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References: 1. LUCIRA® by Pfizer COVID-19 & Flu Test. Instructions for Use. Pfizer Inc; 2023. **2.** US Food and Drug Administration, Center for Devices and Radiological Health. LUCIRA® by Pfizer COVID-19 & Flu authorization letter. June 15, 2023. Retrieved September 14, 2023, from https://www.fda.gov/media/163455/download

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JUCM The Journal of Urgent Care Medicine (ISSN 19380011) supports the evolution of urgent care medicine by creating content that addresses both the clinical practice of urgent care medicine and the practice management challenges of keeping pace with an ever-changing healthcare marketplace. As the Official Publication of the Urgent Care Association and the College of Urgent Care Medicine, *JUCM* seeks to provide a forum for the exchange of ideas regarding the clinical and business best-practices for running an urgent care center.

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URGENT INTERACTIONS

"In 2024, we are still likely to see volume driven by 'waves' of COVID, but we'll also face new challenges related to at-home testing and the appropriate prescribing of antivirals. Any overlap of COVID, seasonal RSV, and flu will further determine the degree of uptick in UC volumes in the winter months. At the same time, new centers will open their doors as an increasing number of APPs enter the UC workforce. Leaders will be tasked with ensuring quality of care and supporting the rapid development of these newly minted clinicians."

— Joshua W. Russell, MD, MSc, FUCM, FACEP

JUCM Editor in Chief

"In terms of predictions for this year's influenza season, we can only guess based on what we observed in the Southern Hemisphere. In Australia, it was a single-peak season and not as severe as last year."

— Lindsey Fish, MD

JUCM Insights in Images Editor
Medical Director, Peña Urgent Care Clinic, Denver Health and Hospital
Associate Professor of Medicine, University of Colorado School of Medicine

"As we continue our work to continuously advance Urgent Care in 2024, the Urgent Care Association will empower members with brand new trainings, data access, quality resources and more. We'll focus our work to ensure the long-term success of members through increased federal lobbying and enhanced opportunities for state-based advocacy. It takes us all. I'm excited to see our inevitable progress in 2024."

— Lou Ellen Horwitz

Chief Executive Officer, Urgent Care Association

A WORD OF THANKS

The Journal of Urgent Care Medicine would like to thank the dedicated group of urgent care professionals listed below who graciously contributed their time and insight to review recent articles for publication. The peer reviewer status is worthy of inclusion on your curriculum vitae, so if you're interested in becoming a peer reviewer, reach out to the *JUCM* team at: **editor@jucm.com**.

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Leadership Must Guide Behavior Change for the Next Phase in Urgent Care

Ben Barlow, MD

As I've discussed before, urgent care medicine is ready for its next phase, and exceptional leadership is needed to make urgent care a shining light within a struggling house of medicine. Engaging your team and setting one priority goal is the best approach for solidifying a behavior change that leads to exceptional results. Picking one goal is the easy part. Getting all team members to engage in accomplishing that goal is the difficult part.

The one goal that your team chooses to concentrate on will be as unique as your organization itself. It may be improvement of one of your key performance indicators or a clinical quality measure. Perhaps there's a new line of service you want to offer. When selecting this primary goal, solicit input from every team member and choose one that will impact your clinic the most. Once you have narrowed your goal to just one, it is now the leader's job to define it so everyone can understand it.

In the book *The 4 Disciplines of Execution*, the authors recommend putting quantitative measures around your goal.[1] This will provide clarity to your team as they execute. For example, imagine a hypothetical urgent care clinic whose team decided they wanted to increase the number of patients with lacerations repaired each month. With help from the clinic manager, the clinical team found through analysis that they repaired an average of 5 lacerations every month. However, they also found they were turning away 20 patients with lacerations per month. With this data in mind, the team decided on a main goal of increasing the number of lacerations repaired in a month from 5 to 15. They gave themselves 4 months to accomplish this main goal. Tripling the number of lacerations repaired was a big change, but the clinical team agreed they could do it.

Ben Barlow, MD, is Chief Medical Officer of Experity

The team responsible for accomplishing the goal should always be the one who selects the main goal. While leadership can certainly guide the decision-making process, it's important that they don't dictate the goal. When the team is involved in setting the goal, they're more likely to be invested in achieving it.

Once the main goal is decided on, a visible tracking board can show progress along the way. I also suggest making a document that tracks the drivers for this goal—in other words, the daily behavior changes that must occur for the goal to be met. By defining and planning the specifics of the behavior change, your team will have a much higher chance of success.

Determine Team Drivers

In our hypothetical clinic, the number of lacerations repaired monthly is a lagging indicator. Lagging indicators only tell you what happened; they don't tell you what *is* happening. Leading indicators, or drivers, are the activities that will move the lagging indicator. The team's drivers must also be determined and tracked. These are the items your team will report on as you track the main goal.

Returning to our hypothetical clinic team, since the team decided their main goal is to increase the number of laceration repairs done per month, it is essential to set lead measures for that goal. The clinic manager discovered the providers spent a lot of time hunting for suture material and needle drivers. Often they required help finding what they needed or gave up looking. This led the providers to stop repairing lacerations, and what's more, they sent those patients to the emergency room instead.

As a remedy, the team decided a lead measure will be to ensure that enough laceration kits are available for the providers and ready to use in the clinic. They decided to track and ensure 3 kits were ready for use at the beginning of each day. They also worked with each provider to make a standard suture repair kit and procedure room setup guide. When a provider ordered a suture repair, the medical assistant set out a suture kit, irrigation fluid,

basin, and suture material. Setting drivers such as these ensured the providers always had enough fully stocked kits available, preventing them from wasting time hunting for materials, and thus decreasing the number of patients turned away every month. This, in turn, helped the clinic meet its goal.

There are other drivers this clinic considered, such as training all the staff to assist in laceration repairs and improving the clinic's check-in process to ensure that patients with lacerations are promptly attended to. But the leadership decided these would be evaluated later as subsequent goals.

Throughout the process, the team can monitor their goal progress on the visible tracking board. Each week, the leader should have a team meeting to review the goal, the drivers, and the commitments for the next week.

Our hypothetical clinic team had weekly Thursday meetings before clinic opening. They reviewed the goal tracker and whether the drivers were met each day. In several instances during the first week, the suture setup was not prepared for the provider. The staff started to make excuses about how busy the daily whirlwind had been. The clinic leader listened without condemnation and guided the staff to commit to making sure suture setup was accomplished the following week, even in the midst of achieving the just as important daily care activities.

It is also important to recognize the team when they meet milestones of progress. Make the recognition meaningful and something that will build your team's comradery. If this is new for your organization, set an initial goal that you believe has a high likelihood of achieving. That way, when the team accomplishes the first goal, it will provide momentum for the next one. As each goal is accomplished, it will become part of the daily whirlwind, enabling a continued advancement toward excellence.

Urgent care has a bright future and provides value to every community we serve. The leaders, providers, and staff need to have a clear and structured path for improvement so as not to feel overwhelmed. Consider this a starting point to move the needle on repairing the issues we are facing in medicine. Intentional leadership, main goal setting, driver tracking, and accountability are how we will make tomorrow better than today. ■

Reference

1. Covey S, McChesney C, Huling J, Thele S. *The 4 Disciplines of Execution*. Simon & Schuster, Inc. 2012, 2021

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Master the Distinction Between Level 3 and Level 4 Visits with These Best Practices

Bradley L. Laymon, PA-C, CPC, CEMC

A recurring issue for healthcare practitioners is the frequency with which they find themselves contemplating whether a patient encounter should be classified as a level 3 or level 4 office visit. With a staggering number of ambulatory patient visits falling within these categories, this query has become exceedingly common among providers. Complicating matters further, the coding guidelines from the American Medical Association (AMA) contain gray areas that can contribute to additional confusion.

This article aims to shed light on four key components that will empower all providers to navigate these intricacies with greater confidence when determining the appropriate level of service. Ensuring accurate coding of level 3 and level 4 patient encounters with the appropriate documentation to support it offers practical benefits including optimal reimbursement that recognizes the comprehensive scope of provider efforts, better communication with coders, improved quality of patient records, and better patient care.

4 Key Components

1. Comorbid Conditions

The influence of comorbid conditions on a patient's overall risk cannot be underestimated. It is important to distinguish between healthy, young patients and those whose age and/or co-morbidities increase the probability of complications, even in the setting of an otherwise seemingly simple presentation. Consider, for instance, a 22-year-old individual with a leg wound and no comorbidities, whose risk management would be much lower compared to a 78-year-old patient with the same leg wound, alongside a medical history encompassing diabetes, morbid obesity, and congestive heart failure. Clearly, the latter patient would face a higher risk of complications.

While selecting a level of service, comorbid conditions typically do not factor in—unless they contribute to increased complexity in data review/analysis or pose a greater need for patient management. Thorough documentation of comorbid conditions plays a pivotal role in this process. Each comorbid condition should be meticulously documented in the treatment plan, encompassing all medications and other forms of therapy employed. Additionally, any modifications to the management plan should be duly recorded to ensure comprehensive and accurate documentation.

2. Acute, Uncomplicated Illness vs Acute Illness with Systemic Symptoms

Confusion lies in distinguishing between two categories: "*acute, uncomplicated illness/injury;*" and "*acute illness with systemic symptoms*." To gain clarity, let's explore the definitions outlined in the AMA guidelines.

- *Acute, Uncomplicated Illness/Injury*: This refers to a recent or new short-term problem with a low risk of morbidity, where treatment is deemed necessary. There is minimal to no risk of mortality with treatment, and the expectation is a complete recovery without any functional impairment. An acute, uncomplicated illness is typically self-limited or minor in nature. Even when its resolution does not follow a definite and prescribed course, the illness or injury falls into this category. Examples include cystitis, allergic rhinitis, or a simple sprain.[1]
- *Acute Illness with Systemic Symptoms*: This term applies to an illness that manifests systemic symp-

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toms and carries a high risk of morbidity if left untreated. In cases involving general systemic symptoms, such as fever, body aches, or fatigue, where treatment is aimed at alleviating symptoms, shortening the duration of the illness, or preventing complications, clinicians should refer to acute, uncomplicated illness/injury definitions to make a determination. Systemic symptoms may not be general but rather specific to a single system. Examples include pyelonephritis, pneumonitis, or colitis.

When it comes to classifying most uncomplicated cases of otitis media, otitis externa, sinusitis, conjunctivitis, and similar illnesses with normal vital signs, as other examples, there is generally a consensus that they fall under the acute, uncomplicated illness category. However, what about patients who present with additional factors that have relevance?

Consider, for instance, a patient with left otitis media exhibiting a temperature of 101.6°F and a heart rate of 106 beats/minute, or a patient who has tested positive for influenza, with a temperature of 102.1°F and a heart rate of 118 beats/minute. These cases pose a challenge as they deviate from the usual straightforward classification.

To address such complex scenarios, it becomes crucial to shift the clinical focus toward Systemic Inflammatory Response Syndrome (SIRS). By considering the parameters outlined within the SIRS criteria, which include indicators, such as heart rate, temperature, respiratory rate, and white blood cell count, providers can gain a better understanding of the patient's systemic response and evaluate the potential severity of the condition.

Delving deeper into the details of these challenging cases and leveraging the framework provided by SIRS criteria allows healthcare providers to make informed decisions regarding appropriate categorization and treatment pathways for patients presenting with acute, uncomplicated illnesses that exhibit additional clinical complexities.

SIRS is defined by the National Institutes of Health as, "an exaggerated defense response of the body to a noxious stressor (infection, trauma, surgery, acute inflammation, ischemia or reperfusion, or malignancy, to name a few) to localize and then eliminate the endogenous or exogenous source of the insult. It involves the release of acute-phase reactants, which are direct mediators of widespread autonomic, endocrine, hematological, and immunological alteration in the subject. Even though the purpose is defensive, the dysregulated cytokine storm can cause a massive inflammatory cascade leading to reversible or irreversible end-organ dysfunction and even death."[2]

Objectively, SIRS is defined by the satisfaction of any two of the criteria below:

- Body temperature over 100.4°F or under 96.8°F.
- Heart rate greater than 90 beats/minute
- Respiratory rate greater than 20 breaths/minute or partial pressure of CO2 less than 32 mmHg
- Leukocyte count greater than 12,000 or less than 4,000 or over 10% immature forms or bands.[2]

Many adult patients with acute febrile illnesses will meet these fairly liberal and non-specific SIRS criteria and consequently will also meet systemic symptoms criteria, for coding purposes, as an "acute illness with systemic symptoms." Other common systemic symptoms worth being familiar with and documenting include (but are not limited to):

- Nausea, diarrhea, or vomiting
- Loss of appetite
- Malaise or fatigue
- Confusion or dizziness that is not primarily neurological
- Rash in a condition that is not primarily dermatological
- Joint or muscle pain in a condition that is not primarily orthopedic

By understanding these distinctions, healthcare professionals can navigate the complexity of differentiating between acute, uncomplicated illness/injury and acute illness with systemic symptoms, thereby ensuring accurate categorization and appropriate treatment decisions.

3. Pediatric Patients

Pediatric patients may require a higher level of service that should be reflected in the documentation. It is important not to hastily assign a level 3 visit to a pediatric patient who has tested positive for strep, for example. In many cases, these encounters should be categorized as level 4 visits when appropriate documentation is provided.

Consider an illustrative example: A 4-year-old child arrives at the clinic accompanied by the father who reports the child has been experiencing a fever, loss of appetite, and a sore throat for the past 2 days. Point-of-care (POC) tests for strep throat and COVID-19 are conducted. The strep test yields a positive result, and you prescribe amoxicillin as treatment.

In this scenario, due to the ordering of 2 POC tests (strep and COVID-19), the documentation of an independent historian who provides the history of the present illness (in this case, the father), as well as the prescription of amoxicillin, the visit qualifies as a level 4 office visit. These factors contribute to the complexity and documentation requirements necessary to justify the higher level of service.

By recognizing the significance of these elements and

appropriately documenting the details of the encounter, healthcare providers can accurately assign the appropriate level of service for pediatric patients, ensuring proper reimbursement and reflecting the level of care provided.

4. Documentation

Undoubtedly, documentation stands as the cornerstone when it comes to selecting the correct level of service. Neglecting to document crucial elements, such as comorbid conditions, an independent historian, and over-the-counter (OTC) or prescription medications, among others, can inadvertently confine healthcare providers to level 3 categorization. Consequently, this not only deprives them of rightful reimbursement but also hampers the overall revenue generation for the healthcare organization, failing to recognize the comprehensive scope of their efforts. To ensure accurate documentation and optimize reimbursement, consider the following documentation practices:

- **Comorbid Conditions:** Thoroughly document all relevant comorbid conditions, acknowledging their impact on patient management and the associated complexities.
- **Independent Historian:** Whenever an independent historian provides critical information regarding the patient's history, ensure it is duly documented, acknowledging the source and their relationship to the patient.
- **OTC/Prescription Medications:** Record all OTC and prescription medications prescribed or recommended during the encounter, demonstrating the comprehensive nature of the care provided.
- **Differential Diagnosis:** Incorporating a summary of the differential diagnosis in your treatment plan can prove highly beneficial. By doing so, you provide valuable insight to the coder regarding the complexity of the patient's condition, ultimately contributing to a more accurate coding process. Including a differential diagnosis within the treatment plan serves multiple purposes. First, it demonstrates your thoughtful consideration of various potential diagnoses based on the patient's symptoms, history, and examination findings. This showcases the depth of your clinical reasoning and your comprehensive approach to patient care. Secondly, a documented differential diagnosis helps coders to better understand the complexity of the case. It provides them with valuable information, enabling them to assign appropriate codes that accurately reflect the intricacies involved in managing the patient's condition. By adopting this practice, healthcare providers can facilitate effective communication with coders, resulting in improved coding accuracy and a more thorough understanding of the patient's medical complexity.
- **Treatment Options or Data Options Considered But Not Performed:** Even if a patient refuses a recommended course of action, such as declining a prescribed medication like nirmatrelvir/ritonavir (Paxlovid) despite a positive POC COVID-19 test, the refusal still holds significance within the realm of prescription management. When a patient declines a recommended test or treatment, clinicians should document the refusal and the specific details surrounding it. In doing so, providers can demonstrate their comprehensive evaluation and management approach, as well as the time, effort, and consideration given to different treatment options. They also uphold the integrity of their records, ensuring comprehensive documentation that accurately reflects the decision-making process and the patient's role in their own healthcare journey.

By adhering to these documentation guidelines and capturing the essential elements of the patient encounter, healthcare providers can accurately reflect the level of service delivered. This ensures fair reimbursement, optimizes revenue, and acknowledges the extensive effort and expertise invested in patient care.

Conclusion

All healthcare providers should possess a comprehensive understanding of medical coding guidelines. This knowledge empowers them to accurately assign appropriate codes for patient encounters, reflecting the complexity and specificity of the services rendered. However, achieving coding success requires thorough documentation. Thorough documentation serves as the linchpin in the coding process. It allows healthcare providers to capture the specific details of the patient encounter, including relevant diagnoses, procedures, treatments, and other pertinent information.

Accurate coding of level 3 and level 4 office visits not only ensures appropriate reimbursement but also facilitates effective communication among healthcare professionals, researchers, and payer entities. It contributes to the reliability and integrity of medical records, allowing for precise analysis, improved decision-making, and enhanced patient care. ■

References

1. American Medical Association. CPT® evaluation and management (E/M) office or other outpatient (99202-99215) and prolonged services (99354, 99355, 99356, 99417) code and guideline changes. Available at: https://www.ama-assn.org/system/files/2019-06/cpt-office-prolonged-svs-codechanges.pdf
2. Chakraborty RK, Burns B. Systemic Inflammatory Response Syndrome. 2023 May 29. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan. PMID: 31613449.

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The Cost of Fear

Lou Ellen Horwitz, MA

I have a story I want to share with you, but I'm finding it hard to do without it reeking of privilege. This is a story about feeling 100% welcomed in one place when you don't feel that way in many others. This is a rare for me, and perhaps it will feel like a poor example to you. Yet, it is part of my lived experience and brought something home for me that made me think of the Urgent Care community and how it may help us grow as an industry. I hope you will take it in the spirit in which it's told and forgive me if it offends you in any way.

The other day, I was running errands, looking rather shabby—no makeup, messy ponytail shoved into a baseball cap, sloppy clothes. Consequently, I felt myself slinking in and out of the stores I went to, not making much eye contact, not really speaking to anyone. I didn't want to run into anyone I knew or put forward this version of myself in a way that would be noticed. I was hiding. Then there was Ulta.

Ulta is a cosmetics store—one that has been very outspoken in its definition of beauty—in opposition to the majority of the beauty industry. In its marketing, Ulta is very clear that the definition of beauty is infinite because everyone is beautiful in their own way, no matter what they look like. On the doors of its retail stores, Ulta is very clear that hate is not tolerated, and when you get into the store, the diversity among the sales staff is absolutely striking.

What I found walking into Ulta is that I suddenly quit worrying about what I looked like because I knew that in there it *truly didn't matter*. I knew that because they told me over and over again in direct and indirect messaging throughout the store. Walking in there was like laying down a small burden I didn't even realize I was carrying. I relaxed, asked questions about what I was looking for, got help, and walked out feeling better than when I'd walked in.

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

"What are we doing to eliminate that shame and fear before they even walk in our doors?"

Let me remind you, I am a middle-aged, white, heterosexual woman, and this is just a cosmetics store. But I realized I was still carrying shame into that store because of how I looked that day.

How must it be for our patients who worry about how they might be perceived every day, in a high-risk situation like an Urgent Care, where they are confessing their health issues to total strangers, hoping not to feel shame—however unwarranted—at the same time? And most importantly, what are we doing to eliminate that shame and fear before they even walk in our doors? Probably not enough.

UCA's Commission on Diversity, Equity and Inclusion (DEI) has been working on a new Commitment Statement and Commendation for our Certification and Accreditation programs. As we've been looking at the criteria for these, we've recognized that Urgent Care's commitment to DEI cannot just be internal. It must be external to actually be effective in addressing healthcare disparities because if our communities don't know about our commitment, many patients may never consider coming in our doors. Think about this as you think about your visit counts. The cost of that fear is not just spiritual, it's economical.

This work also calls me to look critically at how I am doing leading UCA in this area. When I look at "The People Behind UCA" on our website, I see diversity, and we have made it transparent that DEI is important to UCA. We have also improved our recruiting policies and evaluated our boards, but are we doing enough? Almost certainly we are not.

And I'm not talking about checking boxes. I am talking about creating a "place" where everyone in Urgent Care can relax for just a minute. For example, does everyone arrive at our conventions thinking, "At last I'm somewhere I can just be myself?" Probably not. We still have work to do. Let's go into 2024 committing to doing it together. ■

CONTINUING MEDICAL EDUCATION

Release Date: December 1, 2023
Expiration Date: November 30, 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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Considerations for Holiday Hours in Urgent Care (page 21)

1. The busiest day of the week in an urgent care center, according to Experity data, is usually:
a. Friday
b. Saturday
c. Sunday
d. Monday

2. What phrase best describes the number of patient encounters multiplied by the average net collections per patient?
a. Incremental patient revenue
b. Complementary patient revenue
c. Negative patient revenue
d. Unclaimed patient revenue

3. Keeping a center open for business on a holiday is likely to produce which advantage?
a. Additional revenue
b. Brand recognition
c. Reduced surge on the subsequent day
d. All of the above

Systemic Steroid Stewardship in Urgent Care: Recognizing Indication Creep to Limit Avoidable Harms (page 29)

1. Indication creep refers to:
a. Increasing use of a given therapy outside of clinical scenarios of proven benefit
b. The need for hospitalized patients to use supplemental oxygen
c. Multiple co-morbidities in COVID-19 patients
d. None of the above

2. The use of short course systemic steroids is supported by guidelines for patients presenting with:
a. Acute asthma exacerbations
b. Acute gout
c. Children with croup
d. All of the above

3. Children are at an increased risk of pneumonia for how long following short course systemic steroids?
a. There is no risk
b. Up to 3 months
c. Up to 6 months
d. Up to 1 year

Berger's Disease in Urgent Care: A Case Report (page 35)

1. Berger's disease is also known as:
a. IgA nephropathy
b. Epilepsy
c. Sporotrichosis
d. Bronchiolitis

2. IgA nephropathy may be seen in patients with which of the following conditions?
a. Celiac disease
b. Cirrhosis
c. Hepatitis
d. All of the above

3. The most commonly used tool to predict outcomes in IgA nephropathy is:
a. PHQ-9 Score
b. MEST-C Score
c. FAST Score
d. QoL Score

Diagnostics are the Heart of Antimicrobial Stewardship

How innovative diagnostics can help reduce antimicrobial use at the point of care

Antimicrobial resistance (AMR) is not a future threat—it's already a leading cause of death worldwide, with 4.95 million deaths associated with AMR in 2019.[1] This growing threat is fueled by the misuse and overuse of antimicrobials, which enables the emergence and spread of bacteria, viruses, fungi, and parasites that have evolved to withstand the drugs designed to kill them.

Without effective antimicrobials, infections have the potential to become life-threatening. In fact, the unchecked spread of AMR has the potential to make routine healthcare ineffective or even dangerous.[2]

Effectively addressing the challenge of AMR requires action across countries, industries, and settings—including at the point of care.

Antimicrobial Use at the Point of Care

Outpatient settings like urgent care clinics or primary care offices are a crucial source of antimicrobial prescribing. Around 80–90% of the volume of human antibiotic use occurs in outpatient settings.[3] However, much of that antimicrobial use is unnecessary or inappropriate.[4] **In ambulatory settings, for example, over 45% of antibiotics prescribed for respiratory diagnoses are inappropriate.[5]**

Upper respiratory tract infections represent the top reason that patients visit primary care providers.[6] Furthermore, antibiotics are frequently and inappropriately prescribed for viral respiratory infections.[4] It is clear that outpatient settings are uniquely positioned to make an enormous impact in reducing unnecessary and inappropriate antimicrobial use.

Outpatient Antimicrobial Stewardship

Antimicrobial stewardship is a coordinated effort to encourage the appropriate use of antimicrobials. The goal is to maximize the benefit of antimicrobial treatment while minimizing harm to the patient and reducing the spread of resistance. The CDC calls on healthcare organizations of every size—including outpatient clinics—to commit to optimizing antimicrobial use.[7]

The CDC offers a framework for outpatient antimicrobial stewardship, and one recommendation is to focus stewardship efforts on high-priority conditions for which clinicians commonly deviate from best practices for antimicrobial prescribing—like acute viral respiratory illnesses.[7]

The question becomes: What tools exist today to improve antimicrobial prescribing in the outpatient settings? Diagnostics can be powerful tools for optimizing antimicrobial use, giving clinicians the information they need to ensure antimicrobials are prescribed only when needed, and at the right dose and duration.

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A great deal of inappropriate antibiotic use is associated with viral respiratory tract infections.[4] The SPOTFIRE Respiratory Solution can provide clinicians with diagnostic information to inform stewardship practices—prescribing the right drug for the right patient at the right dose for the right duration.

Upper respiratory tract infections represent the **top reason that patients visit primary care providers.**[6] Furthermore, **antibiotics are frequently and inappropriately prescribed** for viral respiratory infections.[4]

Be a Game Changer

Urgent care settings are uniquely positioned to help slow the spread of AMR, and diagnostics are at the heart of antimicrobial stewardship initiatives. According to the CDC, "Diagnostics can be just as critical for fighting infections as antibiotics."[2]

Together, we can help preserve antimicrobial efficacy today, and for future generations. **Learn more about how the SPOTFIRE Respiratory Solution can empower your clinic in the global fight against AMR.**

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1. Antimicrobial Resistance Collaborators. Lancet. 2022;399(10325):629-655. **2.** CDC. Antibiotic Resistance Threats in the United States, 2019. Accessed 21 Aug 2023. Retrieved from: https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf **3.** Maillard JY, et al. Am J Infect Control. 2020 Sep; 48(9): 1090–1099. **4.** Fleming-Dutra KE, et al. JAMA. 2016;315(17):1864-1873. **5.** Shapiro DJ, et al. J Antimicrob Chemother. 2014;69(1):234-40. **6.** Finley CR, et al. Can Fam Physician. 2018 Nov; 64(11): 832–840. **7.** Sanchez GV, et al. Core Elements of Outpatient Antibiotic Stewardship. CDC. 2016;65(6):1-12.

Tympanic Membrane Conditions Beyond Otitis Media in Urgent Care Practice

Urgent Message: Better understanding of tympanic membrane/middle ear conditions can inform more accurate diagnoses at the point of care.

Jeff LaCour, MD

Citation: LaCour J. Tympanic Membrane Conditions Beyond Otitis Media in Urgent Care Practice. *J Urgent Care Med.* 2023;18(3): 15-19

Urgent care providers are often tasked to determine the source of a patient's otalgia, muffled hearing, or ear fullness. Unfortunately, general medical education and training regarding normal and abnormal conditions of the tympanic membrane (TM) and the middle ear is often inadequate for appropriate risk stratification of many conditions affecting the TM. In one study, pediatricians averaged 50% incorrect responses when distinguishing between acute otitis media, serous otitis media, and a normal tympanic membrane.[1]

In this article, we will review the normal anatomy of the tympanic membrane as well as common tympanic membrane/middle ear conditions urgent care (UC) providers are most likely to encounter.

Anatomy

The TM is a mere 0.1 mm thick with a diameter of approximately 1 cm. It is composed of three layers, with the fibrous stratum or lamina propria (the middle layer) providing its stability. The lateral layer is stratified keratinizing epithelium, and the inner/medial layer is cuboidal mucosal epithelium. The majority of the TM is the pars tensa, which should appear transparent on a normal exam. The pars flacida is above the short process of the malleus and is less taut due to its absence of the fibrous layer. The umbo attaches to the inferior aspect of the malleus manubrium and is the most depressed portion of the TM (**Figure 1**).[2]

The middle ear space consists of the malleus, incus, and stapes. The middle ear space is connected to the nasopharynx via the eustachian tube (ET). **(Figure 2).** A patent ET serves the vital function of pressure equalization between the nasopharynx and middle ear.

Tympanosclerosis/Myringosclerosis

Tympanosclerosis is a post-inflammatory calcification of the collagen containing structures in the middle ear. In 90% of patients, it will manifest as visible white plaques of the TM, a condition known as myringosclerosis. The

Author affiliations: Jeff LaCour, MD, Compassio Medical Education.

Figure 1. Normal Tympanic Membrane

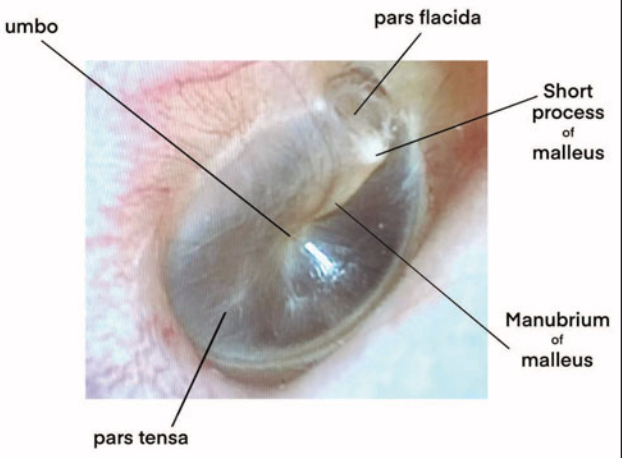


Figure 3. Extensive Myringosclerosis

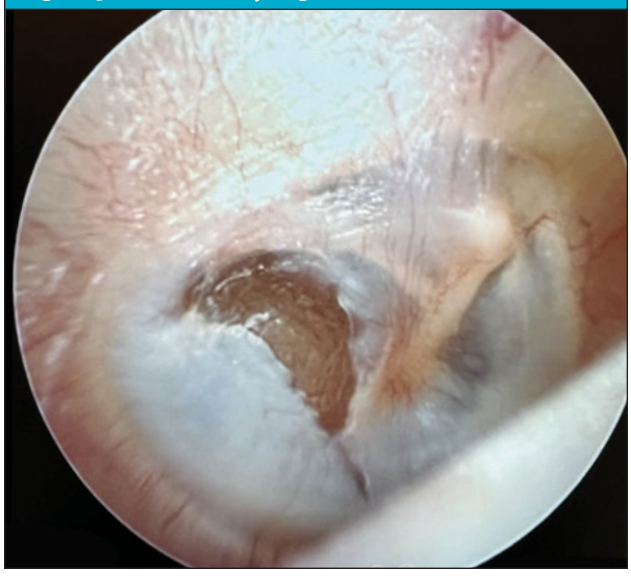


Figure 2. Middle Ear

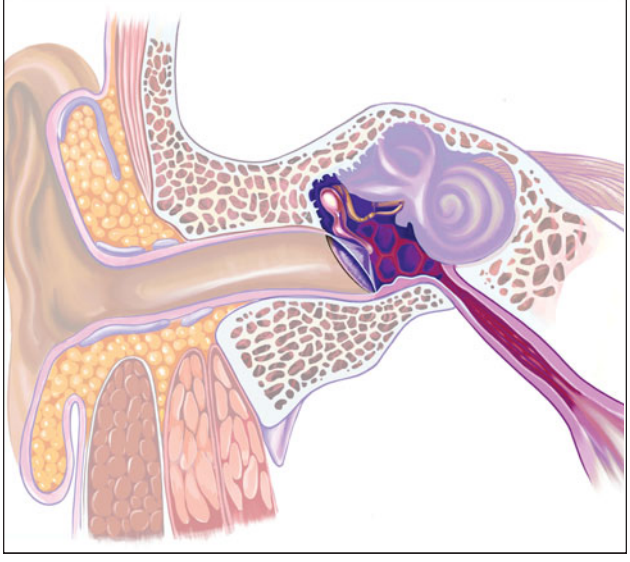
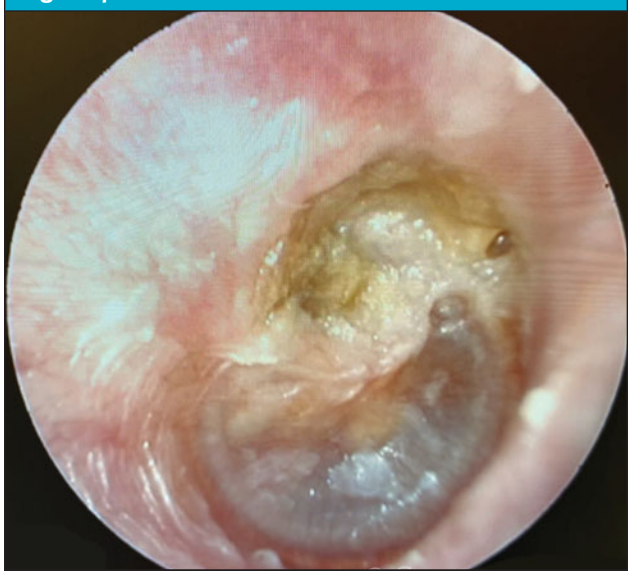


Figure 4. Pars Flacida Cholesteatoma



condition is common in patients with a history of pressure equalization tubes (PE tubes), chronic otitis media with effusion, and recurrent acute otitis media.[3,4] This can be mistaken for cholesteatoma or sometimes gives the appearance of bubbles or fluid in the middle ear. In patients with more extensive myringosclerois, the normal translucent aspects of the TM may appear like a perforation (**Figure 3**). A type A tympanogram or a mobile TM on pneumatic otoscopy can help rule out a TM perforation or middle ear effusion. Myringosclerosis does not typically cause hearing loss, and an ENT referral should be reserved only for patients complaining of hearing loss in the affected ear.

Cholesteatoma

A cholesteatoma is a locally invasive, non-neoplastic lesion of the temporal bone. It occurs when the epidermis of the external ear canal migrates into the middle ear space.[5,6] There are two types of cholesteatomata: congenital, which is unique to childhood; and acquired, affecting both adults and children.[7] The congenital type is located medial to an intact tympanic membrane, while an

Figure 5. TM Perforation with Inferior Cholesteatoma

Figure Courtesy of Neal Jackson, MD, Tulane University Department of Otolaryngology

Figure 6. Inflammatory Changes with Posterior Inferior Cholesteatoma

Figure Courtesy of Neal Jackson, MD, Tulane University Department of Otolaryngology

Figure 7. Adult OME with Amber Fluid, Entire Middle Ear

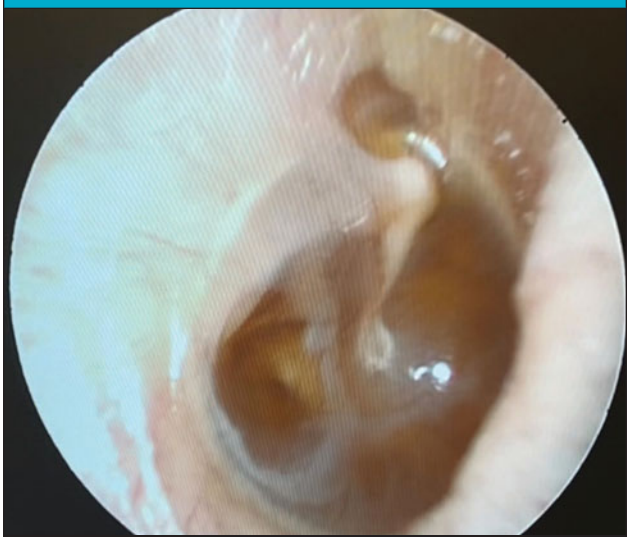


Figure 8. Adult OME with Amber Fluid and Bubbles, Interior Aspect of Middle Ear

acquired type commonly forms from a retraction pocket located in the pars flaccida TM or the posterior superior aspect of the pars tensa TM (**Figure 4**).[5] An acquired type can also originate from epithelial migration into the middle ear through a TM perforation (**Figure 5**).[8]

If left undetected and untreated, a cholesteatoma can lead to hearing loss, temporal bone destruction, and intracranial invasion (**Figure 6**). Cholesteatomata typically appear as cystic structures with a pearly white appearance. The most frequent symptom of a cholesteatoma is foul smelling otorrhea (65% of cases), which can be persistent or intermittent in nature. Other symptoms include otalgia and hearing loss from erosion of the malleus, incus, or stapes.[5]

The incidence of cholesteatomata is higher in children and is upwards of 9 per 100,000 people in developed countries.[9] Any patient with the possibility of a cholesteatoma warrants an ENT referral within 6 weeks. Although rarely urgent, surgical removal is the treatment of choice.

Otitis Media with Effusion

Otitis media with effusion (OME) is the presence of

Figure 9. Adult OME Myringotomy, Serous Middle Ear Fluid

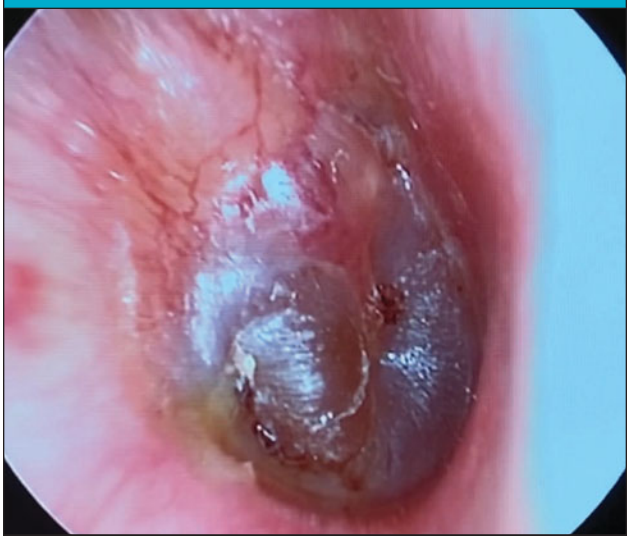


Figure 11. Chronic TMP

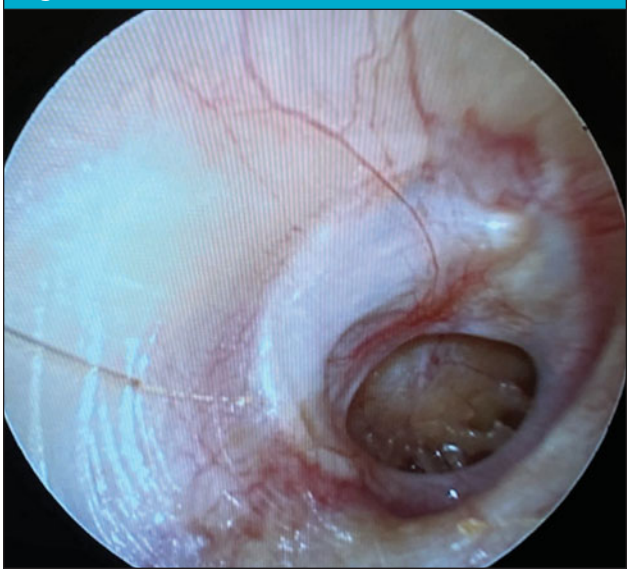


Figure 10. Pediatric AOM with Cerumen Crust, Posterior Superior Annulus

Figure 12. Posterior Superior Retraction Pocket

fluid in the middle ear, in contrast to otitis media, which is the presence of purulence in the middle ear. OME is extremely common in childhood, affecting 90% of children prior to starting school. The horizontal plane and short length of a child's eustachian tube impair middle ear ventilation, which is a precursor to OME. Oral antibiotics and oral steroids are not recommended for OME as most cases resolve spontaneously.[10]

Children that are considered higher risk (eg, pre-existing hearing loss, speech delay, autism, Down syndrome/craniofacial disorders, visual impairment, cleft palate, developmental delay) should be referred for hearing test as this population could be disproportionately affected by hearing loss.[10] OME is often misdiagnosed as acute otitis media (AOM) leading to unnecessary oral antibiotics.[1] Becoming more familiar with otoscopic findings of OME versus AOM will help limit this error (**Figures 7-10**). Although unable to distinguish between AOM and OME, the use of tympanometry is highly accurate for confirming a normal middle ear (type A tympanogram) versus fluid or purulence in the middle ear (type B flat tympanogram).[10]

Adult-onset OME (AOOME) is less prevalent and is not as universally benign. Even though sinusitis is the most common causal factor of AOOME, the association between AOOME and nasopharyngeal carcinoma (NPC) is well established.[11] Therefore, when AOOME is identified in adult patients, ENT referral is indicated within 3 weeks, as many of these patients will have findings of significance on nasal endoscopy. In a series of 167 patients with AOOME, head and neck tumors (mainly NPC) were found in a staggering 4.8% of patients. In the same study, 66% of patients had ethmoid sinus disease, and 19% had nasopharyngeal or lymphoid hyperplasia.[12]

Tympanic Membrane Perforations

A tympanic membrane perforation (TMP) is most commonly the result of trauma or an episode of AOM with spontaneous TM rupture. A TMP following AOM generally resolves following control of the infection.[13] ENT referral should be reserved for adult cases only. Pediatric cases should follow up with the primary pediatric provider to assure closure of the hole. Traumatic TMP are most commonly caused by instrumentation, principally by self-hygiene with cotton-tipped applicators. Other causes of traumatic TMP include water trauma (during diving or waterskiing), strikes to the head, blast injuries, and falls.[14]

Some 78-97% of traumatic TMP will heal spontaneously without surgical intervention. Systemic antibiotics are not necessary for these patients, but otic antibiotic drops (eg, ofloxacin) are recommended if otorrhea is present. Aminoglycoside-containing drops (eg, neomycin, tobramycin) should be avoided for TMPs due to their ototoxicity (hearing loss and balance problems) if introduced into the middle ear. Dry ear precautions and avoidance of swimming/submersion should be initiated. Patients with traumatic perforations of the TM are advised to have a follow up with an ENT provider within 2 weeks to assess hearing and confirm closure of TMP (**Figure 11**).

Tympanic Membrane Retraction Pockets

A retraction pocket (RP) of the tympanic membrane is a localized area of the TM invaginated into the middle ear space. RPs are common in children, with a prevalence of roughly 10%; the prevalence in adults is largely unknown.[15] The most common sites of RPs are the pars flaccida and the posterior superior aspects of the TM (**Figure 12**).[16] The main etiological factor is negative middle ear pressure caused by eustachian tube dysfunction (ETD) and middle ear inflammation.[17,18] Suspicion of a retracted TM can be confirmed via tympanogram demonstrating negative middle ear pressure (type C tympanogram). Patients with retracted TMs should be referred to an ENT provider within 3 months for surveillance, possible pressure equalization tube, or surgery.

Discussion

For many patients with acute or subacute ear complaints, UC centers are the most likely destination for initial presentation. UC clinicians, therefore, should have a comprehensive understanding of these various conditions potentially encountered during otoscopy. Additionally, knowledge of the initial treatment for each condition and indications for ENT referral when TM pathology is encountered are critical for avoiding both unnecessary referrals and for mitigating the risk of long-term sequelae of potentially serious middle ear conditions. ■

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References

1. Pichichero ME., Poole MD. Assisting Diagnostic Accuracy and Tympanocentesis. Skills in the Management of Otitis Media. *Arch Pediatr Adolesc Med*. 2001; 155(10): 1137-1142
2. Luers JC, Hüttenbrink KB. Surgical Anatomy and Pathology of the Middle Ear. *Journal of Anatomy* 2016; Feb; 228(2): 338-353
3. Kay DJ, Nelson M, Rosenfeld RM. Meta-analysis of tympanostomy tube sequelae. *Otolaryngology Head Neck Surg*. 2001. April; 124 (4): 374-380
4. Daly KA, Hunter L, Lindgren B. Chronic Otitis Media with Effusion: Sequelae in Children Treated with Tubes. *Arch Otolaryngol Head Neck Surg*. 2003; 129(5):517-522.
5. Castle JT. Cholesteatoma Pearls: Practical Points and Update. *Head Neck Pathol*. 2018 Sep; 12(3):419-429
6. Soldate D, Mudry A. Knowledge about cholesteatoma, from the first description to the modern histopathology. *Otol Neurotol*. 2001 Nov;22(6): 723-730
7. Kuo C, An-Suey S, Yung M, Sakagami M, Sudhoff H, Wang C, Hsu C, Lien C. Updates and Knowledge Gaps in Cholesteatoma Research. *Biomed Res Int*. 2015:854024
8. Semaan MT, Megerian CA. The pathophysiology of cholesteatoma. *Otolaryngologic Clinics of North America*. 2006;39(6):1143-1159
9. Bonnard A, Berglin CE, Wincent J, Erikson PO, Westman E, Feychting M, Mogensen H. The Risk of Cholesteatoma in Individuals with first degree relatives surgically treated for the disease. *JAMA Otolaryngol Head Neck Surg*. 2023; 149(5):390-396
10. Rosenfeld RM, Shin JS, Schwartz SR, Coggins R, et al. Clinical Practice Guideline: Otitis Media with Effusion (Update). *Otolaryngology – Head and Neck Surgery* 2016, Vol. 154, S1-S41
11. Mills R, Hathorn I. Aetiology and pathology of otitis media with effusion in adult life. *The Journal of Laryngology & Otology*. 2016. 130, 418-424
12. Finkelstein Y, Ophir D, Talmi YP, Shabtai A, Strauss M, Zohar Y. Adult-onset otitis media with effusion. *Arch Otolaryngol Head Neck Surg* 1994; 120: 517-27
13. Principi N, Marchisio P, Rosazza C, Sciarrabba CS, Esposito S. Acute otitis media with spontaneous tympanic membrane perforation. *Eur J Clin Microbiol Infect Dis*. 2017 Jan. 36(1):11-8
14. Carniol E, Bresler A, Shaigany K, Svider P, Baredes S, Eloy JA, Ying YL. Traumatic tympanic membrane perforations diagnosed in emergency departments. *JAMA Otolaryngol Head Neck Surg*. 2018 Feb; 144(2): 136-139
15. Bayoumy AB, Veugen C, Rijssen LB, Yung M, Bok, J-WM. The natural Course of Tympanic Membrane Retractions in the Posterosuperior Quadrant of Pars Tensa: A watchful Waiting Policy. *Otol Neurotol*. 2021 Jan; 42(1): e50-e59
16. Parab SR, Khan MM. Endoscopic Management of Tympanic Membrane Retraction Pockets: A Two-Handed Technique with Endoscope Holder. *Indian J Otolaryngol Head Neck Surg*. 2019 Dec; 71(4): 504-511
17. Danner CJ. Middle ear atelectasis: What causes it and how is it corrected? *Otolaryngol Clin North Am* 2006; 39:1211-1219
18. Ruah CB, Schachern PA, Paparella MM, Zelterman D. Mechanisms of retraction pocket formation in the pediatric tympanic membrane. *Arch Otolaryngol Head Neck Surg* 1992; 118: 1298-1305

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See CME post-test questions on page 13.

Considerations for Holiday Hours in Urgent Care

Urgent Message: Whether an urgent care center should be open 365 days per year or close on major or minor holidays depends upon factors that influence profitability such as patient demand, competitive positioning, staff availability, payer reimbursement, and the branding impact of after-hours accessibility.

Alan A. Ayers, MBA, MAcc

As urgent care operators look to the coming holiday season and begin their strategic planning for the new year, many are faced with the question of how they should approach holiday operating hours.

Specifically, should a center open its doors on Thanksgiving, Black Friday, New Year's Day, or other holidays, for example? And if so, are full-day operations in order, or should a center offer truncated hours in the interest of keeping operating costs down?

Ideally, a best-in-class urgent care center will be open for business 12-14 hours a day, 7 days a week, 365 days a year, reinforcing the overall message of "care when you need us." Thus, holiday hours serve to underscore the dual value propositions of urgent care—that fast, convenient medical care is accessible even when primary care isn't, and that substantial cost/time savings can be realized by foregoing the emergency room for minor injury/illness.

However, the difficulties of provider holiday scheduling, the desire for staff to enjoy time off with their families, and the need to maintain profitable operations can discourage some centers from attempting such extensive hours.

What the Data Reveals

A study of past patient visits in the Experity electronic medical record system, normalized for COVID-19, reveals some interesting findings (**Exhibit 1**).

First, on "minor holidays"—meaning those in which schools, banks and government offices are closed but many private businesses remain open—average volume increases by 16%, and an average of 11% of urgent care centers close for these holidays.

Significant is that with the exception of Veterans Day and Juneteenth, these holidays are prescribed by law to always occur on a Monday. Monday tends to be the busiest day of the week in urgent care already, but there may be additional lift coming off of a three-day weekend. **Exhibit 2** lists the types of holiday activities that drive urgent care visits.

Author affiliations: Alan A. Ayers, MBA, MAcc is President of Experity Networks and is Senior Editor of *The Journal of Urgent Care Medicine*. The author has no relevant financial relationships with any commercial interests.

Exhibit 1. Analysis of Centers Closed on Holidays

	Day or Date	Average Visit Variance	% of Centers Closed
New Year's Day	January 1	1.6%	44%
Martin Luther King Jr. Day	Monday	22.3%	10%
Presidents' Day	Monday	22.1%	7%
Easter	Sunday	-26.0%	43%
Memorial Day	Monday	3.3%	14%
Juneteenth	June 19	23.7%	7%
Independence Day	July 4	-16.2%	33%
Labor Day	Monday	7.6%	24%
Columbus Day	Monday	27.8%	8%
Veterans Day	November 11	5.1%	8%
Thanksgiving Day	Thursday	-46.2%	77%
Christmas Day	December 25	-54.5%	86%
Day after Christmas	December 26	51.8%	11%

Analysis of ~2,000 centers using the Experity EMR from 2019 to 2023. Factors not considered in this analysis include: day of week variances; condition seasonality; temporary or unrelated closures; unreported data.

Second is that "major" holidays tend to experience a drop in visits. The explanation is that patients may not expect urgent care to be open, which is reasonable given that 43% of centers are closed on Easter, 33% on Independence Day, 77% on Thanksgiving, and 86% on Christmas.

If we segment holidays into three categories, the variances become even more apparent:

- **Major Holidays (New Year's Day, Easter, Independence Day, Thanksgiving, Christmas):** 57% of centers closed, volume down 28%.
- **"Tier 2 Holidays" (Memorial Day, Labor Day):** 19% of centers closed, volume up 5%.
- **"Tier 3 Holidays" (Martin Luther King Jr. Day, Presidents' Day, Juneteenth, Columbus Day, Veterans Day):** 8% of centers closed, volume up 20%.

Interestingly, the busiest day of the year is the day after Christmas with a 50% uptick in visits. The conundrum is whether it's better to open with reduced staff on Christmas Day to alleviate pressure on the 26th, or to give employees Christmas Day with their families and double up on staff for the 26th?

Single-Day Profit and Loss

Holiday hours can be considered profitable if the incremental revenue generated on the holiday exceeds the incremental cost of opening. To assess the breakeven volume required, an owner/operator can create a model of expected revenues and costs, as illustrated in **Exhibit 3**. To identify the number of patients required to break even, divide incremental operating costs by incremental revenue per patient. Only include expenses that would not otherwise be paid if the center had closed on the holiday.

Breakeven Volume for Holiday Operations = Incremental Cost of Opening / Incremental Revenue per Patient Encounter

Profit or Loss on Holiday Operations = Incremental Patient Revenue - Incremental Cost of Opening

Put simply, a center must see more patients than needed to break even to recoup the cost of opening and realize a profit on the holiday. Because overtime, holiday pay, and holiday advertising costs are not incurred on "normal" operating days, however, the incremental costs of a holiday opening will necessarily require a higher patient volume than on a typical day. For centers that truncate their holiday hours or serve a community with a smaller patient base, they'll struggle to achieve breakeven volumes.

Conversely, higher volume centers and multilocation operators who appoint a single center to handle the local holiday patient load from its other sites can often reach or exceed breakeven volumes. Regardless, single day profitability, while relevant in the short-term,

Exhibit 2. Holiday Activities Drive Urgent Care Demand

Unexpected illness and injury don't take a holiday just because the calendar says it's a certain day. As primary care offices are closed on major holidays, people with emergent medical needs have their options narrowed to two: the emergency department or an open urgent care facility/walk-in clinic. While there are a great many situations that might bring patients to an urgent care center on a holiday, below is a short list of some of the most common concerns and injuries.

- **Injuries from cooking accidents** – These run the gamut from burns caused by dangling sleeves over hot stoves, haphazard rushing to remove meals from ovens, or general carelessness around outdoor grills. Lacerations, ostensibly from carving meat, are also increasingly seen on holidays.
- **Sprains and fractures** – Knee, ankle, and hip sprains from slips and falls due to scaling roofs to hang holiday paraphernalia and climbing stools and ladders to adorn trees, bushes, and awnings with decorations are common.
- **Heartburn/indigestion** – Overindulging in food and drink can lead to gastrointestinal issues, which can also induce chest pains that mimic a heart attack in some patients.
- **Food-borne illness** – Issues can arise from undercooked meat, mishandling of raw meat (eg, salmonella, E. coli exposure), improper storage or thawing of holiday cuisine (eg, foods prepared with eggs, mayonnaise), or cross-contamination.
- **Injury from physical activity** – Competitive running events, fun runs, days at the lake, golf tournaments and other physical activities tend to occur on holidays, and physical activity always presents risk of an unexpected injury. Whether it's a youngster awakening Christmas morning with pinkeye, or a weekend warrior who overdoes it at the annual 10k, an open urgent care center can expect a steady stream of patients on the holidays. When considering holiday hours, an urgent care center may start by examining anticipated patient demand.

Exhibit 3. Incremental Patient Revenue and Incremental Cost

Incremental Patient Revenue Generated by Holiday Hours: Incremental revenue is simply the number of patient encounters multiplied by the average net collections per patient.

Incremental Cost of Opening on a Holiday: Incremental costs are costs that would not be incurred if the center were closed for the holiday. Fixed costs such as rent and equipment leases are thus excluded from the analysis.

Variable costs of opening include:

- Direct hourly cost of providers and staff working on the holiday, including overtime and/or holiday pay.
- Pro-rated share of benefits, paid time off, incentive pay, and other variable staffing costs per hour worked.
- Costs of advertising the holiday opening (distinct from any regular, ongoing marketing program).
- Janitorial services, courier, security, and other services incurred on days the center is open.
- Costs attributable to specific patient encounters, including billing fees, supplies, x-ray overread fees, etc.

should not be the lone consideration when deciding whether holiday hours can benefit a center.

Holiday Hours and Branding Goals

Going beyond single-day profitability and payer reimbursements, a center whose doors are open 365 days a year elevates its brand immeasurably. Being known as the urgent care center "that's always open, even on the holidays" helps engender highly-coveted "top of mind" awareness, as people experiencing holiday mishaps recall right away that the center is indeed open—regardless of the season or the particular holiday being observed. In a sense, being open every single day, including holidays positions a center's brand in such a way to be associated with the Walmarts and McDonalds of the world—synonymous for their convenience and availability.

Additionally, consider the competition when evaluating holiday operations for the urgent care brand. It's universally known that the emergency department is always open but what about competing centers within the community? A competitor who is open sets a consumer expectation that "urgent care includes holidays" and it's best to follow suit. If competitors are closed, however, being open differentiates the brand significantly, and lends it a competitive advantage.

Even if there's insufficient local demand to justify holiday hours from a single-day profitability standpoint, the urgent care brand that puts patient convenience above all positions itself to attract more business in the long run. ■

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1. CFR - Code of Federal Regulations Title 21. U.S. Food & Drug Administration. Updated March 29, 2022. Accessed July 26, 2022. https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?fr=866.3328 2. ID NOW Strep A 2 Product Insert 3. Chartrand, C. et al. Diagnostic Accuracy of Rapid Antigen Detection Tests for Respiratory Syncytial Virus Infection: Systematic Review and Meta-analysis. J Clin Microbiol. December 2015 vol. 53 no. 12 3738-3749 4. ID NOW RSV Product Insert

COL-15358-04 10/23

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Blood Pressure Monitoring—Cuff Size Matters

Take Home Point: The use of an inaccurately sized automated blood pressure (BP) cuff resulted in significantly inaccurate BP readings.

Citation: Ishigami J, Charleston J, Miller E, et. al. Effects of Cuff Size on the Accuracy of Blood Pressure Readings: The Cuff(SZ) Randomized Crossover Trial. *JAMA Intern Med*. 2023 Oct 1;183(10):1061-1068. doi: 10.1001/jamainternmed.2023.3264.

Relevance: Chronic hypertension is a leading cause of cardiovascular and cerebrovascular morbidity and mortality, and accurate measurement of BP is central to the screening and monitoring of BP.

Study Summary: This was a randomized, crossover community trial based in Maryland. Participants were recruited via community screening events, targeted mailing to previous trial participants, patients from hypertension clinics and referrals from physicians providing hypertension care. Four cuff sizes were used: small, regular, large, and extra-large. All BP measurements were obtained by research staff members, and measurements were taken between 9AM and 6PM using an automated, validated, oscillometric device (ProBP 2000 Digital Blood Pressure Device [WelchAllyn]). Each participant completed 4 sets of triplicate BP measurements for a total of 12 BP measurements per study participant.

The authors randomized 195 participants with 35 participants measured for small cuff, 54 regular, 66 large, and 40 extra-large cuffs. They found measurements obtained when the regular sized BP cuff was too large or too small for the participant resulted in clinically and statistically significant lower and higher BP readings, respectively. The effect was similar across the other cuff sizes with the magnitude of difference greater when larger BP cuff sizes would have been appropriate.

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Editor's Comments: Body mass index of participants was self-reported and not considered within the analysis. However, the results are compelling and confirm the importance of accurate cuff sizing to ensure accurate BP measurement and monitoring. These findings also have important implications for patient education regarding cuff size selection as a large part of BP management relies on patients monitoring their pressures with a device in their homes. ■

Use of AI in Surgical Skills Training—Unintended Consequences

Take Home Point: In this study, an artificial intelligence (AI)-enhanced curriculum for bimanual surgical skills resulted in unintended changes that improved performance in safety but negatively affected some efficiency metrics.

Citation: Fazlollahi A, Yilmaz R, Winkler A, et. al. AI in Surgical Curriculum Design and Unintended Outcomes for Technical Competencies in Simulation Training. *JAMA Netw Open*. 2023 Sep 5;6(9): e2334658. doi: 10.1001/jamanetworkopen.2023.34658

Relevance: AI is increasingly pervasive technology, but the consequences of its use in most domains remains unknown. As AI begins to be used for medical education, it's important to understand the consequences of its integration into more traditional methods of education.

Study Summary: This was a secondary analysis of 2 previously conducted studies: a cohort study and a randomized trial. The cohort study involved 14 experts performing simulated neurosurgical procedures with no feedback to establish benchmarks and was conducted in 2015-2016. In the subsequent study, 46 undergraduate Canadian medical students were randomized into 2 groups and learned to perform the same task with or without instructions from an AI-enhanced curriculum. All participants performed 4 simulated neurosurgical tumor resection procedures within a fixed time after first receiving either an AI-enhanced tutorial with a virtual operative assistant (VOA) or standard training for the procedures (control and skilled groups) after the completion of each attempt. The intervention for the VOA group involved receiving post-hoc audiovisual in-

structions on 4 learning objectives based on the learners' lacking competency.

The authors found unintended surgical skill acquisition with both positive and negative consequences following an AI-enhanced curriculum. They noted that training the non-dominant hand was associated with movement changes of the dominant hand. VOA participants demonstrated safer approach with more focused and steady control of instruments that resulted in less healthy tissue damage. However, they became significantly slower in movements of their dominant hand and were less efficient in completing the task.

Editor's Comments: There may be limited generalizability as the study focused on neurosurgical procedures. Additionally, all training and task completion was virtual and it is uncertain how this might translate to real-world performance of surgical skills. However, the study does highlight that AI is already out there for applications within medical education and extensive research opportunities exist for the many unanswered questions we must keep in mind as we begin to see increasing integration of these innovative technologies. ■

Does This Child's Wrist Fracture Really Need a Cast?

Take Home Point: In this study, the Robert-Jones (RJ) bandage was non-inferior to traditional cast for treatment of selected distal radius fractures in children.

Citation: Doski J, Shaikhan R. Robert Jones bandage versus cast in the treatment of distal radius fracture in children: A randomized controlled trial. *Chinese Journal of Traumatology*. 26 (2023) 217e222

Relevance: Remodeling and healing of fractures in children is significantly more robust than in adults. Present evidence suggests that specific wrist fractures, such as torus fractures, can be successfully treated without rigid immobilization in children. This study looks at the possibility of bandaging as an alternative treatment modality to rigid immobilization for certain fracture types.

Study Summary: This was a randomized controlled, non-inferiority clinical trial based in Iraq. Children aged 2-12 years with torus, greenstick, non-displaced distal radial physis fractures (Salter-Harris classification type 1 and 2 only), or non-displaced/minimally displaced metaphyseal fractures were recruited. They were randomized in a 1:1 fashion to receive a short arm cast or RJ bandage (a bulky bandage comprising alternating layers of cotton and elasticated bandaging material). Follow-ups (at the end of the 2nd, 4th, 6th, and 12th week) of both groups were conducted with final assessment at the end of 26th week by a specialist orthopedic doctor in collaboration with a radiologist.

The authors recruited 150 pediatric patients and found that most patients had satisfactory outcomes from both treatment modalities. There were 5 complications noted: 3 pressure sores (all in the cast group) and 2 fractures, which were ultimately displaced (all in the RJ group). There was better parental satisfaction in the cast group, although not statistically significant.

Editor's Comments: This was an Iraqi study and practice may not be generalizable to more diverse populations. The participants and investigators of the study were not blinded to the treatment modality applied. The authors discounted the natural variation of stability of the differing fractures by including all types of fractures in the study. No greenstick fractures were included in either group. There were few complications in either group. This study is noteworthy as it highlights the continuously changing nature of recommendations surrounding pediatric fracture immobilization.

It is important to ensure initial treatment is discussed with the orthopedic specialist with whom the child will be following up, as there's considerable nuance in splint selection based on age of patient, fracture characteristics, etc. In the absence of clear guidance from an orthopedist, it remains prudent to err on the side of more conservative/traditional rigid splinting. ■

Considering the Language We Use

Take Home Point: This editorial article suggests that clinicians should be conscientious about communications surrounding serious illness when speaking to patients and their families to promote appropriate care that aligns with patients' wishes and values.

Citation: Kruser J, Clapp J, Arnold R. Reconsidering the Language of Serious Illness. *JAMA*. 2023 Aug 15;330(7):587-588. doi: 10.1001/jama.2023.11409

Relevance: Communication about illness is central to every patient encounter. Reflecting on the language we use is important for identifying improvements in the way we convey information about patients' conditions and treatment options.

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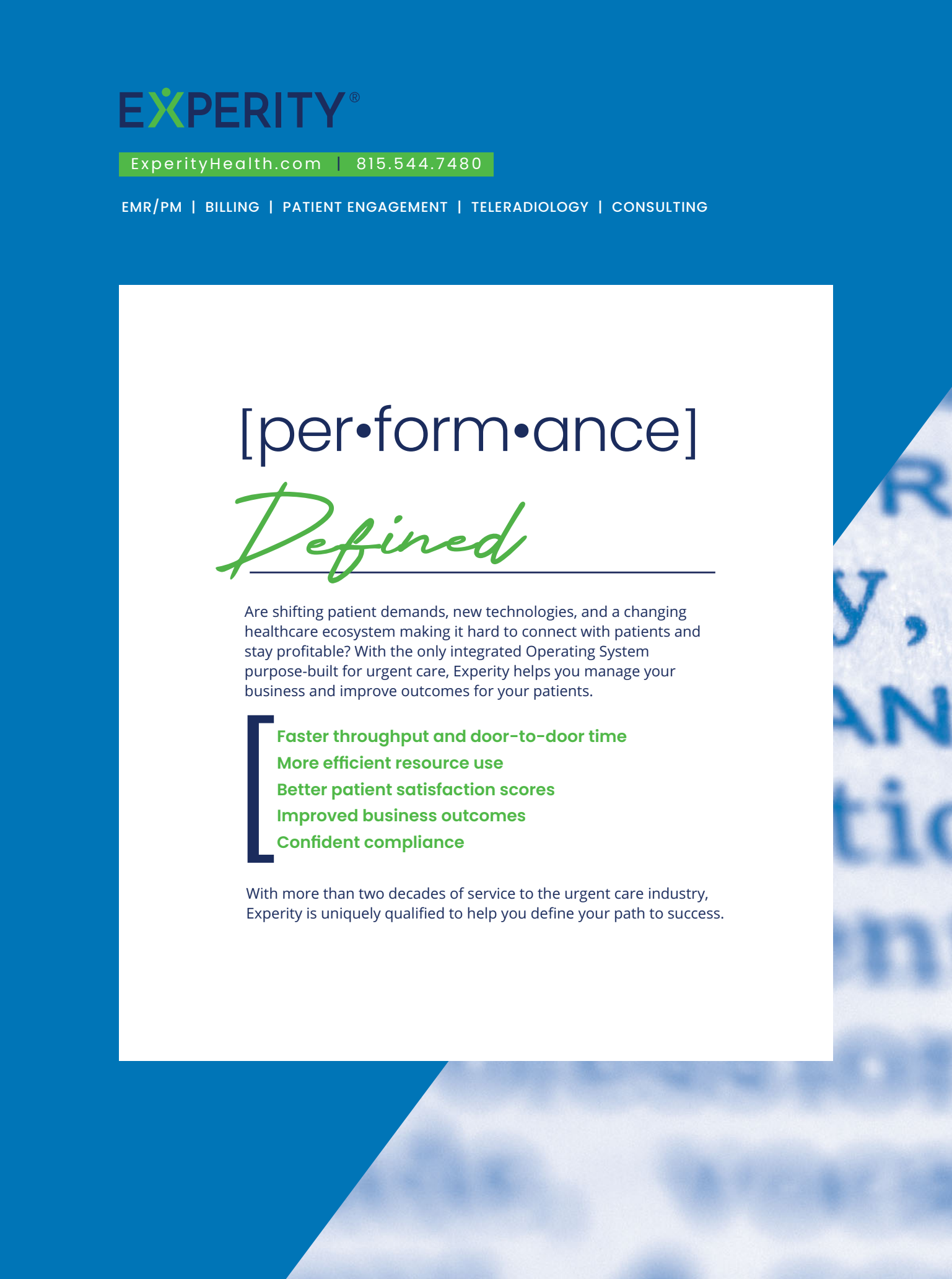

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Study Summary: This was an editorial looking at the way language is used in communication with patients and their families with serious illness. The authors focused on the word "need" specifically and how it is used to express clinicians' viewpoints when speaking to patients and families regarding serious illnesses. The authors propose a shift in how clinicians think and communicate about serious illnesses to promote transparent deliberation and ensure that care is concordant with patients wishes.

The authors suggest using the phrase "what this means" as an alternative to "need" in most contexts. In using this phrase, a pause for reflection is created without implying or presuming the appropriate course of action. For example, in a UC setting, this phrase might be used when influenza is diagnosed in an otherwise healthy adult. The clinician might say, "What this means is that there's a decision to be made about taking antivirals," rather than saying, "We need to start oseltamivir." Pausing to acknowledge the change creates space to attend to patients' and families' experience of receiving news about a diagnosis before jumping to solutions. The phrase "what to do next" then can be used subsequently to offer an opportunity for further deliberation, collaboration, and informed and shared decision making.

Editor's Comments: The authors' intention is to offer an opinion on how we might reframe the language used in more acute hospital settings. However, as UC clinicians, these messages are also relevant, as there are situations where reframing the phrases and language we use can help negotiate tricky and difficult patient interactions. ■

Anchoring Bias and Its Effects on Arriving at a Diagnosis

Take Home Point: In this study, anchoring bias was observed when physicians noted the reason for patient's visit documented prior to the seeing the patient.

Citation: Ly D, Shekelle P, Song Z. Evidence for Anchoring Bias During Physician Decision-Making. *JAMA Intern Med*. 2023;183(8): 818-823. doi:10.1001/jamainternmed.2023.2366

Relevance: Anchoring bias is a common form of cognitive bias clinicians encounter when assessing an undifferentiated patient complaint. Awareness of this bias and its potential consequences is critical to avoid premature closure and, consequently, missing serious diagnoses.

"There are situations where reframing the phrases and language we use can help negotiate tricky and difficult patient interactions."

Study Summary: This was a cross-sectional study of Veterans Affairs (VA) data of patients with congestive heart failure (CHF) presenting with dyspnea to VA emergency departments (ED). The authors examined data from patients presenting with chief complaint of shortness of breath and focused on the clinician's consideration of pulmonary embolism (PE) as a possible diagnosis based on a work-up which included either d-dimer, CT angiogram of scan, ventilation/perfusion scan, or lower extremity ultrasonography in patients with and without mention of CHF in their triage note.

The authors examined data of 108,019 patient visits across 104 VA facilities. They found 4.1% had a visit reason that specifically mentioned CHF, and 13.2% were tested for PE. A documented visit reason mentioning CHF was associated with less PE testing, a longer time to PE testing, and more BNP testing. There was no significant difference in the rates of ultimately diagnosed acute PE within 30-days of the ED visit between groups. However, mention of CHF in the initial ED reason for visit was associated with a 15% lower likelihood of testing for PE.

Editor's Comments: This study was conducted in the VA system which is a predominantly older, male population, which may limit generalizability. Nevertheless, this study highlights the insidious effects of cognitive biases and how they may affect how clinicians approach patient assessment. ■

Validating the Emoqol-100 Single Question for Low Mood in Primary Care

Take Home Point: The single question Emoqol-100 tool appears to have high validity when low scores are recorded (≤60) and allows for rapid screening for low mood.

Citation: Dahle N, Matthew C, Roskvist R, et. al. Emoqol-100: Development and validation of a single question for low mood in primary care - A retrospective audit. *BJGP Open*. 2023 Sep 19;7(3): BJGPO.2023.0011. doi: 10.3399/BJGPO.2023.0011

Relevance: Depression is among the leading causes of disability worldwide. Patients with depression commonly present to UC for mood complaints as well as for unrelated issues. Rapid assessment and screening for the state of patient's mood is highly desirable in the fast-paced clinical environment of UC.

Study Summary: This was a retrospective audit of consecutive patients seen in a single general practice (ie, primary care clinic) in Auckland, New Zealand, over 20 months. The authors reviewed 160 patients in whom low mood was suspected and who were coming for wellness visits. Patients had an Emoqol-100 score and a Patient Health Questionnaire (PHQ-9) score or Burns Depression Scale Today (BDST) questionnaire administered at the same visit. The Emoqol-100 was developed to allow more accurate self-assessment of mood at that time. The specific Emoqol-100 question is: "How is your emotional quality of life now, with 100 being perfect and zero being the worst imaginable?"

The authors found that an Emoqol-100 score in the 0-20 (out of 100) range had a positive likelihood ratio (LHR+) of 25 and was associated with a high PHQ-9 and a high BDST score, indicative of poor mood/depression. Emoqol-100 scores of ‹60 were indicative of low mood when compared to both PHQ-9 and BDST. Emoqol-100 scores of 81–100 had a very low LHRs (0.09), suggesting that it may have high utility for ruling out significant mood disorders, especially if patients report a very high number.

Editor's Comments: This was a retrospective study of primary care patients. This tool may not perform similarly in other settings, and prospective study is important to determine if its use affects patient outcomes. However, this is very similar to how we assess pain, and therefore patients will likely have familiarity with the tool. It also can be done much more quickly than other depression assessments. It's likely we will see wider adoption of this tool if it continues to prove that it correlates well with previously validated depression assessment questionnaires. ■

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See CME post-test questions on page 13.

Systemic Steroid Stewardship in Urgent Care: Recognizing Indication Creep to Limit Avoidable Harms

Urgent Message: Steroid overprescribing is a universal urgent care issue. While systemic steroids have several indications in which the preponderance of evidence supports their use in the urgent care setting, indication creep has led to their use outside of these scenarios resulting in significant risk for avoidable and unjustifiable adverse reactions.

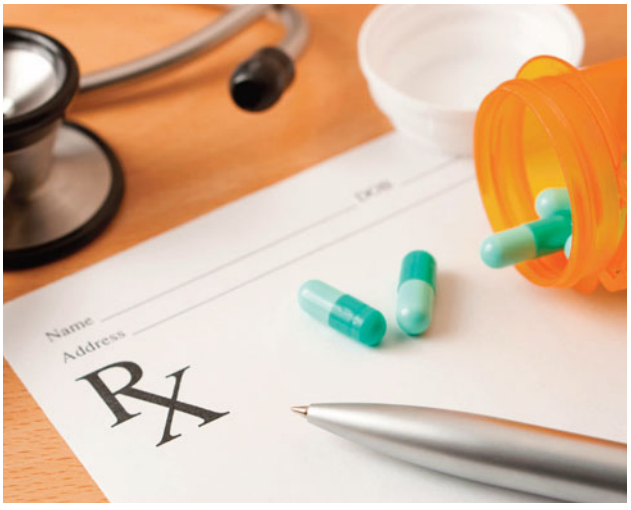
Paul Hansen, MD, FAAP, FACP

Citation: Hansen P. Systemic Steroid Stewardship in Urgent Care: Recognizing Indication Creep to Limit Avoidable Harms. *J Urgent Care Med.* 2023;18(3): 29-32

Introduction

Systemic steroids have several evidence-based indications and can be powerful tools for various acute issues when used appropriately in urgent care (UC) settings. However, over recent decades, "indication creep" has occurred in the clinical use of systemic steroids due to a variety of factors, such as perceived versatility, relatively rapid onset of profound biological effects, pressure from patient expectations for the receipt of a prescription, as well as a general perception among healthcare providers that short courses of steroids are relatively innocuous.[1] Indication creep refers to the increasingly widespread use of a given therapy outside of clinical scenarios of proven benefit[2] Other common examples of indication creep include the use of antibiotics for the treatment of acute bronchitis[3] or sinusitis that is not persistent, severe, or suggestive of a "double-sickening" illness script.[4,5]

This trend, combined with the data from publications in the last decade outlining the harms of even short courses of corticosteroids, provide justification for the College of Urgent Care Medicine to publish a position statement advocating for "steroid stewardship."[6,7,8,9] In UC, steroids are frequently used, often in situations where there is limited or no evidence of benefit, and consequently can cause avoidable harm.[6,7,8,10,11]

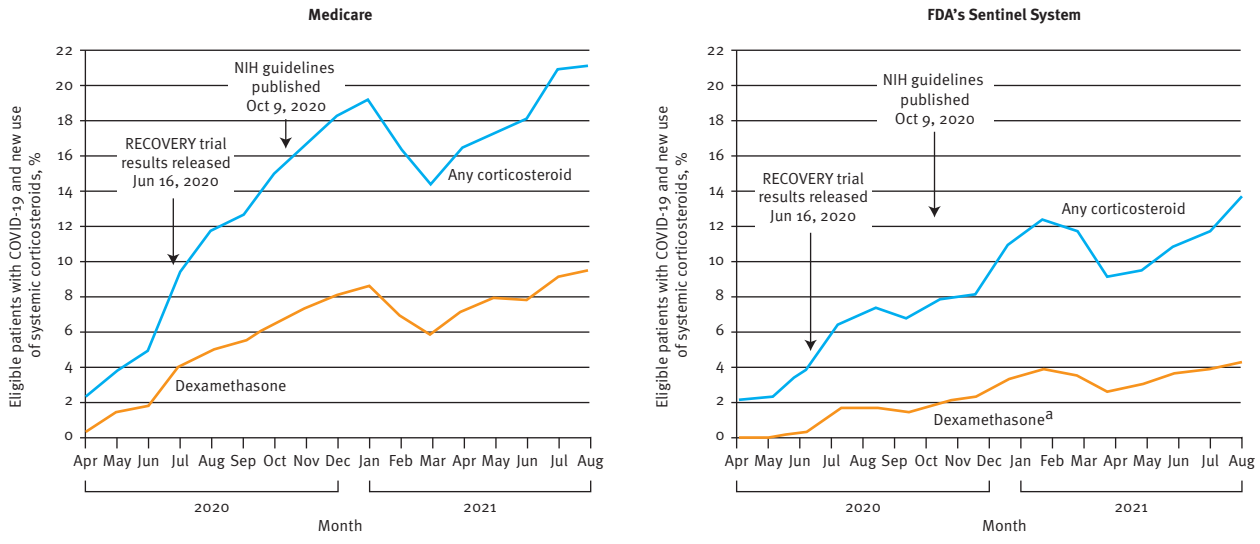


COVID-19: A Case Study in Indication Creep

When looking for an example of systemic corticosteroid indication creep in the UC and outpatient settings, COVID-19 serves as a useful example. The publication of

Author affiliations: Paul Hansen, MD, FAAP, FACP, Mercy GoHealth. The author has no relevant financial relationships with any commercial interests.

Figure 1. Proportion of Patients With COVID-19 Initiating Systemic Corticosteroids Within 14 Days of Diagnosis[12]



Notes: Food and Drug Administration (FDA); National Institutes of Health (NIH); Randomised Evaluation of COVID-19 Therapy (RECOVERY). (a) The name of the corticosteroid was only available for pharmacy dispensings. Data collected separately from both Medicare fee-for-service and FDA's Sentinel System were used.

top line results of the RECOVERY trial in June 2020 led to headlines heralding the life-saving potential of dexamethasone without a similar emphasis that benefits were seen only among hospitalized patients requiring supplemental oxygen and that there was actually a trend toward harm when systemic steroids were given to hospitalized patients who did not have a new or worsening oxygen requirement.[12] Thus, despite the publication of National Institutes of Health treatment guidelines advising against systemic steroid prescribing for outpatients with COVID-19 who did not require supplemental oxygen, an alarming trend of increasing corticosteroid use in outpatients with COVID-19 has been observed (**Figure 1**).[13] This trend prompted the Centers for Disease Control and Prevention (CDC) to issue a health advisory in April of 2022.[14]

Outpatient Short Course Systemic Steroid Use is Increasingly Common

Short course steroid use, variably defined in publications as less than 14[6,7] to 30 days,[8] has risen dramatically in outpatient and acute care settings over the past 20 years. This is not a uniquely American phenomenon. Below are a few examples from large/population-wide studies.

- France: use increased from ~15% to 17% from 2007 to 2013.[11]
- Taiwan: 1 in 4 adults[6] and 4 in 10 children[7] received a steroid burst over a 3- and 5-year period in the 2010s, respectively.
- United States: ~1 in 5 adults received a steroid script from 2012-2014.[8]

Commonly Used for Avoidable Indications

The use of short course systemic steroids (SCSS) is supported by evidence-based guidelines for patients presenting with conditions such as acute asthma or chronic obstructive pulmonary disease exacerbations, children with croup, toxicodendron species related dermatitis, acute gout, or Bell's Palsy.[15,16,17] However, prescribing of SCSS outside of these indications in the UC setting is an increasingly frequent phenomenon.[10]

Common examples of avoidable SCSS use include:

- **Acute Respiratory Infections (ARI):** including viral upper respiratory infections, acute bronchitis, pneumonia, acute sinusitis, non-severe acute pharyngitis, acute otitis media.[15]
  - A U.S. study showed that the proportion of adult patients with an ARI receiving a systemic steroid increased from 10% in 2008 to 17% in 2016, with significant geographic variability noted. As an example, patients were greater than 14 times more likely to receive a parenteral steroid in the south compared to the northeast.[10] The etiology for these striking regional variances is likely multifactorial and have not been fully explored. Of note, there is considerable geographic overlap when comparing SCSS for ARI to the overall and

when comparing SCSS for ARI to the overall and inappropriate antibiotic use variance previously described, the latter of which bolstered the rationale for antibiotic stewardship efforts. Furthermore, the degree of regional variance appears to be an order of magnitude more drastic for SCSS than for antibiotics for ARI, respectively.[18,19,20]

- Unfortunately, UC centers have been the worst offenders in SCSS for ARIs, using systemic corticosteroids about 25% more frequently than primary care, twice as often as retail walk-in clinics, and slightly more than emergency departments.[10]

- **Allergic Rhinitis:** Given that nasal steroids have been shown to be equally as effective without the risk of avoidable harms of systemic steroids, current allergy and otolaryngology treatment guidelines do not recommend SCSS.[15,21,22] Despite this, nationwide unadjusted claims data shows that greater than 1 in 10 adult US patients diagnosed with allergies received a SCSS.[10]
- **Non-Radicular Low Back Pain:** Utilizing SCSS for back pain is a common practice pattern, despite clinical practice guidelines recommending against their use.[8,23] In the United States, back pain was the second most common indication for SCSS use behind ARIs.[8] While a recent Cochrane meta-analysis showed modest benefit for patients with radicular low back pain, there was no improvement in pain, short- or long-term function, need for surgery, or improvement in quality of life for patients with non-radicular low back pain or spinal stenosis.[24,25]

Increased Risk for Various Adverse Outcomes

Classically, a provider prescribing a steroid "burst" would discuss certain commonly known risks associated with SCSS, including hyperglycemia, insomnia, changes in mood and appetite, and dyspepsia in adults, and possibly that repeat courses of steroids in children can negatively impact a child's growth trajectory.[26] Unfortunately, more recent evidence has demonstrated additional, more serious harms associated with SCSS use. These additional conditions are important to weigh when considering prescribing SCSS to patients in UC.

Infection

It has long been appreciated that the potent anti-inflammatory effects of steroids come at the expense of immunosuppression. Unsurprisingly, therefore, both adult and pediatric patients prescribed SCSS are at increased risk of sepsis for up to 3 months. The degree of risk of sepsis is a 2-to-5-fold increase in adults and a nearly two-fold increase in children with the risks being highest in the 30-days after SCSS.[6,7,8]

Additionally, it has been shown that children are at an increased risk of pneumonia for up to 3 months following SCSS. There is a greater than a two-fold risk that a child will develop pneumonia in the month after a steroid burst, and the risk does not return to baseline until 90 days after receiving the prescription.[7]

Cardiovascular

A patient is roughly 250% more likely to develop congestive heart failure within the first month after a SCSS. This relative risk is significant for those with and without a previous history of cardiovascular disease or significant comorbidity, respectively, and does not return to baseline for up to 3 months.[1,6] Similarly, patients given SCSS are at a >300% increased risk of deep vein thrombosis in the several months after taking steroids.[8]

Musculoskeletal

Chronic steroid use is associated with osteoporosis and its complications (eg, vertebral compression fractures). However, more recent evidence has shown that even SCSS increases susceptibility to a variety of fractures. Adults are nearly twice as likely to be diagnosed with a fracture in the month following SCSS with the risk attenuating over the subsequent 60 days.[8] Similarly, SCSS can also increase the risk of avascular necrosis (AVN). While usually associated with longer term or repeated steroid use, there are case reports of AVN occurring even with single short courses of steroids.[15,27,28]

Gastrointestinal

The risk of gastrointestinal (GI) bleeding is significantly increased in both adults and children for the 3 months following SCSS. In adult patients, the risk of GI hemorrhage is nearly twice baseline, and the risk in children is increased approximately 1.5 times with the greatest risk being in the 30 days following SCSS.[6,7]

Discussion

Since shortly after the development of cortisone, the first corticosteroid used therapeutically in 1948, it has been evident that there are significant risks to long-term steroid use.[29] However, for many decades the risks of SCSS were felt to be minor and short-lived. Increasingly, over recent years, larger studies in patients of all ages have revealed rare but significant increased risk of serious harms for even short-term corticosteroid therapy, which continue for months after completing the therapies.[6,7,8] Importantly,

the risks of the adverse events apply to both the straightforward healthy patient with bronchitis and the frail patient with multiple medical comorbidities, meaning they might be viewed in the context of our entire patient population rather than a high-risk subset.[1]

SCSS are effective for a number of conditions commonly seen in UC as discussed above (eg, croup, asthma, radicular low back pain). However, they are similarly commonly utilized for many related UC presentations without evidence to support their benefit (eg, sinusitis, bronchitis, and non-radicular low back pain). This indication creep is understandable and comes from a place of clinicians wanting to offer something helpful for patients seeking treatment. Yet, in situations where the evidence for benefit is minimal, murky, or absent, we are encouraged to prioritize the foundational principle of medicine: "First, do no harm."

Given the episodic nature of our patient-provider relationships, it is unlikely that a UC clinician would gain relevant clinical experience from these rare downstream adverse events in the weeks or months following our initial encounter to inform our practice patterns. Patients likewise are unlikely to recognize that a fracture, blood clot, or hospitalization for sepsis 1 to 3 months after a steroid burst may be related. This is why it is so important to foster a culture of systemic steroid stewardship in the UC: so that we can apply this recent evidence to limit our SCSS use to situations where benefit is likely and educate our patients about the potential hazards so that they may be similarly judicious about seeking and taking systemic steroids in the future.

Conclusion

Changing ingrained practice patterns and patient expectations is a difficult but worthwhile endeavor if the aim is to improve the quality of care we deliver. Fostering a culture of systemic steroid stewardship will allow us to deliver effective, compassionate, evidence-based care to the patients we serve. ■

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References

1. Wallace BI, Waljee AK. Burst Case Scenario: Why Shorter May Not Be Any Better When It Comes to Corticosteroids. *Ann Intern Med.* 2020 Sep 1;173(5):390-391. doi: 10.7326/M20-4234. Epub 2020 Jul 7. PMID: 32628530.
2. Riggs KR, Ubel PA. The role of professional societies in limiting indication creep. *J Gen Intern Med.* 2015 Feb;30(2):249-52. doi: 10.1007/s11606-014-2980-0. Epub 2014 Aug 5. PMID: 25092014; PMCID: PMC4314486.
3. Morley, V.J., Firgens, E.P.C., Vanderbilt, R.R. *et al.* Factors associated with antibiotic prescribing for acute bronchitis at a university health center. *BMC Infect Dis* 20, 177 (2020). Doi: 10.1186/s12879-020-4825-2
4. Chow A, et al. File, Executive Summary: IDSA Clinical Practice Guideline for Acute Bacterial Rhinosinusitis in Children and Adults, *Clinical Infectious Diseases*, Volume 54, Issue 8, 15 April 2012, Pages 1041–1045, doi:10.1093/cid/cir1043
5. Truitt KN, Brown T, Lee JY, Linder JA. Appropriateness of Antibiotic Prescribing for Acute Sinusitis in Primary Care: A Cross-sectional Study. *Clin Infect Dis.* 2021 Jan 27;72(2):311-314. doi: 10.1093/cid/ciaa736. PMID: 33501972; PMCID: PMC7840109.
6. Yao TC, Huang YW, Chang SM, Tsai SY, Wu AC, Tsai HJ. Association Between Oral Corticosteroid Bursts and Severe Adverse Events : A Nationwide Population-Based Cohort Study. *Ann Intern Med.* 2020;173(5):325-330. doi:10.7326/M20-0432
7. Yao T, Wang J, Chang S, et al. Association of Oral Corticosteroid Bursts With Severe Adverse Events in Children. *JAMA Pediatr.* 2021;175(7):723–729. doi:10.1001/jamapediatrics.2021.0433
8. Waljee A K, Rogers M A M, Lin P, Singal A G, Stein J D, Marks R M, et al. Short term use of oral corticosteroids and related harms among adults in the United States: population based cohort study *BMJ* 2017;357:j1415 doi:10.1136/bmj.j1415
9. College of Urgent Care Medicine Position Statement: Corticosteroid Stewardship. Published 2022 Aug 18. Accessed Nov. 4, 2023.
10. Lin KJ, Dvorin E, Kesselheim AS. Prescribing systemic steroids for acute respiratory tract infections in United States outpatient settings: A nationwide population-based cohort study. *PLoS Med.* 2020 Mar 31;17(3):e1003058. doi: 10.1371/journal.pmed.1003058.
11. Bénard-Laribière A, Pariente A, Pambrun E, Bégaud B, Fardet L, Noize P. Prevalence and prescription patterns of oral glucocorticoids in adults: a retrospective cross-sectional and cohort analysis in France. *BMJ Open*. 2017;7(7):e015905. Published 2017 Jul 31. doi:10.1136/bmjopen-2017-015905
12. RECOVERY Collaborative Group, et al. Dexamethasone in Hospitalized Patients with Covid-19. *N Engl J Med*. 2021 Feb 25;384(8):693-704. doi: 10.1056/NEJ Moa2021436. Epub 2020 Jul 17.
13. Bradley MC, Perez-Vilar S, Chillarige Y, et al. Systemic Corticosteroid Use for COVID-19 in US Outpatient Settings From April 2020 to August 2021. *JAMA.* 2022;327(20):2015–2018. doi:10.1001/jama.2022.4877
14. Centers for Disease Control and Prevention. Updated Information on Availability and Use of Treatments for Outpatients with Mild to Moderate COVID-19 Who are at Increased Risk for Severe Outcomes of Covid-19. CDCHAN-00463. Accessed September 5, 2023.
15. Dvorin EL, Ebell MH. Short-Term Systemic Corticosteroids: Appropriate Use in Primary Care. *Am Fam Physician*. 2020;101(2):89-94.
16. Usatine RP, Riojas M. Diagnosis and management of contact dermatitis. *Am Fam Physician*. 2010 Aug 1;82(3):249-55. PMID: 20672788.
17. Smith DK, McDermott AJ, Sullivan JF. Croup: Diagnosis and Management. *Am Fam Physician*. 2018 May 1;97(9):575-580. PMID: 29763253.
18. Kim C, Kabbani S, Dube WC, Neuhauser M, Tsay S, Hersh A, Marcelin JR, Hicks LA. Health Equity and Antibiotic Prescribing in the United States: A Systematic Scoping Review. *Open Forum Infect Dis*. 2023 Aug 19;10(9):ofad440. doi: 10.1093/ofid/ofad440. PMID: 37671088; PMCID: PMC10475752.
19. Bizune D, Tsay S, Palms D, King L, Bartoces M, Link-Gelles R, Fleming-Dutra K, Hicks LA. Regional Variation in Outpatient Antibiotic Prescribing for Acute Respiratory Tract Infections in a Commercially Insured Population, United States, 2017. *Open Forum Infect Dis.* 2023 Feb 8;10(2):ofac584. doi: 10.1093/ofid/ofac584. PMID: 36776774; PMCID: PMC9905267.
20. Szymczak JE, Linder JA. "Cultural" Variation in Antibiotic Prescribing: Have Regional Differences Had Their Day? *Open Forum Infect Dis.* 2023 Feb 8;10(2):ofad025. doi: 10.1093/ofid/ofad025. PMID: 36776775; PMCID: PMC9905358.
21. Seidman MD, et al. Guideline Otolaryngology Development Group. AAO-HNSF. Clinical practice guideline: Allergic rhinitis. *Otolaryngol Head Neck Surg.* 2015 Feb;152(1 Suppl):S1-43. doi: 10.1177/0194599814561600. PMID: 25644617.
22. Dykewicz MS, et al. Treatment of seasonal allergic rhinitis: An evidence-based focused 2017 guideline update. *Ann Allergy Asthma Immunol*. 2017 Dec;119(6):489-511.e41. doi: 10.1016/j.anai.2017.08.012. Epub 2017 Nov 2. PMID: 29103802.
23. Qaseem A, et al. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. *Ann Intern Med.* 2017 Apr 4;166(7):514-530. doi: 10.7326/M16-2367. Epub 2017 Feb 14. PMID: 28192789.
24. Haley SP, Stem LA. Corticosteroids for Low Back Pain. *Am Fam Physician.* 2023 Mar;107(3):Online. PMID: 36920810.
25. Cashin AG, et al. Pharmacological treatments for low back pain in adults: an overview of Cochrane Reviews. Cochrane Database Syst Rev. 2023 Apr 4;4(4):CD013815. doi: 10.1002/14651858.CD013815.pub2. PMID: 37014979; PMCID: PMC10072849.
26. Prednisone. Package Insert. Hikma Pharmaceuticals, 2023.
27. Kennedy P, Bassiouni A, Psaltis A, et al. Avascular necrosis after oral corticosteroids in otolaryngology: case report and review of the literature. *Allergy Rhinol (Providence).* 2016;7(1):e50-e54.
28. Dilisio MF. Osteonecrosis following short-term, low-dose oral corticosteroids: a population-based study of 24 million patients. *Orthopedics.* 2014;37(7):e631-e636
29. Benedek TG. History of the development of corticosteroid therapy. *Clin Exp Rheumatol*. 2011 Sep-Oct;29(5 Suppl 68):S-5-12. Epub 2011 Oct 21. PMID: 22018177

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Case Report

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Berger's Disease in Urgent Care: A Case Report

Urgent Message: Although urgent care providers would not be equipped to make an initial diagnosis of Berger's disease, it's important to recognize the signs that may suggest this condition and refer patients for follow-up.

Emily Pierson PA-C, Christina Gardner DHSc, MBA, PA-C

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Key words: Berger's disease, hematuria, IgA Nephropathy, nephrology, urgent care, case report

Abstract

Introduction

IgA nephropathy (IgAN)—sometimes known as Berger's disease—is the most common primary glomerular disease in the world. It often has delayed diagnosis since biopsy is required to confirm, but the main presenting symptom of gross hematuria may very easily be seen in an urgent care setting.

Clinical Presentation

A 22-year-old female college student presented to the urgent care with lower urinary tract symptoms and no red flags, but this was her fourth such visit in the last 8 months. On review of her chart, she had already been diagnosed with IgAN.

Physical Exam/Workup

Physical exam was unremarkable, and vitals were normal, though urinalysis showed dark red turbid urine with large bilirubin and blood, trace ketones, and large protein, as well as trace leukocyte esterase and negative nitrites. She was prescribed oral antibiotics to treat the presumed urinary tract infection, and a urine culture was sent, which later confirmed pan-sensitive *Klebsiella*.

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The authors have no relevant financial relationships with any commercial interests.

Case Resolution

The patient's UA showed significantly more protein in her urine than previous visits, and she would not be able to see her hometown nephrologist for several months since she was away at college. A referral was placed to the local nephrology group, but subsequent communication with the patient was lost to follow-up.

Conclusion

While this case itself has an unsatisfactory resolution, it provides a good stage for discussion of a common disease that is just as commonly overlooked, and suggests how urgent care providers might best serve patients with this condition through recognition and referral for further workup and treatment.

Introduction

Clinical Presentation

A 22-year-old female college student presented to a local urgent care (UC) with a 1 day history of urgency, frequency, dysuria, and hematuria. She denied any abdominal pain, flank pain, fevers, chills, or gastrointestinal (GI) complaints. She also denied any recent sexual encounters or concern for sexually transmitted infection or pregnancy. She reported that she recovered from an upper respiratory infection (URI) 1 day ago and that she typically has hematuria just after URIs.

This was her fourth visit to a UC center in the last 8 months for the same set of complaints. On further questioning about this she says that she sees a "special doctor" back in her hometown because "something is wrong with my kidneys." She denies taking any medications for this condition, but reports she is supposed to be on a low sodium diet, which she admits she has not been doing since coming to college.

Physical Exam and Lab Findings

The physical exam was unremarkable, and specifically there was no abdominal or costovertebral angle tenderness. Her vitals were also normal. A urinalysis (UA) showed dark, red, turbid urine with large bilirubin and blood, trace ketones, and large protein, as well as trace leukocyte esterase and negative nitrites. Her basic metabolic panel (BMP) showed a normal creatinine and electrolyte values were also within the normal range.

Urgent Care Management and Diagnostic Assessment

On review of her chart, the patient had been seen by a nephrologist in her hometown for IgA nephropathy (IgAN) previously. She had been seen much more frequently, however, for IgAN flares in UC. The UA obtained during this UC visit showed significantly higher levels of protein than her previous visits. In reviewing the electronic medical record, there was a note from her nephrologist that if proteinuria became persistent or her kidney function declined, they would consider immunosuppressive treatments.

Due to these factors and poor adherence to a low salt diet, a BMP was obtained to assess for electrolyte abnormalities and renal function. She was referred to a local nephrology group as she could not follow up with her nephrologist until returning to her hometown at the next school break, which was over a month away. More immediately, she was prescribed an oral antibiotic to treat the presumed urinary tract infection (UTI), and her urine culture later confirmed pan-sensitive *Klebsiella spp*.

Case Conclusion

Ultimately, the patient was lost to follow-up and did not present either to the nephrologist or subsequently return to the UC.

Epidemiology

IgA nephropathy—sometimes known as Berger's disease—was first described in 1968. It is the most common primary glomerular disease in the world. It is more common in children and young adults, and slightly more common in males. There appears to be a higher prevalence in Asian countries than in the United States or Europe, but this is likely due to a higher rate of screening and of renal biopsies in those countries when compared to North America and Europe.[1] In fact, because of the higher threshold to biopsy by most North American nephrologists, true epidemiologic data is lacking. There have been some studies suggesting a genetic component, however, most data supports the theory that IgAN is a sporadic condition.[2]

Pathophisiology

IgAN is an autoimmune disease in which the immune system creates antibodies that are deposited in the basement membrane of the kidneys. These antibodies are generated in response to a mild illness like a URI or a gastrointestinal infection. IgAN can also be seen in more chronic conditions like celiac disease, cirrhosis, hepatitis, and HIV. The immune response results in inflammation and renal injury, specifically to the

semi-permeable membrane of the glomeruli.[3] This damage will mostly heal once the immune response resolves, and deficits in renal function are usually transient. However, after repeated episodes of immune response and renal damage, the glomeruli can develop scarring and permanent renal insufficiency can result. This can lead to persistent proteinuria and chronic kidney disease (CKD). Twenty years after diagnosis, up to 40% of patients will have developed end-stage-renal disease (ESRD) requiring dialysis or transplant.[2]

Presentation

The damage to the glomeruli allows red blood cells and sometimes protein to pass into the renal tubules and subsequently into the urine. If the damage is extensive enough, this will result in gross hematuria. This hematuria is often a darker red, almost brown color, giving it the classic name of "cola-colored urine."[3] It is this gross hematuria that will bring most patients to medical attention and possibly an index visit occurring in a UC setting.

Generally, the first episode of gross hematuria will occur in the second or third decade of life, though it can occur in teenagers. Painless gross hematuria should also prompt consideration for bladder or renal cancer and referral to urology for further evaluation. Nephrology referral is appropriate if there is concomitant proteinuria.[4]

Patients with IgAN will usually present with painless, gross hematuria *during* or *immediately after* a symptomatic infection of the upper respiratory tract or GI tract. Conversely, post-streptococcal glomerulonephritis typically has a 2-3 week delay between URI symptoms and hematuria.

Apart from hematuria, most patients with IgAN are asymptomatic, although mild flank/low back pain during a flare, which is thought to be due to pressure on the renal capsule caused by swelling during the immune response, can also occur.[2] Only about 5% of patients will present with signs of nephrotic syndrome during a flare, which include edema, hyperlipidemia, hypoalbuminemia, and >3g of proteinuria/day.[2] The presence of peripheral edema in a patient with hematuria and proteinuria is an indicator of more significant disease and warrants more prompt follow-up with a nephrologist.

Diagnosis

As discussed, patients are not formally diagnosed with IgAN until they have a renal biopsy, which is generally only ordered by nephrologists. Often in North America, patients are presumptively diagnosed with IgAN, either by their primary care provider (PCP) or by a nephrologist based on pattern of hematuria and/or proteinuria during or just after a respiratory/GI infection.

These patients often have a creatinine monitored regularly to evaluate for changes in renal function. Periodic 24-hour protein excretion is also obtained to assess for the extent of renal damage. If there is no persistent proteinuria between flares, these patients are generally monitored with periodic nephrology follow-up. Formal renal biopsy may be obtained before initiation of medical intervention, but this is still not always done.[3]

"The damage to the glomeruli allows red blood cells and sometimes protein to pass into the renal tubules and subsequently into the urine. If the damage is extensive enough, this will result in gross hematuria."

Treatment

Initially, patients without persistent proteinuria between flares are monitored and encouraged to make certain renal protective lifestyle changes like maintaining a low-salt diet, staying well-hydrated, and controlling blood pressure if hypertensive. If the disease progresses, patients are generally started on corticosteroids or other immunosuppressants—such as tacrolimus, cyclophosphamide, mycophenolate mofetil, or azathioprine—to mitigate autoimmune renal injury. These two classes of medications—corticosteroid and immunosuppressants—were shown to be the most effective at reducing proteinuria in a recent meta-analysis.[5] Even though UC providers are not going to be making the initial diagnosis of IgAN or initiating immunosuppressive agents, it is critical to know if a patient is taking these medications. Antibiotics according to standard treatment guidelines are appropriate when treating other urinary complaints, such as UTI.

"If able to review previous UAs in the patient's medical record, evidence of prior hematuria and/or significant proteinuria warrants an immediate nephrology referral."

Referral

UC may be the site where gross hematuria initially presents, however, specialist referral, again, is appropriate in such cases—some of which may result in a diagnosis of IgAN. All patients with painless gross hematuria (or microscopic hematuria on repeat urinalyses without UTI) should be referred back to their PCP or to nephrology or urology if available.[6] Unfortunately, the most commonly used tool to predict outcomes in IgAN, known as the MEST-C Score or the Oxford Classification, is based largely on the renal biopsies.[2,3] This makes it difficult to quickly and objectively classify patients into higher risk categories in an UC setting. However, a 2021 meta-analysis found that patients who initially present with microscopic hematuria and persistent hematuria seemed to have increased risk for poor outcomes, while those who initially presented with macroscopic hematuria tended to have a decreased risk of poorer outcomes.[7]

If able to review previous UAs in the patient's medical record, evidence of prior hematuria and/or significant proteinuria warrants an immediate nephrology referral. If this is the first episode of microscopic hematuria, the patient could be referred their PCP for repeat UA. Macroscopic hematuria could be seen by a PCP for follow-up, but patients should be informed that they will ultimately need to be referred to a specialist most likely.[6]

Discussion

Micro- and macroscopic hematuria are commonly encountered in UC in the setting of UTI and kidney stones. Painless, gross hematuria or persistent microscopic hematuria outside of these settings, however, warrant specialist referral. Urinary tract malignancy is a primary consideration, especially in older patients. If a younger patient presents with gross hematuria, especially after a recent URI, IgAN may be the culprit. While both nephrologists and urologists are equipped to evaluate patients with hematuria, the presence of proteinuria, worsening renal function, and/or peripheral edema, suggests a renal issue, and nephrologist referral is most appropriate.

Though UC providers will not be making an initial diagnosis of IgA nephropathy, it's important to recognize the signs that may suggest this condition. Furthermore, in cases with known IgAN, it is important to counsel patients on the importance of following recommended dietary modifications and renal protective measures as prescribed by their nephrologist to limit the likelihood of CKD and progression to ESRD.

Ethics Statement

An attempt was made to contact the patient to obtain informed consent to publish this case, but she was lost to follow-up and could not be reached. The patient's identifying details were changed or omitted to protect her privacy. ■

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References

1. Schena FP, Nistor I. Epidemiology of IgA Nephropathy: A Global Perspective. Semin Nephrol. 2018 Sep;38(5):435-442.
2. Rajasekaran, A, Julian BA, Rizk DV. IgA nephropathy: An interesting autoimmune kidney disease. *Am J Med Sci.* 2021 Feb; 361(2): 176–194.
3. Pattrapornpisut P, Avila-Casado C, Reich H. IgA Nephropathy: Core Curriculum 2021. *Am J Kidney Dis.* 2021 Sep;78(3):429-441.
4. Murphree D, Thelen S. Chronic Kidney Disease in Primary Care. *J Am Board Fam Med.* 2010 Jul-Aug;23(4):542-50.
5. Yu J, Luo J, Zhu H, Sui Z, Liu H, Li L, et al. Quantitative Comparison of the Clinical Efficacy of 6 Classes Drugs for IgA Nephropathy: A Model-Based Meta-Analysis of Drugs for Clinical Treatments. *Front Immunol.* 2022
6. Loo R, Whittaker J, Rabrenivich V. National practice recommendations for hematuria: how to evaluate in the absence of strong evidence? *Perm J.* 2009 Winter;13(1):37-46.
7. He P, Wang H, Huang C, He L. Hematuria was a high risk for renal progression and ESRD in immunoglobulin a nephropathy: a systematic review and meta-analysis. *Ren Fail.* 2021; 43(1): 488–499.

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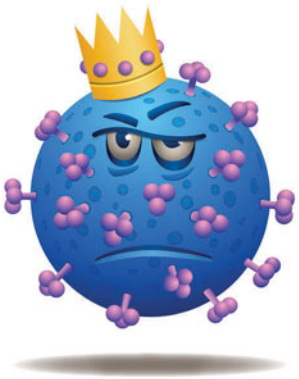

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Original Research

Pediatric Knowledge Needs Assessment: A Pilot Study

Urgent Message: Pediatric emergency medicine researchers have an opportunity to enhance collaboration with general emergency medicine and acute care clinicians to bridge the gap between research and dissemination of evidence-based care recommendations.

Bashar S. Shihabuddin, MD, MS, FAAP, FACEP; Jessica Fritter, MACPR, ACRP-CP; Charmaine B. Lo, PhD MPH; Rachel Stanley MD, MHSA; Michael Weinstock, MD

Citation: Shihabuddin B, Fritter J, Lo C, Stanley R, Weinstock M. Pediatric Knowledge Needs Assessment: A Pilot Study. *J Urgent Care Med.* 2023;18 (3): 40-43

Abstract

Objectives: We conducted a pilot knowledge needs assessment survey of providers at a general academic emergency department (ED) within the catchment area of an academic, tertiary care children's hospital.

Methods: We developed a 22-question electronic survey that was validated by combined emergency medicine and pediatric emergency medicine faculty members at the regional children's hospital. Three reminders were sent to the respondent pool at 2, 4, and 8 weeks after the initial survey. Reponses were analyzed using descriptive statistics.

Results: A total of 18 surveys were completed. Most respondents were trainees with less than 5 years' experience working in emergency medicine. The most frequently used methods to access information reported by all respondents were websites with a medical or health focus, spending on average 1-5 hours weekly gathering that information. Faculty were more likely to use a laptop or desktop computer to access that information, while trainees were more likely to use a smartphone. All respondents reported that accessible evidence-based clinical practice guidelines and information regarding novel diagnostics and therapeutics in pediatrics were the most relevant items to enhance their clinical practice. Information on pediatric trauma, sepsis, and neurological emergencies were rated as the highest priorities for clinical care in their practice.

Conclusion: Our findings can guide future knowledge needs assessments to develop dissemination and implementation efforts of evidence-based guidelines in the acute care of children in general EDs.

Introduction

The majority of emergency department (ED) visits by children in the United States are to local community EDs.[1] Previous studies have shown that community EDs often lack the proper equipment and specialized personnel to care for pediatric patients.[2] Most patients referred to the emergency department from the urgent care are discharged, and the odds of nonacute transfer is lower in a pediatric urgent care than a general urgent care.[3] The care children receive in community urgent cares and EDs may not be supported by the latest evidence.[4]

There is a gap between the generation of evidence-based recommendations for pediatric emergency and acute care and its implementation.[5] Greater collaboration efforts between pediatric emergency medicine (PEM) researchers and general emergency medicine (EM) and

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acute care clinicians may help bridge the gap between research and dissemination of evidence-based care recommendations. Establishing the knowledge needs of providers that would impact patient care, as well as the methods to address those needs, would guide dissemination and implementation efforts of PEM researchers.

Our aim was to assess the knowledge needs of general practice EM providers with an ultimate goal that this assessment could lead to interventions that might enhance care of pediatric patients provided by nonpediatric emergency medicine trained clinicians. We also sought to use the data with the hopes of better understanding about how the participants engage with medical reference resources to determine the optimum method to deliver this PEM-specific knowledge. We planned and conducted a collaborative needs assessment pilot project between an academic quaternary care pediatric ED and an academic ED located in a rural area.

Methods

This was a survey study of clinicians at an academic regional medical center serving a rural community located 40 miles south of a quaternary-care-dedicated pediatric hospital. The survey was developed by the authors, based on previous work by the Canadian Translating Emergency Knowledge of Kids (TREKK) network, which has an established track record of successful dissemination and implementation in pediatric emergency care.[6] The survey was adapted to practice elements relevant in the United States (ie, differences in graduate medical education and practice settings). The survey questions were validated by three faculty members board certified in general and pediatric emergency medicine.

Table 1. Survey Respondent Demographics and Characteristics

Characteristic	N
Sex	
Male	9
Female	9
Age Range	
20-30 years of age	10
31-40 years of age	4
41-50 years of age	2
>50 years of age	2
Degrees obtained (may have selected more than one)	
Master's Degree (eg, MS, MBA, MPH, MHA, MMM)	1
Professional Degree (eg, MD, DO, JD, LLB, DDS)	15
Doctoral Degree (eg, PhD, EdD)	2
Years in this profession (including any training in emergency medicine)	
<1 year	2
1-5 years	13
6-10 years	0
11-20 years	1
>20 years	2

Selection of Participants

The study was approved by the Institutional Review Board, with stipulation for verbal consent from survey participants. The survey was circulated electronically to 41 emergency medicine providers including attending physicians, advanced practice providers, and resident physicians. Three reminders were sent to the respondent pool at 2, 4, and 8 weeks after the initial survey.

Data Analysis

Reponses were analyzed using descriptive statistics.

Results

A total of 20 surveys (48.8%) were initiated, 18 surveys (44%) were completed, and 2 surveys were partially completed. Only complete survey responses were included in the final analysis. The demographics of the respondents are listed in **Table 1**. The respondents included 13 with an osteopathic doctorate, 11 respondents were resident trainees, and most respondents had less than 5 years' experience working in emergency medicine.

All respondents reported currently using websites with a medical or health focus as the most frequent method to find information to care for children in the ED, spending 1-5 hours weekly gathering that information. Faculty were more likely to use a laptop or desktop computer to access information, while trainees were more likely to use a smartphone. All respondents found that accessible evidence-based clinical practice guidelines and information regarding novel diagnostics and therapeutics as the most relevant items to enhance their clinical practice. Respondents identified information on the emergency care of infants below 1 year of age as most relevant to their practice. Information on pediatric trauma, sepsis and early childhood infections were rated as the highest priorities for clinical care (**Figure 1**). Most respondents preferred mobile applications and formal discussions with colleagues for future access to updated information (**Figure 2**).

Discussion

General emergency medicine practitioners provide most of the initial emergency and acute care to children in

Figure 1. Pediatric Conditions Rated By Priority To The Respondents' Clinical Practice Using A 5-Point Likert Scale

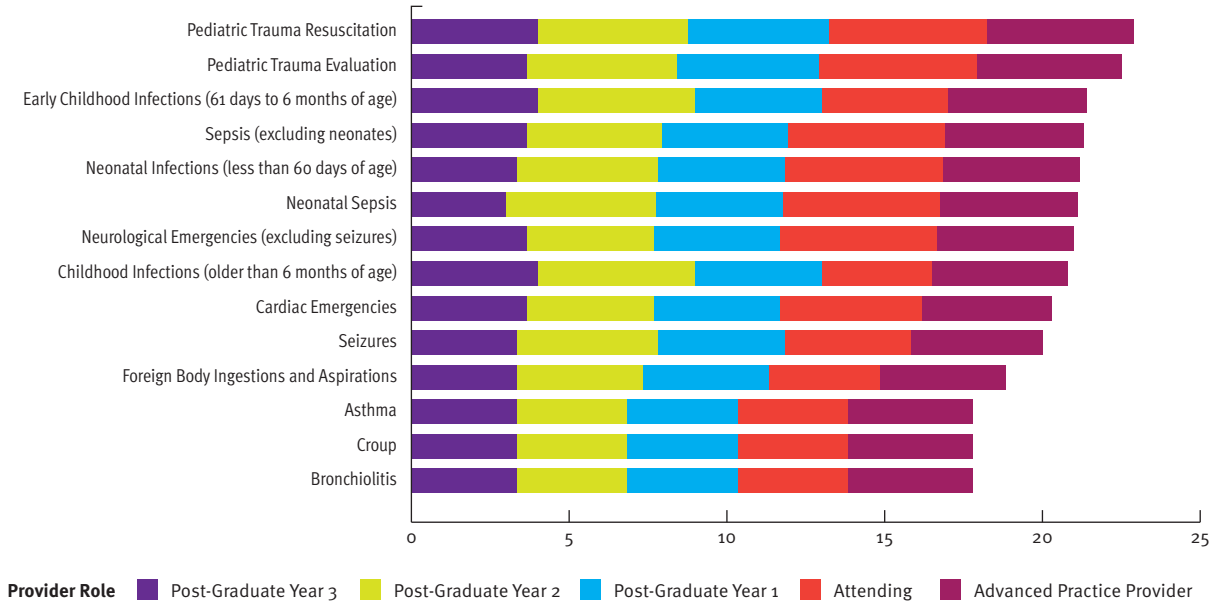
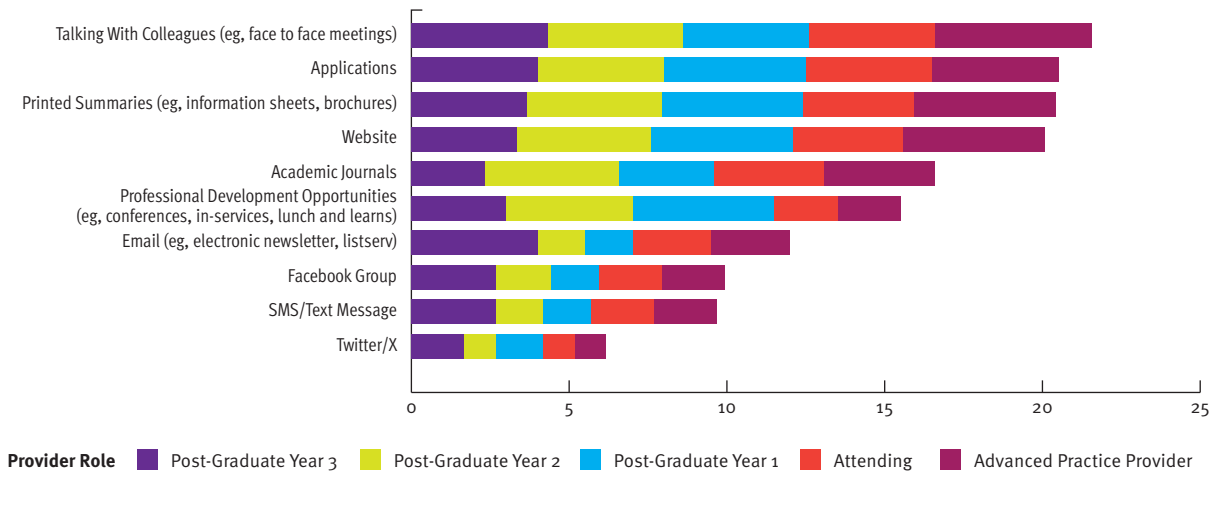


Figure 2. Respondents' Rating Of Preferred Future Methods For Accessing Information Using A 5-Point Likert Scale



the United States and need to have comfort with rapidly accessing relevant resources for the provision of acute care for pediatric patients.[1] Research conducted solely in pediatric EDs lacks practical relevance as general EM practitioners in nonpediatric specialty EDs face a different challenges within their clinical environments. Collaboration between EM practitioners and PEM researchers is necessary to determine how to implement evidence-based guidelines and practice within the context of the most commonly encountered clinical scenario (ie, in a general ED).

Gerber et al. found that the rate of head computed tomography (CT) in pediatric head injuries was not significantly impacted after the Pediatric Emergency Care Applied Research Network (PECARN) risk stratification guidelines were published.[7] Similarly, Hess et al. conducted a cluster randomized trial in seven geographically diverse EDs found that the use of the PECARN guidelines

increased parent knowledge, decreased decisional conflict, and increased involvement in decision-making, but did not significantly reduce the head CT rate.[8] Doran et al. found an exceedingly low rate of positive CT scan in patients presenting to the urgent care with head injuries who were then transferred to the ED.[9] Unfortunately, we are not aware of a head injury clinical decision pathway specific to urgent care patients. These studies suggest that even now, the divide between PEM researchers and community practitioners remains substantial.

Respondents in our cohort were specifically interested in resources on pediatric trauma, sepsis, and neurological conditions. These conditions result in significant mortality and morbidity in pediatric patients and are high-priority research areas. Resources on the care of infants below 1 year of age were rated as highly impactful to clinical practice in our study, which aligns with priorities identified by the American College of Emergency Physicians for pediatric readiness in general EDs.[10] Previous studies have found variation in the care infants receive in general emergency departments compared to pediatric EDs, and decreasing comfort among EM practitioners caring for children with decreasing age.[11,12] Therefore, increasing dissemination of evidence-based care guidelines would harmonize the care infants receive, regardless of the setting.

The different preferences for accessing medical information emphasizes the need for developing different strategies for dissemination of research findings and recommendations. A possible solution is developing websites linked to mobile applications, so they can be accessed either on a computer or smartphone. Accessing mobile applications may enhance the speed with which this information is recovered, often while the clinician is engaged in patient care, which has the potential to change the trajectory of that child's care and recovery. Another option would be to incorporate guidelines and clinical decision tools into electronic health records, which would facilitate rapid access by clinicians.

Limitations

Our study had notable limitations that warrant discussion. This was a single-center pilot study with a small sample size and low response rate, and most of the respondents were trainees. The trainees had a wide range of prior training and may not be a representative sample. The residents did rotations in a pediatric ED, and answers may have been different for physicians without this experience. The site of the study was an academic ED, so our findings may not translate to all community EDs. Future knowledge needs assessments would ideally include EDs in multiple geographic and practice settings and nonphysician clinicians (eg, nurse practitioners and physician assistants). Additionally, it is unclear as to how this data might apply to acute care practitioners caring for children in urgent care settings.

Conclusion

Assessments regarding how providers seek knowledge and apply evidence-based guidelines for pediatric emergency care can inform how resources are created and made available. Our findings can guide future research on knowledge needs assessment to promote the dissemination and implementation of evidence-based practices in the acute care of children in all emergency settings. ■

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References

1. McDermott KW, Stocks C, Freeman WJ. Overview of Pediatric Emergency Department Visits, 2015: Statistical Brief #242. Healthcare Cost and Utilization Project (HCUP) Statistical Briefs. Rockville (MD): Agency for Healthcare Research and Quality (US); 2006.
2. Remick K, Gausche-Hill M, Joseph MM, Brown K, Snow SK, Wright JL. Pediatric Readiness in the Emergency Department. *Pediatrics*. 2018;142(5). Epub 2018/11/06. doi: 10.1542/peds.2018-2459. PubMed PMID: 30389843.
3. Eason M, Clingenpeel J, Vazifedan T, Guins T, Amond G. Transfers From a Pediatric Urgent Care to an Academic Pediatric Emergency Department. *Pediatr Emerg Care*. 2022;38(2):e507-e10. Epub 2022/02/02. doi: 10.1097/pec.0000000000002373. PubMed PMID: 35100757.
4. Emergency Care For Children In The United States. *Health Affairs*. 2013;32(12):2109-15. doi: 10.1377/hlthaff.2013.0871.
5. Aregbesola A, Abou-Setta AM, Jeyaraman MM, Okoli G, Lam O, Sibley KM, Klassen TP. Implementation strategies in emergency management of children: a scoping review protocol. Systematic reviews. 2020;9(1):46. Epub 2020/03/05. doi: 10.1186/s13643-020-01310-z. PubMed PMID: 32127032; PMCID: PMC7055076.
6. Scott SD, Albrecht L, Given LM, Hartling L, Johnson DW, Jabbour M, Klassen TP. Pediatric information seeking behaviour, information needs, and information preferences of health care professionals in general emergency departments: Results from the Translating Emergency Knowledge for Kids (TREKK) Needs Assessment. *CJEM*. 2018;20(1):89-99. Epub 2017/01/10. doi: 10.1017/cem.2016.406. PubMed PMID: 28067181.
7. Gerber N, Sookraj K, Munnangi S, Angus LDG, Lamba V, Kumar K, Doraiswamy B. Impact of the Pediatric Emergency Care Applied Research Network (PECARN) guidelines on emergency department use of head computed tomography at a level I safety-net trauma center. *Emergency Radiology*. 2019;26(1):45-52. Epub 2018/09/28. doi: 10.1007/s10140-018-1645-4. PubMed PMID: 30259227.
8. Hess EP, Homme JL, Kharbanda AB, Tzimenatos L, Louie JP, Cohen DM, Nigrovic LE, Westphal JJ, Shah ND, Inselman J, Ferrara MJ, Herrin J, Montori VM, Kuppermann N. Effect of the Head Computed Tomography Choice Decision Aid in Parents of Children With Minor Head Trauma: A Cluster Randomized Trial. *JAMA Network Open*. 2018;1(5):e182430-e. doi: 10.1001/jamanetworkopen.2018.2430.
9. Doran Prgg A, Weber M, et al. Necessity (or Not) for Patient Transfer from Urgent Care to the ED Following Traumatic Brain Injury. *Journal of Urgent Care Medicine*. 2020;15(3):13-6.
10. Remick K, et al. Pediatric Readiness in the Emergency Department. *Pediatrics*. 2018;142(5). doi: 10.1542/peds.2018-2459.
11. Jain PN, Lerer R, Choi J, Dunbar J, Eisenberg R, Hametz P, Nassau S, Katyal C. Discrepancies Between the Management of Fever in Young Infants Admitted From Urban General Emergency Departments and Pediatric Emergency Departments. *Pediatr Emerg Care*. 2022. Epub 2022/05/05. doi: 10.1097/pec.0000000000002740. PubMed PMID: 35507367.
12. Jain PN, Choi J, Katyal C. Pediatric Care in the Nonpediatric Emergency Department: Provider Perspectives. *Hospital Pediatrics*. 2019;9(3):216-9. Epub 2019/03/02. doi: 10.1542/hpeds.2018-0133. PubMed PMID: 30819720.

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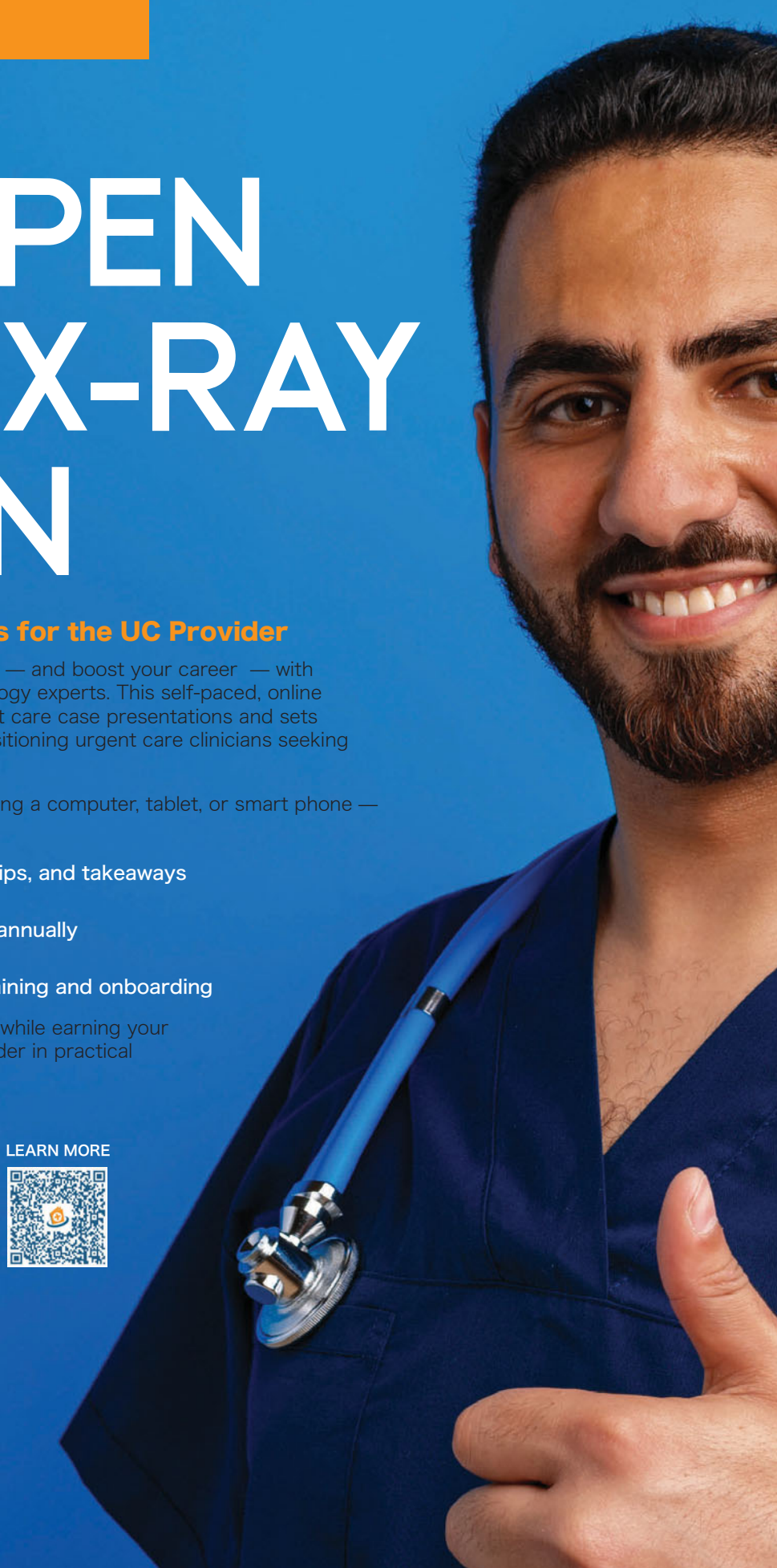

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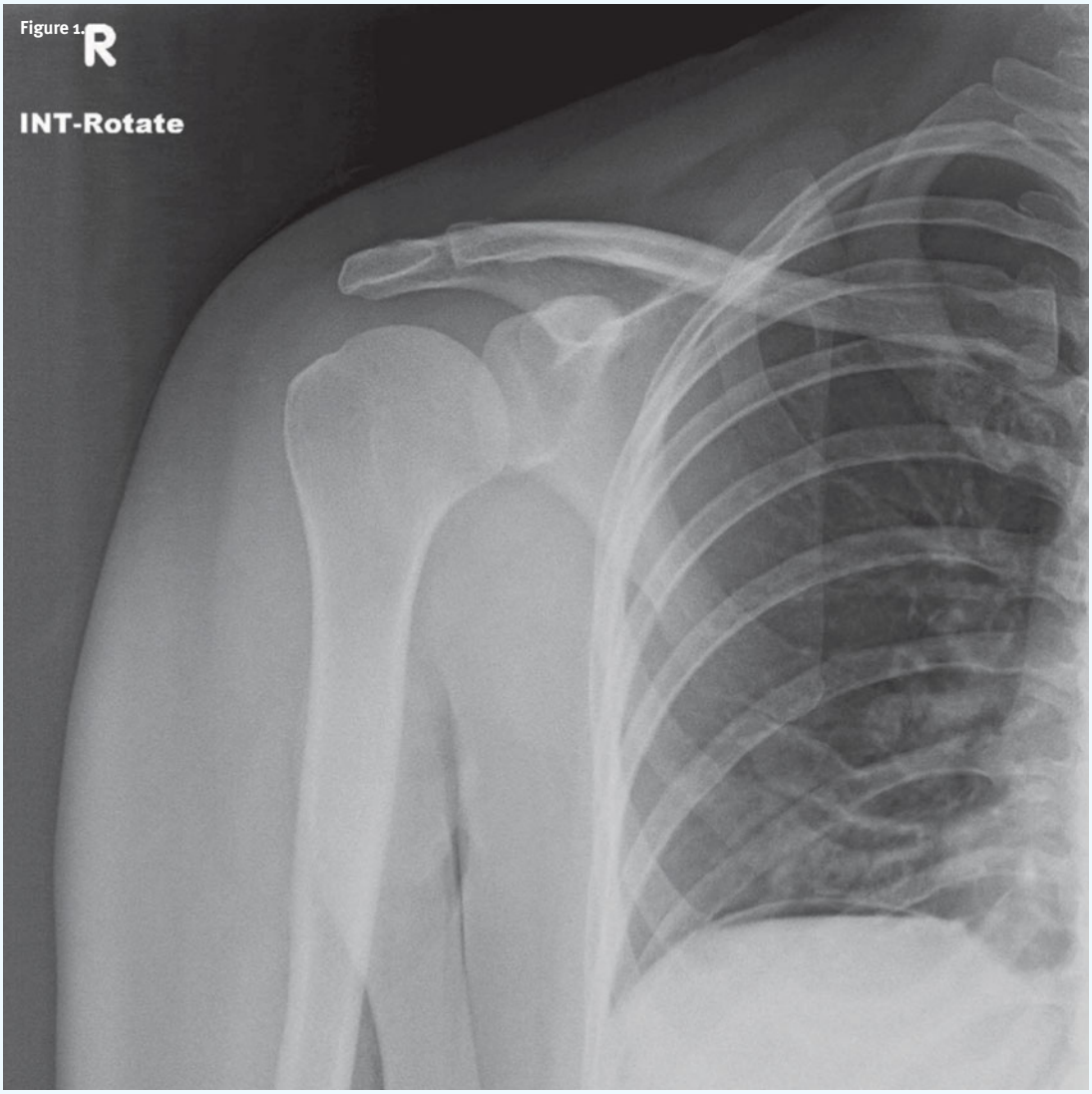
INSIGHTS IN IMAGES

CLINICAL CHALLENGE: CASE 1

In each issue, *JUCM* will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of conditions that real urgent care patients have presented with.

If you would like to submit a case for consideration, please e-mail the relevant materials and presenting information to editor@jucm.com.

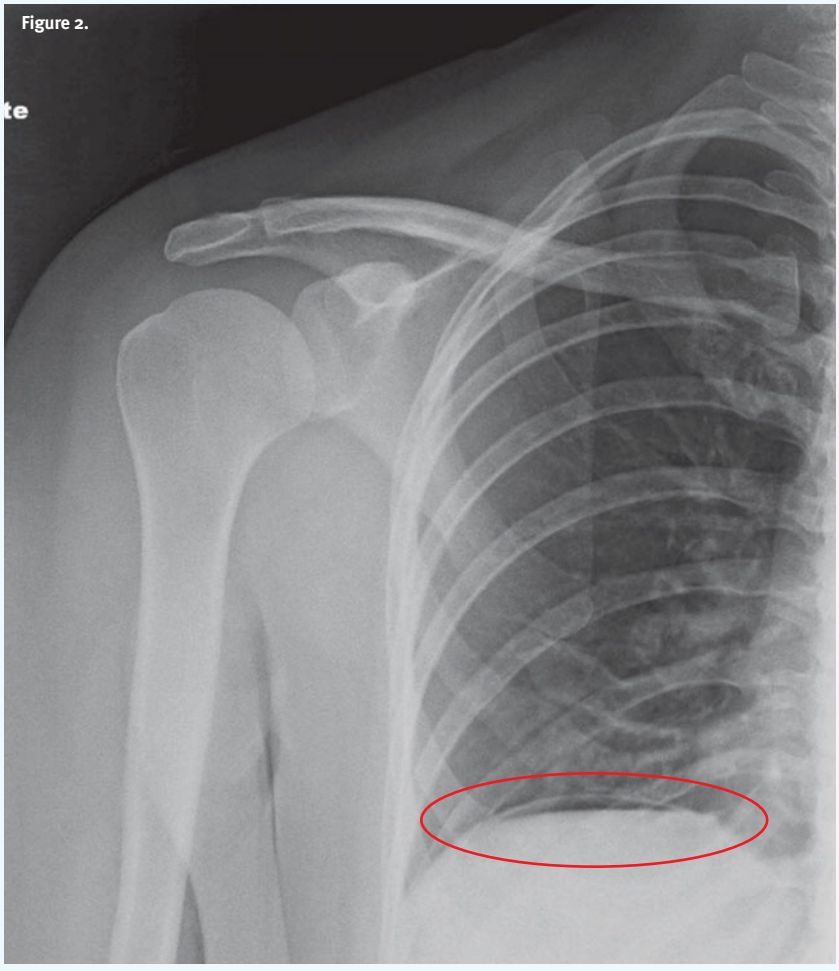
25 Year Old With Shoulder Pain



A 25-year-old male presents to urgent care with ongoing pain in his right shoulder. He denies trauma and reports the pain is deep within the shoulder joint itself.

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

Figure 2.



Differential Diagnosis

- Glenohumeral joint osteoarthritis
- Acromioclavicular joint separation
- Pneumothorax
- Pneumoperitoneum

Diagnosis

The correct diagnosis is pneumoperitoneum as the imaging reveals air under the right hemidiaphragm. Although musculoskeletal causes of shoulder pain are common, other non-orthopedic causes should be in the differential, including gastrointestinal, cardiopulmonary, and neurologic sources.

What to Look For

- Free air under the diaphragm on upright chest or abdominal x-ray
- Pneumomediastinum, pleural effusion, pneumothorax and subcutaneous emphysema may also occasionally be seen on x-ray
- Patient may present with abdominal and/or chest pain along with shoulder pain

Pearls for Urgent Care Management

- If no recent trauma, pneumoperitoneum is usually the result of a gastrointestinal tract perforation
- This requires immediate transfer to the emergency department for further evaluation and management
- Fluid resuscitation is the initial treatment

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

51 Year Old With Asymptomatic Rash

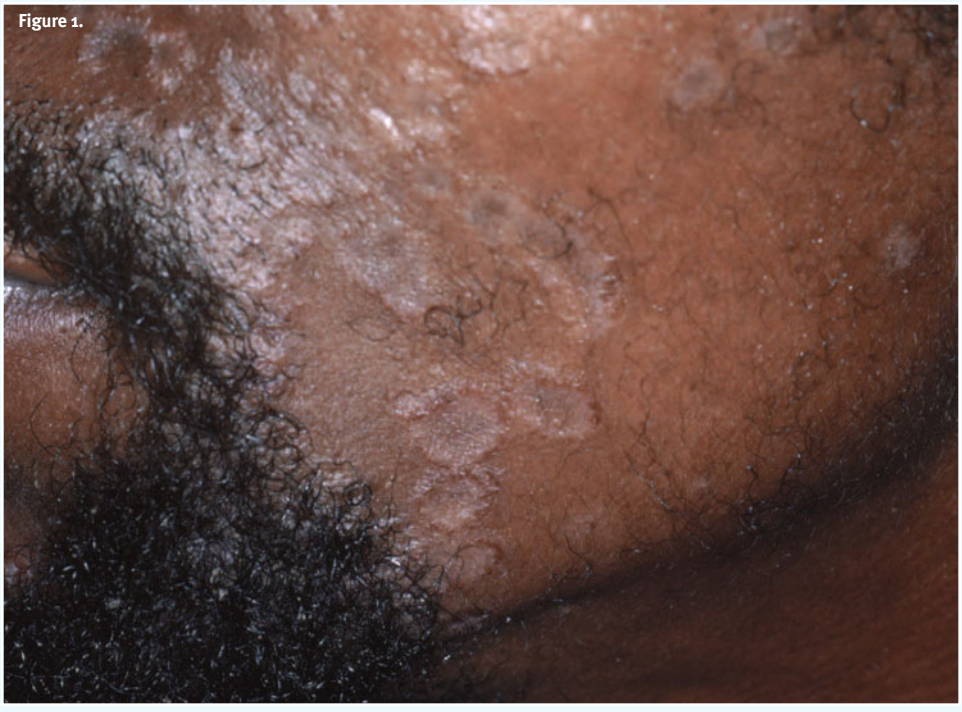


Figure 1.

A 51-year-old man presents to urgent care concerned about an asymptomatic rash that developed over his face within the last month. On examination, pink and violaceous, annular, scaly papules, and plaques were seen on his cheeks and within his beard area and nasolabial folds. The patient appeared well and reported no systemic symptoms.

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

THE RESOLUTION

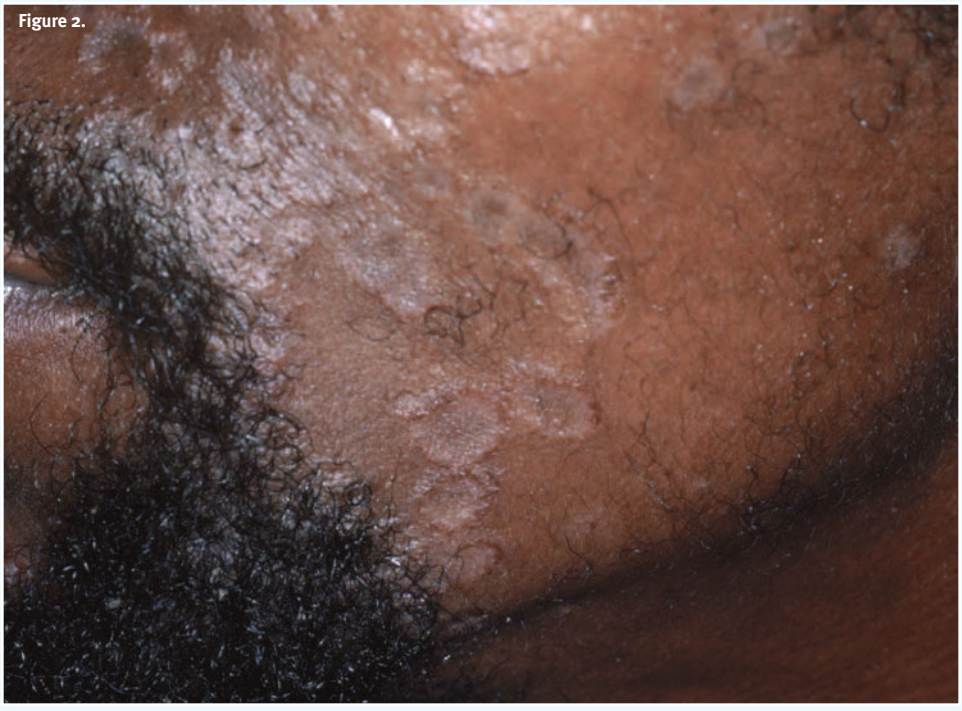


Figure 2.

Differential Diagnosis

- Erythrasma
- Granuloma annulare
- Nummular dermatitis
- Seborrheic dermatitis

Diagnosis

This patient was diagnosed with seborrheic dermatitis. Seborrheic dermatitis is a common inflammatory papulosquamous condition that affects the sebum-rich areas of the body, including the face, scalp, neck, upper chest, and back. Up to 5% of adults are affected by seborrheic dermatitis, and the condition is particularly common after the fifth or sixth decades. Clinical presentations of seborrheic dermatitis vary, ranging from simple dandruff to fulminant rash.

What to Look For

- Lesions may look pink or red, ashy gray, or darker than normal skin depending on a person's skin color
- Lesions may also have dryness, pruritus, and fine, greasy scaling
- Characteristic sites include the scalp, eyebrows, glabella, nasolabial folds, the beard area, upper chest, external ear canal, posterior ears, eyelid margins, and intertriginous areas

Pearls for Urgent Care Management

- Treatment may include corticosteroids (low potency for the face), anti-fungals, or a combination of both
- Seborrheic dermatitis tends to be a chronic condition, and remissions and exacerbations are expected
- Intermittent treatment may be helpful for chronic state
- Seborrheic dermatitis is often better in summer months and worse in the winter

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

CLINICAL CHALLENGE: CASE 3

64 Year Old With Dyspnea and History of COPD

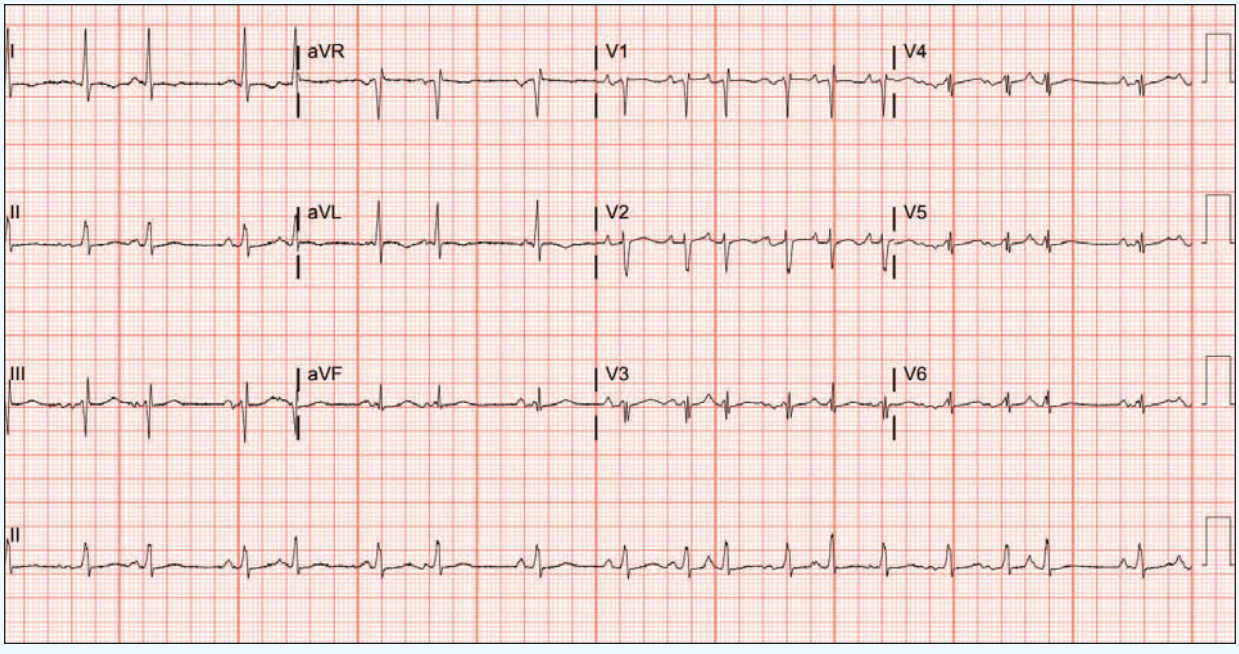


Figure 1: Initial ECG

A 64-year-old female presents in the urgent care complaining of dyspnea for the past 3 days. After asking a few questions, you learn the woman has a history of chronic obstructive pulmonary disease (COPD).

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

Case presented by Jonathan Giordano, DO

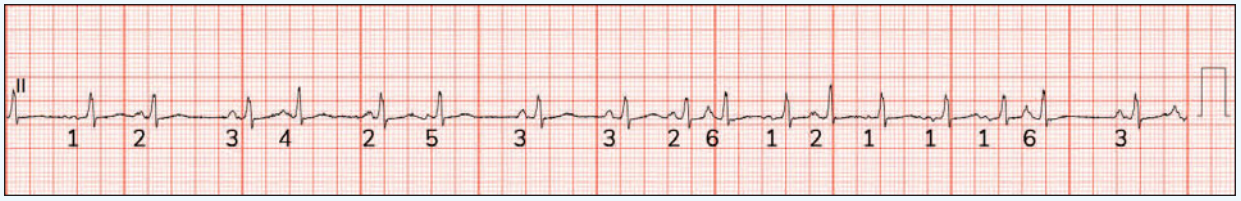


Figure 2: Multifocal atrial tachycardia. Note 6 distinct P wave morphologies (numbered) in the lead II rhythm strip as well as the variable P-P intervals.

Differential Diagnosis

- Sinus tachycardia
- Atrial fibrillation
- Multifocal atrial tachycardia (MAT)
- Atrial flutter with variable atrioventricular (AV) conduction
- Hyperkalemia

Diagnosis

The diagnosis is multifocal atrial tachycardia (MAT). The ECG reveals an irregular, narrow complex rhythm with a ventricular rate of 108 beats per minute. There are at least 3 different P-wave morphologies with variable P-P intervals. This constellation of findings is consistent with multifocal atrial tachycardia. There is also low voltage present, likely secondary to increased impedance from hyperinflated lungs.

MAT is an irregularly irregular rhythm, typically between 100-150 beats per minute, that arises from multiple ectopic foci within the atria. It is most often seen in patients with advanced lung disease, such as COPD. MAT is defined by a rate >100 beats per minute with at least 3 morphologically distinct atrial complexes, varying P-P intervals, and an isoelectric baseline between P waves.[1]

The mechanism is not completely understood but is believed to be caused by either re-entrant centers, increased atrial automaticity, or triggered centers, and is often associated with respiratory failure. Underlying hypoxia or hypercarbia, right atrial dilation, and increased sympathetic drive are typical physiologic stressors contributing to development of MAT in respiratory failure. Additionally, medications such as beta agonists or theophylline may contribute to development of MAT.[1]

Clinicians should focus on treatment of the underlying cause. Unfortunately, the development of MAT during an acute illness/exacerbation should be viewed as a poor prognostic indicator, with a significant in-hospital mortality associated during acute illness.[1]

Other diagnoses to consider with an irregularly irregular rhythm include atrial fibrillation and atrial flutter with variable conduction. With atrial fibrillation, there should be no discernible P waves, and with atrial flutter, "sawtooth" P waves are often visualized (especially in the inferior leads).

What to Look For

- The differential for an irregularly irregular rhythm should focus on atrial fibrillation, atrial flutter with variable atrioventricular block, and MAT.
- MAT is defined by a rate >100 beats per minute with at least 3 morphologically distinct atrial complexes, varying P-P intervals, and an isoelectric baseline between P waves.

Pearls for Management; Considerations for Transfer

- Management should focus on treatment of the underlying cause and not to control the rate.
- Differentiating between other causes of irregularly irregular rhythms is important as therapeutic approaches vary.
- MAT is associated with a poor prognosis when associated with an acute illness. Transfer to a higher level of care should be initiated early.

References

1. Surawicz B, Knilans TK. *Chou's Electrocardiography in Clinical Practice*. 6th ed. Elsevier; 2008.

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

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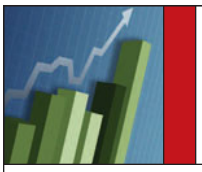
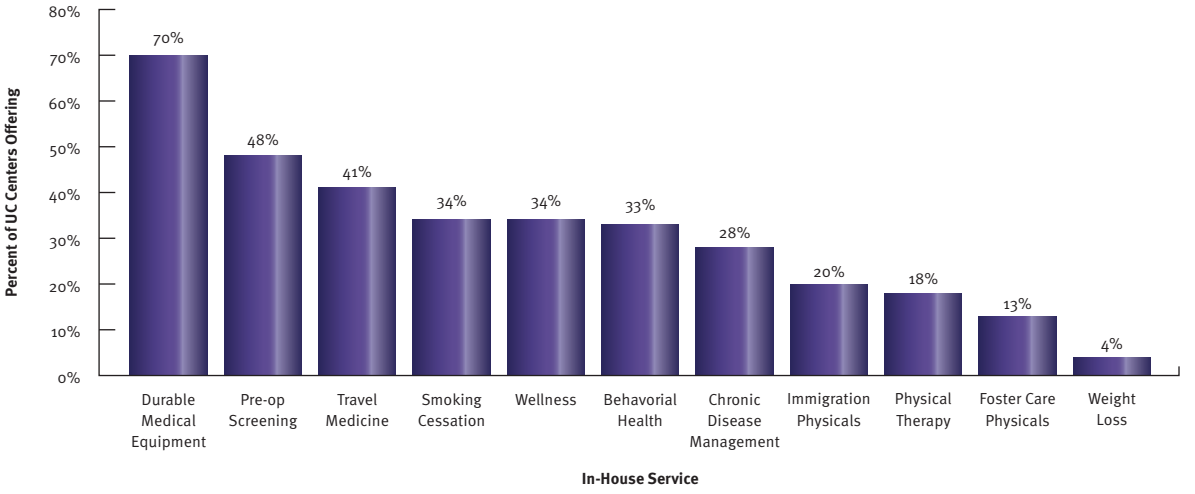


DEVELOPING DATA

Urgent Care Scope of Services

Julie Miller

Services Offered By Urgent Care Centers



Same-day ambulatory healthcare services are the hallmark of urgent care (UC). Because UC clinicians care for a wide range of conditions and injuries, they need to be proficient in a broad scope of immediate intervention services.

In its latest white paper, the Urgent Care Association (UCA) noted that more organizations are moving to a staffing model with nurse practitioners (NPs) and physician assistants (PAs) serving as the primary providers on-site, rather than physicians. This model grew from 54.4% in 2019 to 71.6% in 2022—a 31% increase. UCA attributes the change to federal and state policies enacted during the pandemic that authorized more midlevel providers to have full practice authority.[1] More than half of states allow full practice authority for NPs currently.[2]

In terms of patient populations, UC centers are generally equipped to manage adults, children, and infants. Even pregnant moms can be seen in the urgent care with many centers capable of conducting point-of-care tests for common conditions that may come along with pregnancy.

UCA maintains a detailed definition to describe the nature of the medical services offered at UC centers, which includes, for example, radiology and labs. In its white paper, UCA also offers a glimpse into the specifics of service lines offered across the industry, as collected in the association's benchmarking survey.

Further, UCA categorizes centers' capabilities according to acuity. Nearly 69% of centers surveyed rely on traditional urgent care services, while 10.3% specialize in high acuity, and 8% are exclusively pediatric urgent care providers. Another 5.1% are a combination of urgent and primary care.[1]

Julie Miller is Managing Editor of the *Journal of Urgent Care Medicine.*

References

1. Urgent Care Association. Urgent Care Industry White Paper, The Essential Nature Of Urgent Care In The Healthcare Ecosystem Post-Covid-19. August 2023. https://bit.ly/3RRxwKq. Accessed October 10, 2023.
2. American Association of Nurse Practitioners. State Practice Environment. Accessed October 26, 2023 at https://www.aanp.org/advocacy/ state/state-practice-environment

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