

URGENT CARING

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Empowering Clinicians,
Enhancing Quality of Care

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COLLEGE OF
URGENT CARE
MEDICINE



URGENT CARE
COLLEGE OF
PHYSICIANS

A publication of the Urgent Care College of Physicians in collaboration with the College of Urgent Care Medicine.

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From the President of the College

Cesar Mora Jaramillo, MD, FCUCM



As we are approaching the fall season, I keep thinking about the work Urgent Care centers do on a regular day and how busy we get over the fall/winter. **With over 200 million Urgent Care patient encounters each year and 90% of the U.S. population living within a 30-minute drive of a center, Urgent Care is uniquely positioned to provide access and improve the outcome of our communities while decreasing healthcare costs.**

Last week was one of those days that reminded me why Urgent Care centers are so pivotal nowadays. Within a couple of hours, we'd already seen a few toddlers with a high fever (late summer Covid-19 wave) and worried parents, a work related injury with a deep laceration and a young woman who thought she was having an allergic reaction but was actually in early anaphylaxis, a few patients with vague symptoms and, of course, the walk in chest pain patient. Our team managed stabilization, suturing, a rapid workup and coordination of care, all without sending a single one to the emergency department.

This is what Urgent Care is capable of at its best - full scope, efficient care, quality of care and accessibility to our communities. And yet, there are UCCs that do not suture or do not have X-rays on sites or provide limited services.

Urgent Care has matured into a critical component of the healthcare system, reducing emergency department overcrowding and providing cost-effective, timely care. Yet for all the progress we've made, there's one area where we must significantly level up if we want to secure our place as a recognized, respected specialty: **avoid scope degradation.**

But how do we avoid scope degradation in our field? What can we do?

Data is proof of our value in the health ecosystem. With the right metrics, we can demonstrate our impact on patient access, outcomes, population health and healthcare costs - these are among a few reasons why data is so important. Furthermore, we can track throughput times, revisit rates, antibiotic stewardship and patient satisfaction, not just to meet compliance requirements but to actively improve care.

Having Urgent Care specific benchmarks ensures we're compared fairly to other care settings. Without them, we risk being measured against hospital emergency departments or primary care offices environments with different patient acuity, resources and workflows.

With data, we can define standards that reflect our real-world practice and allow us to showcase excellence with accuracy while we prevent scope degradation. We cannot improve what we do not measure!

Over the past few years, I've watched small pieces of our scope chip away, sometimes because health systems assume certain procedures "should" only be done in the ED, sometimes because Urgent Care is labeled as "just colds and sore throats."

The truth is, unless we show them exactly what we are capable of doing, with real numbers and real outcomes, these misconceptions can quietly rewrite our job description.

Without that proof, it's far too easy for someone else to define Urgent Care in a way that minimizes our capabilities and full impact in healthcare.

How about research? What is the role of research in our field?

Research is so essential in specialty recognition, and it is the fuel that moves us forward. High-quality research in Urgent Care is still relatively sparse, which means our story is often told by others and sometimes inaccurately. We need rigorous studies that address Urgent Care's unique patient population, care delivery models and operational challenges. Research can help answer critical questions and elevate our field.

When Urgent Care research is published, it strengthens our credibility, informs our practice guidelines and positions us as leaders in evidence-based acute care or it helps us to improve our delivery models and make an impact in our communities.

Specialty recognition, scope-of-practice protection, quality improvement and even payer negotiations all rest on a foundation of credible data and research. Without this, we leave ourselves vulnerable to being defined and potentially limited by external stakeholders.

Urgent Care is more than a convenience; it is an essential, high-quality and evidence-driven care model. Let's make sure we can prove it with the data and research. UCCOP is now the entity for clinical research in our field. Let's become more involved and collaborate in obtaining and sharing valuable data to enhance research in Urgent Care!

From the Editor in Chief



No One Should Have to Choose Between a Bathroom Break and Lunch

Tracey Quail Davidoff, MD, FCUCM
Editor-in-Chief

On a busy work day, not too long ago, when I was single covered due to staffing shortages, somewhere around 3 p.m. I realized I had not used the bathroom (I had to go!) and I'd not had lunch. Looking at the clock and the exploding tracking board, I decided I had time for only one "luxury." So I ignored my grumbling stomach.

In Urgent Care, we pride ourselves on being fast, flexible and fiercely committed to our patients (with the lowest possible throughput time). But somewhere along the line, we've normalized a culture where skipping meals and delaying bathroom breaks is seen as dedication, not dysfunction.

Let's be clear: No clinician should have to choose between a bathroom break and lunch. Yet many of us do, every shift. We push through hunger, dehydration and exhaustion because the waiting room is full, the staffing is thin and the clock never stops. We have unconsciously, or in some cases consciously, decided that productivity is paramount to our basic human needs.

This isn't sustainable. It's not heroic. It's harmful.

Burnout does not always announce itself with a breakdown. Sometimes it creeps in quietly, through skipped meals, missed moments of rest and the slow erosion of our own well-being. And when we are running on empty, patient care suffers too. We make more mistakes. We lose empathy. We start to dread the work we once loved.

The problem isn't lack of resilience. Urgent Care clinicians are some of the most adaptable, driven professionals in medicine. The problem is a system that treats basic human needs as negotiable. When the expectation is to power through a 12 or more-hour shift without time to eat or use the restroom, we're not just failing our clinicians, we are setting them up to fail.

That said, there are small but meaningful steps clinicians can take to protect their time and energy. Prioritizing tasks using quick triage tools, setting micro-goals for breaks and communicating proactively to teammates about coverage can help carve out moments for self-care. Even five-minute pauses taken intentionally may make a difference. Time management won't solve systemic issues, but it can help clinicians reclaim a sense of control in an often-chaotic environment.

It doesn't have to be this way. Protecting time for breaks, ensuring adequate staffing and fostering a culture that values clinician wellness are not luxuries, they're necessities. Leadership must take responsibility for creating environments where clinicians can care for themselves without guilt or fear of judgement.

Because if we want to keep showing up for our patients, we have to start showing up for ourselves. And that starts with something as simple and as essential as the right to eat lunch and use the bathroom.

So what happened to me that day? My next patient, who had waited 90 minutes with a sick kid with the flu, heard my grumbling stomach and actually stopped me and asked if I had had lunch. When she learned I had not, she told me that they would be willing to wait, their concerns were not that important and that I should go eat. I couldn't believe it. And I ate lunch, after I discharged them.

If you are experiencing a loss of job satisfaction, symptoms of imposter syndrome, compassion fatigue or other signs of burnout, help does exist. Most employers will provide access to employee assistance programs that are confidential and free of charge.

As an initiative of the Burnout Task Force developed during the Clinical Advisory Group in 2024, The College of Urgent Care Medicine and Urgent Care College of Physicians are partnering with Better Together to provide professional coaching programs to help us better understand and treat these symptoms of burnout. This program began September 1 and it is a free program for College members. Check it out now at the link below and take the first step to your future well-being - register!

Tracey Davidoff, MD, FCUCM, Editor-in-Chief

For more information: <https://bettertogetherphysiciancoaching.com/>

To register: <https://redcap.ucdenver.edu/surveys/?s=NHWRFMNRPKP8FLX9>

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The Urgent Care Association (UCA) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

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Presented by the College of Urgent Care Medicine

September marks two vital public health observances: Sexual Health Awareness Month and Sepsis Awareness Month. As Urgent Care clinicians, we are uniquely positioned to identify, educate and intervene early in both domains—often during brief but pivotal patient encounters.

Sexual Health Is Health

Sexual health is more than the absence of disease—it's about autonomy, access and dignity. The CDC emphasizes routine screening for sexually transmitted infections (STIs), especially Chlamydia and Gonorrhea in sexually active individuals under 25 and offers a [Guide to Taking a Sexual History](#) to help clinicians navigate sensitive conversations. The American College of Obstetricians and Gynecologists (ACOG) also provides patient-friendly resources on [Your Sexual Health](#) to support discussions around desire, arousal and sexual pain.

Small steps you can take:

- Normalize sexual health discussions during routine visits.
- Offer STI screening and expedited partner therapy when appropriate.
- Display inclusive and teen-friendly materials in your clinic space.

Resources for Clinicians:

- CDC Sexual Health Clinical Guidance: [[cdc.gov/sti](https://www.cdc.gov/sti/hcp/clinical-guidance/index.html)](<https://www.cdc.gov/sti/hcp/clinical-guidance/index.html>)
- ACOG Patient FAQs: [[acog.org/womens-health/faqs/your-sexual-health](https://www.acog.org/womens-health/faqs/your-sexual-health)](<https://www.acog.org/womens-health/faqs/your-sexual-health>)
- Urology Care Foundation: [[urologyhealth.org](https://www.urologyhealth.org)](<https://www.urologyhealth.org>)

Sepsis is a medical emergency

Sepsis is a leading cause of death in U.S. hospitals and early recognition in outpatient settings can be lifesaving. The CDC's [Get Ahead of Sepsis Toolkit](#) provides communication tools and clinical guidance to help providers recognize symptoms and educate patients. Remember the acronym *TIME*: Temperature, Infection, Mental decline and Extremely ill—signs that should prompt immediate action.

Proactive steps for clinicians:

- Maintain a high index of suspicion for sepsis in patients with infection and abnormal vitals.
- Educate patients on infection prevention and when to seek emergency care.
- Use CDC and Sepsis Alliance materials to reinforce awareness in your clinic.

Resources for Clinicians:

- CDC Sepsis Toolkit: [cdc.gov/sepsis](<https://www.cdc.gov/sepsis/php/toolkit/index.html>)
- Sepsis Alliance Awareness Materials: [sepsis.org](<https://www.sepsis.org/get-involved/sepsis-awareness-month>)
- World Sepsis Day: [worldsepsisday.org](<https://www.worldsepsisday.org>)

Let's use this month to reaffirm our commitment to whole-person care. Whether it's a candid conversation about sexual health or swift action in a suspected sepsis case, your vigilance makes a difference.

Warm regards,

The College of Urgent Care Medicine

Improving STI Detection in Urgent Care: The Role of Clinical Exam and Multiplex PCR Testing

By Steven E. Goldberg, MD¹

Introduction

Sexually transmitted infections (STIs) remain a critical area of concern in Urgent Care settings. Urgent Care clinicians are on the front lines of evaluating patients with genitourinary symptoms, or those seeking screening following a recent exposure. ¹ Accurate, timely diagnosis is key to reducing transmission, preventing complications and improving antimicrobial stewardship. Recent advances in molecular diagnostics—particularly multiplex polymerase chain reaction (PCR) testing—offer rapid, sensitive and comprehensive results for many prevalent STIs.² This article reviews current trends in STI evaluation and diagnostic testing and demonstrates the role of PCR through several case examples.

Self-Collection Fits Within the Spectrum of STI Diagnostic Approaches

The literature has established that self-collected vaginal, pharyngeal and rectal swabs, when used with validated molecular assays, are non-inferior to clinician-obtained samples for detecting a range of STIs and vaginal infections, including gonorrhea, chlamydia, trichomoniasis, bacterial vaginosis and candidiasis.³ For asymptomatic patients seeking screening, especially in resource-constrained or time-limited Urgent Care settings, this method represents a clinically sound and patient-centered alternative. It is also recognized that in symptomatic individuals or those with risk factors suggestive of upper genital tract involvement, clinician-performed pelvic examination and targeted multiplex PCR testing remain essential.⁴

This article uses example cases to present a contemporary approach to STI evaluation in the Urgent Care setting and demonstrates where evidence supports the use of multiplex PCR testing—whether on patient- or clinician-collected samples, for screening or symptomatic complaints and for lower or upper reproductive tract complaints—to support more precise diagnosis and management of STIs in real-world Urgent Care scenarios. ⁵ The diagnostic (testing) strategy must remain responsive to symptom presentation, patient history and relevant clinical context. ¹

Epidemiology of Common STIs

According to the Centers for Disease Control and Prevention (CDC), there were more than 2.5 million reported cases of chlamydia, gonorrhea and syphilis in the U.S. in 2022. ⁶ Chlamydia remains the most common notifiable disease, with over 1.6 million cases annually. ⁶ Gonorrhea cases have surpassed 700,000 per year and syphilis—especially congenital syphilis—is rising at an alarming rate. ⁶ *Mycoplasma genitalium* is an emerging pathogen associated with urethritis, cervicitis and pelvic inflammatory disease.⁷ Detection is often missed without molecular diagnostics, given the difficulty with culturing the organism. ⁸ Further, antimicrobial resistance is increasingly reported. ⁹ *Trichomonas vaginalis*, a protozoan parasite, is the most common curable STI worldwide, with a prevalence that

disproportionately affects women and minorities. 10 Herpes simplex virus (HSV) types 1 and 2 cause lifelong infection, periodic exacerbations and are a leading cause of genital ulcer disease, with frequent asymptomatic shedding. Other underrecognized pathogens, such as *Ureaplasma urealyticum* and Bacterial Vaginosis (BV)-associated bacteria, also contribute to the clinical differential, particularly when symptoms are non-specific. 11

Natural History of Common STI Pathogens

Understanding the natural history of sexually transmitted pathogens is essential to clinical interpretation and appropriate patient counseling. *Neisseria gonorrhoeae*, for example, is an obligate intracellular, facultative anaerobic gram-negative diplococcus that preferentially colonizes the cervix in women, but not the vaginal mucosa. 4,12 This localization explains why some patients with vaginal discharge may be experiencing an upper reproductive tract infection despite minimal external findings. *Chlamydia trachomatis* is another intracellular pathogen that can remain asymptomatic in a host for extended periods, with the potential for silent progression to pelvic inflammatory disease (PID) and infertility. 4,13 Intracellular pathogens may not be detected in samples like urine, that likely do not contain cells. This physiologic consideration also explains the risk of using a urine sample for PCR collection for an STI evaluation (e.g., false negative) in females. *Mycoplasma genitalium* has a prolonged and often subclinical course, marked by persistent urethritis or cervicitis and increasing macrolide antibiotic resistance. 4,14 *Trichomonas vaginalis*, a flagellated protozoan, tends to reside in the lower genital tract, often causing frothy discharge and irritation—but may also be asymptomatic. 4,15 *Ureaplasma urealyticum* is commensal in some individuals but can contribute to urethritis and adverse pregnancy outcomes when pathogenic. 4,16 Finally, HSV types 1 and 2 establish lifelong latency in sensory ganglia, with reactivation leading to recurrent bothersome genital ulcerations. 4,16

STI Testing Guidelines

Clinical interpretation of sexually transmitted infections (STIs) should be guided not only by the natural history of pathogens but also by current public health guidelines for diagnostic testing.

Screening Recommendations for Asymptomatic Individuals

According to the CDC's 2021 STI Treatment Guidelines, 1,4 routine screening is recommended for asymptomatic individuals in the following cases:

- *Chlamydia trachomatis* and *Neisseria gonorrhoeae*: Screening is advised for sexually active women under age 25, older women with risk factors (e.g., new or multiple sex partners), all pregnant women under 25 years of age, pregnant women 25 years of age and older if at increased risk and men who have sex with men (MSM) at sites of contact.
- HIV, Syphilis and Hepatitis B: Screening is recommended in high-risk populations, including individuals with new or multiple sex partners or MSM.

These pathogens are routinely screened due to their high prevalence, public health impact and potential for asymptomatic transmission.

Testing Recommendations for Symptomatic Individuals

For other pathogens, diagnostic testing is generally reserved for individuals with symptoms or relevant clinical findings¹:

- Herpes Simplex Virus (HSV): The CDC recommends type-specific PCR or culture for HSV only when active lesions are present. Serologic testing may be used in specific contexts but is not recommended for routine screening in asymptomatic individuals.
- Mycoplasma genitalium: Testing is recommended only in patients with persistent or recurrent urethritis, cervicitis, or pelvic inflammatory disease. Routine screening or extragenital testing for asymptomatic M. genitalium infection is not recommended.
- Trichomonas vaginalis: Testing is advised primarily in symptomatic women and high-risk groups, including HIV-positive women. Routine screening of asymptomatic men or women is not broadly recommended.

Medical and Sexual History: Informing the Scope of STI Testing

Thorough documentation of a patient's past medical and sexual history is fundamental in Urgent Care STI evaluation. Ask questions in a positive way, affirming that sexual activity is a normal part of human behavior. Be non-judgmental and affirming. This will help you attain a better history. A history of prior STIs, sexual practices (including anal, vaginal and oral intercourse), number of partners, use of barrier protection and recent symptoms can influence the choice and breadth of diagnostic tests.¹⁷ The CDC STI Treatment Guidelines recommend risk-based screening strategies that consider sexual orientation, gender identity and history of past infections.¹ Additionally, sexual history can uncover patterns of recurrent or resistant infections and guide the clinician to include less commonly tested pathogens such as Mycoplasma genitalium or HSV. Tailoring the testing panel based on history ensures both clinical accuracy and cost-effectiveness. ¹⁸

The Importance of Pelvic Examination in STI Evaluation and in Diagnosing PID

A pelvic exam is a critical component of STI assessment in women, providing visual and tactile insights that laboratory testing alone cannot offer.¹⁹ During the examination, clinicians can assess for cervical motion tenderness, mucopurulent discharge, adnexal tenderness and evidence of ulcerations or lesions—all of which are relevant for diagnosing pelvic inflammatory disease (PID) or cervicitis.⁴ Research support the diagnostic value of pelvic exams in guiding testing and treatment decisions, especially when symptoms are nonspecific.²⁰⁻²² Clinical findings from pelvic exams influenced not only testing decisions but also patient education and follow-up care. ²⁰⁻²² While vaginal discharge is often the presenting symptom in STI-related visits, it can be misleading in isolation. Clinicians must maintain a high index of suspicion for pelvic inflammatory disease (PID) in women presenting with discharge, even if abdominal or systemic symptoms are absent.²³ A pelvic exam enables the detection of cervical motion tenderness and adnexal tenderness—which are hallmarks of PID.⁴ The exam's value extends beyond surface inspection, aiding in early detection and prevention of long-term sequelae such as infertility and chronic pelvic pain.²⁴

Why PCR Testing Matters – with Caveats

Multiplex PCR testing allows for the simultaneous detection of multiple pathogens from a single swab.²⁵ Compared to traditional methods, such as wet mounts, cultures, or antigen-based tests, PCR offers superior sensitivity and specificity. ²⁶ Culture may miss gonorrhea or take 48–72 hours to yield results. Wet preparation for *Trichomonas* is operator-dependent and has poor sensitivity (<60%).⁴ specify that HSV PCR—or culture—should only be used to confirm diagnosis from lesions and not for routine screening of asymptomatic individuals. ¹ Screening of asymptomatic *M. genitalium* infection among women and men or extragenital testing for *M. genitalium* is not recommended.⁴ Antigen tests for HSV are limited by timing and sample collection requirements. PCR overcomes these limitations by directly detecting microbial DNA or RNA, enabling same-day or next-morning results, even for asymptomatic carriers. ²⁷

The following case examples serve to demonstrate the integration of PCR testing with clinical examination for several common STI-related chief complaints in Urgent Care settings.

Case 1: Asymptomatic Screening Request

A 24-year-old woman presents to Urgent Care requesting STI screening before beginning a new relationship. She denies symptoms and has no known exposures. A clinician may be tempted to test “everything”, including:

- Chlamydia, Gonorrhea and *Trichomonas vaginalis*
- *Mycoplasma genitalium*
- *Ureaplasma urealyticum*
- Herpes simplex virus

The CDC recommends testing for only Chlamydia and Gonorrhea in asymptomatic patients, except in high-risk groups. *Mycoplasma*, *Ureaplasma* and *Trichomonas* should only be tested in symptomatic patients and those at high risk. Herpes simplex testing should only be done if an active lesion is identified on exam. (6)

Case 2: Vaginal Discharge with Unknown Etiology

A 32-year-old woman presents with three days of vaginal discharge and irritation. She is sexually active with one partner. The differential includes Bacterial Vaginosis (BV), Trichomoniasis, Gonorrhea and Chlamydia. Traditional evaluation may involve:

- pH testing
- Amine (whiff) test
- Wet mount microscopy

However, these methods are subjective and often miss coinfections. A multiplex PCR panel delivers objective identification of pathogens while co-detecting BV-associated bacteria if present.³⁰ Next-day results enable timely treatment, reduce overtreatment and support improved partner notification and management.

Case 3: Concurrent Urinary Tract and Gynecologic Infection Symptoms

A 38-year-old woman presents with dysuria, urgency and vaginal discharge. She is unsure whether her symptoms are urologic or gynecologic in origin.³¹ Traditional urine dipsticks and microscopy may detect pyuria, but they cannot differentiate between infectious etiologies. Multiplex PCR testing from a vaginal swab identifies both uropathogens and STIs, facilitating targeted treatment. For example, let's suggest that *Mycoplasma genitalium* and *E. coli* were both detected. PCR could guide the use of dual therapy and support a decision to avoid unnecessary empirical antibiotics that may contribute to greater resistance.

Case 4: A male with urethritis symptoms 32

A 29-year-old male presents with penile discharge and dysuria. He denies recent travel and has had two sexual partners in the past six months. Urethritis in males may result from Gonorrhea, Chlamydia, *Mycoplasma genitalium*, or *Trichomonas vaginalis*. Empiric treatment often covers only gonorrhea and chlamydia. If multiplex PCR testing confirmed *Mycoplasma genitalium*—this could allow selection of a single agent, such as moxifloxacin, which would not have been chosen empirically.

Conclusions

Multiplex PCR testing—whether deployed at the point of care or via next-day turnaround—can reshape best practices in Urgent Care STI management. By enabling high-sensitivity screening for asymptomatic individuals and rapid, organism-specific diagnosis in symptomatic patients, PCR enhances both diagnostic precision and timeliness. This facilitates more targeted, supports antibiotic stewardship and meaningfully contributes to national efforts to curb the US STI epidemic.²⁵ When integrated with focused history-taking and appropriate clinical examination (including pelvic examination when indicated), multiplex PCR empowers Urgent Care clinicians to deliver evidence-based, patient-centered care with greater confidence and efficiency.

Table 1. Comparison of STI Testing Methods — Sensitivity, Specificity, Turnaround Time.

Method	Sensitivity	Specificity	Turnaround Time
Wet Mount (<i>Trichomonas</i>)	<60%	High	Immediate
Culture (Gonorrhea)	70–85%	High	48–72 hours
Antigen Testing (HSV)	Varies	Varies	24–48 hours
Multiplex PCR	>95%	>95%	Same-day or next-morning

Comparison of STI Testing Methods — Sensitivity, Specificity, Turnaround Time.

This table summarizes key performance characteristics of traditional and molecular methods. Adapted from CDC and Clinical Microbiology Reviews.³⁰

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Best Practice Summary of the College of Urgent Care Medicine and the Urgent Care College of Physicians

Recommendations for Sample Collection for Gynecologic Infections in Women

Date Reviewed August 8, 2025

Subject

Recommendations for sample collection for gynecologic infections in women

Patient Population

Adult female patients

Rationale

Guidance is needed for clinicians who evaluate patients with gynecologic infections regarding physical examination and sample collection. Due to newer technology and recent evidence, samples may now be collected by the patient in some clinical settings. This best practice summary provides guidance on when patient collected samples or “self-swabs” are appropriate, and when a pelvic exam with clinician collected swabs is warranted.

Introduction

With recent advances in laboratory science, allowing patients to collect their own samples in the evaluation of gynecologic infections is now possible. In many cases, this is more comfortable for the patient and saves valuable time for the Urgent Care clinician, as well as eliminating the need for sensitive examinations in all patients. However, this practice may not be appropriate in all settings. We reviewed the literature from a wide berth of specialties to determine when self-collected swabs may be appropriate, and when a traditional pelvic examination with clinician collected swabs should be undertaken.

Evidence based guidelines

Miller JM, Binnicker MJ, Campbell S, et. al. Guide to Utilization of the Microbiology Laboratory for Diagnosis of Infectious Diseases: 2024 Update by the Infectious Diseases Society of America (IDSA) and the American Society for Microbiology (ASM). Clin Infect Dis. 2024;:ciae104.doi:10.1093/cid/ciae104.

ACOG Committee Opinion No. 754 Summary: The Utility of and Indications for Routine Pelvic Examination. Obstet Gynecol. 2018 Oct;132(4):1080-1083. doi: 10.1097/AOG.0000000000002896. PMID: 30247359.

Discussion

The results of patient-collected vaginal self-swabs for vaginal infections, including gonorrhea, chlamydia, bacterial vaginosis, candida and trichomonas vaginalis are non-inferior to samples collected by clinicians when the patient is instructed on the proper method of collection. This has been clinically validated by numerous studies. (Krause, Paladine, Khan, Schaffer) Clinicians should consider these results clinically equivalent to clinician obtained samples.

Self-collected vaginal swabs may be used for screening for sexually transmitted infections in asymptomatic women if the patient prefers this type of testing over a traditional clinician obtained sample, also called a high-vaginal swab. This practice enhances patient autonomy and may reduce patient stress. Shared decision making should be used when deciding how samples are to be collected in asymptomatic patients. All patients should be offered a pelvic examination. This practice is supported by the CDC for gonorrhea and chlamydia screening. (Workowski)

The Infectious Diseases Society of America and the American Society for Microbiology support the use of self-collected vaginal swabs when used with validated molecular assays for the diagnosis of uncomplicated bacterial vaginosis, vulvovaginal candidiasis and trichomoniasis, highlighting their comparable accuracy to clinician-collected samples. (Miller) The CDC supports this practice only if the assay used to perform the test has been validated for self-collected samples. (Workowski)

The American College of Obstetrics and Gynecology states that pelvic examinations should be conducted when indicated by medical history or symptoms. (ACOG)

Self-collected samples should be avoided in patients who are symptomatic of a pelvic complaint, especially in the following circumstances:

- Treatment failure following a self-collected sample
- Recurrent episodes (>4 times per year)
- Severe symptoms
- Following gynecologic surgery including termination of pregnancy
- Pregnancy or postnatal patients
- Symptoms not characteristic of BV or candidiasis
- Vaginitis without discharge
- When abdominal or pelvic pain is present (suspected pelvic inflammatory disease)
- When there is a suspicion of a retained foreign body
- Inconclusive self-swab results

These patients should have a pelvic examination and clinician obtained samples as indicated. (ACOG, Barnes)

Failure to complete an examination in any patient may result in missed diagnosis if visual inspection of the external and internal genitalia is not performed. Examples include but are not limited to herpes simplex, retained foreign body, carcinoma and pelvic inflammatory disease.

Exceptions may be made if the patient refuses examination or if examination is not clinically feasible (e.g. modesty concerns, clinic lacks resources for pelvic exam, etc.) (Khan)

The patient should be informed of the risks vs. benefits of a pelvic examination and clinician obtained samples, and shared decision making should be used. This discussion should be clearly documented in the medical record, especially if the patient refuses the examination in lieu of self-collected samples.

Patients who refuse a pelvic examination should not be refused testing and treatment. Self-collected samples may be used. (Khan) This should be clearly documented in the medical record.

Summary

1. The results of patient collected vaginal swabs for gonorrhea, chlamydia, trichomonas, bacterial vaginosis and candida are clinically non-inferior to clinician obtained swabs during a pelvic examination. The patient should receive adequate education in how to obtain the swabs correctly.
2. Self-collected vaginal swabs may be obtained in asymptomatic women desiring screening for sexually transmitted infections. Clinician obtained swabs may be performed if desired by the patient.
3. Self-collected vaginal swabs may be obtained in women presenting with presentation consistent with uncomplicated vaginal candidiasis, bacterial vaginosis and trichomonas infections, however patients should be offered a pelvic exam and clinician obtained swabs.
4. Self-collected vaginal swabs should not be used in patients who are symptomatic as outlined above or have a complicated presentation, unless completing a pelvic exam is not possible or refused by the patient. Shared decision making should be performed and well documented in the medical record.

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Reviewers

Prepared by Tracey Q. Davidoff, MD, FCUCM, peer-reviewed and approved by the Clinical Response Committee of the College of Urgent Care Medicine

Attachments (flow charts, graphics, tables, etc.)

Consult the package insert for directions on obtaining samples as different platforms may have different requirements.

It is recommended that staff members are adequately trained to coach patients on the instructions for obtaining samples. Posters or hand-outs with full instructions recommended.

Evaluation and Management Coding of Emergency Room Transfers

By Stephanie Mercer, PA-C, FCUCM

In the Urgent Care setting, patient transfers to the emergency department for a higher level of care are expected and can be rather common. Higher acuity patients attempt care in the outpatient setting to avoid higher copays and longer wait times associated with the ER. It can be a moral dilemma when choosing the E/M code for these patients. You feel as though you “did nothing,” but it was your expertise and medical knowledge that identified the severity of the complaint and the need for a higher level of care. These visits are frequently considered higher complexity, and we should bill accordingly. Let’s first review the Medical Decision-Making Table first.

There are three main elements of the MDM table: problem(s), data and management. These are categorized by complexity: straight-forward, low, moderate and high. Knowing how to use this table is imperative to choosing the correct code. Complexity is based on the risk the medical condition has on the patient’s morbidity and mortality. The complexity level must qualify for two out of the three elements to choose that specific E/M level. Now, let’s examine a case.

Here’s a common Urgent Care scenario: A 65-year-old male presents to your clinic with a complaint of chest pain for the last several hours. This patient has a history of hypertension and hyperlipidemia. He describes the pain as pressure without radiation. He denies all other symptoms. The patient is obese, and vital signs show a blood pressure of 170/90. The remainder of the physical exam is otherwise unremarkable. An ECG is ordered and shows normal sinus rhythm without any acute findings. What do you do next?

As Urgent Care providers, we should constantly be forming a differential diagnosis and whether we can rule out the most serious and life-threatening issues with the tools we have available. In this case, at the top of our differential should be myocardial ischemia/infarction. Can we rule this out here? Unless your office has real-time troponins, the answer is likely no. Of course, there are other life-threatening diagnoses to consider as well.

The decision was made to send this patient to a nearby emergency department. An ambulance arrives to transfer the patient. The whole visit took 15 minutes. How do we bill for this? This would be a level 5 visit, and here’s why:

As you see on the Medical Decision-Making Chart, an acute illness that poses a threat to life is of high complexity. Since the management has a high risk of morbidity and mortality, you should code appropriately as level 5. The clinician must document the risks factors and differential diagnoses in their MDM to justify the complexity. They can also document the likelihood of hospitalization to explain their decision further.

**Table 2 – CPT E/M Office Revisions
Level of Medical Decision Making (MDM)**

Revisions effective January 1, 2021:

Note: this content will not be included in the CPT 2020 code set release



Code	Level of MDM (Based on 2 out of 3 Elements of MDM)	Number and Complexity of Problems Addressed	Elements of Medical Decision Making		Risk of Complications and/or Morbidity or Mortality of Patient Management
			Amount and/or Complexity of Data to be Reviewed and Analyzed	*Each unique test, order, or document contributes to the combination of 2 or combination of 3 in Category 1 below.	
99211	N/A	N/A	N/A	N/A	N/A
99202 99212	Straightforward 99212	Minimal • 1 self-limited or minor problem	Minimal or none	Minimal or none	Minimal risk of morbidity from additional diagnostic testing or treatment
99203 99213	Low 99213	Low • 2 or more self-limited or minor problems; or • 1 stable chronic illness; or • 1 acute, uncomplicated illness or injury	Limited (Must meet the requirements of at least 1 of the 2 categories) Category 1: Tests and documents • Any combination of 2 from the following: • Review of prior external note(s) from each unique source*; • review of the result(s) of each unique test*; • ordering of each unique test* or Category 2: Assessment requiring an independent historian(s) (for the categories of independent interpretation of tests and discussion of management or test interpretation, see moderate or high)	Limited (Must meet the requirements of at least 1 of the 2 categories) Category 1: Tests, documents, or independent historian(s) • Any combination of 2 from the following: • Review of prior external note(s) from each unique source*; • review of the result(s) of each unique test*; • Ordering of each unique test*; • Assessment requiring an independent historian(s) or Category 2: Independent interpretation of tests • Independent interpretation of a test performed by another physician/other qualified health care professional (not separately reported); or Category 3: Discussion of management or test interpretation • Discussion of management or test interpretation with external physician/other qualified health care professional/appropriate source (not separately reported)	Low risk of morbidity from additional diagnostic testing or treatment
99204 99214	Moderate 99214	Moderate • 1 or more chronic illnesses with exacerbation, progression, or side effects of treatment; or • 2 or more stable chronic illnesses; or • 1 undiagnosed new problem with uncertain prognosis; or • 1 acute illness with systemic symptoms; or • 1 acute complicated injury	Moderate (Must meet the requirements of at least 1 out of 3 categories) Category 1: Tests, documents, or independent historian(s) • Any combination of 3 from the following: • Review of prior external note(s) from each unique source*; • Review of the result(s) of each unique test*; • Ordering of each unique test*; • Assessment requiring an independent historian(s) or Category 2: Independent interpretation of tests • Independent interpretation of a test performed by another physician/other qualified health care professional (not separately reported); or Category 3: Discussion of management or test interpretation • Discussion of management or test interpretation with external physician/other qualified health care professional/appropriate source (not separately reported)	Moderate (Must meet the requirements of at least 1 out of 3 categories) Category 1: Tests, documents, or independent historian(s) • Any combination of 3 from the following: • Review of prior external note(s) from each unique source*; • Review of the result(s) of each unique test*; • Ordering of each unique test*; • Assessment requiring an independent historian(s) or Category 2: Independent interpretation of tests • Independent interpretation of a test performed by another physician/other qualified health care professional (not separately reported); or Category 3: Discussion of management or test interpretation • Discussion of management or test interpretation with external physician/other qualified health care professional/appropriate source (not separately reported)	Moderate risk of morbidity from additional diagnostic testing or treatment Examples only: • Prescription drug management • Decision regarding minor surgery with identified patient or procedure risk factors • Decision regarding elective major surgery without identified patient or procedure risk factors • Diagnosis or treatment significantly limited by social determinants of health
99205 99215	High 99215	High • 1 or more chronic illnesses with severe exacerbation, progression, or side effects of treatment; or • 1 acute or chronic illness or injury that poses a threat to life or bodily function	Extensive (Must meet the requirements of at least 2 out of 3 categories) Category 1: Tests, documents, or independent historian(s) • Any combination of 3 from the following: • Review of prior external note(s) from each unique source*; • Review of the result(s) of each unique test*; • Ordering of each unique test*; • Assessment requiring an independent historian(s) or Category 2: Independent interpretation of tests • Independent interpretation of a test performed by another physician/other qualified health care professional (not separately reported); or Category 3: Discussion of management or test interpretation • Discussion of management or test interpretation with external physician/other qualified health care professional/appropriate source (not separately reported)	Extensive (Must meet the requirements of at least 2 out of 3 categories) Category 1: Tests, documents, or independent historian(s) • Any combination of 3 from the following: • Review of prior external note(s) from each unique source*; • Review of the result(s) of each unique test*; • Ordering of each unique test*; • Assessment requiring an independent historian(s) or Category 2: Independent interpretation of tests • Independent interpretation of a test performed by another physician/other qualified health care professional (not separately reported); or Category 3: Discussion of management or test interpretation • Discussion of management or test interpretation with external physician/other qualified health care professional/appropriate source (not separately reported)	High risk of morbidity from additional diagnostic testing or treatment Examples only: • Drug therapy requiring intensive monitoring for toxicity • Decision regarding elective major surgery with identified patient or procedure risk factors • Decision regarding emergency major surgery • Decision regarding hospitalization • Decision not to resuscitate or to de-escalate care because of poor prognosis

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Here’s an example of how the above scenario should be reflected in the MDM section of your documentation: “Patient is a 65 y/o male with chest pain who has multiple risk factors for cardiac disease, including advanced age, hypertension, hyperlipidemia and obesity. Although the ECG did not show any acute findings based on my interpretation, the risks remain high and the patient will need a further hospital-based workup. My working diagnosis is Acute Coronary Syndrome. Patient was sent to the ER by ambulance given the life-threatening nature of the differential.” You should provide a differential list here.

Not all transfers to the emergency room are considered level 5 cases. Sometimes in Urgent Care, we are obligated to send patients to the ER for resources we lack. This can include urgent specialist evaluation, advanced imaging, prolonged patient monitoring and STAT laboratory results.

Here’s another scenario: A 26-year-old female presents to the office with abdominal pain. The patient endorses several episodes of vomiting and watery, non-bloody diarrhea, which began 5 hours before her arrival. The vital signs are unremarkable. The patient’s exam reveals diffuse abdominal tenderness, but it is greatest in the right lower quadrant. The patient’s urinalysis and urine pregnancy test are both negative. While your suspicion is high for a viral cause, you decide to send the patient to the emergency room for further diagnostic testing.

A diagnosis of “Right lower quadrant abdominal pain” is added as the primary assessment, which justifies the moderately complex term “undiagnosed problem with uncertain prognosis”. This is a moderate level 4 problem type. The management is considered moderate risk with an urgent referral to the emergency room for workup, but there is no current threat to life or bodily function. This visit would be a level 4. Remember, any undiagnosed problem should have a differential diagnosis listed in the MDM section of the chart to explain the increased risk.

While clinical judgement in the above examples will vary, your expert documentation must explain the treatment plan you felt was best and any risk concerns you had for your patient.

Clinicians who work in the Urgent Care setting have a special set of skills that allow them to recognize high risk patients in a fast-paced environment. You deserve to get credit for these skills and the knowledge you worked tirelessly to obtain.

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<https://www.ama-assn.org/system/files/2019-06/cpt-office-prolonged-svs-code-changes.pdf>

Recognizing and Managing Conjunctivitis-Otitis Syndrome in the Urgent Care Setting

By Alicia V. Tezel, MD from Little Spurs Pediatric Urgent Care

Conjunctivitis-otitis syndrome refers to the simultaneous occurrence of purulent conjunctivitis and acute otitis media. This is a common pediatric condition seen in Urgent Care centers. This article reviews the etiology, clinical features and management of this condition with a focus on actionable guidance for general Urgent Care settings.

Introduction

Urgent Care clinicians frequently encounter pediatric patients with either acute otitis media (AOM) or conjunctivitis. Less frequently, the two appear together in a well-described but under-recognized condition known as *conjunctivitis-otitis syndrome*. Awareness of this syndrome is critical to ensure appropriate diagnosis and treatment, especially since management differs from isolated eye or ear infections

The role of *Haemophilus influenzae* in acute otitis media (AOM) and purulent conjunctivitis was first recognized by Coffey nearly 40 years ago. Some years later, Bodor coined the term “conjunctivitis-otitis syndrome” and reported that *H. influenzae* was present in the conjunctival exudate in approximately 80% of cases.¹

Epidemiology and Etiology

The antecedent event in almost all cases of acute otitis media is a symptomatic viral upper respiratory tract infection. Approximately one-third of viral upper respiratory tract infections are complicated by acute otitis media. The median time between the onset of an upper respiratory infection and the development of acute otitis media is approximately four days. Viral infection inflames the mucosa of the upper respiratory tract, including the nasopharynx and eustachian tube. Eustachian tube dysfunction impairs the drainage of fluid from the middle ear and leads to nasopharyngeal aspiration of pathogens.²

The most common etiologies of acute otitis media include *Streptococcus pneumoniae*, *Haemophilus influenzae* and *Moraxella catarrhalis*. These are also the predominant pathogens of bacterial conjunctivitis in children.

Since the introduction of the pneumococcal and *H. influenzae* type b vaccines, the nasopharyngeal colonization rate of non-typeable *H. influenzae* (NTHi) has been increasing.

¹ Bingen, Edouard PhD*; Cohen, Robert MD†‡; Jourenkova, Nadejda MD§; Gehanno, Pierre MD||. EPIDEMIOLOGIC STUDY OF CONJUNCTIVITIS-OTITIS SYNDROME. The Pediatric Infectious Disease Journal 24(8):p 731-732, August 2005. | DOI: 10.1097/01.inf.0000172939.13159.3b

² Shaikh N. Otitis media in young children. *New England Journal of Medicine*. 2025;392(14):1418-1426. doi:10.1056/nejmcp2400531

NTHi is a beta-lactamase–producing organism capable of infecting both the upper respiratory tract and the conjunctival epithelium.³

Clinical Presentation

Typical signs and symptoms include:

- **Conjunctivitis:** Purulent eye discharge, conjunctival injection, often bilateral
- **Otitis media:** Ear pain, irritability, possible fever, and middle ear effusion or tympanic membrane inflammation

Importantly, patients may not report symptoms from both sites. Eye complaints might prompt the visit, while the ear infection is discovered on examination—or vice versa. A thorough physical exam is essential.

Diagnosis

Diagnosis is clinical. No specialized testing is required in uncomplicated cases. Clinicians should maintain a high index of suspicion when a child presents with either conjunctivitis or otitis alone, particularly in the presence of bilateral purulent conjunctivitis.

Accurate diagnosis of AOM in infants and young children may be difficult. Symptoms may be mild or overlap with those of an upper respiratory tract illness. The tympanic membrane (TM) may be obscured by cerumen, and subtle changes in the TM may be difficult to discern. Ear pain is useful in diagnosing AOM, but **clinicians should diagnose AOM only when children present with moderate to severe bulging of the TM or new onset of otorrhea not due to acute otitis externa. Isolated redness of the TM without bulging is not sufficient for diagnosis**

Otitis media with effusion (OME) is the presence of middle-ear fluid that may occur either as the aftermath of an episode of AOM or due to eustachian tube dysfunction from an upper respiratory tract infection. OME may also precede and predispose to the development of AOM. These two forms of OM may be considered segments of a disease continuum. However, because OME does not represent an acute infectious process that requires antibiotics, it is critical for clinicians to become proficient in distinguishing normal middle ear status from OME or AOM. This will prevent unnecessary antibiotic use, which increases the risk of adverse effects and antimicrobial resistance.⁴

³ Hu YL, Lee PI, Hsueh PR, Lu CY, Chang LY, Huang LM, Chang TH, Chen JM. Predominant role of Haemophilus influenzae in the association of conjunctivitis, acute otitis media and acute bacterial paranasal sinusitis in children. *Sci Rep.* 2021 Jan 8;11(1):11. doi: 10.1038/s41598-020-79680-6. PMID: 33420151; PMCID: PMC7794412.

⁴ Lieberthal AS, Carroll AE, Chonmaitree T, et al. The diagnosis and management of Acute Otitis media. *PEDIATRICS.* 2013;131(3):e964-e999. doi:10.1542/peds.2012-3488

Treatment

Treatment differs from isolated conjunctivitis or otitis media:

- **Systemic antibiotics** are preferred to treat both infections simultaneously.
- Given the likelihood of resistant organisms, narrow-spectrum antibiotics like amoxicillin alone may be insufficient as NTHi produces beta lactamase which renders it inactive
- First-line therapy is **Amoxicillin-Clavulanate**, 90 mg/kg/day of the amoxicillin component, divided BID. Amoxicillin 600mg/Clavulanate 42.9mg per 5 ml is the preferred choice. The Clavulanate acts as an irreversible inhibitor of many beta-lactamases therefore restoring the antibacterial activity of amoxicillin against beta-lactamase producing organisms.⁵
- Remind parents to give this with food to reduce the risk of diarrhea.
- Alternative: **Cefdinir** or **cefuroxime** in penicillin-allergic patients (non-anaphylactic)

Topical ophthalmic antibiotics (e.g., polymyxin-trimethoprim drops) **are not necessary** if systemic antibiotics are used and are typically avoided unless eye symptoms persist beyond 48 hours.

Disposition and Follow-Up

Most patients can be safely discharged with reassurance and close outpatient follow-up. Red flags warranting referral include:

- Orbital cellulitis
- Intractable ear pain or vomiting
- Immunocompromise state
- Failure to improve within 48–72 hours

Educate caregivers on the expected clinical course: improvement in 24–48 hours, with full resolution over 5–7 days.

Conclusion

Conjunctivitis-otitis syndrome represents a distinct clinical entity requiring tailored management. Urgent Care clinicians can confidently identify and treat this syndrome with a thoughtful exam and targeted antibiotic therapy. Routine eye drops are not required, and recognition of NTHi as the primary culprit should guide treatment decisions. An efficient, informed approach improves outcomes and reduces unnecessary prescriptions or referrals

⁵ Geddes AM, Klugman KP, Rolinson GN. Introduction: historical perspective and development of amoxicillin/clavulanate. *Int J Antimicrob Agents*. 2007 Dec;30 Suppl 2:S109-12. doi: 10.1016/j.ijantimicag.2007.07.015. Epub 2007 Sep 27. PMID: 17900874.

Image Challenge: EKG Abnormality After Syncope

By Tracey Q. Davidoff, MD, FCUCM

A 23 y/o male presents to the Urgent Care following a syncopal episode at work. He has no significant past medical history. His vital signs are normal. You get the following EKG:



Figure 1.

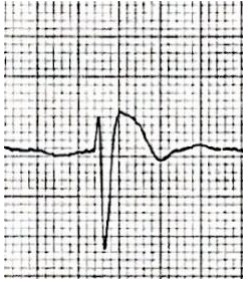
Should you be worried?

Yes! This EKG pattern is classic for Brugada syndrome. **Brugada syndrome** is an inherited cardiac channelopathy characterized by a distinctive electrocardiographic pattern—**covered ST-segment elevation ≥ 2 mm in at least one of the right precordial leads (V1–V2)** (red arrow), often accompanied by a negative T wave, in the absence of structural heart disease. This ECG pattern may present spontaneously or be unmasked by sodium channel–blocking drugs or fever. The syndrome is associated with an increased risk of ventricular fibrillation and sudden cardiac death, particularly in young to middle-aged males, though it can occur at any age. Clinical presentation ranges from asymptomatic to syncope, nocturnal agonal respiration or aborted sudden cardiac arrest. The American College of Cardiology, the American Heart Association, and the Heart Rhythm Society define Brugada syndrome by these clinical and ECG features and recommend risk stratification and consideration of implantable cardioverter-defibrillator (ICD) therapy in patients with a history of syncope or cardiac arrest due to ventricular arrhythmia, as these individuals are at highest risk for life-threatening events.

When **ECG changes consistent with Brugada syndrome are identified in a patient presenting with syncope**, the patient should be considered at high risk for ventricular arrhythmias and sudden cardiac death. The most important next step is urgent referral to an emergency department or facility with cardiac monitoring and electrophysiology consultation, as these patients may require inpatient monitoring and expedited evaluation for implantable cardioverter-defibrillator (ICD) therapy if the syncope is suspected to be arrhythmic in origin. Ideally EMS should be called, and the patient should not be allowed to drive.

Immediate stabilization, avoidance of fever, as fever can precipitate arrhythmias in Brugada syndrome, and prompt cardiology involvement is advised.

Remember this pattern in V2, if you see it, it is BRUGADA until proven otherwise!



As a side note, remember the EKG machine software is not always correct, and may miss this and other findings. In this instance, the machine reading interpreted this as an acute anterior wall MI. **Always** look at the EKG yourself, and do not rely on machine readings. If there is a discrepancy, phone a friend!

Shen WK, Sheldon RS, Benditt DG, et al. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Journal of the American College of Cardiology*. 2017;70(5):e39-e110. doi:10.1016/j.jacc.2017.03.003.

Why It Matters to Ask: Identifying Risk Factors for Pregnant and Postpartum Patients in Urgent Care

In conjunction with the American College of Obstetricians and Gynecologists

By Martha Williams, PA-C, UCA/CUCM

It's the first week of January, and respiratory illness season is in full swing, swamping the Urgent Care centers with the post-holiday surge. A 38-year-old female walks into the local Urgent Care complaining of cough and shortness of breath. Triage notes that she had symptoms for the last week that are worsening despite the use of meds. Vitals are all within normal limits except for SpO₂ of 94%. The patient is not flagged as emergent. A focused history is obtained by the attending clinician with one key question omitted: has she been pregnant in the last year?

In 2023 the pregnancy-related mortality ratio in the US was 18.7/100,000 live births, which is thankfully improved from the previous modern-day high in 2021 of 33.2. But to put this into perspective, in 1987 that same ratio was 7.2. (CDC, 2025). Why has there been such a stark upward trend despite the advancements in medicine? A current working hypothesis is that there is a lack of recognition of risks that are specific to the pregnant and postpartum population. Within the Urgent Care (UC) realm, there is an inherent duty to recognize those risks since many patients use the UC system as their first step in healthcare.

Some of the leading causes of pregnancy-related deaths include hemorrhage (18.1%), infection/sepsis (15.2%), embolic conditions (11.5%), cardiomyopathy (10.2%), and hypertensive disorders (6.4%), (CDC, 2024), and when comparing racial and ethnic groups, death rates were high in non-Hispanic Black and American Indian/Alaska Natives. In UC settings, early recognition of these conditions is possible and potentially life saving. The American College of Obstetricians and Gynecologists (ACOG) specifically recommends that UC clinicians pay extra attention to the symptoms of shortness of breath, headache, chest pain and edema in this population group and noted that the postpartum period is 12 months long (ACOG, 2024). Common misconceptions in medical education that persists in recognizing that the postpartum period is as short as 6-12 weeks. And many UC clinicians and staff would say that those listed presenting symptoms are quite common in UC clinics around the country. It has been taught to ask about pregnancy, and sometimes breastfeeding, but rarely is it asked if someone has been pregnant in the previous year. It is for these very reasons that the College of Urgent Care Medicine has been working with ACOG to develop a set of algorithms and guidelines to help shift training to include recognizing these risks for pregnant and postpartum patients.

The Identifying and Managing Obstetric Emergencies in Non-obstetric Settings (ACOG, 2025) initiative has included experts from emergency medicine, emergency medical services and UC medicine along with the Centers for Disease Control and Prevention in response to the increase in the pregnancy-related mortality rates, which in 2021 was ten times that of other high income, industrialized countries like Australia, Spain and Japan (ACOG 2024). Two algorithms and two guidelines were created for

Urgent Care medicine: Cardiovascular Disease in Pregnancy and Postpartum Algorithm, Acute Hypertension in Pregnancy and Postpartum Algorithm, Postpartum Hemorrhage Guideline, and Elevated BP in Pregnancy and Up to 6 Weeks Postpartum Guideline. It is also recommended to consider adding signage to clinics and EMR alerts to ask if patients have been pregnant in the preceding 12 months.

Looking back at the initial presentation of the 38-year-old. Would it matter to have asked if she had been pregnant within the last year? For the average young adult woman, cardiomyopathy risk is generally low and often not in the differential; however, if this patient had been asked and she responded in the affirmative, an immediate need for a whole new set of history questions would be triggered as well as the importance of an emergent referral.

The time to recognize UC medicine and clinics as a key prevention tool in pregnancy-related mortality is now. While it is understood that the pregnancy and postpartum condition will be treated outside of Urgent Care, it is the responsibility of UC clinicians to appropriately identify the potential risks and manage patients in the center in addition to referring the appropriate level of care. Working with local OB/GYN offices and hospitals in advance to create a triage plan can help when time is of the essence during an urgent or emergent case. Together, Urgent Care clinicians can save the lives of pregnant and postpartum patients with an awareness of these specific risk factors, while impacting a reduction in the pregnancy-related mortality rate in the U.S.

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Tick Borne Illness Season – A Few Questions About Lyme Disease

By Cesar Mora Jaramillo, MD, FAAFP, FCUCM

Could that summer rash actually be Lyme disease? As tick activity increases, it's essential to recognize that certain skin lesions may represent more than just a rash—they could be the first sign of Lyme disease.

Let's discuss a brief case and learn more about Lyme Disease!

Case: A 45-year-old woman presents to Urgent Care in Rhode Island 48 hours after removing a tick. She noticed a tick while taking a shower. She describes the tick as being engorged but she thinks it might have been attached for less than 24 hours, although she is unsure. She has difficulty describing the tick but after showing her pictures she thinks it might have been a deer tick.

No significant past medical history. No current medications. She denies symptoms in the past.



She denies fatigue, fever, headache, joint pain or neurologic symptoms, but reports a slowly enlarging erythematous patch on her periumbilical area where the tick was attached. The rash is not painful or itchy.

On exam, vital signs are within normal limits. You notice an oval shaped erythematous patch with questionable central clearing of 4-5cm. Otherwise the rest of the exam is unremarkable.

What is the diagnosis?

- A. Early localized disease
- B. Early disseminated disease
- C. Late disease
- D. Tick Bite Hypersensitivity

How about if you find multiple lesions?

- A. Early localized disease
- B. Early disseminated disease
- C. Late disease
- D. Tick Bite Hypersensitivity
- E. Multiple tick bites

Based on your diagnosis - What is the best next step?

- A. Order serologic testing to confirm Lyme disease at this stage
- B. Prescribe treatment for Lyme
- C. Prescribe Lyme prophylaxis
- D. A + B
- E. A + C

DISCUSSION

You diagnosed the patient with Erythema Migrans - Early Lyme disease.

Erythema Migrans (EM)

- Early localized phase of Lyme disease may present with an Erythema Migrans rash and low-grade fever. This stage usually occurs within 1 to 28 days following the tick bite.
- EM occurs in approximately 70-80 percent of patients.
- The lesion is typically a single, erythematous, nonpainful, round or oval patch that expands slowly over days to weeks if untreated.
- The majority is uniformly erythematous although central clearing may occur.
- Patients in the early localized stage can also have nonspecific findings similar to a viral syndrome (fatigue, headache, myalgia, arthralgia).
- Single EM lesions may be confused with tick bite hypersensitivity reaction.
- A small redness at the site of a tick bite that occurs immediately and resembles a mosquito bite, is common. This irritation generally goes away in 1-2 days and is not a sign of Lyme disease.
- EM is the primary manifestation of early Lyme disease also called early localized disease. Although some patients who present with early localized disease probably have some degree of dissemination.
- Multiple EM lesions are a sign of early disseminated disease, not multiple tick bites.

- All patients with EM should be treated for Lyme disease. The goal of therapy is to shorten the duration of the signs and symptoms of early disease and to prevent progression to later stages of Lyme disease.
- For nonpregnant patients the recommended treatment is 10-day course of doxycycline rather than one of the other oral agents. Doxycycline has activity against other tick-borne illnesses.
- The American Academy of Pediatrics supports the use of doxycycline for children <8 years of age if it is administered for ≤ 21 days.
- Second line therapy includes a 14-day course of amoxicillin or cefuroxime.

How about testing?

- Serologic testing is not required in early disease.
- EM lesions often appear prior to development of an immune response, and patients are often seronegative.
- Serologic testing after treatment in early disease is not indicated – patients may not develop antibody response; hence they will have negative titers.
- Serologic testing can be considered if the cause of the skin lesion is in doubt, and empiric antimicrobial therapy is not administered. Testing could be obtained at the time of presentation and repeated in 2 to 3 weeks if negative.
- Monitoring the rash over several days could be considered if in doubt. EM usually expands within 2-3 days if antibiotics are not initiated.

What is the criteria for Lyme prophylaxis?

IDSA/AAN/ACR guidelines recommend prophylactic antibiotic therapy to adults and children within 72 hours of removal of an identified high-risk tick bite.

To be considered high risk, a tick bite must meet all of the following 3 criteria:

- The tick bite was from an identified Ixodes spp. vector species.
- The tick bite occurred in a highly endemic area.
- The tick was attached for ≥ 36 hours.

If a tick bite cannot be classified with a high level of certainty as a high-risk bite, the guidelines recommend a wait-and-watch approach.

Antibiotic prophylaxis is not recommended for bites that are equivocal risk or low risk.

The recommended regimen for prophylaxis is a single oral dose of doxycycline, 200 mg for adults and 4.4 mg/kg (up to a maximum dose of 200 mg) for children.

Conclusion

This case emphasizes the importance of recognizing Lyme disease early in Urgent Care settings. It is important to notice that for a tick to be engorged, it must have been attached for at least 36-48 hours. Prompt identification of Erythema Migrans and timely initiation of appropriate antibiotic therapy can significantly reduce the risk of complications and long-term sequelae. For clinicians in Urgent Care, maintaining a high level of suspicion is crucial for ensuring accurate diagnosis and effective management of early Lyme disease.

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Antibiotic Stewardship in the Urgent Care Setting- A Measure of Clinical Impact

This poster was displayed at the 2025 Urgent Care Convention in Dallas, TX.

Background

Infectious conditions are among the most common types of diagnoses managed in the Urgent Care setting. Several resources indicate that a higher volume of antibiotic prescriptions and inappropriate antibiotic prescribing were associated with Urgent Care center visits than any other practice setting. Antibiotic Stewardship requires a multi-layered effort which includes not only avoiding unnecessary use or overuse but also avoiding antibiotic misuse, such as wrong antibiotic selection, wrong dose, or wrong duration of therapy. To combat inappropriate antibiotic prescribing in hospitals, hospitals have incorporated Antibiotic Stewardship Programs as a standard practice, but these programs are not a common practice in the Urgent Care industry, thereby presenting an industry gap. The incorporation of Quality Improvement Programs into Urgent Care organizations to focus on projects like antibiotic stewardship would certainly serve as an advancement for Urgent Care medicine as a specialty.

Statistical Methods

To compare the compliance rates in patients before and after the stewardship intervention, a chi-square test of independence was performed. In addition to reporting the counts and percentages for the 2 time periods (pre and post intervention implementation), the odds ratio was also computed to determine the magnitude of change following the intervention. Secondary analyses were performed examining changes at the clinic and provider levels. Wilcoxon signed-rank tests were used to test for changes across time for clinics and providers. Descriptive statistics, including medians, inter-quartile ranges and minimums and maximums, are utilized to describe the compliance rates pre-intervention and post-intervention, as well as the observed changes for clinics and providers. All analyses were performed using R Statistical Software (R version 4.4.2, R: A Language and Environment for Statistical Computing, R Core Team 2024 and RStudio 2024.09.1 Build 394, Post Software, PBC).

Results

Clinic-level:
During the pre-intervention period, a total of 82 clinics were included. The number of cases within clinics ranged from 10 to 376. For the pre-intervention time period, compliance rates ranged from 0% to 83.2%, with median=17.7% (IQR=6.2% - 34.6%). During the post-intervention period, there were a total of 84 clinics (2 new clinics in addition to the 82 from the pre-intervention phase). This clinic-level analysis only includes the 82 clinics appearing in both time periods. During the post-intervention period, the compliance rates for these clinics ranged from 10.3% to 87.9%, with median=57.1% (IQR=46.4% - 67.0%).

Clinic changes in compliance ranged from -16.2% to +70.3%. Only 2 clinics exhibited a decrease in compliance, these 2 had the highest compliance in the pre-intervention period (i.e., 83.2% & 70.1%). Each of the other 80 clinics displayed improved compliance. The median change was +35.5% (IQR=23.4% - 45.4%), z=7.83, p<0.0001.

Objectives

The objective of the project was to determine if an antibiotic stewardship project would result in a measurable clinical outcome, thereby suggesting that Quality Improvement Programs addressing antibiotic stewardship be considered common practice in the Urgent Care setting.

Results

Patient-level:
During the pre-intervention period, 3221 cases out of a total 15372 (21.0%) were compliant with the established guidelines, while for the post-intervention period 9033 (56.6%) cases of 15969 were compliant, X²=4170.0, p<0.001. The odds of compliance were 4.9 times greater following the implementation of the intervention (OR=4.913 (95% CI 4.674 - 5.164)).

This project not only poses the question of high relevance for Urgent Care medicine, "Should Quality Improvement Programs that address antibiotic stewardship be common practice in the Urgent Care industry" but also aims to provide public education and awareness to antibiotic resistance which is among the greatest public health threats today per the Centers for Disease Control and Prevention.

In terms of a secondary endpoint, the patients whose treatment was compliant with IDSA guidelines 724/12294 (5.9%) subsequently received a second antibiotic. For those noncompliant, 1005/19087 (5.3%) subsequently received a second antibiotic. This metric called into question the impact that initial prescribing of a broad-spectrum antibiotic (rather than a recommended narrow-spectrum antibiotic) had on the patient's subsequent receiving a second antibiotic.

Provider-level:
In order to obtain more reliable measures of compliance, only providers having 10 or more cases in each of the 2 time periods were used in examining provider changes over time. During the pre-intervention period, 264 (74.4%) of the total 355 providers had 10 or more cases. Similarly, during the post-intervention period, 273 (78.7%) of a total of 347 providers had 10 or more cases. A total of 171 providers who had 10 or more cases in both periods were used for the provider-level comparison of changes over time. The number of cases for each provider ranged from 10 to 172 during the pre-intervention period and from 10 to 161 during the intervention phase. For the pre-intervention period, compliance rates ranged from 0% to 94.0%, with median=1.7% (IQR=0.0% - 39.7%). During the post-intervention period, the compliance rates for these providers ranged from 0% to 93.8%, with median=56.2% (IQR=35.4% - 73.0%).

Provider changes in compliance ranged from -59.0% to +91.7%. Note, 16 (9.4%) providers experienced declines in compliance, 14 (8.2%) exhibited no change in compliance (all had compliance rates of 0.0 pre & post), while the other 141 (82.4%) displayed improved compliance. The median change was +52.6% (IQR=40.0% - 51.1%), z=10.12, p<0.0001.

Box Plot - a visual representation of a data set's distribution
1st quartile (Q1, bottom line of box) = 25th percentile (value below which 25% of data points fall when data is arranged in increasing order)
2nd quartile (Q2, middle line in box) = median of a data set (50% of data lies below this point)
3rd quartile (Q3, top line of box) = 75th percentile (75% of data falls below 3rd quartile)
Whiskers = min and max
Dot = outliers
Interquartile Range (IQR) = representing the spread of the middle 50% of data

Pre-intervention period:
• Compliance rates ranged from 0% to 83.2%.
• Median (middle line of box) = 17.7%.
• Mean (x) = 22%.
• 1st quartile (bottom line of box) = 6.2%.
• 3rd quartile (top line of box) = 34.6%.
• Minimum = 0%.
• Maximum = 70%.
• Outlier = 83.2% compliance

Post-intervention period:
• Compliance rates ranged from 10.3% to 87.9%.
• Median (middle line of box) = 57.1%.
• Mean (x) = 56.5%.
• 1st quartile (bottom line of box) = 46.4%.
• 3rd quartile (top line of box) = 67%.
• Minimum = 25.5%.
• Maximum = 87.9%.
• Outlier = 10.3% compliance

Methods

In keeping with any institutional Antibiotic Stewardship Program, American Family Care identified a physician and pharmacist champion for the project. We also ensured these clinical leaders were provided with sufficient time and resources to devote to stewardship to demonstrate commitment to optimizing antibiotic prescribing. The project incorporated several of the CDC's Core Elements of Outpatient Stewardship to include both provider and patient facing education surrounding antibiotic stewardship, as well as any quality improvement project, assessment, intervention, tracking, and reporting were essential to improving antibiotic prescribing practices. Data was electronically extracted from the electronic health record (EHR) and included patient reported demographics, past medical history, clinician specialty (MD, DO, NP, PA), International Classification of Diseases Tenth Revision (ICD-10 codes), and the antibiotics prescribed. This data was collected through retrospective chart review and evaluated for the following measures: frequency in which treatment for acute, uncomplicated, urinary tract infection treatment was concordant with IDSA guidelines and frequency in which the patient had to be prescribed a second antibiotic. Baseline data was collected for a 6-month timeframe. We then introduced several interventions to include poster sized cognitive aids detailing evidence-based guideline recommended therapy, a learning management system course reviewing diagnosis and treatment of uncomplicated urinary tract infections, and patient education to provide public awareness of the dangers of antibiotic overuse. During the 6-month timeframe in which interventions were in place, we tracked and reported frequency in which UTI treatment was concordant with IDSA guidelines on an individual clinician level. Essentially clinicians were able to see their percentage of UTI treatments prescribed that were IDSA compliant and compare that percentage with that of their peers. We then reviewed 6 months of data with interventions in place, again via retrospective chart review looking at the same measures as before the implementation of interventions. Evaluation of measurable outcomes entailed the comparison of baseline data to post intervention data to determine the clinical impact of the antibiotic stewardship project. The specific outcomes that were evaluated were the rate at which treatment was concordant with IDSA guidelines and the frequency at which the patient had to be prescribed a second antibiotic.

Results

Patient-level:
During the pre-intervention period, 3221 cases out of a total 15372 (21.0%) were compliant with the established guidelines, while for the post-intervention period 9033 (56.6%) cases of 15969 were compliant, X²=4170.0, p<0.001. The odds of compliance were 4.9 times greater following the implementation of the intervention (OR=4.913 (95% CI 4.674 - 5.164)).

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Provider-level:
In order to obtain more reliable measures of compliance, only providers having 10 or more cases in each of the 2 time periods were used in examining provider changes over time. During the pre-intervention period, 264 (74.4%) of the total 355 providers had 10 or more cases. Similarly, during the post-intervention period, 273 (78.7%) of a total of 347 providers had 10 or more cases. A total of 171 providers who had 10 or more cases in both periods were used for the provider-level comparison of changes over time. The number of cases for each provider ranged from 10 to 172 during the pre-intervention period and from 10 to 161 during the intervention phase. For the pre-intervention period, compliance rates ranged from 0% to 94.0%, with median=1.7% (IQR=0.0% - 39.7%). During the post-intervention period, the compliance rates for these providers ranged from 0% to 93.8%, with median=56.2% (IQR=35.4% - 73.0%).

Provider changes in compliance ranged from -59.0% to +91.7%. Note, 16 (9.4%) providers experienced declines in compliance, 14 (8.2%) exhibited no change in compliance (all had compliance rates of 0.0 pre & post), while the other 141 (82.4%) displayed improved compliance. The median change was +52.6% (IQR=40.0% - 51.1%), z=10.12, p<0.0001.

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3rd quartile (Q3, top line of box) = 75th percentile (75% of data falls below 3rd quartile)
Whiskers = min and max
Dot = outliers
Interquartile Range (IQR) = representing the spread of the middle 50% of data

Pre-intervention period:
• Compliance rates ranged from 0% to 94%.
• Median (middle line of box) = 1.7%.
• Mean (x) = 19.8%.
• 1st quartile (bottom line of box) = 0.0%.
• 3rd quartile (top line of box) = 39.7%.
• Minimum = 0%.
• Maximum = 94%.

Post-intervention period:
• Compliance rates ranged from 0% to 93.8%.
• Median (middle line of box) = 56.2%.
• Mean (x) = 51.4%.
• 1st quartile (bottom line of box) = 35.4%.
• 3rd quartile (top line of box) = 73.0%.
• Minimum = 0%.
• Maximum = 93.8%.

Patient and Provider Characteristics for UTI Antibiotic Stewardship Project

Baseline characteristics.

A total of 31,341 patients were included in the study, 15,372 patients for the pre-intervention phase and 15,969 patients for the post-intervention phase. Patient and provider characteristics were similar at baseline.

Inclusion Criteria:

- Female patients between the ages of 18 and 74
- Diagnosis of acute cystitis or urinary tract infection

Exclusion Criteria:

- Females <18 years of age and >75 years of age
- Pregnant and breastfeeding females
- Males
- Diagnosis of complicated UTI or pyelonephritis
- Secondary diagnosis requiring antimicrobial therapy
- Chronic Kidney Disease
- Immunocompromised
- Fever or chills indicating possible alternative diagnosis of pyelonephritis or complicated UTI

Variable	Pre-Intervention	Post-Intervention
Patient Characteristics		
• Mean Age	43.5	43.3
• % Without Medication Allergy	62.9%	61.6%
Provider Characteristics (%)		
• Physician provider	24.8%	17.9%
• Midlevel provider	75.2%	82.1%

The following barriers were anticipated, knowledge gaps regarding up-to-date IDSA clinical practice guidelines, clinician perception of patient expectations for antibiotics, and clinician concern regarding decreased patient satisfaction when antibiotics are not prescribed.

Conclusion

The incorporation of an antibiotic stewardship project involving several of the CDC's Core Elements of Outpatient Stewardship among other interventions was found to have a statistically significant measurable clinical outcome, thereby suggesting that Quality Improvement Programs addressing antibiotic stewardship be considered common practice in the Urgent Care setting. The incorporation and standardization of such Programs within the Urgent Care industry would certainly change the landscape of Urgent Care, and while they are customary within the hospital setting, one could argue that until these stewardship initiatives are incorporated into the Urgent Care industry the reach of the CDC's antibiotic stewardship endeavor will be minimal. The inclusion of Quality Improvement Programs addressing antibiotic stewardship would advance Urgent Care medicine, improving the care provided to our patients, and reducing antibiotic resistance across our community and across the country.

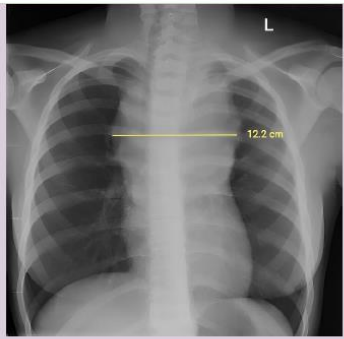
Acknowledgements

We would like to acknowledge the Urgent Care Foundation for providing the Grant that funded this Research as part of its 2024-2025 Research Grant Cycle.

Uncovering the Unexpected: A Case of Chronic Cough in an Adolescent with an Unusual Etiology

By Daniel Moscato, MS, PA-C, Joshua W. Russell, MD

This poster was displayed at the 2025 Urgent Care Convention in Dallas, TX.

<p>Introduction</p> <p>Cough is an exceedingly common pediatric chief complaint in urgent care (UC) settings and is most often attributable to an infectious cause. However, clinicians must refine and alter their differential diagnoses when the cough persists to ensure serious etiologies are diagnosed in a timely fashion.</p>	<p>Diagnosis and Resolution</p>  <p>Due to the refractory and chronic nature of her cough, a chest x-ray (CXR) was obtained which revealed a mediastinal mass. The patient was referred to the emergency department (ED) for further specialist evaluation and management. She subsequently had a biopsy as an inpatient, which confirmed a diagnosis of Hodgkin lymphoma (HL).</p>	<p>Conclusion/Takeaway Points</p> <ul style="list-style-type: none"> Cough is a common presenting chief complaint in the pediatric population, especially during the winter season. However, it is important to expand the differential diagnosis in patients with cough lasting longer than 4 weeks without improvement. The differential diagnosis for patients presenting to the UC setting with a chronic cough should be broadened to avoid delay in diagnosis of more severe, life-threatening pathologies, including Hodgkin lymphoma. When patients fail to follow the expected path of a provisional diagnosis and have multiple return visits, expanding the differential and work-up can mitigate the risk of serious diagnosis errors. Hodgkin lymphoma is one of the most common cancers in adolescents. It has excellent rates of cure with current therapies, particularly when diagnosed in early stages Clinicians practicing in UC settings must be cognizant of the possibility of falling subject to biases, such as premature closure.
<p>Presentation</p> <p>A 14-year-old girl presented to UC with cough for 6 weeks. She had multiple presentations to UC for these symptoms over prior weeks; a viral upper respiratory infection (URI) diagnosis was assigned at each preceding visit. Symptomatic therapies were recommended. She was prescribed a short course of systemic steroids, which resulted in mild and transient improvement.</p>		<p>References</p> <ol style="list-style-type: none"> 1. Potharaju R, Duvvuri R, Madala S, Potharaju S, Tapanan S. Duration of chronic cough in children with acute respiratory infection. <i>Asian Pac J Trop Biomed</i>. 2013;3(1):1-4. doi:10.1016/j.apjtb.2012.12.001 2. Pringle G, Meehan G, Lee A, De Papp M, Clancy C, Mangan M. Upper respiratory tract infection associated acute cough and the age to cough: New Zealand for Children. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 3. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 4. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 5. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 6. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 7. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 8. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 9. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001 10. Pringle G, Meehan G, Clancy C, Mangan M. Age to cough in children with acute respiratory infection. <i>Paediatr Respir Rev</i>. 2010;10(1):1-4. doi:10.1016/j.prr.2009.12.001
<p>Physical Examination</p> <p>The patient's vital signs were all normal and her physical examination was only remarkable for a persistent, dry cough. Auscultation of bilateral lungs revealed no adventitious lung sounds.</p>		

The HINTS Exam: Vertigo for People in a Hurry

By Sophie Waldman, PA-C

This poster was displayed at the 2025 Urgent Care Convention in Dallas, TX.

QUICK START GUIDE
(THIS SCREEN WILL NOT PRINT)

The HINTS exam is a quick, bedside exam that can be performed by a healthcare provider in a few minutes. It is a simple exam that can be performed by a healthcare provider in a few minutes. It is a simple exam that can be performed by a healthcare provider in a few minutes.

This is a template that is 36 inches tall by 48 inches wide.

Zoom In and **Zoom Out** to adjust the size of the text and images on the screen. You can also use the **Print** button to print the document.

Reset and Defaults to return the screen to its original settings.

Help and Support for more information on how to use the software.

Quality check your graphics to ensure that all images and text are clear and legible.

The HINTS Exam: Vertigo for People In a Hurry

Author: Sophie Waldman, PA-C
Northwell - GoHealth Urgent Care, Advised by Lyndsie Watkins, PA-C, FCUCM; Michael Kim, DO, FCUCM

Learning Objectives

- Learns how to perform and apply the HINTS exam
- Learns when to use the HINTS exam
- Learns the clinical significance of the HINTS exam
- Differentiates between different types of dizziness
- Define acute vestibular syndrome.

When to Use

Dizziness is generally subdivided into four categories: vertigo, disequilibrium, presyncope, and lightheadedness.⁽¹⁾ Briefly, vertigo can be described as "false sense of motion" or "spinning sensation," distinguishing it from the other causes of dizziness listed below. The HINTS exam is meant to be used for patients presenting with acutely onseted symptoms [1], also known as Acute Vestibular Syndrome (AVS) or Vestibular Neuronitis (ICD-10 Code H91.2). An abnormal test can raise clinical suspicion for a central vs. peripheral cause of a patient's vertigo, causing by the differentials listed below.

Category	Description	Percentage of patients with dizziness
Vertigo	False sense of motion, possibly spinning sensation	40 to 54
Disequilibrium	Off-balance or wobbly feeling or being uncoordinated or shaky on feet	Up to 16
Presyncope	Vegetan symptoms, possibly feeling lightheadedness	Approximately 10
Lightheadedness	Nonspinning dizziness	Approximately 10

Performing the Test

Head Impulse Test:

1. Hold the patient's head with both hands on either side and tilt the head slightly downward.
2. Encourage the patient to let their head relax in your hands to allow you to move back and forth and direct them to keep their eyes on your nose.
3. Quickly move the head a small amplitude from central to the left of the right and back to the center.
4. Randomly test left and right directions, as to test the patient predict the movement.

Syngnase:

1. Observe the patient's eyes at rest for any nystagmus and the direction of the nystagmus.
2. Ask the patient to gaze to the left and then to the right and observe for nystagmus.

Skew Deviation:

1. Have the patient sit in front of you and focus their gaze on your nose.
2. Cover one eye with your hand for a couple of seconds and then uncover the eye.
3. Observe for the eye drifting from a drift once the eye is uncovered or if the eye stays focused.

Head-Impulse Test

Interpretation

Interpretation of the HINTS exam:

Response	Peripheral/central	Central vertigo
Impulse response	Normal	Abnormal
Syngnase	Normal	Abnormal
Skew Deviation	Normal	Abnormal

Discussion

- In the setting of acute vestibular syndrome (AVS), if any of the tests are suggestive, central causes must be worked up empirically. [3]
- User competence can affect how you use the test. Do you feel confident that you performed the test accurately?
- Other tests to help determine peripheral causes: Fingily, Special tests of vestibular function: Romberg, Froese drill, Finger-to-nose, rapid repetitive movements, tandem gait, etc.

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Want to Learn More?

• Access the full guide: [The HINTS Exam: Vertigo for People in a Hurry](#).
• Access the full guide: [The HINTS Exam: Vertigo for People in a Hurry](#).
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Urgent Care Evaluation and Management of Elbow and Forearm Pain in Adults

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Editor's Note: The following content is a summarized excerpt from the cited article. It is not an exhaustive review of the condition but rather a focused highlight of the key points.

Introduction

Pain in the elbow and/or forearm is a common presentation in acute care settings. Elbow and forearm injuries represent almost 15% of emergency department (ED) visits for upper extremity injuries.¹ These concerns are frequently traumatic in origin and must be appropriately managed to prevent future functional limitations or other deficits. Joint dislocations comprise about 11% to 28% of all elbow injuries,² and elbow fractures represent 5% of all fractures.^{1,3}

Differential Diagnosis

The causes of elbow and forearm pain range from benign chronic conditions to acute limb-threatening concerns. The majority of diagnoses will be primarily musculoskeletal in origin, including degenerative disease, overuse injuries and acute traumatic injuries. (See Table 1.)

Table 1. Differential Diagnosis of Nontraumatic Elbow Pain

Condition	Symptom Onset	Key Features	Mimics
Olecranon bursitis (nonseptic)	Acute	<ul style="list-style-type: none"> · Pain over the posterior elbow · Boggy fluid collection over the elbow · Possible history of trauma or repetitive friction 	Septic bursitis
Septic bursitis	Acute	<ul style="list-style-type: none"> · Pain over the posterior elbow · Associated with erythema and swelling · Possible history of trauma 	Nonseptic bursitis
Septic arthritis	Acute	<ul style="list-style-type: none"> · Pain throughout the elbow · Worse with both passive and active ROM 	Gout

Compartment syndrome	Acute	<ul style="list-style-type: none"> · Extreme pain · Paresthesia · Pallor · Lack of pulses · Poikilothermia · Often associated with fracture 	<ul style="list-style-type: none"> · Deep vein thrombosis · Acute limb ischemia · Peripheral vascular disease
Ulnar neuropathy	Acute (more common with fractures) or chronic	<ul style="list-style-type: none"> · Pain or paresthesia in the fourth and fifth finger · Worse after prolonged periods of elbow flexion · Positive Tinel sign 	<ul style="list-style-type: none"> · Cerebrovascular accident · Cervical radiculopathy
Biceps tendinopathy	Acute (more common with tears) or chronic	<ul style="list-style-type: none"> · Tenderness over distal biceps tendon · Pain worsens with supination and pronation · Weakness with supination may be present with tears 	Osteoarthritis
Triceps tendinopathy	Chronic (but can have an acute flare)	<ul style="list-style-type: none"> · Pain at the posterior elbow · Worse with extension · Weakness with extension may be present with tears 	Osteoarthritis
Lateral epicondylitis	Chronic (but can have an acute flare)	<ul style="list-style-type: none"> · Pain over the lateral elbow · Worse over the common extensor tendon · Associated with repetitive movements (“tennis elbow”) 	Osteoarthritis
Medial epicondylitis	Chronic	<ul style="list-style-type: none"> · Pain over the medial elbow · Worse over the common flexor tendon 	Osteoarthritis

		<ul style="list-style-type: none"> · Associated with repetitive movements (“golfer’s elbow”) 	
Osteoarthritis	Chronic	<ul style="list-style-type: none"> · Pain worsens with repetitive movements · Isolated joints · Only occurs in about 2% of the population 	<ul style="list-style-type: none"> · Gout · Rheumatoid arthritis
Rheumatoid arthritis	Chronic	<ul style="list-style-type: none"> · Symptoms improve throughout the day · Systemic · Symmetrical 	<ul style="list-style-type: none"> · Gout · Osteoarthritis

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Urgent Care Evaluation

Key history and physical examination findings can support the diagnosis and guide any further testing.

History

The initial history should include elements to better characterize the pain and establish a timeline of symptom onset and duration or activities that exacerbate pain. Ask about:

- Any recent trauma or repetitive activities
- Movements or activities that exacerbate pain
- Relevant surgical history
- Any chronic medical conditions and medications

Physical Examination

The physical examination of the elbow and forearm should include the following assessments:

- Assess joint function
- Flexion, extension, supination, pronation
- Passive and active ROM and strength of muscles
- Assess neurovascular status
- Pulses, capillary refill and sensation
- Assess for red flags
- Tissue defects suggesting open fracture

Diagnostic Studies

Imaging Studies

No guidelines have been universally agreed upon for imaging of acute elbow pathologies.⁵ Generally, after traumatic injury, an adult patient who has full range of motion of the elbow (flexion, extension, supination, pronation) does not require radiographs.

- X-rays: Should be obtained after trauma resulting in limited range of motion⁵, to exclude osteoarthritis⁶ or for neurologic symptoms in the median nerve distribution (possibly secondary to a supracondylar process).³ It is recommended to obtain anteroposterior and lateral x-ray. When there is high suspicion for intra-articular fractures, it is also appropriate to obtain an oblique (Greenspan) view.
- Magnetic resonance imaging: The superior imaging modality for evaluating chronic elbow and forearm pain and is most useful for diagnosing ligamentous injury, tendinopathies and joint effusions.

- Computed tomography: Less utility in evaluation of chronic elbow pain, although may be indicated if there is concern for occult fracture or an intra-articular body.⁸
- Ultrasound: When performed by a trained evaluator, this may be useful in specific cases, typically when there is high suspicion for tendonitis.^{10,11}

The presence of a posterior fat pad on x-ray is always pathological and, in adult patients, is typically associated with an occult radial head fracture.⁵ The anterior fat pad is a less specific radiologic finding, as it is often visible in normal x-rays. However, when there is fracture or effusion, the anterior fat pad becomes lifted away from the periosteum, and appears to form a triangular shape, called the “sail sign.”

Radial head fractures are among the most common fractures in adult patients. Inspect the x-ray for cortical defects at the neck or at the radial head extending into the joint. Presence of a posterior fat pad may be the only evidence of radial head fracture. Coronoid process fractures can be mistaken for radial head fractures. Obtaining multiple x-ray views will help ensure correct identification of coronoid process involvement.⁵

Laboratory Testing

Fluid analysis must be obtained when there is concern for joint infection. Bursal fluid analysis is required to differentiate between septic and aseptic bursitis.⁸ Joint fluid analysis is required to diagnose septic arthritis.¹² These tests must be obtained as soon as possible, and patients should be directed to the nearest facility that has this testing capability. Additional studies, including a complete blood count with differential and inflammatory markers (C-reactive protein and erythrocyte sedimentation rate), can be obtained to support the diagnosis, but should not be used to exclude infection.

Urgent Care Management

Overuse Injuries

Basic treatment strategies for overuse injuries center on pain control and decreasing inflammation:

- Patients should rest the affected elbow and refrain from the activity or motion that brings on pain.
- Compressive dressings and elevating the elbow above the level of the heart will reduce swelling and decrease pain.
- Applying ice to the injured area can also help reduce inflammation, but ice should never be directly applied to the skin.
- Nonsteroidal anti-inflammatory drugs (NSAIDs) have been shown to be beneficial in short-term use (1-2 weeks) when used either as a topical preparation or taken orally.¹⁴
- After trialing these initial therapies, patients may be ready to begin a slow return to normal activity, taking caution to continue modifying motions that trigger pain. Some conditions respond well to physical therapy and rehabilitation programs.⁷

Osteoarthritis

- First-line therapy includes topical NSAIDs, oral NSAIDs, and activity modification.⁹

- Patients can be discharged to primary care for follow-up.⁹

Rheumatoid Arthritis

- Safe for patients taking methotrexate to trial oral NSAIDs (except anti-inflammatory doses of aspirin).¹⁷ Selective NSAIDs such as celecoxib may be more effective than traditional NSAIDs.¹⁸
- Low-dose prednisolone (15 mg daily for 2 weeks) can be considered on an individual basis.¹⁹

Lateral Epicondylitis (“Tennis Elbow”)

- First-line treatment: rest, activity modifications and up to 4 weeks of oral NSAIDs.^{20,21} Topical NSAIDs in gel form may also be effective.²¹
- Alternative conservative therapies include counterforce bracing or wrist extension splinting.
- Refer to physical therapy as it reduces pain and improves joint function.²³
- Return to activity as symptoms allow with nonurgent primary care follow-up.²²

Medial Epicondylitis (“Golfer’s Elbow”)

- Oral NSAIDs can be given for up to 2 weeks.²⁴
- Counterforce bracing, especially when used overnight.²⁴
- Avoid prolonged elbow immobilization as it can contribute to joint stiffness.
- Return to activity as symptoms allow and refer to physical therapy.^{24,25}
- Nonurgent primary care follow-up.²⁵

Ulnar Neuropathy

- Acute ulnar neuropathy due to fracture requires referral to ED for emergent orthopedic evaluation.¹
- Chronic condition: educate on avoiding arm positions that provoke pain.
- No high-quality evidence supports night-time bracing or corticosteroid injections.
- Discharge to primary care follow-up for chronic cases.

Distal Biceps and Triceps Tendinopathies

- Biceps and triceps tendinopathies should initially be managed with conservative therapies (e.g., activity modification and pain control and referral to physical therapy).¹⁴
- Partial tears can be referred to primary care follow-up or orthopedic consultation.
- Complete tears should be referred for orthopedic follow-up in 1 week.^{4,5}
- Slings can be used for comfort, but prolonged immobilization is not recommended due to risks of stiffness and muscle atrophy.¹⁴

Olecranon Bursitis (Nonseptic)

- Conservative therapies: oral NSAIDs and compression bandaging.

- Needle aspiration or aspiration with steroid injection is not more effective than conservative therapies and carry higher risk of complications.
- High treatment failure rate at 4 weeks; may require more invasive therapy.²⁸
- Nonurgent orthopedic follow-up if advanced therapies are needed.

Septic Bursitis

- Urgent aspiration for bursal fluid analysis required.
- If aspiration is not available in Urgent Care: prompt referral to ED for analysis.³⁷
- Confirmed septic bursitis: 10 days of oral antibiotic therapy with methicillin-resistant *Staphylococcus aureus* coverage.
- Immunocompromised patients, systemic symptoms, or high suspicion for joint involvement: refer to ED for IV antibiotics.³⁷

Septic Arthritis

- Urgent arthrocentesis for joint fluid analysis required.
- If arthrocentesis not available in Urgent Care: prompt referral to ED.¹²
- Confirmed septic arthritis: hospital treatment with IV antibiotic therapy.

Compartment Syndrome

- Early signs: abnormal pain ("out of proportion"), compartment tension (firmness), passive traction pain.³⁸
- Late findings (not required for diagnosis): motor palsy, paleness, pulselessness.³⁸ (See Table 2.)
- Immediate referral to ED if concerned for compartment syndrome.^{5,38} Delays in care increase risk of permanent limb injury or amputation.

Table 2. The 5 "P's" of Compartment Syndrome

1. **Paresthesia:** Sensation of numbness or tingling can be an early sign.
2. **Poikilothermia:** Extremity may become cool to touch.
3. **Palsy:** Motor weakness can be a late sign.
4. **Pale:** Pale extremity or poor capillary refill can be a late sign.
5. **Pulseless:** Absent distal pulse is a late sign.

Fractures and Dislocations

Radial Head Fractures

- Isolated, nondisplaced or minimally displaced (<2 mm): pain control, posterior long arm splint for several days, nonoperative early use.^{3,5,30}
- Early elbow mobilization typically recommended within 2 days.^{5,29}

- Comminuted, displaced (>2 mm), or complete articular fractures: refer for close orthopedic follow-up.^{3,5}
- Open fractures, unstable joints or neurovascular deficits: posterior long arm splint and refer to ED with orthopedic consultation.⁵

Proximal Ulnar Fractures

- Isolated nondisplaced fractures: posterior long arm splint and orthopedic follow-up in 1 week.
- Fractures with 10° to 15° angulation, 50% displacement, or with radial head dislocation (Monteggia fracture): refer to ED with orthopedic consultation.⁵

Distal Humerus Fractures

- Typically result from FOOSH (fall on an outstretched hand), especially in elderly population.
- Isolated nondisplaced fractures: posterior long arm splint and orthopedic follow-up in 1 week.
- Partial or complete articular fractures: prompt referral to ED with orthopedic consultation due to high risk of complications.⁵

Olecranon Fractures

- Extra-articular stress (incomplete) fractures: conservative therapy with activity modifications, long arm splint, orthopedic follow-up in 1 week.^{4,31,5}
- Stable, nondisplaced (<2 mm) with intact extensor function: pain control and orthopedic follow-up in 1 week.^{4,5,32}
- Displaced (>2 mm), unstable, or associated with dislocation: prompt referral to ED with orthopedic consultation.³³
- Prior to discharge/referral: posterior long arm splint between 45° and 90° of flexion.⁵

Coronoid Process Fractures

- Type I (avulsion fractures of tip): conservative management.⁵
- Type II (avulsion fractures >50%): orthopedic follow-up for surgical repair.⁵
- Type III (displaced fractures) or associated with ulnar dislocation/radial head fractures: refer to ED with orthopedic consultation.
- Prior to discharge: posterior long arm splint at 90° flexion.^{5,34}

Elbow Dislocation

- Open fractures, anterior dislocations, neurovascular compromise: splint and refer to ED with orthopedic consultation.^{2,5}
- Simple dislocations (no associated fracture): Urgent Care clinicians can attempt reduction with multimodal analgesia if confident.
- Unsuccessful reduction or requires conscious sedation: refer to ED.²

- Post reduction: obtain x-rays to evaluate for subluxation/dislocation in extension.
- Apply posterior splint for comfort; successful reductions need orthopedic follow-up in 1 week.²

Urgent Care Disposition

Disposition plans depend on the most likely diagnosis and the need for additional testing.

- Patients with chronic conditions for whom there is no evidence of neurovascular compromise or infection (e.g., osteoarthritis, rheumatoid arthritis, lateral epicondylitis, and medial epicondylitis) may be discharged with recommendations for primary care follow-up.
- Patients with a suspected new diagnosis of rheumatoid arthritis (or poorly managed rheumatoid arthritis) should be referred to a rheumatologist with primary care follow-up in the meantime.
- Patients diagnosed with simple closed fractures, tendon injury, and chronic conditions that have failed conservative therapies may be referred for orthopedic evaluation.

General recommendations for nonurgent concerns are to follow up in 5 to 7 days. Injuries with an open fracture, a high-risk fracture pattern, an unstable joint, or neurovascular compromise should be referred to an ED for orthopedic consultation. Other situations that warrant referral to an ED include a high-risk elbow dislocation or concern for a septic joint.

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Legal Lessons: It's Just a Flesh Wound... or Is It?

By Kelly Heidepriem, MD

In the fast pace of Urgent Care, lacerations are our bread and butter. A few sutures, a tetanus shot and a cheerful “all set!” send many patients back out the door feeling stitched-up and satisfied. But some of those patients come back—with more than meets the eye. One of the biggest (and most litigious) culprits? Missed glass foreign bodies in lacerations.

When a Cut Isn't Just a Cut

Let's start with two real cases featured on Dr. Eric Funk's website, Med Mal Reviewer.

Case 1: A 35-year-old man comes in after falling while carrying a glass. He had a 4 cm open laceration on his forearm, and his neurovascular exam was normal. It was irrigated, sutured and he was sent home. A few months later, he's back—with numbness, weakness and pain in his hand. Turns out, there was a shard of glass left behind. A hand surgeon finds it and removes it, but the patient now has permanent dysfunction from an ulnar nerve injury. He sues.

Case 2: A 45-year-old man sustained a laceration to the webspace between his index and middle fingers after dropping a glass at work. At initial presentation, he had full flexion and extension and was discharged after the wound was sutured. Over the following months, he continued to experience persistent pain and noticed a palpable bump in the area. A hand surgeon eventually removed a thin sliver of glass measuring 1.5 cm by 2 mm. The patient pursued legal action.

Glass Happens. Here's What to Do About It.

We don't share this to stoke fear, but to emphasize the high stakes of missed glass in hand lacerations and the value of a few simple practices that can help protect both our patients and ourselves.

1. Know When to Image

We're not suggesting an X-ray for every paper cut. But for any lacerations involving glass—or anything likely to splinter—imaging can be crucial. Why should we not just trust our gut?

- Glass shows up well on X-ray: Studies show that 2mm glass fragments have a 99% detection rate on plain films, and even 1mm pieces are detected 83% of the time.
- Patient complaints are unreliable: The positive predictive value of a patient feeling like something's in there? Just 31%.
- Ultrasound has a role too: If you've got it, it can be helpful for detecting foreign bodies, especially if the X-ray is negative and suspicion remains high.

Bottom line: If there's a reasonable chance glass got into the wound, get the X-ray. Especially in the hand, where the consequences of a missed shard can be severe: just think of all those little nerves in your hand that control precise, fine movements!

2. Document Like a Pro

As always, a good and well-documented neurovascular exam can be your best defense. Include the usual suspects: flexion, extension, two-point discrimination, capillary refill, radial pulse, etc. Some clinicians even re-check and document neurovascular status after wound closure or reduction.

Here's my dot phrase that I use as a mental checklist of all the things you should check for an exam:

"Able to flex/extend all DIP, PIP, MCP, IP joints; sensation intact to radial, median and ulnar nerve distributions; capillary refill <2 seconds; no scissoring or angulation. Digits neurovascularly intact."

This will help you remember to be thorough and catch any deficits on Day 0.

3. Don't Forget the Follow-Up Plan

Another missed opportunity in both cases? Patient education. Even if a wound seems clean and neurovascularly intact, set the stage for what to watch for and when to return.

Say something like:

"There's a small chance that a tiny piece of glass could still be inside. Even though we don't see anything now. If you notice new pain, numbness or a bump, come back and see us or follow up with this hand specialist." ... and then give them the name of your go-to neighborhood hand surgeon.

Then document the conversation. It's not about covering yourself—it's about preparing the patient and giving them a plan. Patients will likely be less surprised about a complication if you had warned them that it was a possibility and also provided them with an avenue to address it.

4. Remember: Hands are High Risk

Both of these legal cases involved hand lacerations. Hands are intricate, functional and unforgiving of missed injuries.

Final Takeaways

- Glass in lacerations is more common than you think—foreign bodies are found in up to 15% of hand wounds that get imaged, and in 7–9% of all wounds caused by glass.
- Don't rely on patient perception—or your own perception—alone to guide imaging decisions.
- Radiographs have excellent sensitivity for most glass—use them when there's even a sliver of doubt.
- Document your exam, your thought process and your patient instructions with clarity.
- And remember: Giving patients a heads-up about what could go wrong might be the most important suture you place.

Get more info at Hippo's [Urgent Care RAP here!](#)

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Pediatric Research Briefs

A Different Approach to Toddler's Fractures – Another Shift in Paradigm?

Boutin A, Colaco K, Stimec J, et. Al.

Removable Boot vs Casting of Toddler's Fractures: A Randomized Clinical Trial.

JAMA Pediatr. 2025 Apr 21;179(7):713–21. doi: 10.1001/jamapediatrics.2025.0560

Toddler's Fractures (TF) are the most common lower limb fracture seen in young children under the age of 5. This was a pragmatic, multicenter, assessor-blinded, 2-arm, noninferiority randomized clinical trial of children 9-months to 4-years diagnosed with TF by an ED physician at 4 Canadian urban, tertiary care children's hospitals. Participants were randomly assigned in a 1:1 ratio to receive a prefabricated removable boot or casting. Follow-up was at 4 weeks via a virtual (video) visit where caregivers reported complications, weight-bearing, baseline activities, duration of immobilization device use, satisfaction, preference and any health care resource use after the initial ED visit. The study found removable boot without physician follow-up was non-inferior to circumferential casting in children with TF.

Editors' Comments: This is another in a series of treatment of injuries in children where the prevailing "less is more" approach is potentially a viable option to present conventional protocols. This is a further shift in the paradigm, moving away from traditional plaster casting – which is already recognized treatment in wrist torus fractures.

There were some limitations to this study, primarily the lack of blinding for the caregivers. The other was the high attrition rate of children in the casting group, who were lost to follow-up, which may lead to attrition bias and unmeasured confounders. This study does provide potential for UC based investigations to ascertain whether a similar cohort could be treated with less requirement for follow-up. UC clinicians are advised presently to follow the local guidelines on TF management until such time as there is UC specific evidence to support this method of treatment.

Chaperone for Examination of Adolescent Patients

Berhane A, Hackell J, Wallace S; Committee on Practice and Ambulatory Medicine; Committee on Adolescence

Use of Chaperones for the Pediatric and Adolescent Encounter: Policy Statement.

Pediatrics. 2025 Jun 1;155(6):e2025071810. doi: 10.1542/peds.2025-071810. PMID: 40383537.

The requirement for physical examination is crucial for the delivery of care to all patients. Some of these examinations may be perceived as uncomfortable or intrusive by patients, particularly young children and those in adolescent age groups. The American Academy of Pediatrics (AAP) recommendation that a chaperone be present for potentially distressing examinations and inspections of certain body areas of children and adolescents is consistent with guidelines and policies from other national organizations of physicians, including the American College of Obstetricians and Gynecologists, the American Medical Association and those issued in other countries, such as the General Medical Council in the United Kingdom.

The purpose for considering the use of a chaperone during a clinical encounter is to optimize the patient's feelings of safety and comfort.

This policy statement has several recommendations:

1. *All clinical practice settings are strongly encouraged to develop chaperone policies to provide a safe and comfortable environment for pediatric patients.*
2. *Each clinical setting should assess its ability to provide chaperones when determining policies, including workflow and staffing considerations.*
3. *Clinical staff members are the preferred choice for chaperones.*
4. *Pediatric clinicians should preferably include the roles of the chaperone using an opt-out approach to avoid any issues of imbalance of power or control.*

Editor's Comments: This is an important topic and needs careful consideration particularly for UC clinicians that may be the only clinical staff member on-site. Having robust organizational policies and procedures in place will help guide UC clinicians on the matter. This consideration is particularly relevant due to the potential vulnerability of children, especially regarding intimate medical examinations.

Accuracy of ChatGPT in Answering Post-Discharge Questions

Gupta M, Kahlun A, Sur R, et. al.

Accuracy, appropriateness, and readability of ChatGPT-4 and ChatGPT-3.5 in answering pediatric emergency medicine post-discharge questions

Pediatr Emerg Med J 2025;12(2):62-72

This was a pilot study to investigate the potential of the two versions of ChatGPT to accurately and consistently answer follow-up questions for pediatric patients discharged from the ED. Twenty-three questions were posed to the two versions of ChatGPT as collated from emergency physicians working with pediatric patients.

The authors found ChatGPT-4 demonstrated slightly better performance than ChatGPT 3.5 in accuracy and appropriateness of answers to the questions posed to it. They did however find that both versions of ChatGPT showed decreased appropriateness and accuracy in questions regarding medication dosing, particularly for over-the-counter medications, such as ibuprofen, acetaminophen and polyethylene glycol. These findings align with previous research cautioning against relying on AI for medication instructions and highlight a critical area for improvement in the LLMs.

Editor's Comments: This is another in a long list of studies looking at ways to incorporate AI tools into healthcare. While continuing to show promise, there are still areas where AI has gaps in its ability to provide the same level of care and information as a clinician would. There remains a requirement for human involvement in most clinical situations, even as technology advances and narrows the gap.

Prepared by Ivan Koay MBChB, MRCS, FRNZCUC, MD

Urgent Care Physician

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London Representative Faculty of Prehospital Care, Royal College of Surgeons Edinburgh

URGENT UPDATES

Trends in Prenatal Exposure to Antiseizure Medications Over the Past Decade A Nationwide Study

A recent French registry study (2013–2021) observed a total of **55,801 pregnancies** with antiseizure medication (ASM) exposure during the first trimester. Over the decade, use of *safer ASMs*—notably **lamotrigine** and **levetiracetam**—rose by ~30%, while exposure to **high-risk ASMs** like **valproate/valpromide** fell by over 80%. However, **carbamazepine** and **topiramate** exposures declined only marginally, and newer agents with uncertain risk (e.g. pregabalin, gabapentin) saw increased utilization. **Socioeconomically disadvantaged women** remained disproportionately more exposed to higher-risk medications. Overall, the study highlights a promising shift toward prescribing lower-risk ASMs during pregnancy—but underscores ongoing concerns about persistent use of drugs with known teratogenic potential and disparities in exposure. Full Access: [American Academy of Neurology](#)

Diverticulitis: A Review

The JAMA review highlights that diverticulitis is increasingly managed in outpatient settings, with many cases not requiring antibiotics. For uncomplicated diverticulitis, supportive care alone is often sufficient, as antibiotics do not speed recovery or reduce complications. CT imaging is key for diagnosis, while complicated cases may require hospitalization, antibiotics, or surgery. This reflects a shift toward more conservative, evidence-based management. Full Access: [JAMA](#)

When Patients Arrive with Answers

A family physician reflects on the evolving clinician-patient dynamic in which patients come armed with medical advice generated by AI tools like ChatGPT. The essay explores the tension between this wealth of pre-arranged information and the patient's deeper need to feel truly heard and understood. Through narrative medicine, Dr. Sundar illustrates how listening empathetically—rather than debating content—can deepen trust, honor patient autonomy, and enhance therapeutic relationships. Full Access: [JAMA](#)

Regular Use of Opioids and Dementia, Cognitive Measures, and Neuroimaging Outcomes Among UK Biobank Participants With Chronic Non-Cancer Pain

A UK Biobank cohort study examined the relationship between **regular opioid use for chronic non-cancer pain** and long-term cognitive outcomes, including dementia risk, cognitive performance, and brain structure. Researchers found that participants who regularly used opioids had an **18% higher risk of developing all-cause dementia** compared to those who used non-opioid pain medications. The risk was even greater among users of **strong opioids**, who demonstrated up to a **70% increased risk of dementia** and a **150% increased risk of vascular dementia**. Full Access: [Journal of the Alzheimer's Association](#)

The Effect of Misinformation and Disinformation on Physicians' Ability to Provide Quality Care

More than 60% of surveyed U.S. physicians reported that their patients were influenced by health misinformation or disinformation over the past year, with nearly 90% saying it's increased compared to five years ago. This influx of inaccurate information is undermining patient safety and damaging the doctor–patient relationship, with 57% stating it has a **significant impact** on their ability to deliver quality care. Full Access: [The Physicians Foundation](#).

Empirically Derived Evaluation Requirements For Responsible Deployments of AI in Safety-Critical Settings

Researchers demonstrate that augmentative AI—designed to support nurses in recognizing imminent patient emergencies—can both enhance and impair human decision-making depending on the accuracy of the AI's recommendations. Specifically, when the AI was accurate, nurses performed better; but when it was misleading, their performance deteriorated—even when explanations were provided. Based on these findings, the authors argue that safe and responsible deployment of AI in critical settings requires two essential evaluation steps: (1) testing how humans and AI perform together, and (2) assessing AI across a spectrum of performance scenarios—from strong to poor—to uncover potential harms. Full Access: [Nature](#)

New ACC/AHA Guideline Addresses Prevention, Detection, Evaluation and Management of High Blood Pressure

The new guideline—published August 14, 2025—updates the 2017 recommendations and places greater emphasis on **early detection, personalized risk assessment, and treatment** of hypertension in adults. It introduces the **prevent** risk calculator to better tailor cardiovascular risk and treatment decisions, incorporates broader screening for conditions like primary aldosteronism, and recommends continued use of combination antihypertensive therapy, including consideration of newer treatments such as **GLP-1 agents** for overweight or obese patients. Full Access: [American College of Cardiology](#)

Systems-Based Care of the Injured Child: Policy Statement

The AAP's new policy, "**Systems-Based Care of the Injured Child**" highlights that injuries are the leading cause of childhood death and disability and calls for a cohesive, system-wide approach to trauma care. It emphasizes ensuring the "right child, at the right place, at the right time" through integrated trauma systems that span prevention, prehospital care, emergency treatment, rehabilitation, and reintegration into the community. The policy stresses the need for universal pediatric readiness in all care settings, inclusion of mental health support and abuse recognition, and efforts to promote equity. It also calls for robust data collection, research, and advocacy to strengthen pediatric trauma systems and improve outcomes. Full Access: [AAP](#)

Brain Abnormalities in Children Exposed Prenatally to the Pesticide Chlorpyrifos

A longitudinal cohort study of approximately 270 children (ages 6–14) in New York City found that higher prenatal exposure to the insecticide chlorpyrifos was dose-dependently linked to widespread brain changes—including thicker cortical regions, reduced white matter volumes, altered

microstructural integrity, and lower cerebral blood flow—as well as poorer fine motor and motor programming performance. Full Access: [JAMA](#)

Vaccine Integrity Project Presents Reassuring Data on Vaccines for Upcoming Respiratory Virus Season

The Vaccine Integrity Project (VIP), launched by CIDRAP, conducted an extensive evidence review of recent studies on COVID-19, influenza, and RSV vaccines—especially for children, pregnant individuals, and those with weakened immunity. After screening nearly 17,000 abstracts and reviewing 1,406 full-text articles (including 50 randomized controlled trials), the panel found no new safety concerns or drops in effectiveness among these key groups, though a potential risk of preterm birth associated with the RSV vaccine in pregnancy was noted. Full Access: [CIDRAP](#)

Study Suggests Probiotics May Suppress Antibiotic Resistance Genes in Preterm Infants

A recent UK study examined very-low-birth-weight (VLBW) preterm infants—some of whom received probiotic supplementation with *Bifidobacterium bifidum* and *Lactobacillus acidophilus*, while others did not. Those given probiotics exhibited notably fewer antibiotic resistance genes (ARGs) and multidrug-resistant (MDR) pathogens in their gut, even when exposed to antibiotics. The probiotics appeared to help the gut microbiome resemble that of full-term infants more closely, without increasing horizontal gene transfer risks. Full Access: [Nature](#)

Children Living in Socially Vulnerable Areas Have More Asthma ED Visits at Start of School

Children living in neighborhoods with higher social and economic vulnerability experience disproportionately larger spikes in asthma-related emergency department (ED) visits at the start of the school year. The study, conducted across major Texas cities, found that asthma ED visit rates increased by approximately **60 cases per 100,000 person-years** in high-SVI (Social Vulnerability Index) areas—three times more than the **20-case increase** observed in low-SVI areas. These findings highlight how underlying neighborhood disadvantage elevates the risk of virus-triggered asthma exacerbations during back-to-school periods. Full Access: [Helio](#)

CAUSE FOR APPLAUSE Q3 2025

CAUSE FOR APPLAUSE



Six New Fellows and a New Accredited Fellowship Program in Q3

The College of Urgent Care Medicine is proud to introduce its Q3 Fellows (FCUCM):

Justin Bowles, MD, FCUCM

Justin Bowles, MD, FCUCM is a highly experienced family medicine physician and medical educator with extensive clinical, teaching and leadership roles in Urgent Care and family medicine. His career spans military service, serving underserved populations and leadership in medical education programs, notably developing a successful APP Urgent Care Fellowship. Bowles' compassion and dedication is demonstrated through published research, teaching medical residents and his pivotal role in developing a successful Urgent Care fellowship program.

Mona McArdle, MD, FCUCM

Mona McArdle, MD, FCUCM has contributed significantly to the healthcare field and is currently serving at Valley Immediate Care in Medford, Oregon. As a result of her dedication and expertise, Dr. McArdle has made impactful strides in medicine, benefiting countless patients and advancing medical practices within her community. Stepping up and volunteering when her community needed her most, McArdle mobilized her centers in the early days of Covid and volunteered at a temporary medical station to help evacuees during the Alameda fires.

Salisia Valentine, DNP, FNP-C, MSN, RN, FCUCM

Salisia Valentine, DNP, FNP-C, MSN, RN, FCUCM is a Family Nurse Practitioner and healthcare leader with over ten years at American Family Care. She has served as Vice President of Provider Services and Interim Medical Director, managing 50+ clinicians. Named Alabama's Nurse Practitioner of the Year from NPAA, Salisia stands out for her clinical skill, commitment to clinician growth and patient-centered approach. She holds advanced degrees in nursing, has experience in clinical education and has played a key role in developing provider onboarding and continuing education programs.

Joshua Stone, PA-C, FCUCM

Joshua Stone, PA-C, FCUCM has distinguished himself through dedicated service and clinical excellence at Go Health, where he has accumulated over 5,000 patient care hours across nine years. Serving as a faculty preceptor, he educates Fellows in medical knowledge, procedural skills and antibiotic stewardship, while also emphasizing thorough documentation. As an active member of the Emergency Response Training Team, he leads mock code training throughout the New York market, demonstrating both leadership and commitment to quality patient care and professional development.

Ivan Koay, MBChB, MRCS, FRNZCUC, MD, FCUCM

Ivan Koay, MBChB, MRCS, FRNZCUC, MD, FCUCM is an accomplished physician with international experience across the UK, New Zealand and Ireland. He has excelled in clinical roles, academic research and medical education, contributing to numerous peer-reviewed journals and conferences. Dr. Koay's mentorship of trainees and nurse practitioners, along with his leadership and volunteer work, exemplifies his dedication to advancing Urgent Care medicine and positively impacting both patients and colleagues. He has significantly influenced and advanced the practices and standards within Urgent Care.

Lindsey Fish, MD, FCUCM

Lindsey Fish, MD, FCUCM stands out as an accomplished physician-leader, researcher and educator. She established and is the Medical Director for the Peña Southwest Urgent Care Clinic at Denver Health and has been pioneering Urgent Care research. She also was recently selected to represent the Urgent Care College of Physicians on the AMA's Specialty and Service Society. She excels clinically, has contributed over thirty publications and is serving as editor-in-chief of the Journal of Urgent Care Medicine. Dr. Fish also mentors aspiring clinicians and educates the community through multiple channels, embodying excellence and leadership in Urgent Care.

Congratulations to our new Fellows and thank you for your incredible work and contributions to the Urgent Care field of medicine.

Yale New Haven Health Urgent Care Fellowship Program Achieves CUCM Accreditation

The College of Urgent Care Medicine is pleased to announce Yale New Haven Health Urgent Care for its commitment to the next generation of Urgent Care clinicians. Yale New Haven Health Urgent Care has had its post-graduate fellowship program accredited by the College of Urgent Care Medicine, becoming the 5th program to achieve the distinction. Jasmeet Bhogal, MD, FCUCM, Chair of the Fellowship Accreditation Committee, acknowledged the program, stating, "The College developed its Standards and the accreditation program recognizing the uniqueness of Urgent Care medicine and the need to address its nuances when onboarding clinicians. We are thrilled to see organizations like Yale New Haven embrace that vision and demonstrate the quality of their program by pursuing the distinction. On behalf of the College and the Fellowship Accreditation Committee, I want to extend our gratitude to the clinical leadership at Yale New Haven and the other programs they now join as CUCM Accredited Post-graduate Fellowship programs."

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