination, and treatment services, uncertainty over patient volumes forced many operators to the sidelines. Independent providers with fewer than nine centers faced several key barriers during the pandemic.

Widespread staffing challenges, shortages in key roles like medical assistants and radiology technologists, and wage inflation all made navigating the day-to-day aspects of business more challenging. Meanwhile, a swarm

of merger-and-acquisition activity capitalized on many smaller operators' desire to sell their businesses while high on revenues from COVID's record volumes.

As a result, 2020 saw a shift in the main driver of urgent care growth from entrepreneurial ownership to corporate models. The first quarter of 2020 saw 10+ unit operators add the most de novo locations of any type of center (see **Figure 1** and **Figure 2**).

As of the fourth quarter of 2022, 10+ unit operators



remained the segment with the highest number of de novo locations added.

The consistency of this segment can partially be attributed to the influence of private equity investors and fully funded 3- to 5-five-year investment horizons. As smaller operators took a step back to evaluate the pandemic’s effects, 10+ unit operators were strongly positioned to capitalize on increased volumes. Indeed, the level of demand allowed new centers to break even almost immediately after opening.<sup>1</sup>

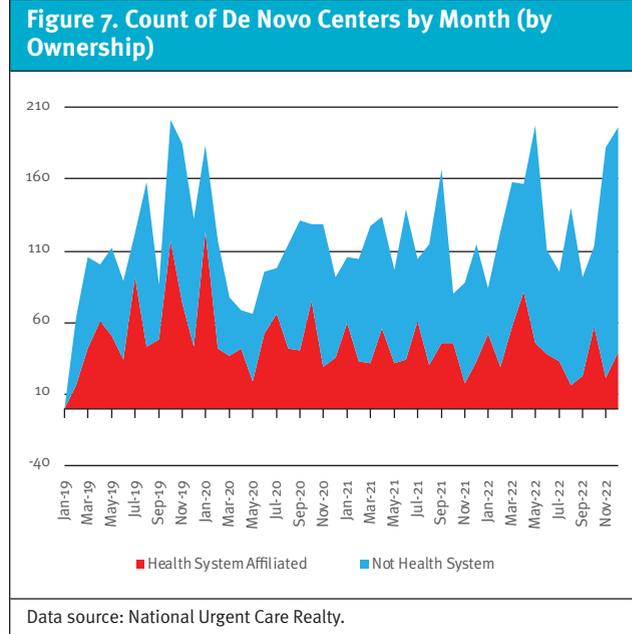
The 10+ unit operator segment’s growth over the past 2 years means it persists as the primary growth engine for urgent care. However, as pandemic fears wane and entrepreneurs regain their courage, this trend could be due for a change.

The final quarter of 2022 saw a large spike in single-unit operator de novo locations, from 12% to 28% of all openings (see Figures 1 and 2). Notably, this share is reminiscent of Q1 2019 when single-site operator de novo centers accounted for 24% of the total.

Despite the challenges of soaring interest rates, inflation, and operating costs, single-site physician owner-operators are still the backbone of the urgent care industry. As the world continues to trek back toward normalcy, the industry should be encouraged by entrepreneurs opening new urgent care centers both independently and with franchising.

**Increased Differentiation Leads to More Opportunities**

Urgent care continues to make itself accessible to an



even broader range of patients. Increasingly, de novo centers focus on attracting new audiences. This includes developing centers in underserved rural and urban areas, extending services available to those on Medicaid, and catering to specific patient populations such as pediatrics and orthopedics (see Figure 3 and Figure 4).

These centers follow the opposite trajectory of freestanding or remote emergency rooms and retail clinics, which have all experienced a decline in de novo center

“Although the traits of de novo urgent care centers in 2023 look far different than the pre-pandemic landscape, there are plenty of growth opportunities.”

openings.

These data suggests “traditional urgent care” (ie, those centers meeting the criteria set forth by the Urgent Care Association<sup>2</sup>), is the preferred operating model of providers, patients, and payers. The combination of flexible hours and efficient, accessible services continues to be a winning strategy.

Meanwhile, we also saw renewed growth in the limited urgent care segment to close out 2022 (see Figures 3 and 4). This reflects the operating changes made by many centers in the wake of COVID-19. Limited urgent care centers are unable to meet all UCA certification criteria, often due to external limitations. For instance, offering fewer opening hours due to demand constraints in the center’s geography or eliminating x-ray services due to a testing focus or staffing issues can land centers in the limited category.

The distinction between “traditional” and “limited” urgent care can explain variances in the numbers of centers reported by UCA and other publications or resources. Including limited centers—those which offer “urgent care medicine” but fail to meet all UCA criteria—simply expands the industry’s umbrella and more accurately depicts the number of sites holding themselves out as “urgent care.”

### Health System Troubles Slow Hospital Urgent Care Growth

As the wider urgent care industry has seen robust growth over the past few years, one segment has slowed significantly: health system-affiliated centers. The total percentage of de novo clinics with a health system affiliation has plummeted by half, from a peak of 50% in Q3 2019 to 24% in Q4 2022 (see Figure 5).

So, who or what is to blame for this drastic change? The ongoing financial pressure on hospitals and health-care systems bears much of the responsibility.

Going into 2023, there is no relief in sight for hospitals’ heightened baseline labor cost, lofty inflation, and growing fears of a recession.<sup>3</sup> Adding to the struggle are rate increases from payers failing to match higher ex-

penses and inflation as well as hospitals being forced to sell market investments at a loss to generate sufficient cash flow.

As a result, healthcare systems cannot prioritize expansions into areas like new urgent care facilities or partnerships. However, the sharp decrease in de novo centers with health system affiliations opens the door for entrepreneurs and smaller groups to own and operate new centers. The final quarter of 2022 saw nearly 105% more de novo clinics not owned by a health system than those with an affiliation (see Figure 6 and Figure 7).

### Continued Growth with More Centers on the Way

While the number of de novo centers across segments is encouraging, one number stands above the rest. Over the fourth quarter of 2022, “coming soon” centers accounted for over 20% of all de novos (see Figure 3 and Figure 4).

This represents a robust pipeline of new centers heading into 2023. Unforeseen circumstances excluded, the data indicate urgent care’s current growth trend will likely continue well into this year.

### Conclusion

While the COVID-19 pandemic has impacted our industry significantly over the past few years, new factors are now driving urgent care forward. Although the traits of de novo urgent care centers in 2023 look far different than the prepandemic landscape, there are plenty of growth opportunities.

As the industry shifts away from healthcare system affiliations, physician owner-operators and 10+ unit operators alike can tap into the growing demand for urgent care services and differentiate themselves by targeting new populations, geographies, and community needs. The diversity and flexibility of the urgent care model will continue to adapt to meet the changing demands of the healthcare industry and provide growth opportunities at all scales.

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## ABSTRACTS IN URGENT CARE

- Accuracy of Dipsticks in Diagnosing Infant UTIs
- Vestibular Suppressants and Vertigo
- Management of Sudden-Onset Headaches: New Questions
- Hemorrhage in Elderly Patients on Anticoagulation
- Detecting Skull Fractures in Children
- An Approach to Episodic Wheezing in Children

■ IVAN KOAY MBChB, MRCS, FRNZCUC, MD

### Are Urine Dipsticks Accurate in Diagnosing UTIs in Infants?

**Take-home point:** Point-of-care (POC) urinalysis (ie, urine dipstick) is moderately sensitive and highly specific for diagnosing urinary tract infection in febrile infants. The optimum cut-point for excluding UTI is leucocytes (1+), and the optimum cut-point for confirming UTI is nitrites (trace).

**Citation:** Waterfield T, Foster S, Platt R, et al. Diagnostic test accuracy of dipstick urinalysis for diagnosing urinary tract infection in febrile infants attending the emergency department. *Arch Dis Child*. 2022;107:1095–1099.

**Relevance:** Diagnosing and treating UTI in infants can be challenging. This study addresses this conundrum with the tool most widely available in UC.

**Study summary:** This was a multicenter cohort study conducted in sites from Pediatric Emergency Research in the UK and Ireland as part of the Febrile Infants Diagnostic assessment and Outcome (FIDO) study. The study included patients under 90 days of age with a recorded fever ( $\geq 38^{\circ}\text{C}$ ) at triage. The index test was the commercially available Siemens Multistix POC urine dipstick test performed on urine samples obtained by clean-catch or transurethral bladder catheter (TUBC). The authors identified 275 patients; 252 (92%) were clean-catch samples and 23 (8%) were TUBC for analysis. They found 38 (13.8%) participants had a confirmed (noncontaminant) UTI. Of those, 35 (92%)

were *Escherichia coli*; two (5%) were *Klebsiella*; and one (3%) was *Enterococcus*. The most sensitive individual dipstick result for UTI was the presence of leukocytes; using trace indicating a positive result gave the highest sensitivity of 84% (95% CI 69 – 94%) and a specificity of 73% (95% CI 67 – 79%). The most specific individual dipstick result for UTI was the presence of any nitrites. The specificity of 1+, 2+, or 3+ was 95% (95% CI 91-97%), 99% (95% CI 97 - 100%) and 98% (95% CI 95 – 99%), respectively. The presence of both leucocytes and nitrites was highly specific for UTI but poorly sensitive.

**Editor's comments:** The study population was too small to allow for further subgroup analysis, such as by age or symptoms, and included only very young infants ( $< 3$  months of age). It is helpful that the vast majority of urine specimens collected were clean-catch, as catheterized samples are rarely collected in urgent care centers. It is worth noting that even the lowest threshold of leukocyte esterase (ie, trace) still was only 84% sensitive for excluding UTI. ■

### Vestibular Suppressants in Treatment of Vertigo

**Take-home point:** Canalith repositioning maneuvers (CRMs), rather than vestibular suppressants, seem to be the most effective treatment for benign paroxysmal positional vertigo (BPPV).

**Citation:** Sharif S, Koujah D, Greer A, et al. Vestibular suppressants for benign paroxysmal positional vertigo: A systematic review and meta-analysis of randomized controlled trials. *Acad Emerg Med*. 2022 Oct 21.

**Relevance:** Recommendations for the treatment of BPPV from the American Academy of Otolaryngology (AAO) and the American Academy of Neurology have been against the use of suppressants in favor of CRM, yet prescribing of



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*“Understanding that 6 hours is a cutoff for the use of CT alone in reliably excluding SAH can inform rapid ED referrals to allow for patients with thunderclap headache presentations to undergo expedited ED evaluation and ideally forego LP.”*

the suppressants remains common.

**Study summary:** This was a systematic review of literature regarding the utility of medications relative to placebo, no treatment, or CRM in BPPV. The authors conducted a comprehensive search of MEDLINE, Cochrane, EMBASE, and ClinicalTrials.gov for randomized controlled trials investigating the role of antihistamines, benzodiazepines, anticholinergics, and phenothiazines for the management of BPPV.

The authors identified five RCTs in the quantitative analysis and one RCT for qualitative analysis, involving a total of nearly 300 patients. The use of vestibular suppressants had no effect on symptom severity at the point of longest follow-up (2-4 weeks). CRM had a relative risk (RR) of 0.63 (95% CI 0.52 to 0.78) for symptom improvement at follow-up within 1 month. It was unclear whether vestibular suppressants reduced the rate of repeat ED or clinic visits, patient satisfaction, and symptom resolution within 24 hours as confidence intervals for RR for each of these metrics crossed the neutral point.

**Editor’s comments:** None of the included studies assessed the ability of an emergency physician to perform CRMs adequately and not all studies used the Epley maneuver as the CRM of choice. The studies focused exclusively on BPPV and other causes of vertigo were not assessed. ■

**Management of Sudden-Onset Headaches—Are the Days of Lumbar Puncture Behind Us?**

**Take-home point:** With newer multislice CT scanners, head CT undertaken within 6 hours of headache onset is highly sensitive and can rule out subarachnoid hemorrhage (SAH) in low-moderate suspicion cases.

**Citation:** Walton M, Hodgson R, Eastwood A, et al. Management of patients presenting to the emergency department with sudden onset severe headache: systematic review of diagnostic accuracy studies. *Emerg Med J.* 2022; 39(11):818-825.

**Relevance:** Recent studies question the need for routine lumbar puncture after a normal head CT. This systematic review

suggests scans undertaken beyond 6 hours are less sensitive; therefore, additional testing is likely to be beneficial.

**Study summary:** This was a systematic review of evidence on diagnostic strategies for neurologically intact adult patients presenting to hospital with nontraumatic sudden-onset severe headache. Eighteen databases (including MEDLINE and Embase) were searched. Studies included assessed any care pathway for ruling out SAH (including clinical decision rules and specific diagnostic tests, such as CT or LP) in neurologically intact adult patients presenting to the ED with a sudden-onset severe headache and clinical suspicion of SAH.

The authors identified 37 studies which were included in their analysis. The use of Ottawa SAH Clinical Decision Rule was highly sensitive (99.5%) for excluding SAH clinically, but poorly specific. Noncontrast head CT <6 hours from headache onset on a modern, multislice scanner with CT assessed by a neuroradiologist or radiologist who routinely interprets head CT images had a sensitivity of 98.7% (95% CI 96.5 to 100) and specificity of 100% (95% CI 99.7 to 100). Head CT beyond 6 hours was significantly less sensitive (<90%). Two small studies that were included evaluated the utility of CT-angiography; however, neither study identified any patients with cerebral aneurysms. LP was 100% sensitive for identifying SAH in patients with negative head CT after 6 hours.

**Editor’s comments:** There was the substantial heterogeneity in the study methods and population characteristics of the included studies. It appears that with clinical decision aids, such as the Ottawa Rule, and adoption of modern CT scanners, the necessity of LP is limited for patients who present early after sudden-onset headache. As many UC centers do not have CT scanners, it is important for UC providers to understand that 6 hours is a cutoff for the use of CT alone in reliably excluding SAH. Understanding this can inform rapid ED referrals to allow for patients with thunderclap headache presentations to undergo expedited ED evaluation and ideally forego LP. ■

**Delayed Intracranial Hemorrhage in Elderly Patients on Anticoagulation**

**Take-home point:** Overall risk of delayed intracranial hemorrhage (ICH) is low, but highest among patients prescribed warfarin.

**Citation:** Liu S, McLeod S, Atzema C, et al. Delayed intracranial hemorrhage after head injury among elderly patients on anticoagulation seen in the emergency department. *CJEM.* 2022.24:853–861.

**Relevance:** UC clinicians and practitioners should be aware of the risk of delayed intracranial hemorrhage after head injury, particularly in those on warfarin compared with other forms of anticoagulation (or none).

**Study summary:** This was a planned subgroup analysis of a larger study that compared the risk of intracranial hemorrhage in elderly patients (age >65 years) on anticoagulation who presented to the ED after head injury. Data were obtained from the Canadian Institutes of Health Information National Ambulatory Care Reporting System (CIHI-NACRS) and the electronic Canadian Triage and Acuity Scale (eCTAS) database.

The authors identified 69,321 patients for analysis, of whom 58,233 (84.0%) were not on anticoagulation, 8,007 (11.6%) were on a direct-acting oral anticoagulant (DOAC), and 3,081 (4.4%) were on warfarin. Delayed ICH occurred in 718 (1.0%) patients. Of those, 586 (1.0%) not on anticoagulation had a delayed ICH, compared with 54 (1.8%) patients on warfarin and 78 (1.0%) patients on a DOAC. There was an increased odds of delayed ICH among patients on warfarin compared with those not on oral anticoagulation (OR 1.5, 95% CI 1.1–2.1). There was no significant difference in delayed ICH between patients on a DOAC compared with no oral anticoagulation (OR 0.9, 95% CI 0.6–1.1).

**Editor's comments:** This study used administrative data, therefore there is the possibility of coding errors. The authors were unable to identify if anticoagulation was stopped following initial head injury, which might affect the rate of bleeding. Importantly, the risk of delayed intracranial hemorrhage seems to be between 1% and 2% regardless of anticoagulation in elderly patients. The data suggest caution against dismissing delayed or repeat head injury presentations in older adults, especially with concerning symptoms (eg, severe headache, confusion, vomiting). ■

#### Sensitivity of Physical Examination in Detecting Skull Fractures in Children

**Take-home point:** Skull fractures are common in patients with intracranial injury from blunt trauma. Physical exam by emergency clinicians had poor sensitivity for detecting skull fractures, with the lowest sensitivity for detecting basilar or depressed skull fractures.

**Citation:** Akie T, Gupta M, Rodriguez R, et al. Physical examination sensitivity for skull fracture in pediatric patients with blunt head trauma: a secondary analysis of the National Emergency X-Radiography Utilization Study II Head Computed Tomography Validation Study. *Ann Emerg Med.*

2022;S0196-0644(22)01031-9.

**Relevance:** Physical examination (PE) is required as part of the pediatric head CT clinical decision rules but has limits and can impact in imaging decision-making.

**Study summary:** This was a post-hoc secondary analysis of pediatric patients from the validation studies of the NEXUS Head CT decision instrument. The present study additionally analyzed the prevalence of skull fractures and the provider's ability to detect these injuries clinically. Clinicians were asked to determine whether patients had evidence of skull fracture, which included signs of any of the following: basilar skull fracture, including ecchymosis in the periorbital or preauricular area, hemotympanum, and clear drainage from the ear or nose; depressed or diastatic skull fracture (palpable step-off, stellate laceration from a point source).

The authors identified 1,018 patients for final analysis, 128 (12.5%) of whom had any injury identified on a CT scan. Among those, 85 (66% of all patients with intracranial injury) also had radiographically identified skull fractures. Eighteen (14% of all patients with intracranial injuries) had depressed or basilar skull fractures. They found overall prevalence of skull fracture in patients with any injury on CT to be 66.4%; basilar and/or depressed skull fractures were present in 14%. Provider sensitivity and specificity for detection of any skull fracture were 18.5% (95% confidence interval [CI], 10.5% to 28.7%) and 96.6% (95.3% to 97.7%), respectively. Sensitivity and specificity of basilar or depressed skull fractures were 11.1% (1.4% to 34.7%) and 95.9% (94.5% to 97.1%).

**Editor's comments:** Participants had to have a CT head obtained at the index visit to be included. Emergency providers missed most of the skull fractures on clinical exam, suggesting that a reassuring cranial exam should not obviate concern for intracranial injury or skull fracture in patients with serious head injury and/or red flag symptoms (eg, seizure, vomiting). ■

#### Use of Intermittent Tiotropium Bromide for Episodic Wheezing in Children

**Take-home point:** Intermittent tiotropium bromide treatment may be an effective alternative to current therapies for pediatric episodic wheezing.

**Citation:** Kotaniemi-Syrjanen A, Klemola T, Koponen P, et al. Intermittent tiotropium bromide for episodic wheezing: a randomized trial. *Pediatrics.* 2022;150(3): e2021055860.

**Relevance:** Options for treating episodic viral wheeze, which mimics asthma in the pediatric population but has a different pathophysiology, are scarce. Finding solutions that do not have significant side effects, such as inhaled steroids, would be useful.

**Study summary:** This study was a multicenter, randomized, open-label, controlled, parallel-group trial across four hospitals in Finland. Eligible children recruited were born at the gestational week of 36 or later, aged 6 to 35 months, and had two to four physician-confirmed episodes of wheeze and/or shortness of breath. The children were randomized in a 1:1:1 treatment ratio to receive intermittent tiotropium bromide treatment co-administered with as-needed albuterol sulfate (tiotropium group), intermittent fluticasone propionate treatment co-administered with as-needed albuterol sulfate (fluticasone group), or as-needed albuterol sulfate treatment alone (albuterol group). Symptom-free days were highest in the tiotropium once daily vs 87% in the fluticasone group and 88% in the as-needed albuterol only group.

The authors found that patients in the albuterol group discontinued the intervention more often because of trou-

blesome respiratory symptoms than the patients in the tiotropium group. Recruitment of the patients was discontinued after including the 80th subject to the study. The authors noted that the tiotropium group needed less albuterol for symptom relief than the other treatment groups.

**Editor's comments:** Early termination of the study resulted in underpowering statistically; the authors attempted to ameliorate this by recalculations of power. There was no blinding for the study, which could introduce bias. Regardless, tiotropium seems to be a well-tolerated and effective adjunct for children with wheezing in the setting of viral URI. ■

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# Key Signs and Symptoms of Severe Illness in Urgent Care: Cervical Necrotizing Fasciitis and Necrotizing Mediastinitis

**Urgent message:** Cervical necrotizing fasciitis and necrotizing mediastinitis may ultimately occur in patients presenting with symptoms of odontogenic infection. While severe illnesses rarely present in urgent care, it is important to establish a prompt diagnosis and implement rapid medical management for these patients, in order to improve survival.

Vitoria Regina Nunes Maia, MS and Lindsey E. Fish, MD

Citation: Nunes Maia VR, Fish LE. Key signs and symptoms of severe illness in urgent care: cervical necrotizing fasciitis and necrotizing mediastinitis. *J Urgent Care Med.* 2023;17(6):43-46.

Keywords: fasciitis, mediastinitis, CNF, DNM, odontogenic

## Abstract

Cervical necrotizing fasciitis (CNF) is a rapidly progressive infection that can be fatal. This condition can develop from odontogenic infections that spread to the deep fascial planes of the neck, including cervical fat and muscle, resulting in necrosis. When the disease progresses into the thorax, the course is complicated by descending necrotizing mediastinitis (DNM) which carries a much higher risk for septic shock.

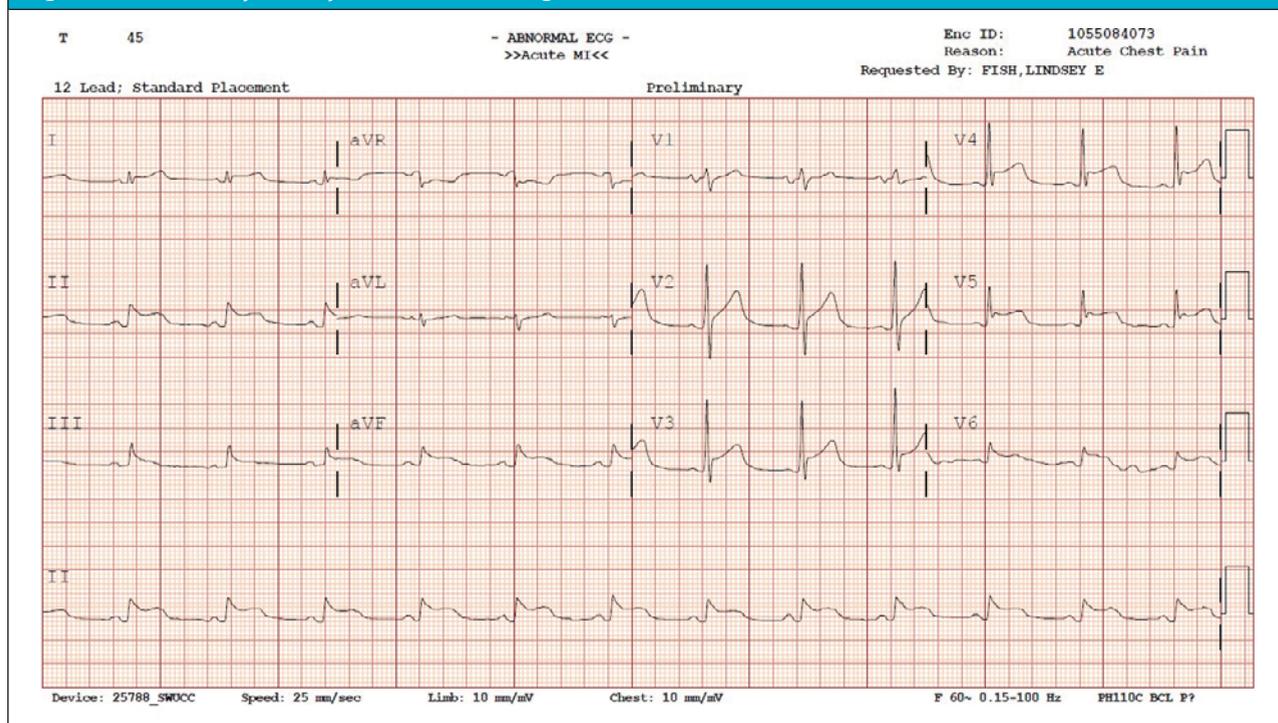
## Case Presentation

Mr. S is a 60-year-old man who presented to the urgent care clinic with a chief complaint of sore throat and phlegm in the throat. Symptoms started 6 days earlier and were improving after getting antibiotics for pre-



sumed strep throat following a telephone visit with his primary care physician. He reported that he continued

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**Figure 1. EKG of the patient performed at the urgent care.**

to feel like he had phlegm in his throat despite the sore throat improving. He also reported a cough with chest pain. A home COVID-19 test was negative. Patient's wife reported that he had started to act confused the day prior to presentation. PMH includes diabetes, high cholesterol, and hypertension. Current medications included amoxicillin/clavulanic acid, dexamethasone (just completed), atorvastatin, glimepiride, linagliptin, lisinopril, metformin, and pioglitazone. The patient is a current smoker with a 40 pack-year smoking history.

#### Physical exam:

Vitals: T 37°C, BP 74/47, HR 74, RR 24, SpO<sub>2</sub> 90%.

Constitutional: well-developed, no distress, fatigued

#### HENT:

- Mouth – moist mucous membranes
- OP – erythematous without exudates, 1+ B tonsils
- Eyes: PERRL, EOMI

CV: RRR nl S1, S2 no M/R/G

Chest nl effort, no respiratory distress, bibasilar rales

Skin: warm and dry

Neurological: alert and oriented x 3, slow to answer questions and unable to give clear history

Psychiatric: behavior normal, sluggish

Due to chest pain, hypotension and confusion, an

EKG was ordered (**Figure 1**).

After review of the EKG by the urgent care physician, the local emergency department was notified, and the patient was transferred by ambulance emergently for presumed ST-elevation myocardial infarction. The catheterization lab was activated, and the patient received emergent cardiac catheterization which did not demonstrate an obstructive coronary artery lesion.

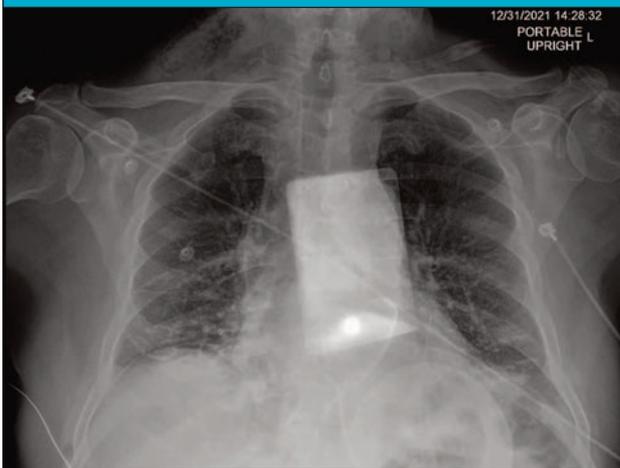
The patient was transferred to the medical intensive care unit (MICU) for management of hypotension. Labs in the MICU demonstrated:

- CBC: WBC 10.6, H 14.2, Hct 39.1, Pts 100
- BMP: Na 121, K 4.6, Cl 85, CO<sub>2</sub> 17, BUN 116, Cr 5.52, Glu 462, anion gap 19,
- Troponin: 0.07
- BNP: 5,570
- B-hydroxybutyrate: 4.3 H
- SARS-CoV-2 PCR: Negative
- Lactate: 2.6, D-dimer: 3.16

A chest X-ray demonstrated significant subcutaneous gas in the cervical neck and mediastinum (**Figure 2**).

Neck exam performed following the chest x-ray: + crepitus on right.

The patient received extensive fluid resuscitation and antibiotics. Blood pressure remained low over the evening.

**Figure 2. Chest x-ray of the patient.****Figure 3. CT scan of chest of the patient.**

The CT neck and chest demonstrated findings concerning for descending necrotizing mediastinitis including fluid, fat stranding, and gas foci in the bilateral supraclavicular regions extending inferiorly into the mediastinum (**Figure 3**).

ENT and General Surgery were consulted, and the teams made the final diagnosis of septic shock due to necrotizing fasciitis of the neck and necrotizing mediastinitis. After obtaining further history from the patient, the presumed source was several recent dental extractions. The patient had a prolonged hospitalization with multiple surgeries and made a complete recovery.

### Discussion

This case presents a patient with descending necrotizing mediastinitis (DNM), a serious infection that occurs as a complication of oropharyngeal infection-induced cervical necrotizing fasciitis.<sup>1,2</sup> This can lead to septic shock with a high mortality rate and an overall poor prognosis. Cervical necrotizing fasciitis (CNF) has a described mortality rate of 7% to 20% which can reach 22% to 41% in cases where the disease extends to the thorax culminating in DNM.<sup>3</sup>

DNM limited to the area above the carina is defined as type I; that extending into the lower mediastinum is defined as type II. In this case, the patient was defined as DNM type II as the infection spread to the level of the diaphragm.

The pathologic organisms involved may be either anaerobes or aerobes. The most commonly isolated organism is beta-hemolytic oral *Streptococcus* (a consequence of the fact that most DNM cases are caused by odontogenic infections). Other organisms commonly found include *Prevotella*, *Peptostreptococcus*, *Fusobacterium*,

*Staphylococcus*, and also alpha-hemolytic *Streptococcus*.<sup>4</sup>

This case highlights several key learning points. First, it is essential to obtain dental history. In the case described here, several dental extractions were performed prior to presentation. These procedures were the risk factor for DNM.

It is known that a primary odontogenic infection can spread via cervical facial layers and deep cervical infection that can result in mediastinitis. In this setting, establishing control of the upper airway and infection with tracheotomy, surgical drainage of deep cervical spaces and the mediastinum, as well as intravenous broad-spectrum antibiotic therapy, were required for successful treatment.<sup>5</sup> Poor dentition and dental procedures are associated with bacteremia, endocarditis, brain abscess, and other systemic illnesses.

Additionally, this case highlights the importance of obtaining a social history including tobacco use which increases susceptibility to respiratory tract infections, including pneumonia; bacterial vaginosis and sexually transmitted diseases, such as gonorrhoea; *Helicobacter pylori* infection; periodontitis and postsurgical infections; and nosocomial infections. Tobacco-induced susceptibility to periodontitis is associated with shifts in the microbial composition of complex periodontal plaques.<sup>6</sup>

Furthermore, this case highlights the importance of a differential diagnosis for the patient's hypotension. In this case, an EKG was ordered due to hypotension and the fact that cardiac etiologies were included in the differential.

It is known that hypotension is a decrease in systemic blood pressure below accepted low values usually due to decreased effective circulating volume (hypovolemia), flow compromised due to cardiac pump dysfunction

(cardiogenic), flow compromised due to cardiac obstruction (obstructive), or lack of peripheral resistance (distributive).<sup>7</sup> It is important to understand these etiologies in order to create a differential diagnosis and establish the most appropriate treatment.

In this case, the patient was experiencing septic shock, which is a form of distributive hypotension from the deep tissue infection. Of note, the initial suspected cause of hypotension was cardiogenic in the setting of an EKG consistent with an ST-elevation myocardial infarction; however, the cardiac catheterization did not demonstrate an obstructive lesion.

This case also highlights the risk of a *premature closure of diagnosis*. This case occurred in the setting of the COVID-19 pandemic, which has demonstrated significant premature closure of diagnosis that resulted in many delays in recognizing and treating diseases. In the present case, the first presentation of the patient with general symptoms such as sore throat and phlegm in the throat could lead to a narrow path of diagnostic hypothesis, resulting in delay of treatment.

Of note, the PCP assumed strep throat based on a telehealth visit; COVID could also have been assumed.

Premature closure is a common type of misdiagnosis which may lead to moderate-to-severe harm. These errors are related specifically to taking medical histories, performing physical examinations, and ordering tests.<sup>8</sup> Therefore, it is essential to make a broad differential diagnosis

## Conclusion

Overall, this case highlights a rare but very severe condition that must be rapidly diagnosed if presenting in the urgent care clinic. However, lack of key clinical history and physical examination data pieces can contribute to a diagnostic challenge. The creation of a broad differential diagnosis can help to minimize the risk of premature closure. Though they may be rare, it is important to consider severe illnesses in order to establish the correct diagnosis and facilitate coordination of complex advanced medical and improve the likelihood of successful outcomes. ■

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## A 35-Year-Old with Ankle Pain and a History of Gunshot Wound



A 35-year-old male presents with progressive pain in his ankle. He reports a history of a gunshot to the foot without any aftercare.

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

Figure 1.



### Differential Diagnosis

- Chondrocalcinosis
- Lead arthropathy
- Lead synovitis
- Osteoarthritis

### Diagnosis

The correct diagnosis is lead arthropathy. The x-ray shows a large dominant posterior bullet fragment with innumerable metallic densities overlying the degenerated ankle joint. The retained intra-articular bullet caused a severe proliferative synovitis and a progressive, destructive arthritis. Systemic lead intoxication has been reported when bullets remain bathed in synovial fluid.

### Learnings/What to Look for

- The radiographic identification of intra-articular bullet fragments should prompt an urgent orthopedic consultation. Timely removal of lead particles and debridement of the bone and cartilage fragments will prevent both lead arthropathy and toxicity

### Pearls for Urgent Care Management

- If lead arthropathy is identified, synovectomy and joint replacement are often necessary. All patients with lead arthropathy should be evaluated for systemic lead toxicity

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



## A 33-Year-Old with New, Painful ‘Lumps’ on Her Legs



A 33-year-old female presents with painful “lumps” on her legs that developed over the past few days. She decided to seek care when some of them began to drain pus. She had no trauma and feels well. Her past medical history is significant for type 2 diabetes mellitus. On examination she is afebrile, with scattered tender nodules, some with purulent drainage, on the legs.

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

Figure 1.



### Differential Diagnosis

- Folliculitis
- Furunculosis
- *Mycobacterium marinum* infection
- Ecthyma

### Diagnosis

This patient was diagnosed with furunculosis, cutaneous abscesses associated with hair follicles. *Carbuncles* are a continuous collection of furuncles.

Furuncles are infectious, with the most common causative agent being *Staphylococcus aureus* (either methicillin-sensitive [MSSA] or methicillin-resistant [MRSA]). The infecting strain of *Staphylococcus* is usually colonized in the nares, umbilicus, or perineum.

### Learnings/What to Look for

- Furuncles are painful and may have purulent drainage
- Furuncles usually occur on the face, neck, axillae, buttocks, thighs, and perineum
- Furunculosis most commonly affects males, especially adolescents and young adults
- Predisposing factors include *Staphylococcus* carriage, friction, malnutrition, poor hygiene, diabetes, hyper-IgE syndrome, and HIV infection

### Pearls for Urgent Care Management

- Treatment is incision and drainage; warm compresses may facilitate drainage
- Furuncles may resolve within 2 weeks without treatment in uncomplicated patients
- Antibiotics (ie, cephalexin, TMP/SMX, doxycycline) may be used in febrile patients or patients in whom furuncles persist

Acknowledgment: Image and case presented by Experity Teleradiology ([www.experity.com/teleradiology](http://www.experity.com/teleradiology)).



# A 20-Year-Old Female with Weakness, Vomiting, and a History of Alcohol Abuse

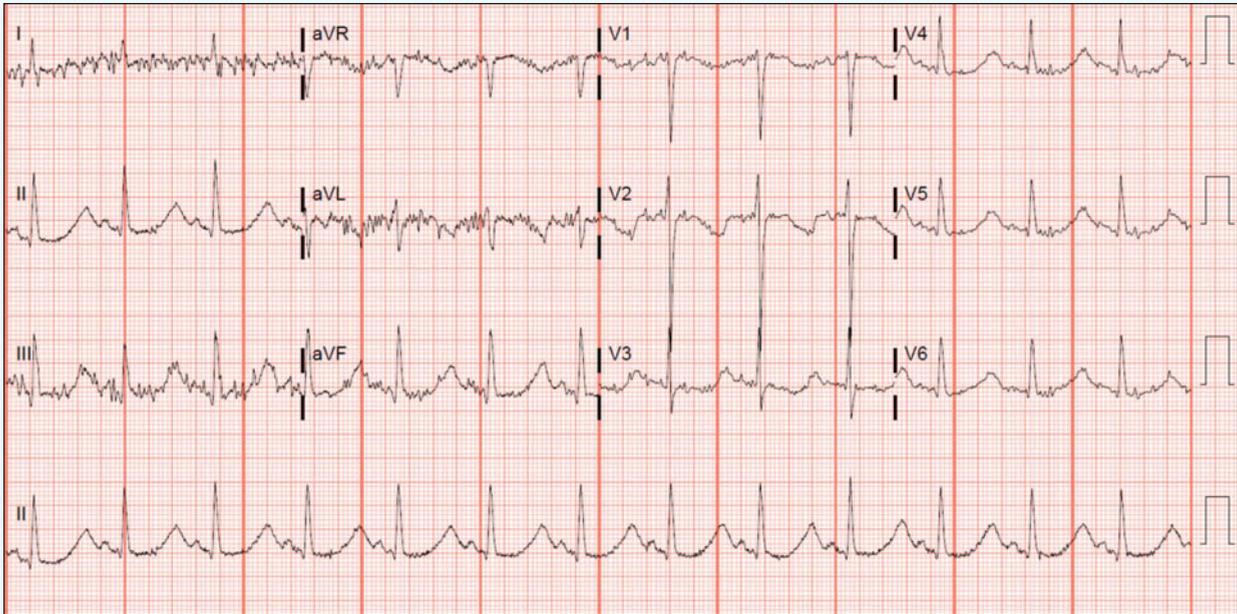
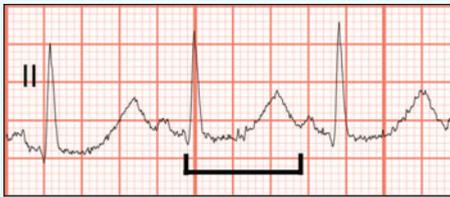


Figure 1. Initial ECG.

The patient is a 20-year-old female who presents complaining of 1 day of generalized weakness and vomiting. She has a history of alcohol abuse and denies chest pain, shortness of breath, lower extremity swelling, fevers, chills, or any infectious symptoms.

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 Jonathan Giordano, DO, MS, MEd, Department of Emergency Medicine, McGovern Medical School at UTHealth Houston.)



**Figure 2:** The QT Interval shown here from lead II, is clearly longer than half of the R-R interval (a simple way to determine if the QT interval is long for the given rate).

### Differential Diagnosis

- Hyperkalemia
- ST-elevation myocardial infarction (STEMI)
- Atrial flutter
- Hypokalemia
- Digoxin use

### Diagnosis

This patient was diagnosed with hypokalemia. The ECG reveals some baseline artifact, a narrow-complex sinus rhythm at a rate of 78 beats per minute, and a normal axis. There are no ST-changes to suggest acute ischemia. The QT interval is prolonged, with a QTc of approximately 660 msec.

Hypokalemia (as well as other electrolyte abnormalities, including hypocalcemia and hypomagnesemia, hypothermia, and many drugs) can cause prolongation of the QT interval. Other changes due to hypokalemia include prolongation of the PR interval, ST depressions, T-wave flattening/inversion, and U-waves. In this example, the T waves in V<sub>2</sub> and V<sub>3</sub> are likely inverted and fused with U waves, creating the appearance of a biphasic T wave with terminal positivity.

ECG changes due to hyperkalemia include peaked T-waves, P-wave flattening, prolonged PR interval, widened/abnormal QRS morphology, bradyarrhythmias, and a sine wave appearance (see the January 2023 issue of *JUCM*, pages 47 and 48, for an ECG demonstrating hyperkalemia).

Downsloping, “scooped” ST-segments resembling Salvador Dali’s mustache, are a finding seen in digoxin use but does not necessarily imply toxicity.

### Discussion

Hypokalemia, hypomagnesemia, and hypocalcemia can all cause a prolongation of the QT interval. While hypokalemia and hypomagnesemia both delay the repolarization phase (phase 3) of the of the cardiac action potential (creating wide-based T waves, U waves, or a fusion of both), hypocalcemia prolongs the QT interval by way of extending the plateau phase (phase 2) of the cardiac action potential (lengthening the ST segment but with a normal T wave).

Tachycardia is protective in patients with hypokalemia because as the heart rate decreases, the QT interval lengthens. With profound bradycardia and a long QT interval, the heart may depolarize while still in the repolarization phase. We call this an R-on-T phenomenon, and it may cause patients to go into torsades de pointes, a special type of polymorphic ventricular tachycardia. Treatment includes electrolyte replacement, removal of the offending drug, and potentially overdrive pacing at a rate fast enough to eliminate the risk of R on T phenomenon.

### Learnings/What to Look for

- With moderate-severe hypokalemia, look for:
  - Increased width and amplitude of the P wave
  - Prolonged PR interval
  - T-wave flattening or inversion
  - ST depression
  - Prominent U-waves
  - Long QT interval
- In severe hypokalemia, patients develop ectopic beats, supraventricular tachyarrhythmias, and eventually ventricular arrhythmias (particularly torsades de pointes)

### Pearls for Urgent Care

- Hypokalemia is often accompanied by hypomagnesemia; don’t forget to check and replace both to decrease the risk of ventricular arrhythmias
- Treatment of hypokalemia involves oral supplementation in the urgent care setting, as well as identification and treatment of the underlying cause of the electrolyte disorder
- Transfer for parenteral potassium administration is indicated when the QT interval is >500 msec, as these patients are at risk for torsades de pointes
- In patients with ECG and laboratory findings consistent with hypokalemia, consider transfer to telemetry capable facilities

### Resources

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Case courtesy of ECG Stampede ([www.ecgstampede.com](http://www.ecgstampede.com)).

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# Are You Chasing Profitable Growth, or Just Growth?

■ HEATHER REAL

With today's urgent care operators challenged with increasing expenses and stagnant reimbursements, many thoughtful entrepreneurs turn to ancillary services to drive more revenue into their business. These offerings are numerous and varying in nature. When determining if and what to add to an urgent care business, you'll need to ask some crucial questions:

- Is this something that members of your community need and will use?
- How much capital investment will be required and how much will it add to operating expenses?
- What is the revenue potential?
- When weighed against costs, is there a positive impact on EBITDA?

As the competition for patient loyalty heats up, many operators are looking for ways to stand out. Some ways of going about this are rooted in the core services of urgent care, such as higher-level, on-site laboratory capabilities or advanced imaging, like CT scan or ultrasound.

While there is certainly an upside to offering these services "in-house" rather than referring these valuable services out to the hospital or another business, it is important to understand the profit potential for these services.

This exercise should include considerations such as upfront procurement costs (supplies, equipment, etc.), staff training/certifications requirements, facility readiness, initial and ongoing marketing, maintenance, and other costs that aren't already part of the center's operating expenses.

Once capital investment has been determined, you'll need to determine who might pay for these services. Will it be individuals that pay with cash, payers through reimbursements on submitted claims, or a combination of both?



If you'll be relying on insurance to pick up the tab, go to the payers first to ensure the service in question is covered under the existing contracts. Sometimes there will be limitations on what services will be covered by a payer; largely, services need to align with the general scope of the contract type.

For example, it may be unrealistic to expect you'll be reimbursed for claims submitted for behavioral health services under your urgent care contracts.

Largely, services that are already aligned with the urgent care operations, such as additional labs and imaging, are reimbursable under the payer contracts. That said, you'll still want to perform further diligence before proceeding.

It is also important to understand how and how much a payer will reimburse for services offered. If you have fee-for-service agreements, check the allowable rates on your fee schedules for the CPT codes you'll be submitting; will this reimburse enough to cover the cost of the service?

An example here might be lab tests that offer quantitative results rather than qualitative results; however, the quan-



Heather Real is Senior Consultant with Experity Consulting.

“If you’ve already built a healthy occ med business and are looking to add more, other routes such as physical therapy or employer injury-prevention programs may be the most relevant next stage of your business expansion.”

titative tests cost more to purchase and the reimbursement for the test may not increase enough to account for the difference. In this case, you may have increased costs to deliver similar, if not the same medical services, only to reduce or erase your profit margin on the service provided.

In the event you have a case-rate contract with a payer, it is even more important to understand the revenue potential against the cost of services delivered. Before proceeding with adding additional diagnostic tools, determine if your contract will allow for additional reimbursements for these services. You don’t want to find out too late that a visit with ultrasound services rendered reimburses at the same case rate as the visit for an earache.

The same exercise applies with cash services. Popular add-on services in the urgent care setting are those that require repeat visits/supplies for optimal consumer experience. These might include weight loss, supplements/IV infusions, or aesthetics, to name a few. In these cases, you set the costs, making it easy to ensure a profit margin on each product/service transaction.

The homework here is determining whether there is a significant cross-section between the patients utilizing the core urgent care services and the potential ancillary services. Will you be able to use your reputation for one service to drive the other? How will you need to maximize your marketing strategies to get the most influence per dollar? And will these services be adopted by a large-enough consumer group to meet the profitability goals of the endeavor?

Looking ahead, any services you are considering adding to your urgent care should be just as consistent and resilient as urgent care services themselves. In the event of a recession, even a small one, consumers close the purse strings a little tighter. Expenditures on the “extras” may be limited or cut, depending on how much the household income is impacted.

This is where ancillaries like aesthetics and nonmedical IV therapies may suffer. Will your business be able to withstand a period of low (or no) adoption of these services? Will it make sense to continue to offer them, even at a loss, to ensure you can offer them when your loyal cus-

tomers return with the improved economy?

The more “recession-proof” services that align well with urgent care are those that are necessary, regardless of the economic climate. This includes like-kind urgent care services, such as labs and imaging, as well as anything that falls in the realm of occupational medicine.

There will still be a need for employer-paid services, workers’ compensation services, DOT physicals, etc. These offerings are certainly not as glamorous as Botox and energy-enhancing vitamin infusions, but they aren’t likely to get cut out of business budgets as easily as vanity services are crossed out of household budgets.

If you’ve already built a healthy occupational medicine business and are looking to add more, other routes such as physical therapy or even developing employer injury-prevention programs may be the most relevant next stage of your business expansion. While more durable than other ancillary services, it is still important to understand the actual profitability of such programs before investing extensive amounts of time and money into the new offering.

Whatever you do to build, expand, and improve your urgent care business, be sure you have a clear pathway to success. By understanding the true costs, the revenue potential, and patient/consumer behaviors, you’ll be sure to build a model that boosts your business and your bottom line. ■

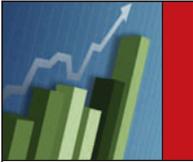
### Consider Incremental Labor Function and Cost of Ancillary Services

Incremental services often incur incremental staffing. The hindrance is that staffing is the greatest cost in urgent care, meaning profitable urgent care operations leverage more revenue (patient visits) across existing staff.

The problem with adding labor is that unless new services cover the labor cost, the added labor dilutes the efficiency of the existing team. Additionally, the incremental labor is often specialized.

For instance, vitamin-infusion services (even if they generate \$150 cash per treatment) may require adding a registered nurse at 2 to 3 times the hourly rate of a medical assistant. How will that RN be utilized when not administering infusions? Until there’s sufficient volume in infusions to keep the RN busy all day, it’s likely that RN will be working as a very expensive MA.

The same could be said of laboratory technicians, medical sonographers, licensed mental health counsellors, physical therapists, and others hired specifically to support an ancillary service.



## DEVELOPING DATA

# Healthcare Visits by Victims of Human Trafficking Are Limited, but Often Include Urgent Care

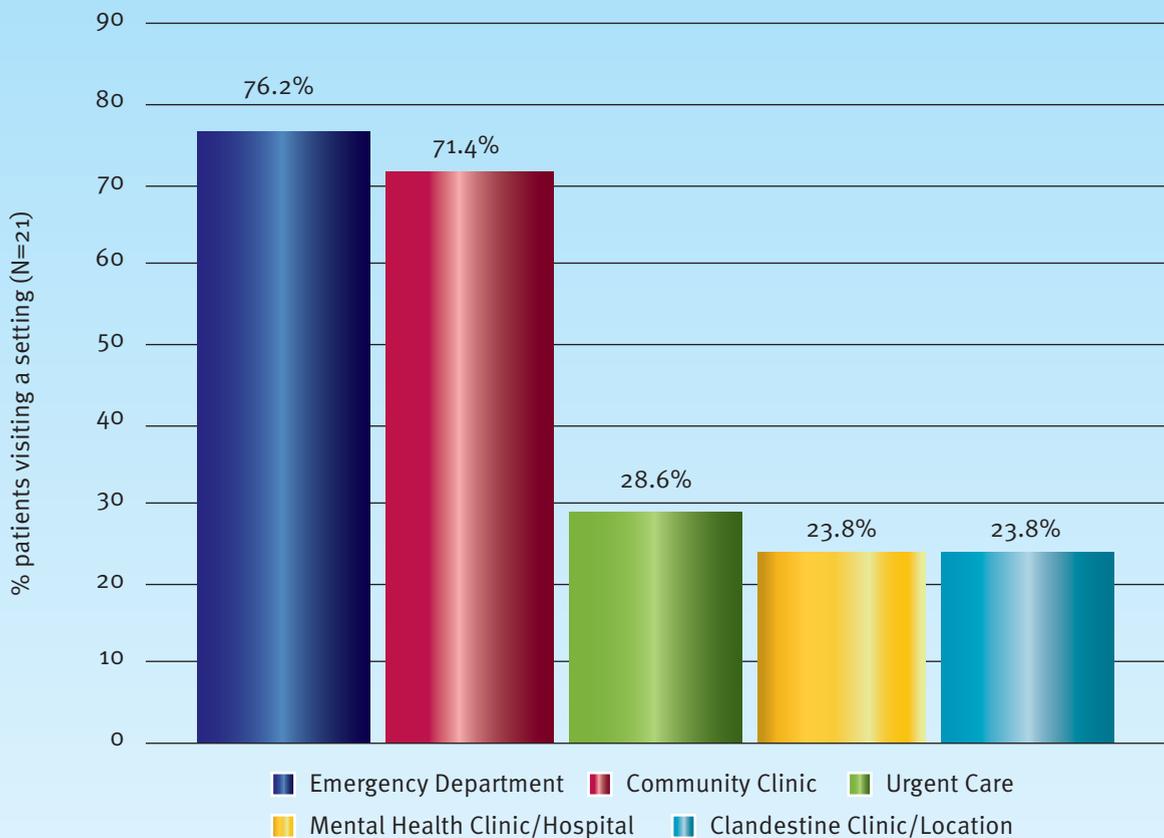
As noted in this month's cover article (Human Trafficking in the Urgent Care Setting: Recognizing and Referring Vulnerable Patients), isolation is one of many tools perpetrators use to control victims of human trafficking. Certainly this includes limiting access to healthcare.

Not surprisingly, when care is necessary it's not likely to be sought in a primary care office. Rather, busy acute care

sites that offer walk-in access and relative anonymity tend to be preferred—with urgent care being the third most visited behind emergency rooms and community clinics (see the graph below).

For insights on red flags and the most prudent steps to take when dealing with a patient whom you suspect could be a victim of human trafficking, turn to page 13.

### FIVE MOST-VISITED HEALTHCARE SETTING DURING HUMAN TRAFFICKING VICTIMIZATION PERIOD



Source: Richie-Zavaleta AC, Villanueva A, Martinez-Donate A, et al. Sex trafficking victims at their junction with the healthcare setting—a mixed-methods inquiry. *J Hum Traffick*. 2020;6(1):1-29.

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