

A Peer Reviewed Publication from the College of Urgent Care Medicine SECOND QUARTER, 2023 Volume 7, Issue 2

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CONTINUING MEDICAL EDUCATION (CME)

From the College of Urgent Care Medicine President



Message from the CUCM President: We Are Your Voice

The College of Urgent Care Medicine (CUCM) held our annual member's meeting during the Urgent Care Association convention in Las Vegas in April. For those who were able to attend, it was a pleasure meeting you in person. Not only did we enjoy a delicious lunch together, but we also had a great

panelist discussion on continuing to advance the specialty of Urgent Care medicine. I appreciate your passion, enthusiasm, and dedication for Urgent Care. I left the convention with renewed optimism and confirmation that the College is on the right path. For those who were unable to attend, we will be returning to Las Vegas next year: April 13-17, 2024, and I look forward to seeing you there.

Please join me in welcoming Lisa Bishop, DNP, MHA, FCUCM and Payman Arabzadeh, MD, MBA to the CUCM Board of Directors. Dr. Bishop comes to the board with over 25 years of clinical experience and is the Vice President, Training and Clinical Development at Premier Health based in New Orleans, Louisiana. Dr. Arabzadeh is the CEO and Chief Promise Officer at Davam Urgent Care in Magnolia, Texas and is currently serving as the President of UCA.

I extend a sincere thank you to Joe Toscano, MD, FCUCM and Max Lebow, MD, MPH who have rotated off the board. I cannot express enough gratitude to Dr. Toscano and Dr. Lebow for their guidance and contributions to the board. I look forward to their continued support and contributions.

Speaking of Dr. Toscano, he is the first recipient of the inaugural Joseph Toscano Inspiring Excellence Award. The College created this award to honor Dr. Toscano for his significant contributions to Urgent Care. In the future, the award will recognize a CUCM member who has made significant and sustained contributions to the industry by inspiring excellence. The College also awarded Tracey Davidoff, MD, FCUCM with the Sean McNeeley, MD, FCUCM Advancing the Specialty Award for her significant and sustained contributions to advancing the specialty of Urgent Care medicine. Dr. Davidoff's many accomplishments include being the co-editor-in-chief of this publication as well as being newly elected to the UCA Board of Directors. Congratulations to both!

May 11, 2023 marked the end of the federal COVID-19 public health emergency. While the public health emergency may be over, healthcare challenges exposed by the pandemic persist. Patient distrust of public health, staffing shortages, provider burnout, decreased payer reimbursement and financial strain are threats to efficient healthcare delivery. Emerging technologies such as artificial intelligence and asynchronous healthcare have the potential to both enhance and disrupt Urgent Care.

In response to the rapidly changing healthcare environment, the College is reviewing our strategic goals. However, our fundamental purpose will remain the same. We will continue to advance the specialty through the promotion of evidence-based Urgent Care medicine, educating the public about the specialty of Urgent Care, improving collaboration between healthcare providers and centers, and encouraging and supporting research. We are over 4,000 members strong. We are your voice, and we want to hear from you.

Chris Chao, MD

President, College of Urgent Care Medicine Board of Directors

From the Editors-in-Chief



Tracey Davidoff, MD, FCUCM



Cesar Mora Jaramillo, MD, FAAFP, FCUCM

This edition of Urgent Caring comes following the wrap-up of the Urgent Care Convention, and what a great convention it was! If you attended, thank you for joining us on this adventure to discover how we can effectively drive change in our industry. If you couldn't attend, you really missed out on some fantastic lectures, keynotes, networking, and vendors sharing the latest and greatest tools to help us practice Urgent Care.

One of the most interesting messages that resonated with us was from the keynote speaker, Nick Webb, who spoke about Chaotic Innovation. From him we learned that the world is rapidly changing whether we like it or not, and that we should embrace these changes. We must be innovative in the way we deliver care. He urged us to think of patients as consumers and to understand that they want on-demand healthcare now more than ever, with multiple platforms to access care. We need to think outside of the box and develop ways to use technology to our advantage and stay ahead of the ever-changing curve.

From Dr. Sharon Grossman, we learned how to prevent burnout before it happens. We need to take care of ourselves, eliminate resentment, care for our coworkers and employees to help foster a kinder workplace environment, and find joy in Urgent Care again.

The Pediatric Urgent Care Conference, from PM Pediatrics, supplied current recommendations for our littlest patients. Clinical lectures for the main convention varied from 20-minute quick picks on short subjects, to standard lectures on evidence-based topics. We saw the first ever Urgent Care Learning Lab with on demand videos and poster presentations. There were also hands-on sessions in suturing, epistaxis, and other topics.

It's a busy time at the convention with lots of learning, but by far, our my opinion, the best part is getting away from the daily grind and networking with like-minded folks. Meeting people from all over the country, and even the world, and realizing that the challenges we face are the same, discovering others' solutions, and validation that we are not alone in this. We always leave the convention with a renewed sense of purpose, optimism, and love for our industry.

Whether you were there or couldn't make it, it's all going to happen again next year (and will be here sooner than we think)! If you would like to contribute, we would love you to start thinking about how you

can become part of the action. A call for speakers and presenters will be published by July 15 and closes October 15. We will be returning to Las Vegas, April 13-17, 2024. Look for other exciting activities as well. Block your schedule now so you can get the time off and come see what all the buzz is about! Bring a coworker. Whether you are a presenter, or just take it all in — you won't be disappointed!

This edition of Urgent Caring should also not disappoint. We are reviewing the evidence-based best practice on syphilis, as well as presenting a relevant case written by one of our fellows in Urgent Care. There is a review on thrush and nail avulsion injuries. We will also have our usual content from Hippo Education, EB Medicine, UC Max, The Laceration Course, and an editorial from a UCA Board Past-President, Pam Sullivan, MD, FCUCM. New to this edition is a Spotlight on Our Members. We are proud of how far this publication has come in the last two years and hope you enjoy it. As always, feedback and participation in future editions is always welcome. And don't forget to claim the **FREE** CME.

Last but not least, we would like to express our sincere gratitude to the diligent and invaluable peer reviewers who have contributed their expertise and time to ensure the quality and integrity of our publication. In this issue we thank: Sean McNeely MD, FCUCM, Ivan Koay MD, Joseph Toscano MD, FCUCM, Jessica Kovalchick RPA-C, Chris Chao, MD, and Jackie McDevitt PA-C.

Tracey Q. Davidoff, MD, FCUCM

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Cesar Mora Jaramillo, MD, FAAFP, FCUCM

Editorials and Opinions

Imposter Syndrome: You Are Not Alone in Your Thoughts.



Pamela C. Sullivan, MD, MBA, FACP, FCUCM, PT

Imposter Syndrome: When an individual doubts their own abilities and feels like a fraud. In other words, when one has the skills without the confidence. At first, I was amazed by how many physicians admit they experienced this phenomenon at some point in their careers. Now, I am amazed when I meet someone who has experienced these feelings and worse, felt isolated not realizing they are not alone. It is rarely discussed despite its commonality. I am reminded of how it was taboo to speak about mental illness in the past. If clinicians should discuss these feelings in themselves, they may be viewed as weak, and it could negatively impact their career. Hence, we brushed it under the

rug for far too long.

It is often described as an issue with women, but it is clearly not isolated to women. Anyone who differs from the common "norm" of a given work culture is more likely to experience these feelings. Here are a few stories which may help you visualize this concept.

A female participates in a predominantly male board meeting, a resident physician whose primary language is not English or a physician who wears their native customary dress. It can be very difficult to find a mentor like you. You are viewed as different. This unconscious bias makes you not the first choice for the promotion or an opportunity. You question your self-worth. Was I too ambitious with my goals? Your self-doubt cripples you into not applying for a role you are quite capable of performing well. You strengthen your beliefs you are not deserving.

Recently someone so eloquently described how she questioned herself every time she received an accolade. Did they feel sorry for me because I moved to the U.S. alone and speak little English? Are they just being kind? Did I really deserve it? Was it said because it was the politically correct comment to tell me? For most of my life I could not say thank you without adding a "but" such as, "It was because I was in the right place at the right time." I felt very justified adding my "but" until one day when a group of us were performing an executive coaching session for a colleague. We made it clear feedback was not just for him but a two-way street. This individual informed me I did not make him feel respected when I added a "but" after a thank you. I did not value his job well done comments. The light bulb went off in my head. It was so hard to say thank you followed by a period and not a "but" for the longest time as it made me feel uncomfortable.

I was being interviewed recently for a podcast as a female physician entrepreneur when this became the topic of discussion. I was asked if I ever moved past imposter syndrome. With belief in my words and confidence in myself, I was able to say yes. At age 58, I can confidently state for three years I do not live in the shadows of self-doubt.

How does one move past these beliefs? Resilience kept me going. I was going to find a way to be successful even if someone closed a door. Success does not mean one has confidence. Confidence does not mean one has competence. External facing confidence does not mean someone feels confident internally. Competence is gained from experience. One must be granted opportunities to gain experience. Confidence comes from being in the right culture feeling valued and supported. My emotional quotient (EQ) was terrible early in my career despite great intentions. I tried to find a mentor. The only mentors around were white males. I finally did something physicians did not do. I turned to our outwardly appearing confident female CNO for mentorship only to learn she was in the same situation. I finally landed in a great culture where I was supported and allowed to make mistakes without fear. I had a positive mentor surrounded by a company with a positive culture. Take the dichotomy of this situation: A resident performs poorly on Part 2 of the boards. One resident, who has never been a test taker but does very well clinically, was called into a room and asked if medicine was the right career path. Another with the same situation was called into a room and advised "we" have a problem to solve. Let's come up with a plan to get you over this hurdle. Same situation for both of us. One with a negative mentor and one with a positive mentor. Which one was beaten down and which one believed she would succeed?

I have many stories I can share about my journey, and I bet many of you can as well. It is in our nature to help others. I ask each of you to speak openly about your experiences, so others do not feel isolated. Be the role model you wish you had or the one that helped you gain confidence affording you to grow your skills and competencies. Provide opportunities. I am hopeful the times are changing toward more inclusivity. We have many young physicians who may differ from yourself in one way or another. I challenge you to be that positive mentor for them.

Fingernail Avulsion Injury - A Case Report



Cesar Mora Jaramillo, MD, FAAFP, FCUCM

Introduction:

Finger injuries, including nail avulsion, are very common in Urgent Care. Anatomy knowledge is crucial when assessing possible fractures, nail bed damage, amputations, open wounds, etc. Detailed history including mechanism of injury, time of injury, the position of the digit during injury (flexion vs extension), dominant hand, occupation, previous hand procedures, surgeries or injuries and physical examination are vital steps to diagnose and manage these types of injuries

properly.^{1,2}

Case:



A 35-year-old patient presents to Urgent Care a few hours after a mechanical fall leading to a right 5th fingernail injury (lifted). She denies any other injury or head trauma, or LOC. Patient reports right 5th finger pain and edema. She denies bleeding or numbness, or weakness of the hand and fingers. She is not taking any anticoagulants and denies any pertinent past medical history, including immunocompromising conditions or bleeding disorders. The patient is not currently working

and reports her right hand is dominant. She denies previous hand surgeries or injuries. The patient reports full range of motion of the finger and denies any numbness or weakness. Her last tetanus shot is unknown.

Physical examination: Vital signs are within normal limits. The patient is alert and oriented. The wrist exam is normal. The right hand shows moderate fingertip edema, no erythema, and no ecchymosis. Fifth right finger has full range of motion, normal sensation, and capillary refill. The fingernail is wholly lifted and almost entirely detached from the eponychium.



Urgent Care Management

The wound was copiously irrigated with tap water. Procedure consent was obtained. Risk and benefits of the

procedure were discussed in detail, including the risk of infection and that the injured nail may look different when it grows back. Digital block was achieved with lidocaine without epinephrine. The injury



was explored, and no nail bed damage was observed or signs of fracture/open wound fracture.

The nail was easily removed with forceps. Due to nail polish (acrylic), the nail was soaked in acetone for 30 - 40 min. The nail polish was partially removed from the original nail, the nail with polish material was cut, and the clean nail was placed back into the nail fold. Dermabond was used to attach the nail to the areas of the nail folds. See Figure A. The neurovascular exam was normal after the procedure. Bacitracin was applied to the finger and covered with a non-adherent gaze. The patient received tetanus.

Figure A: Finger after repair with proximal

segment of prepped native nail placed in proximal nail fold, secured with tissue adhesive.

Discussion

Fingertip injuries can be complex, but the majority can be managed in Urgent Care. Nail avulsion injuries can lead to nail bed damage. Recognizing this and repairing the nail bed when damage is observed is paramount to avoid wide scars and permanently deformed nails. It also is important to preserve the skin folds surrounding the nail margins. To prevent adhesion formation by protecting the germinal matrix, clinicians should use the original nail (if possible), non-adhesive gauze packing, sterile foil, or 0.2-inch silicone sheeting placed under the eponychium into the proximal fold, securing it with wound adhesive (least invasive) or nonabsorbable sutures. ^{1,2,3} Additionally, when using the original nail, clinicians must do trephination to prevent the accumulation of subungual hematomas.

Prior to repairing a nail bed laceration or fingertip amputation, radiographs (anterior-posterior and lateral) should be obtained.¹ If a nail is vastly intact within the nail folds, these injuries do not need nail removal, just securing of the nail. Clinicians must communicate with patients that there is a significant risk of nail deformity even with appropriate management.¹

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Chief Complaint: "Strep Test Please" - A Case Report Tracey Quail Davidoff, MD, FCUCM



A 46-year-old female patient presents to the Urgent Care center requesting a strep test. Her symptoms included a burning sensation in the mouth with a bad metallic taste for over two weeks. The patient had no insurance, so she waited until the symptoms were intolerable. Today, she noted white patches in her throat, so she sought care requesting a strep test. She can eat and drink, has no fever or chills, no cold symptoms, and otherwise feels well. She has a past medical history significant for asthma and uses a controller inhaler. She denies any other past medical history.

She is afebrile and has normal vital signs. She appears well and is in no distress. Consider the photograph of her throat to the left.

Which of the following is the most plausible diagnosis

based on the history and physical findings?

- A. Streptococcal pharyngitis
- B. Leukoplakia
- C. Pseudomembranous candidiasis
- D. Poor oral hygiene
- E. More information is needed

Further history was obtained revealing the patient was recently treated for sinusitis with an antibiotic and prednisone. She uses a fluticasone inhaler daily for asthma and was unaware that she needed to rinse her mouth after use. She is also a smoker.

Answer: C. Pseudomembranous candidiasis

The findings in this patient indicate pseudomembranous candidiasis, also known as oral thrush. It is the most frequently recognized form of candidiasis. Thrush presents as white plaques on the buccal mucosa, tongue, and palate which can be scraped off revealing red patches. The exudate resembles curdled milk.¹

Thrush is the most common of oral fungal infections caused by a group of saprophytic fungi including 8 species of the genus *Candida*. *Candida albicans* is the most common of these and accounts for 70-80% of all oral isolates. It is a dimorphic fungus existing in both yeast and hyphal forms. Only the hyphal form is associated with oral *Candida* infections. About 30-50% of the population has *Candida* as part of their normal oral microflora. 1

Although *Candida* is an opportunistic pathogen, it is part of the normal human gut flora, including the mouth. In healthy patients, the yeast lives in balance with other microorganisms and does not cause infection. When this balance is altered by elements like immunosuppression, local factors, or systemic alterations, infection can occur.² (See Table 1.)

Host Immune Deficiencies	Local Factors	Systemic Factors
HIV/AIDs	Xerostomia	Neonate
Chemotherapy	Medications causing dry mouth	Advanced age
Systemic radiation	Sjogren syndrome	Diabetes (Indirectly proportional to control)
Steroid use	Local radiation	Nutritional deficiencies
DiGeorge Syndrome	Antibiotic intake	Malignancy
Alcoholism	Long term or inhaled steroid use	Broad spectrum antibiotics
Organ or bone marrow transplant	High carbohydrate diet	Fluid and electrolyte disturbance
Partial or combined immunodeficiency	Leukoplakia	
	Dentures	
	Cigarette smoking	
	Steroid inhaler use	

Table 1. Predispositions and Risk factors for Candida infections in humans.

There are several other forms of oral candidiasis which include erythematous candidiasis, acute atrophic candidiasis, and chronic atrophic candidiasis. Erythematous candidiasis is usually due to medications causing dry mouth, wearing dentures for extended periods, and xerostomia. Acute atrophic candidiasis, also called antibiotic sore mouth, causes erythema of the mouth and atrophy of the tongue papilla. Patients complain of an oral burning sensation. This may also be caused by iron deficiency, Vitamin B12 deficiency, and poorly controlled diabetes mellitus (DM). Chronic atrophic candidiasis is found on the hard palate in denture wearers, especially those who do not remove their dentures overnight. It is also called denture stomatitis.

The diagnosis of oral candidiasis of any form is made based on clinical signs and symptoms. There may be no symptoms, or symptoms may include a cottony sensation in the mouth, loss or alteration of taste, or a burning sensation. The classic white patches on the buccal mucosa, palate, tongue, and oropharynx may or may not be present. In many cases, the patient is treated empirically with antifungals, and resolution of symptoms confirms the diagnosis.

If the diagnosis is in question, testing can be performed. Exfoliative cytology, biopsy, and culture can all be used to confirm the diagnosis. The easiest and fastest of these in the Urgent Care setting is exfoliative cytology. A moistened tongue blade is used to scrape the exudate along with the superficial keratinocytes and then sent to the laboratory for PAS staining. If available a KOH prep can be performed in the Urgent Care to confirm the diagnosis immediately. Biopsy and culture take significantly longer to obtain results.1

When a patient with a *Candida* infection is evaluated, it is necessary to determine why the infection developed. Typically, there is a condition or comorbidity that predisposes the patient to this infection. If these conditions can be modified, it aids in the treatment of the infection and may prevent recurrence.2 Patients who present with oral *Candida* who have no apparent risk factors should be investigated further. Diabetic patients, especially those poorly controlled or as yet diagnosed will have increased glucose in saliva, which promotes greater adherence of fungal elements to the oral mucosa. Blood glucose or HgbA1c should be evaluated if diabetes is suspected.

Although much less common after the advent of protease inhibitors for HIV, thrush is an AIDS defining illness in those who have HIV infection. Testing for HIV should be considered for initial *Candida* infections if no other risk factors are identified. Further testing for immune deficiency should be investigated if needed.

For patients with dentures with erythematous candidiasis, removing dentures nightly and cleaning well will mitigate some of the risk of recurrence.³ Medication lists should be reviewed and adjusted if any are found to cause dry mouth. Patients using steroid inhalers should be encouraged to rinse their mouths out after use. Finally, every effort should be made to prescribe antibiotics and steroids in an evidence-based manner to prevent thrush from unneeded medications.

In this case there were multiple risk factors for the development of pseudomembranous candidiasis. She used a steroid inhaler without oral rinsing, was a smoker, and recently took antibiotics and steroids. It is not surprising that she developed this infection. Although her oral hygiene appears to be poor, it is not the cause of the white lesions or the infection. Leukoplakia has a more well-defined, geographic, lacey appearance. Streptococcal pharyngitis does not cause an exudate on the buccal mucosa, palate, or tongue.

Our patient was treated with clotrimazole troches 10mg five times per day for seven days, and her symptoms resolved in four days. Other options include miconazole 50mg buccal tablet daily for seven to 14 days, nystatin 500,000 units four times daily, or in severe cases fluconazole 200mg once followed by 100-200mg daily for seven to 14 days. Providers should discuss with patients the various choices; clotrimazole has a black licorice taste that may not be palatable to some patients, nystatin has an artificial butter cream frosting taste and is a thick suspension that needs to be swished in the mouth for as long as possible. Patients may not find these options palatable or may find the multiple daily dosing difficult to follow. Topical agents are less likely to cause any systemic effects. Systemic agents such as fluconazole may be reserved for more advanced infections.

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From Our Urgent Care Fellows

Identifying Syphilis in the Community

Ryan Grabeic, FNP-C

WellNOW Urgent Care

The essence of providing healthcare to a community lies in the ability to expand beyond the confines of our usual practice, reaching those areas of care inadequately addressed. As in any aspect of society, the stigma surrounding topics such as sexual health has historically limited access to care, as well as created challenges in societal education and prevention.

Among those illnesses, syphilis is an STI that when addressed in a timely manner, is effectively treated. When allowed to persist, the infection may prove to have significant morbidity, or in extreme cases, be fatal. This case will explore a relatable experience in the Urgent Care setting, examine the presenting factors, testing modalities, and lastly differential diagnosis. The paper will also address the recommended evidence-based diagnostic pathways available to the Urgent Care medicine provider, as well as outline patient considerations, recommended follow-up, and treatment for primary through tertiary syphilis in an UC setting. Lastly, discourse will conclude with recognition of syphilis as it pertains to the Upstate New York region and overall epidemiologic trends.

Case Study: A 47-year-old Caucasian, heterosexual male presents to a UCC in an urban region of Upstate NY with the chief complaint of a genital lesion and concern for herpes. He admits the lesion has been present for roughly two weeks. He states he has had two sexual partners over the last six months with whom he engaged in penile-vaginal unprotected intercourse. He denies oral or rectal intercourse. The partners were both females, he denies any intercourse with men. He describes the lesion as located near the tip of his penis. He notes the lesion is nontender. He denies any aggravating or remitting factors and states no treatment modalities have been attempted. This is the first time he has sought care for this condition. He denies any known STI history. The patient denies any fever, fatigue, body aches/chills, nausea, vomiting, diarrhea, dysuria, penile discharge, urinary frequency/urgency, abdominal pain, flank pain, dizziness/lightheadedness, changes in motor/sensory function, or other associated rashes.

The patient has a past medical history of bipolar disorder with manic episodes, as well as alcoholism. He reported noncompliance with current prescriptions and was unable to list his bipolar medication. He is currently homeless and has a 30-pack-year smoking history. He denied any illicit drug use. There were no known allergies and no surgical history. There was no known family history. Vital signs: 136/78, T-98.4, 80, 16, 99% on room air. On exam, there is a notable firm, round, 1cm in diameter, painless lesion to the

dorsal aspect of the shaft of the penis, just proximal to the glans. The lesion is a notable ulceration with a firm raised and sharp border and is flesh colored. There is no active discharge or drainage, edema, warmth, extending erythema, pruritis, or vesicular changes.

The differential diagnoses include primary syphilis, genital herpes, HPV, chancroid, donovanosis, lymphogranuloma venereum, and furuncle (Hicks & Clement, 2021). Primary syphilis is most likely because the lesion is a single non-vesicular, well-demarcated painless ulceration, and has been present for roughly two-weeks.

Syphilis is entirely treatable when identified early and appropriate therapy is initiated. The causative infective agent in syphilis is the bacterium Treponema pallidum. As is in many infectious processes, early recognition remains a key factor in prognosis (Resnick et al., 2014). Testing for primary syphilis in the UC setting requires a venipuncture and send out laboratory testing. Testing modalities require an initial non-treponemal and subsequent confirmatory treponemal test if the non-treponemal test is positive. The current recommended tests for initial syphilis testing are the rapid plasma reagin (RPR) and the venereal disease research laboratory (VDRL) tests. These tests carry a sensitivity of 92.7% and 72.5% respectively. The tests both identify the presence of IgG and IgM to a protein found in the T.pallidum bacterium (Godfrey et al., 2020). If either the RPR or VDRL are positive, it is imperative to perform treponemal testing to confirm. The FTA-abs test carries the highest sensitivity of 98.2% and specificity of near-100%. Given the rise of syphilis infection rates, point of care (POC) testing for syphilis is currently under development, with certain products showing sensitivity and specificity rates of 75-90% and 92-100% (Godfrey et al., 2020).

When a positive diagnosis is made in the UC setting, beginning prompt treatment and referring to either primary care or community health department clinics for follow-up is of the utmost importance (Brown & Frank, 2003). In most states, a positive test is health-department-reportable for contact tracing and monitoring of treatment.

Syphilis treatment is highly effective with little to no resistance rates documented to date (Hicks & Clement, 2021). First-line treatment is 2.4 million units IM of benzathine Penicillin G IM for all primary and secondary cases of syphilis (Godfrey et al., 2020). In the patient discussed above who had no allergies, this first line treatment should be initiated promptly. The patient should be referred to the local community health clinic for follow-up. Although repeat testing is not always recommended, in cases of high-risk individuals such as the case discussed, repeat testing for treatment efficacy versus reinfection is supported. Additionally, cases of syphilis carry a high risk of co-infection with other STIs such as HIV, HPV, HSV, as well as gonorrhea and chlamydia. Patients should be tested for these other common STDs within the same visit if possible. Follow-up in a primary setting aims at both treatment management and prevention in these populations (Hicks & Clement, 2021).

Patients who have tertiary or late syphilis (excluding neurosyphilis), or who are immunocompromised with HIV should be treated with penicillin G benzathine 2.4 million units IM weekly for three weeks (Hicks & Clement, 2021). For those patients with documented anaphylaxis to penicillin, doxycycline 100mg PO BID for two-weeks is recommended. Azithromycin and ceftriaxone are currently not supported by literature as second-line treatment (Hicks & Clement, 2021). If neurosyphilis is suspected, the patient should be referred to the ED after consultation with an attending. These individuals often require lumbar puncture to determine the presence of *T. pallidum* in CSF. If positive, these individuals require penicillin G IV every four hours or IM daily with probenecid given orally for 10-14 days. If penicillin anaphylaxis

exists, these individuals must undergo desensitization and continue penicillin treatment under controlled in-patient settings (Hicks & Clement, 2021).

Syphilis in the United States today is nearing epidemic proportions. Infection rates have steadily risen since the year 2000, which saw only 56 cases in New York State. The latest reported data representing 2019, showed 7,240 cases state-wide. (NYS DOH, 2019). For the UC provider, there is a criticality in understanding infection and prevalence rates in the communities for which one practices.

The UC setting is one of opportunity and importance. With overcrowding of emergency departments, limited access to care, and severe shortage of primary care providers, UC fills a vital void. The UC provider should always cast a wide differential and implore astute history and physical exam skill sets to limit the gaps that might exist. UC providers help to close these gaps in community health and can prove a life-or-death difference in the lives of their patients.

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Where Is the Occlusion Causing This STEMI... ... and Could It Be Even Worse Than It Appears? PART #1



Jerry W. Jones, MD FACEP FAAEM Section Editor, ECG Corner



Figure 1 – ECG by permission of Dawn Altman, RN ("The ECG Guru")

This is an **acute anterior epicardial ischemia** - also known as an *acute anterior MI*. We used to call it an antero*septal* MI but today we call it an antero*apical* MI. That's because the proximal septum is not usually involved in these infarctions. Instead, it is the lower septum and the adjacent apical myocardium that is involved.

The first site of ventricular depolarization is just distal to the mid-septum. Depolarization then proceeds throughout the rest of the left ventricle in a counterclockwise manner with the proximal (basilar) septum being among the last areas of the left ventricle to be activated.

But what is so interesting about this particular myocardial infarction? Let's look closer...

This is a left anterior descending (LAD) artery occlusion that has occurred proximal to the first septal perforator. How do I know that? How can you determine the level of occlusion of the LAD?

To understand how to do that, we must recall some very basic (and schematic) anatomy of the left anterior descending artery.

When we visualize the LAD artery, we aren't thinking of an "anatomically-correct" diagram; instead, we think of a *schematic*, *conceptualized* picture, like this:



Figure 2 – The Left Anterior Descending Artery (LAD)

Usually, the **first branch** from the LAD is the *first septal perforator* (Fig. 2). Actually, there are more septal perforators, but we are only interested in the *first* one. It will serve to represent *all* the septal perforator branches. The septal perforators extend into the interventricular septum perpendicular to the LAD and provide circulation to the upper 2/3 of the septum.

Usually, the second branch from the LAD is the *first diagonal branch*. Actually, there are anywhere from two to four diagonal branches of varying lengths (and occasionally, even one or two more) which course down the lateral surface of the left ventricle... but we are only interested in the *first* one. It will serve to represent *all* the diagonal branches.

In most people, the first septal perforator is the first branch off the LAD, followed closely by the first diagonal branch (Fig. 2). Very infrequently, the first diagonal branch is the first branch off the LAD (Fig. 2-B), followed very closely by the first septal perforator branch.

You will often hear discussions of whether there is a *proximal* or *distal* occlusion of the LAD. When the word *proximal* is used in this context without mentioning "*proximal to what?*" it is assumed *proximal* (or *distal*) to the *first diagonal branch* – *not* the first septal perforator.

Let's begin by learning how to ascertain if the occlusion is *proximal* or *distal* to the first diagonal branch...

Figure 1 – repeated



1.

The first thing to be done is to ascertain whether the occlusion actually involves the LAD. ST elevation in V1 - V3 without concurrent STE in the inferior leads is a good sign that the occlusion is indeed occurring in the LAD. The left circumflex artery (LCx) does not reach the area of Leads V1 and V2 and the RCA would very, very rarely cause ST elevation in Leads V1 and V2 without concurrent ST elevation in the inferior leads.

OK... now where in the LAD is the occlusion located?

2.

To determine if the occlusion is *proximal* to the first diagonal branch, look at the ST segments in Leads II, III and aVF (the inferior leads). If they *all* have depressed ST segments, the occlusion is *proximal to the first diagonal branch*. In this ECG, the occlusion is proximal to the first diagonal branch. If there were no ST depression in the inferior leads, the occlusion would be *distal* to the first diagonal branch.

OK... we've determined that this LAD occlusion is *proximal* – *proximal*, that is, to the *first diagonal branch*. But how can we determine whether the occlusion is proximal or distal to the *first septal perforator*?



First, look at Leads aVR and V1. If there is ST *elevation* in *both* leads, then the occlusion is *proximal* to the *first septal perforator*. But if neither lead manifests ST elevation – or, if there is ST elevation in one lead but not the other – then we cannot say with certainty that the occlusion is proximal to the first septal perforator based on that criterion. *But don't give up yet!* We have one more card up our sleeve: if there is ST *depression* in Lead V6, then the LAD occlusion is *proximal* to the *first septal perforator*.

So, while there is only ONE criterion for determining the location of the occlusion with respect to the *first diagonal branch* (ST depression in the inferior leads), there are **two** criteria for determining the location of the occlusion with respect to the *first septal perforator*. The occlusion on this ECG is *proximal* to the first septal perforator.

Why is this information important? It's the difference between *reading* and *interpreting* an ECG! **Reading** the ECG establishes the presence of an acute STEMI in the LAD. **Interpretation** is knowing that the occlusion is *proximal to the first diagonal branch*, alerting you to the fact that this is a STEMI with a very large area at risk. The larger the area at risk, the greater the likelihood of a decreased ejection fraction and cardiogenic shock! The larger the area at risk, the greater the likelihood of a paroxysmal polymorphic ventricular tachycardia appearing during the very early stages of the ischemia. Let me translate that for you: *All this while still under your care*!

If the occlusion is *proximal to the first septal perforator* the right bundle branch may become blocked acutely, leading to an acute, dyssynchronous contraction of the ventricles – *at the worst possible time!* This adds an additional negative factor to the likelihood of a reduced left ventricular ejection fraction and a lethal cardiac tachydysrhythmia – *again, all while under your watch!*

Beginners *read* ECGs... ...professionals *interpret* them!

In Part 2, you will learn why this particular ECG may be much more ominous than you suspect even now!

Wound Management: Why Are We Sending Away Lacerations?



Patrick O'Malley, MD

Section Editor, Lacerations and Wounds

Lip and facial lacerations are common injuries presenting to Urgent Care. Unfounded fears may be leading Urgent Care clinicians to turn these patients away. I recently co-authored a study (1) with two physician colleagues where we called 100 Urgent Care centers across the country posing as a patient with a lip laceration.

An unbelievable 45% of the centers we called said they could not manage this type of laceration in their facility. The reasons cited for refusal are listed in Table 1.

Table 1. Free-Text Responses from "No" Respondents

- Have to ask the physician, concerned about how deep it was
- Not on the face
- We do cuts on the hands, arms, and legs, but not the face
- Center policy that we do not do sutures on the face
- Had to go ask the provider. Says they would look at it but that "they can't do it if it goes onto the lip inside the mouth because those always come undone"
- Will need a plastic surgeon, we don't touch the face
- Can do stitches but not "cosmetic"
- It's a sensitive area. Go to the ER where they have surgeons. We have a lot of new providers, PAs and NPs who aren't comfortable with suturing
- Don't feel comfortable doing the lip line or the eyebrow
- Not with it going all the way through, "go to the ER to get a good stitch job"
- Nothing on the face, will repair lacs elsewhere
- Nothing that will "leave a scar on the face"
- Aren't doing stitches right now "due to COVID"
- Can't do stitches on the neck and up
- Do not repair lacs on the face
- Won't do it if it touches the lip
- Would have to see it. Probably not, may need plastics because it "needs to come out perfect"
- Nothing on face; needs plastic surgery

From: Ford DT, O'Malley PM, Dick B. Assessing Urgent Care Clinics' Readiness to manage a lip laceration. J Urgent Care Med. 2023;17(8):39-41., with permission.

Let's discuss the reasons these centers chose to send away these lacerations, as many are based on opinion and untruths. Addressing these reasons may help you feel more comfortable in managing facial lacerations.

Many centers simply stated they do not repair facial lacerations. That is just their policy. This trend is concerning and should be addressed. Like any procedure or skill, suturing in general, and especially on the face, takes practice. No one wants to have a bad cosmetic outcome- — not the clinician, not the patient. Guess what? <u>All wounds leave a scar no matter who repairs them</u>. They just do. It is part of the physiology of wound healing. Knowing and accepting this is a big part of being able to manage these injuries. The trick is knowing the techniques to mitigate this and make the scar less obtrusive.

Myth #1: Plastic surgeons are readily available in the ER. Just telling a patient to go to the ER and see a plastic surgeon does not mean this will happen. In fact, there is a 99% chance that the wound will be repaired by an emergency physician, PA, or NP. If they do see a plastic surgeon, it will likely be a surgery resident on a plastic surgery rotation or a first-year fellow. Most ER providers have **more** experience than the on-call resident for plastic surgery. Giving the patient the expectation that they will see a specialist puts the emergency clinician in a tight spot. Please don't promise the patient what services they will receive in the ER. It's OK to say the emergency team will evaluate the patient and determine the next steps. If you really want them to see a plastic surgeon, call one yourself and discuss the case and arrange for them to see the surgeon in the office. You cannot guarantee the patient will see a plastic surgeon in the ER (2).

Myth #2: Plastic surgeon's repairs do not leave scars. ALL wounds scar. It is a physiologic process, and a fact. But you can take steps to help reduce the scarring. These include carefully removing foreign bodies, debriding devitalized tissues, copious irrigation to reduce chance of infection, selecting the appropriate suture for the wound, prescribing antibiotics for high-risk wounds, providing concise discharge instructions for wound care and when to return for recheck or problems, use of sunscreen when the scab has fallen off, and follow-up with plastic surgeon later if the outcome is not as desired. (3)

Myth #3: Patients will sue if there is a bad cosmetic outcome. Patients sue for many reasons, but usually not because of a scar, unless you missed something. They sue because you missed a foreign body that required further care. They sue because you overlooked significant risk of infection or a tendon injury. They sue because you were not a nice person. (4) Seriously.

They came to you, expecting it to be repaired. They didn't go to the ER and didn't call a plastic surgeon. They expect that this is something you can do. I've had people tell me, "No, I don't want a plastic surgeon to do this, that's why I came here." It may be a one- to two-hour drive to the closest hospital with a plastic surgeon in many communities. This is just not feasible in many areas, not to mention the extra cost and hassle.

If the fear of litigation is your driving force here, consider saying something like this: "I have repaired many wounds on the face, and I feel very comfortable doing this. All wounds leave a scar. I can take steps to minimize this and share with you some things you can do to minimize scarring. You can always follow up with a plastic surgeon later for scar revision in the unlikely event of a poor cosmetic result." You will be surprised at how much a simple statement like this can put your patient at ease and reduce any medicolegal risk.

If you are not comfortable suturing the face, that is another whole discussion, but it's OK — you must start somewhere. Skin on the face is the same as skin elsewhere. It has layers, it bleeds, and you can put stitches in it. I encourage you to see every single laceration you can. Shadow a co-worker when they are suturing, take a day in the local ER to observe some more complicated suturing, or take an in-person or online class. Get a practice suture pad and fill it up. If you are a medical director, the suture pad can make for a great homework assignment for your newer or less experienced providers. Challenge them to do 100 sutures in a month. This can be done at home or work, can serve as a check off assignment, and can help give your new clinicians experience in the technical aspect of laceration management.

It should also be stated that staff answering the phones need to be careful with the phrasing they use when patients call in asking if they can be managed in your center. Secret shopper calling using a mock patient is a great way to test this. Have a family member, co-worker, or friend call asking if your center can see XYZ. You'd be surprised at the answers they get. Use a script to ensure a uniform experience. An example of this: "Question: Do you do lacerations on the face? Answer: We would be happy to evaluate

you for this injury. In most cases we are capable of this service, but the provider will evaluate you and give you advice and options for your wound care." If in doubt, have the front desk ask the clinician working if they can do a procedure before telling the patient to go elsewhere. Remember this is revenue going out your door.

As the Urgent Care workforce shifts to newer, potentially less experienced providers who may not have had the needed suturing experience, we must increase education and training in procedures like suturing. These procedures were once considered the "bread and butter" of Urgent Care medicine and were one of the defining services of Urgent Care practice. Urgent Care clinicians who are less skilled in these procedures should take the initiative to improve their skills. To help support and foster this, medical directors should provide them with the tools and training they need so that they can practice at the highest of Urgent Care standards.

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Coding Corner: Chief Complaint of Cough and Fever



Brad Laymon PA-C, CPC, CEMC Section Editor, Coding Corner

Chief Complaint: Cough and fever

Subjective: Forty-four y/o female (new patient) complains of cough and fever. The current episode started two days ago. The cough is nonproductive. Exposure to COVID four days ago at work. Associated symptoms include fever, dyspnea on exertion, fatigue, body aches, nasal congestion, and nausea. Pertinent negatives include no chest pain, palpitations, headaches, or orthopnea. Her symptoms are alleviated by OTC cough suppressant. There is no history of COPD.

Review of Systems:

Constitutional: Positive for fatigue. Negative for chills. HENT: Positive for sinus congestion. Eyes: Negative. Cardiovascular: Positive for dyspnea on exertion. Negative for chest pain. Respiratory: Positive for cough. Negative for shortness of breath at rest. Skin: No rash. Musculoskeletal: Negative for myalgias. Gastrointestinal: Positive for nausea. Negative for diarrhea and vomiting. Neurological: Negative for headaches.

Past Medical History:

• Bronchitis

Social History:

- Smoking status: Current some day smoker Packs/day: 0.50 X 25 years Types: Cigarettes
- Alcohol use: No

Objective:

BP 134/89 (BP Location: Right arm, Patient Position: Sitting) | Pulse 112 | Temp 101.6 °F (Tympanic) | Resp 20 | Ht 5' 5" (1.549 m) | Wt 139 lb (54 kg) | SpO2 95%

Physical Exam:

Constitutional:

General: She is not in acute respiratory distress.

Appearance: She is well-developed. She is mildly ill-appearing.

HENT:

Nose: Mucosal edema present. No congestion.

Mouth/Throat:

Mouth: Mucous membranes are moist.

Pharynx: No posterior oropharyngeal erythema.

Neck:

Vascular: No JVD.

Cardiovascular:

Rate and Rhythm: Tachy rate and regular rhythm.

Heart sounds: Normal heart sounds.

Musculoskeletal:

Right lower leg: No edema.

Left lower leg: No edema.

Pulmonary:

Effort: Pulmonary effort is normal. No respiratory distress.

Breath sounds: No stridor. Examination of the lung fields reveals rhonchi. Rhonchi (Diffuse mild rhonchi bilaterally. Coarse cough.) present. Rales right lung field. No wheezing.

Skin:

General: Skin is warm and dry.

Neurological:

General: No focal deficit present.

Mental Status: She is alert.

Psychiatric:

Behavior: Behavior normal.

Radiology interpretation:

I personally viewed the two view CXR which shows an infiltrate in the right middle lobe. No mass or pneumothorax.

Lab orders placed this encounter:

POCT COVID test is negative POCT Influenza test is negative for type A & B.

Impression / Plan:

- 1. Right middle lobe pneumonia
- 2. Suspected exposure to COVID

See specific instructions and follow-up as given to the patient caregiver below. We discussed the risk and benefits of taking amox/clav including side effects and allergic reactions.

Discussed with the patient the need for smoking cessation. She quit about three years ago with Wellbutrin for six months. She will contact her PCP for further discussion/management of tobacco use.

Follow-up with your PCP this week. Go to the ED if symptoms worsen. Take OTC Tylenol PRN for fever and muscle/body aches. Increase fluids and plenty of rest.

New Prescriptions:

Albuterol sulfate HFA 108 (90 Base) MCG/ACT inhaler Commonly known as: PROVENTIL HFA Two puffs, Inhalation, every six hours as needed Amox/clav 875mg Take one pill by mouth twice daily for 10 days

Number and Complexity of Problems Addressed

The patient complains of fever, cough, dyspnea on exertion, fatigue, nausea, and body aches. Fever at 101.6 and HR of 112 meets the criteria for SIRS (Systemic Inflammatory Response Syndrome). This would be considered an "acute illness with systemic symptoms" moderate, Level 4. If the patient had fever, cough, body aches, nausea, fatigue but did NOT meet SIRS criteria, most coders would still consider this "systemic symptoms" and code at Level 4, but documentation is key. If this patient had been sent to the ED, it still would be Level 4. If the patient was hypoxic or looked moderate to severely ill, it would be a Level 5. Again, it comes down to documentation.

Amount and/or Complexity of Data to be Reviewed and Analyzed

Two POCT were ordered (COVID and Influenza) and a chest X-ray. We do not count the chest X-ray as a point since your company most likely bills for either the technical or professional component. If your organization does not bill for any component of the X-ray, then it would count as one point. The 2 POCT meet the criteria for Category 1 in the Complexity of Data, low, Level 3.

Risk of Complications and/or Morbidity or Mortality of Patient Management

Prescription medications (Augmentin and Albuterol) were prescribed. This would meet the criteria for moderate, Level 4 risk. The risk section of the MDM table, per the guidelines, is based upon consequences of the problem(s) addressed at the encounter when appropriately treated. It is not specific to the patient's condition but to the risk of patient management.

Two of the three elements of MDM need to be met when choosing your level of service. We successfully met Level 4 criteria in the Problems Addressed and Risk categories, so this is a 99204.

Occupational Medicine—A Difficult Adjuster Call



Max Lebow, MD, MPH, FACEP, FACOEM Section Editor, Occupational Medicine

A patient presents to your center with his employer's authorization to treat a workplace injury.

According to the patient, two days ago, he was involved in an MVA while performing deliveries, a normal part of his job. He reported the injury to his employer that day, complaining of left arm pain only. The employer called the

workers' compensation carrier, who accepted the case as a work-related injury.

On examination, the patient complained of pain in the left arm, right shoulder, and back. His physical examination shows an abrasion of his left arm, tenderness, and decreased range of motion of his right shoulder and lumbar spine.

As you are documenting his injury, you get a call from the workers' compensation insurance adjuster. The adjuster states that the insurance company is authorizing the left arm only for treatment. In addition, the adjuster has asked you to perform a drug test on the patient.

Background

What is the role of the Adjuster in Workers' Compensation Claims?

All insurance companies have adjusters that evaluate claims. Adjusters in workers' compensation obtain special training and certification as they play an important part in the outcome of cases.

The workers' compensation adjuster's role begins when the employer reports that a worker has been injured. The WC insurance adjuster will then:

- Determine if the injury or illness will be accepted as a workers' compensation claim. This decision is made by analyzing the mechanism of injury and OSHA and state workers' compensation statutes.
- Investigate causation: Review the medical provider records to ensure that the medical cause of the injury or illness is related to employee's work activities. The adjuster may ask for a causation-specific examination.
- Approve each body part that will be accepted as part of the workers' compensation claim.
- Evaluate requests for services, such as MRI or specialty referral. The adjuster may approve the services immediately or send them to medical peer review for evaluation. Sometimes, as in this case, they even suggest tests.
- Approve payments of employee benefits.

After the adjuster's phone call, what should you do next?

Naturally, patient care always comes first. Regardless of the adjuster's instructions, fully evaluate the patient, and take X-rays as you would in any other case. If additional testing outside the capabilities of your center is required immediately, send them to the ED without hesitation.

After your evaluation, if you believe the associated symptoms, in addition to the left arm, are related to the accident, document this fact clearly and unambiguously in the chart. A statement such as, "After review of the mechanism of injury and examination of the patient, I have determined that the right shoulder and back are related to the injury that occurred on 1/2/23." It may sometimes be necessary to talk to the adjuster who may initiate a call, depending on the circumstances of the case.

What about the adjuster's request that you perform a drug test?

Do not perform a drug test based solely on the request from an adjuster or patient's employer. You must complete an independent evaluation of the patient. If the patient shows signs of intoxication, you should document them and do a drug test only if it is justified.

In future articles, we will discuss the roles of some of the other stakeholders in the complex world of workers' compensation.

You can reach Dr. Lebow at:

Max Lebow, MD, MPH, FACEP, FACOEM Medical Director | Board Certified in Occupational Medicine and Emergency Medicine Reliant Immediate Care Medical Group, Inc. Insight Practice Partners RCM, Inc. (o) 310.215.6020 mlebow@reliantuc.com | www.ReliantMedicalCenter.com

A Best Practice from the College of Urgent Care Medicine

Diagnosis and Treatment of Syphilis	Diagnosis	and Trea	itment o	f Sy	philis
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Date Reviewed	25 April 2023
Subject	Diagnosis and Treatment of Syphilis in Urgent Care
Patient Population	Sexually active immunocompetent male and female patients
Rationale	Patients with active syphilis and those with incidental positive lab results for syphilis are presenting with increasing frequency to Urgent Care centers throughout the United States. Urgent Care providers should have a working knowledge of tests available for syphilis, the interpretation of those test results, and the appropriate treatment for each stage of syphilis.
Introduction	Syphilis is a systemic, sexually transmitted disease caused by the spirochete <i>T. pallidum</i> . This disease is divided into three stages based on clinical findings which guide treatment and follow-up. Patients may present in one of three ways: with symptoms, as asymptomatic exposures, or as asymptomatic with a positive test during routine screening for STIs.
	Syphilis has become an increasingly common concern in UC over the last few years. Thought to be near eradication in 2000, since then the incidence has climbed steadily, with a 52% increase from 2016 to 2020 and an incidence of 12.6 cases per 1000 population. Approximately 80% of new cases of syphilis occur in men. Men who have sex with men (MSM) are disproportionately impacted. Risk factors for primary and secondary syphilis in this group are methamphetamine use and acquiring a new sexual partner through social media. In women and men who have sex with women (MSW), risk factors include use of methamphetamine and injection drugs including heroin.
Evidence- Based Guideline	Walensky RP, Houry D, Jernigan DB, et. al. Sexually Transmitted Infections Treatment Guidelines, 2021. <i>MMWR Recomm Rep</i> 2021;70, No. 4, 41-62.
Discussion	 Clinical Presentation Primary syphilis is characterized by a single painless ulcer, or chancre, at the site of inoculation. Rarely it may present with multiple, atypical, or painful lesions. Secondary syphilis has been called the great masquerader, as the typical rash does not always appear typically. Patients may have a generalized or localized skin rash, mucocutaneous lesions, and lymphadenopathy. Untreated cases may become tertiary syphilis, which is characterized by cardiac involvement, gummatous lesions, tabes dorsalis, and general paresis. This is called neurosyphilis. Latent syphilis is the term for those patients who lack clinical manifestations but test
	positive on serologic testing. If acquired within the previous year, it is considered early latent, if more than one year, the infection is considered late latent, or latent syphilis of unknown duration.

Early neurosyphilis may occur at any stage of infection and may include meningitis, cranial nerve dysfunction, stroke, acute altered mental status, ocular syphilis or otosyphilis. Late neurosyphilis, including tabes dorsalis, and general paresis, may cause personality changes, psychiatric disorders, and dementia. Late neurosyphilis occurs 10 to 30+ years after initial infection. Rare cases may occur sooner.

Congenital syphilis occurs when transmission occurs from an infected mother to the fetus during pregnancy. The rates of reported congenital syphilis in the U.S. has been increasing dramatically since 2012. In 2019 the national rate of 48.5 cases per 100,000 live births has increased 477% since 2012.

Laboratory Testing

Early detection and treatment are essential to prevent the spread of disease and the late-stage complications of syphilis. Screening of at-risk individuals is the best way to accomplish this. Patients should be screened with a nontreponemal test, and if positive, should be confirmed by a second, treponemal test. (See Figure 1 and 2.)

Treatment

Penicillin G administered parenterally is the preferred drug for treating all stages of syphilis. The type of penicillin, dosage, and length of treatment depends on the stage and clinical manifestations present. (See Figure 3.) Latent and tertiary syphilis requires longer treatment. Benzathine penicillin, commercially known as Bicillin L-A is recommended standard treatment in the US. A similarly named combination long and short acting benzathine-procaine penicillin, commercially known as Bicillin C-R, should NOT be used. These recommendations are based on clinical trials, observational studies, and many decades of clinical experiences.

Patients with a true allergy to penicillin can be alternately treated with doxycycline or ceftriaxone or desensitized to penicillin and then treated.

Parenteral penicillin G is the only therapy with documented efficacy for syphilis during pregnancy. Pregnant women with syphilis with a penicillin allergy should be desensitized by an allergist and then treated with penicillin.

The Jarisch-Herxheimer reaction is an acute febrile reaction including headache, myalgia, and fever that occurs within 24 hours of treatment of syphilis, most commonly early syphilis. The incidence is approximately 10-35% (Yang). It can occur with any treatment, not just penicillin. Although the mechanism is not completely understood, it is thought to be due to an immune response to the release of lipoproteins, cytokines, and immune complexes from killed organisms. The reaction cannot be prevented, but is generally self-limited, resolving within 12-24 hours. Patients should be warned of the possibility of reaction. Treatment with NSAIDs and acetaminophen is generally all that is required.

	Sexual Partners
	Sexual partners of patients with syphilis should be evaluated clinically and serologically. Sexual transmission occurs from the mucocutaneous lesions and is uncommon after the first year of infection. Patients exposed within 90 days of the partner's diagnosis should be treated regardless of serologic results. Patients exposed more than 90 days after the partner's diagnosis should be treated based on serology results. (See the complete guideline for in-depth treatment recommendations of partners.)
	All patients who have a confirmed diagnosis of syphilis should be tested for HIV. PrEP should be considered if HIV testing is negative.
	Most states require health department notification of positive syphilis test. Contact your local health department to determine what is required in your area.
	Many areas have government-sponsored sexually transmitted disease clinics that can follow-up and treat these patients in the long term.
Summary	Patients presenting to Urgent Care with concerns of syphilis infections and exposures should be evaluated to determine if their risk for primary, secondary, or latent syphilis. A non-treponemal test should be performed. If positive, the result should be confirmed with a treponemal test. Positive results in patients without past infection should be determined to have a current infection. Patients with previous infection should have their current results compared to previous results to determine if the infection is new.
	Patients requiring treatment should be treated with long-acting parenteral penicillin G, with duration dependent upon stage of infection. Doxycycline is an alternative in patients with a history of penicillin allergy. Pregnant patients cannot be treated with doxycycline and should be desensitized to and treated with penicillin by an allergist.
	Syphilis is a health department reportable disease. Many areas have sexually transmitted disease clinics that can follow-up and treat these patients in the long term.
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Reviewers	Tracey Q. Davidoff, MD, FCUCM, Sean McNeeley, MD, FCUCM

Figure 1. Screening for syphilis in adults without prior infection: Initial nontreponemal test



This algorithm addresses syphilis screening in asymptomatic, nonpregnant adults without a history of syphilis.

* Nontreponemal tests include the rapid plasma reagin (RPR), the Venereal Disease Research Laboratory (VDRL), and the toluidine red unheated serum test (TRUST).

Treponemal tests include the fluorescent treponemal antibody absorption (FTA-ABS), the *Treponema pallidum* particle agglutination (TPPA), the *T. pallidum* enzyme immunoassay (TP-EIA), or chemiluminescence immunoassay (CIA). These different tests target different antigens.

 Δ Treatment of syphilis depends upon the clinical manifestations and the stage of disease (e.g., early, late, neurosyphilis). Asymptomatic patients are considered to have latent syphilis and should be treated for

early latent (patient has serologic evidence of *T. pallidum* infection that was acquired within the last 12 months) or late latent disease (the initial infection occurred more than 12 months ago). If the timing of an infection is not known, late latent syphilis is presumed. Refer to UpToDate topic on the treatment and monitoring of syphilis for information on treatment regimens.

♦ False-positive nontreponemal tests can be seen in the setting of pregnancy, an acute event (e.g., febrile illness, endocarditis, rickettsial disease), or recent immunization. Test abnormalities attributed to these conditions are usually transitory and typically last for six months or less. Other etiologies include chronic conditions, such as autoimmune disorders (particularly systemic lupus erythematosus), intravenous drug use, chronic liver disease, and underlying HIV disease.

<u>https://www.uptodate.com/contents/image?imageKey=ID%2F134584&topicKey=ID%2F7588&search=sy</u> philis&rank=1~150&source=see link, accessed online 12/30/22

Figure 2.

Screening for syphilis in adults with prior infection*



This algorithm addresses syphilis screening in asymptomatic, nonpregnant adults with prior syphilis. * It is important to ensure that all patients with prior syphilis have been adequately treated.

Nontreponemal tests include the rapid plasma reagin (RPR), the Venereal Disease Research Laboratory (VDRL), and the toluidine red unheated serum test (TRUST).

 Δ Treponemal tests include the fluorescent treponemal antibody absorption (FTA-ABS), the *Treponema pallidum* particle agglutination (TPPA), the *T. pallidum* enzyme immunoassay (TP-EIA), or chemiluminescence immunoassay (CIA). These different tests target different antigens.

♦ Treatment of syphilis depends upon the clinical manifestations and the stage of disease (e.g., early, late, neurosyphilis). For those with prior syphilis, results of prior nontreponemal tests are also used to guide treatment decisions. Refer to the UpToDate topic on treatment of syphilis.

If a patient with prior treated syphilis had an initial treponemal test performed, this pattern (reactive treponemal test/nonreactive nontreponemal test) is expected.

<u>https://www.uptodate.com/contents/image?imageKey=ID%2F134584&topicKey=ID%2F7588&search=sy</u> <u>philis&rank=1~150&source=see_link</u>, accessed online 12/30/22

Figure 3.

-				
Recommended	Treatment Re	egimens for	Syphilis	Infections

Type of Infection	Recommended Treatment	Alternative Treatment	Comments
Primary and secondary syphilis in adults, including those with HIV	Benzathine penicillin G 2.4 million units IM, single dose	 Doxycycline 100mg 2 times per day for 14 days Desensitize and use benzathine penicillin G Ceftriaxone 1gm IM/IV daily for 10 days (optimum dose and duration not defined by clinical trials) Azithromycin 2gm oral dose, not recommended due to resistance 	Non-pregnant adults (see below)
Primary and secondary syphilis in infants and children	Benzathine penicillin G 50,000 units/kg IM, maximum 2.4 million units single dose	 Not defined Consider sensitization and treatment with penicillin G 	Must determine if it is congenital or acquired. Should be managed by an infectious disease specialist.
Primary and secondary syphilis in adults who are pregnant and allergic to penicillin	Skin test or oral challenge to confirm allergy. Desensitize if positive, and treat with benzathine penicillin G as above.	None	

Early latent syphilis in	Benzathine penicillin G	Doxycycline 100mg 2 times	Close serologic follow
adults, < 1 year	2.4 million units IM,	daily for 28 days	up recommended
	single dose		especially if alternatives
			used.
Late latent syphilis in	Benzathine penicillin G	Doxycycline 100mg 2 times	Close serologic follow
adults, > 1 year	2.4 million units IM,	daily for 28 days	up recommended
	weekly for 3 weeks		especially if alternatives
	total. Must restart		used.
	series if interval		
	between doses is > 9		
	days.		
Latent syphilis in			 Determine if it is
infants and children			congenital or acquired
			and treat accordingly
			• Should be managed by
			an infectious disease
			specialist. Should be
			assessed for
			neurosyphilis.
Treatment failure, < 4-	Benzathine penicillin G	Should be treated by	May represent a new
fold decrease in titers 1	2.4 million units IM,	infectious disease specialist	infection.
year after treatment	weekly for three weeks		Should be assessed for
	total. Must restart		neurosyphilis.
	series ir interval		
	davs		
Tertiary synhilis	Benzathine penicillin G	Should be treated by	
excluding neurosynhilis	2.4 million units IM	infectious disease specialist	
(i.e. normal CSF exam)	weekly for 3 weeks		
	total. Must restart		
	series if interval		
	between doses is > 9		
	days.		
Neurosyphilis, ocular	Aqueous crystalline	Procaine penicillin G 2.4	
syphilis, or otosyphilis	penicillin G, 18-24	million units once daily plus	
in adults	million units per day,	probenecid 500mg orally once	
	every 4 hours, or	daily, both for 10-14 days	
	continuous infusion for	Ceftriaxone 1-2gm IM/IV daily	
	10-14 days.	for 10-14 days.	
		Desensitize and treat with	
		penicillin.	

Insights

How to Go from Good to *Great* in Urgent Care

Victoria Pittman, MPAP, PA-C

As the role of Urgent Care clinicians continues to expand in the house of medicine and we take on more responsibilities, it's our job as clinicians to ask ourselves:

How can we be better?

How can we do better?

How can we treat patients better?

In other words, how can we be great Urgent Care clinicians?

To answer these questions, we must start by understanding the unique challenges of working in Urgent Care. The answer to what makes a great Urgent Care clinician comes from understanding how to overcome these challenges.

Multiple Hats

If you've worked a day in Urgent Care, you know it's a constant juggling of different hats.

There are times when you must put on your emergency medicine hat and think from an acute care mindset to determine if the patient needs a higher level of care. Then there are times when you have to switch gears and put on your primary care hat to bridge the gap between Urgent Care and primary care follow-up. As if that isn't enough, Urgent Care clinicians also must take on various specialist roles when follow-up appointments for patients are hard to come by.

Juggling all these hats can be hard on even the most seasoned Urgent Care clinicians. And mastering any of them is even harder to do when working in a fast-paced setting.

Limited Resources

Many Urgent Care centers are resource-limited, especially in comparison to emergency departments. While X-ray capability, point of care respiratory viral and strep testing, and phlebotomy services are standard, other tests or supplies can be lacking in Urgent Care centers. This makes caring for certain patients or medical conditions challenging.

With this information in mind, what can we do to become great Urgent Care clinicians?

- **Become an (evidence-based) MacGyver:** Limited resources are no problem when you're armed with evidence-based alternative approaches to certain procedures or medical conditions.

For example, imagine you need to get a urine sample from a feverish infant to evaluate for a possible UTI. If your center doesn't stock pediatric straight catheters, you can try the <u>Quick Wee</u> method or the <u>Bladder Stimulation Technique</u> to collect a clean catch urine. Evaluating a patient with chest pain but don't have a point of care troponin? Use the <u>HEAR</u> score to risk stratify patients that need a higher level of care.

- Master your juggling skills: Sharp clinical reasoning skills can help you switch from one hat to the next. Use your emergency medicine hat to determine the "worst first." Once emergent issues have been considered and acted upon, your primary care hat can help determine the next steps in the longer-term management of the patient.
- Severely elevated blood pressure is a great example of how a clear clinical reasoning pathway comes in handy. When you see a patient with severely elevated blood pressure (≥ 160/110 mmHg), put on your emergency medicine hat and use your history and exam to determine if the patient is having any signs or symptoms of end organ dysfunction. If they are, refer them to the emergency department. If they're not, then you swap out your emergency medicine hat for your primary care hat and determine what that patient needs until they're seen in follow-up, whether it's lifestyle modifications or starting an antihypertensive.
- Stay up to date with the recent literature and guidelines: To become a MacGyver in the face of limited resources and to master your juggling skills, you need to stay up to date with the latest literature. Our unique place in the house of medicine requires us to be in the know about both emergency medicine *and* primary care literature... and everything in between!

In all honesty, this can feel overwhelming, but there are so many ways to stay informed. Listen to podcasts or subscribe to newsletters that help direct you to the most pertinent journal articles. You could even start a journal club at your work and talk about what you're reading and listening to with your colleagues.

Community-Acquired Pneumonia in Urgent Care Medicine

Controversies and Cutting Edge

While antibiotics remain the mainstay of treatment for CAP, more recent data have evaluated the use of adjunctive medications.

Corticosteroids

The 2019 ATS/IDSA guidelines recommend using corticosteroids for CAP and refractory septic shock but recommend against the routine use of corticosteroids in all other cases.³ The authors commented that while no study has shown excess mortality in CAP patients who have received corticosteroids, the overall risk for adverse events outweighs any potential benefits.

Despite these recommendations, the available literature regarding the role of corticosteroids suggests that the balance between potential harm and potential benefit may be more subtle. In cases of non-severe CAP, multiple studies have shown an improvement in outcomes that may be clinically significant, including lower rates of mechanical ventilation and decreased inpatient lengths of stay.⁵⁷ Conversely, other studies have shown increased rates of hyperglycemia and secondary infection in patients who are given short-term doses of corticosteroids.⁵⁸ In cases of severe CAP, the available evidence supporting the use of corticosteroids seems to be more clear, with a reported number needed to treat of 17 to prevent 1 death. However, in this same subset of patients, the reported number needed to harm is 11. While this number needed to treat is greater than the reported number needed to harm, the relative risks of harm (largely in the form of hyperglycemia) may be justified by the potential mortality benefit.⁵⁸ Based on these recommendations, Urgent Care clinicians should carefully consider each patient before determining if corticosteroid treatment for CAP would be beneficial or harmful.

Influenza, Antiviral Agents, and Community-Acquired Pneumonia

Based on a moderate quality of evidence, the ATS/ IDSA guidelines advocate for the use of oseltamivir in all patients with CAP who test positive for influenza, regardless of length of illness.² Despite the lack of studies specifically assessing the use of antiviral agents in patients with CAP and influenza, the authors based their recommendations on observational studies showing an association between the use of oseltamivir and a reduced mortality in patients who are hospitalized with influenza.⁵⁹

For the outpatient setting, the guideline authors recommend using oseltamivir regardless of a patient's duration of symptoms.³ The authors cite a paper by Dobson et al⁶⁰ that reported a decreased rate of lower respiratory complications in patients with influenza (but not necessarily pneumonia) who were treated with antivirals. This recommendation for fairly widespread use of antivirals closely mirrors the 2018 IDSA guideline on seasonal influenza, which similarly advocated for the use of these medications.⁶¹

There are several potential issues with these recommendations. First, none of the studies cited specifically evaluated patients who have both pneumonia and influenza. The authors asserted that, given the reported benefits of oseltamivir in patients with isolated influenza, patients with influenza and CAP would similarly benefit from an aggressive use of antiviral agents. While this may prove to be true, the evidence behind this recommendation is lacking. A second issue with these recommendations involves the ongoing debate regarding the efficacy and tolerability of oseltamivir. While multiple large meta-analyses and systematic reviews concluded that oseltamivir can reduce symptoms and downstream complications, most of these publications have significant methodologic limitations that call into question the reported

efficacy of these agents.⁶² Clinicians should know that the ATS/IDSA guidelines call for the widespread use of oseltamivir, but should also understand there is limited quality of available evidence.⁶³

5 Things That Will Change Your Practice

Consider using the CRB-65 clinical decision tool, along with clinical judgment, to help identify the subset of patients in Urgent Care who can safely receive outpatient treatment.

Do not prescribe a macrolide alone for first-line treatment of CAP. Macrolide monotherapy is a poor choice in many areas due to increasing rates of macrolide-resistant pneumococcus.³ The 2019 ATS/ IDSA guidelines recommend amoxicillin or doxycycline as first-line treatment for adult outpatients without comorbidities.³

Limit antibiotic use to 5 days in patients who show signs of improvement. Studies suggest that patients who take longer courses of antibiotics have similar rates of clinical cure but a higher incidence of adverse events. It is reasonable to start all patients on a 5-day course of antibiotics and then reassess if they are not improving by the end of their prescription.

Do not routinely prescribe corticosteroids except for patients with refractory septic shock.3 In patients with comorbidities such as asthma or chronic obstructive pulmonary disease, the risk of side effects and complications of corticosteroid use must be balanced against the benefits of use and should be determined on a case-by-case basis.

Counsel patients that most antitussive treatments are ineffective; the cough from pneumonia is usually self-limited and will improve with resolution of the infection.

Risk Management Pitfalls for Community-Acquired Pneumonia in Urgent Care

- 1. "I thought the tachycardia and hypoxemia were due to pneumonia." When CAP is not the most likely diagnosis, consider using clinical decision tools such as the PERC rule (available at www.mdcalc.com/calc/347/perc-rule-pulmonary-embolism) and Wells criteria (available at www.mdcalc.com/calc/115/wells-criteria-pulmonary-embolism) to evaluate for pulmonary embolism. Patients with atypical signs and symptoms of CAP (sudden onset of shortness of breath; multiple risk factors for pulmonary embolism) or with findings on imaging that could be consistent with pulmonary infarctions should be evaluated further.
- 2. "Azithromycin seemed like a good choice for her." The choice of antibiotic therapy should be made in coordination with the most up-to-date recommendations. The choice of antibiotic therapy varies, depending on treatment as an outpatient, inpatient, or ICU, and the local and community antibiograms. In North America, resistance to azithromycin is high, and thus, azithromycin should only be prescribed as an adjunct treatment when coverage for atypical pathogens is desired.
- **3.** "I was sure he had pneumonia, but the X-ray was normal." Chest radiography is beneficial in the diagnosis of CAP but cannot rule out the disease process. Chest X-ray should be used in conjunction with a thorough history and complete clinical picture to make the diagnosis. If a patient has a high pretest probability of CAP and a negative chest X-ray, it would be reasonable to either treat for presumed pneumonia or refer the patient for further imaging, such as CT or ultrasound.
- 4. "I just gave her a dose of IV antibiotics to get things started." For patients who are able to tolerate oral medications, there are essentially no data to suggest that patients need a dose of IV or intramuscular antibiotics prior to outpatient treatment.⁶⁴

- 5. "Would you send a 70-year-old patient home with pneumonia?" Scoring systems that incorporate age or medical comorbidities may increase the patient's score while not accurately reflecting the actual risk to the patient. Clinicians should consider the influence that age and other historical elements have in the development of these scores and use these in conjunction with their overall clinical impression to avoid overestimating the patient's actual risk of adverse events.
- 6. "The patient had been having nasal congestion and coughing for several days; it seemed like they should get antibiotics just in case." Healthy patients with upper respiratory tract complaints have high rates of viral pathogens. Unless a clear clinical suspicion of pneumonia is present based on vital signs, lung findings, or chest X-ray findings, antibiotics should not be prescribed.
- 7. "Is it really that bad to give a short course of moxifloxacin or levofloxacin?" While commonly prescribed and recommended, fluoroquinolones have several FDA black box warnings and should be used with caution. Patients taking quinolones are thought to have an increased risk of tendon rupture, neuropathy, and aortic aneurysm/dissection. Clinicians should consider the risk for these complications in all patients before using these agents.⁶⁵
- 8. "The rapid COVID-19 test was positive and the chest X-ray was positive for pneumonia. I assumed the pneumonia was from COVID-19." To date there is no way to differentiate co-infection with COVID-19 and bacterial pathogens. For this reason, it is recommended that bacterial co-infection be assumed in most cases and patients treated with antibiotics accordingly.⁷

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Clinical Pathway for Urgent Care Management of Community-Acquired Pneumonia



Rx 1:

- Amoxicillin 1 g orally 3 times daily (Class II) or
- · Doxycycline 100 mg orally 2 times daily (Class III) or
- A macrolide (azithromycin 500 mg orally on the first day, then 250 mg orally daily; or clarithromycin 500 mg orally 2 times daily or clarithromycin extended release 1000 mg orally daily) only in areas with pneumococcal resistance to macrolides <25% (in most areas of North America resistance is >30%; should not use as monotherapy) (Class II)

Rx 2:

- 1. Combination therapy (oral) (Class III)
- Amoxicillin/clavulanate:
- 500 mg/125 mg 3 times daily
- 875 mg/125 mg 2 times daily
- 2000 mg/125 mg 2 times daily
- or
- · Cephalosporin (cefpodoxime 200 mg 2 times daily or
 - cefuroxime 500 mg 2 times daily)
- PLUS
- One of 2 macrolides:
- · Azithromycin 500 mg on the first day then 250 mg daily or
- Clarithromycin 500 mg 2 times daily or extended release
- 1000 mg 1 time daily OR
- 2. Respiratory fluoroquinolone (oral) (Class II)
 - Levofloxacin 750 mg daily
 - · Moxifloxacin 400 mg daily
 - · Gemifloxacin 320 mg daily

*Significant comorbidities include but are not limited to: asthma or chronic obstructive pulmonary disease; diabetes; congestive heart failure; immunosuppressive disorders or therapy; chronic kidney disease; active cancer or chemotherapy; degenerative neurologic disorders; and advanced age. Abbreviations: CAP, community-acquired pneumonia; ED, emergency department; PSI, pneumonia severity index.

Class of Evidence Definitions

Recommendations in the clinical pathways section of Evidence-Based Urgent Care receive a score based on the following definitions.

Class I	Class II		
 Always acceptable, safe 	 Safe, acceptable 	Class III	Indeterminate
 Definitely useful 	Probably useful	 May be acceptable 	 Continuing area of research
 Proven in both efficacy and effectiveness 	Level of Evidence:	Possibly useful Considered optional or alternative	 No recommendations until furthe research
Lavel of Evidence:	 Generally higher levels of evidence 	treatments	
 One or more large prospective studies 	 Nonrandomized or retrospective stud- 		Level of Evidence:
are present (with rare exceptions)	ies: historic, cohort, or case control	Lavel of Evidence:	 Evidence not available
 High-quality meta-analyses 	studies	 Generally lower or intermediate levels 	 Higher studies in progress
 Study results consistently positive and 	 Less robust randomized controlled trials 	of evidence	 Results inconsistent, contradictor
compelling	 Results consistently positive 	Case series, animal studies, consensus panels Occasionally positive results	Results not compelling

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Dental Emergencies in Urgent Care: Management Strategies That Improve Outcomes

5 Things That Will Change Your Practice

- 1. Milk is a practical storage medium for avulsed permanent teeth. Unflavored oral rehydration solution is also an option if the patient has it on hand.
- 2. Account for all teeth; any that are unaccounted for may have been aspirated, swallowed, or embedded in a laceration. An intrusive luxation mimicking avulsion should also be considered.
- 3. NSAIDs are the best analgesic option for most atraumatic dental pain. Orofacial nerve blocks can be considered if the pain is localized to a single nerve distribution.
- 4. Manage alveolar osteitis pain with NSAIDs or a nerve block and fill the socket with dry socket paste (if available) or use packing gauze with eugenol. The patient should be advised to seek prompt follow-up care from the clinician who performed the extraction.
- 5. Consider using the "syringe" technique for mandibular reduction. No procedural sedation is needed with this technique, and it eliminates the risk for clinician injury.

Risk Management Pitfalls in Oral Injuries

- 1. "They didn't find the tooth at the scene after the injury, but I assumed it was just left on the pavement somewhere." All teeth must be accounted for. If all teeth are not accounted for, consider intrusive luxation mimicking avulsion, aspiration of teeth, swallowing of teeth, or the possibility that a tooth is embedded in a laceration.
- 2. "The patient had three mobile teeth, but I didn't know how to splint them, so I let her go." Become comfortable and familiar with usage of calcium hydroxide paste for fractures and with periodontal splinting material for luxation and avulsion injuries, as they can improve outcomes in patients with traumatized teeth. If splinting is not possible in your practice setting, establish communication and protocols to ensure that these patients are promptly and appropriately managed.
- **3. "The patient required a complex lac repair, so I just left the tooth on the table."** More than 60 minutes of extraoral dry time makes replantation almost always unsuccessful. If not immediately replanted, teeth should be stored in an appropriate storage medium.
- 4. "The patient's tooth was fractured, but he said he could follow up with his dentist in a few days, so I let him go." Failure to appropriately manage dental fractures that involve the dentin or pulp with calcium hydroxide coverage and failure to obtain consultation or prompt follow-up can lead to unnecessary morbidity.
- 5. "I told him to follow up with a dentist. I assumed he understood to see the dentist the next day." It is important to provide appropriate and feasible dental follow-up for many of these patients with acute dental emergencies, as many of the urgent treatments are only temporizing.
- 6. "I put that patient's tooth back in, splinted it, and he came back two days later after it came out while eating a steak!" All patients who have subluxation, luxation, or avulsion injuries should be advised to maintain a soft diet and be prescribed chlorhexidine rinses. For avulsion injuries, prescribe antibiotics, such as doxycycline or penicillin.
- 7. "That patient's neck was pretty full, but I never would have guessed there was a big abscess there." The clinical examination has relatively limited sensitivity for detection of deep neck infections or to fully describe their extent based on physical examination findings alone. Liberal usage of contrast-enhanced CT scan should be considered for any patient suspected of having a deep neck infection. "The patient had diabetes and HIV, but it seemed to just be an infected tooth.

I didn't think she would end up needing surgery." Have a high index of suspicion for patients in an immunocompromised state, as the incidence and the severity of deep neck infections is much higher in these populations.

Excerpted from: Dental Emergencies in Urgent Care: Management Strategies That Improve Outcomes. Evidence-Based Urgent Care. 2023 May;2(5):1-26. Reprinted with permission of EB Medicine.



*This may not be possible in all urgent care settings. The development of protocols to standardize patient management is recommended, along with communication with emergency department staff and specialty teams. Abbreviation: CT, computed tomography; EMS, emergency medical services.

Class of Evidence Definitions

Recommendations in the clinical pathways section of Evidence-Based Urgent Care receive a score based on the following definitions.

Class I	Class II	-	2
 Always acceptable, safe 	 Safe, acceptable 	Class III	Indeterminate
Definitely useful	 Probably useful 	May be acceptable	 Continuing area of research
Proven in both efficacy and effectiveness	Level of Evidence:	 Possibly useful Considered optional or alternative 	 No recommendations until further research
Level of Evidence	Generally higher levels of evidence Noncondomized or mitorreaction stud	treatments	Lougl of Evidence:
are present (with rare exceptions) • High-guality meta-analyses	les: historic, cohort, or case control studies	Level of Evidence: • Generally lower or intermediate levels	Evidence not available Higher studies in progress
 Study results consistently positive and 	· Less robust randomized controlled tria	ls of evidence	 Results inconsistent, contradictory
compelling	 Results consistently positive 	 Case series, animal studies, consensus panels 	Results not compelling
		 Occasionally positive results 	

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Urgent Care Q&A

Ten Questions (and Answers) About Pulmonary Embolism (PE) and Venous Thromboembolism (VTE)

Michael B. Weinstock, MD and Gita Pensa, MD

1. How common is pulmonary embolism (PE)?

The incidence of PE is approximately 60 to 120 cases per 100,000 population per year

2. How many patients die of PE?

- Between 60,00 and 100,000 patients die from PE every year
- PE is the 2nd leading cause of nontraumatic death in the U.S.
- In patients with PE who are stable and less than 50 years old, the death rate is 1%

3. What is the pathophysiology of VTE? What are the two broad classifications of VTE?

- When coagulation exceeds fibrinolysis, blood clots form.
- Between 70-80% of blood clots start as thrombi in the deep veins in the lower extremities or pelvis
- Only 6% are from deep veins in the upper extremities
- Virchow triad: Venous stasis, hypercoagulability, endothelial injury
- Other factors increasing clotting risk include local infection, venous compression, catheters, devices, trauma

4. What are the risk factors for PE?

- Thrombophilias
- Older age
- Family history
- Immobilization
- Cancer
- Estrogens (eg. oral contraceptives)
- Pregnancy and post-partum

5. Is smoking a risk factor for PE?

No. But smoking does cause conditions which increase the risk of VTE/PE including cancer. Patients who are smokers and use estrogen containing contraceptives (especially over the age of 35) have an increased risk of VTE.

6. Is pregnancy a risk for PE?

Pregnancy *is* a risk for thromboembolism, but pregnant patients with shortness of breath or chest pain do not have a higher risk of thromboembolism compared to non-pregnant patients with the same symptoms.

7. Is COVID-19 a risk for PE?

This is not clear. Even less clear is if the present day COVID-19 is an increased risk. Patients who have a risk of PE based on symptoms should be evaluated, but if there are no concerns for PE in patients with COVID-19, investigation does not need to take place.

8. Should an unprovoked PE prompt exploration for underlying cause and does this improve outcomes?

Yes! If the PE is unprovoked (not present with any risk factors above or with trauma or immobilization), evaluate for a hypercoagulable state or occult cancer.

9. Should all patients with syncope be evaluated for PE?

PE may present as unexplained syncope, but the incidence is low with only 0.6% of syncopal patients having a PE and only 3-4 patients with PE having syncope

10. How can we evaluate for PE at the bedside without lab or radiologic testing (is there a clinical decision rule)?

The PERC rule can safely be used to clinically exclude PE at the bedside of an Urgent Care. 30% to 50% of patients with a low clinician-assessed probability of PE can be clinically excluded with the PERC rule.

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Urgent Updates

Pediatric Lyme Disease: Systematic Assessment of Post-Treatment Symptoms and Quality of Life

This study characterized long-term outcomes of pediatric patients with Lyme disease and evaluated the case definition of post-treatment Lyme disease (PTLD) syndrome. Most pediatric patients treated for all stages of Lyme disease reported full resolution of symptoms within 6 months. 22% of pediatric patients reported one or more symptom persisting >6 months, 9% with and 13% without accompanying functional impairment. **Full Access:** <u>Nature</u>

FDA Approves First RSV Vaccine

On May 3rd, U.S. Food and Drug Administration approved Arexvy, the first respiratory syncytial virus (RSV) vaccine approved for use in the United States. Arexvy is approved for the prevention of lower respiratory tract disease caused by RSV in individuals 60 years of age and older. The safety and effectiveness of Arexvy is based on the FDA's analysis of data from an ongoing, randomized, placebo-controlled clinical study conducted in the U.S. and internationally. **Full Access:** <u>FDA</u>

Effects Of Patient Beliefs Regarding the Need for Antibiotics and Prescribing Outcomes on Patient Satisfaction In Urgent-Care Settings

Researchers studied how patient beliefs regarding the need for antibiotics, as measured by expectation scores, and antibiotic prescribing outcome affect patient satisfaction using data from 2,710 urgent-care visits. In this study, patient beliefs regarding the need for antibiotics were significantly associated with patient satisfaction only among patients with moderate-to-high expectation scores for antibiotics.

Researchers suggest that decreasing urgent-care patient expectations and beliefs regarding the need for antibiotics may decrease unnecessary prescriptions without negatively impacting patient satisfaction. **Full Access**: <u>SHEA</u>

Trial of a Multi-Faceted Intervention To Improve Management of Antibiotics for Children Presenting With Respiratory Tract Infections

Amongst children aged 0-9 years presenting to a general practice clinic with respiratory infections, an intervention encompassing risk stratification and caregiver education did not decrease antibiotic dispensing rates or increase hospital admission rates. Full Access: <u>2minutemedicine</u>

Fentanyl Deaths Have Spiked Among U.S. Children and Teens

In 2021, almost 70,000 US adults fatally overdosed on fentanyl. Little is known about the extent to which the fentanyl crisis has affected the pediatric population. More than 1,500 kids under the age of 20 died from fentanyl in 2021, four times as many as in 2018. The mortality rate from fentanyl soared more than 300 percent during that period, from 0.47 per 100,000 children to 1.92 per 100,000, she found. In 2021, 40 infants and 93 children 1 to 4 years of age died from fentanyl. **Full Access:** <u>Science News</u>

Outbreak of Suspected Fungal Meningitis in U.S. Patients who Underwent Surgical Procedures under Epidural Anesthesia in Matamoros, Mexico

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Update to supplement the CDC HAN Health Advisory issued on May 17, 2023. This Health Update provides updates on the status of the ongoing fungal meningitis outbreak and highlights interim recommendations for diagnosis and treatment. **Full Access:** <u>CDC</u>

The Rising Importance of Urgent Care in the Fight Against the STI Epidemic

After a brief hiatus during the peak of the COVID-19 pandemic, the rate of new sexually transmitted infections has resumed at epidemic rates in the United States. With many specialty STI clinics having closed, Urgent Care may be better positioned than ever to help curb their spread. **Full Access:** <u>JUCM</u>

The Mifepristone Case and the Legitimacy of the FDA

Recently, for what appears to be the first time in history, a federal court in Texas invalidated the US Food and Drug Administration's (FDA) approval of a drug—after more than 20 years on the market with a strong safety and efficacy record. The drug, mifepristone, blocks progesterone and has a range of uses, from treatment for Cushing syndrome to, when used together with misoprostol, ending a pregnancy, and managing miscarriage. The 2-drug regimen is used for more than 50% of abortions in the US. **Full Access:** JAMA

Ectopic Pregnancy and Lifesaving Care

Ectopic pregnancy accounts for approximately 2% of all reported pregnancies according to the Centers for Disease Control and Prevention. In the first trimester, ectopic pregnancies are the most common cause of pregnancy-related death, accounting for 2.7% of these deaths. Ectopic pregnancies cannot be relocated to the endometrial cavity and thus lack potential to safely progress to birth. Given these facts, treatment of an ectopic pregnancy is incontrovertibly necessary and lifesaving care; denying or restricting such care would be both unethical and illegal. **Full Access:** JAMA

Here's What to Know About Xylazine, aka Tranq, the Animal Tranquilizer Increasingly Found in Illicit Fentanyl Samples

Veterinarians have used this sedative and pain reliever for half a century, but it has never been approved for human use. And yet, it is increasingly being detected in the illicit US drug supply from coast-to-coast—typically combined with fentanyl or heroin—and in drug overdoses. **Full Access:** JAMA

Management of Pilonidal Disease - A Review

Pilonidal disease is associated with significant physical and psychosocial morbidity. Optimal treatments will minimize disease and treatment-associated morbidity. There is a need for standardization of definitions used to characterize pilonidal disease and its outcomes to develop evidence-based treatment algorithms. **Full Access:** JAMA

Notes from the Field: Pediatric Intracranial Infections — Clark County, Nevada, January–December 2022 In October 2022, the Southern Nevada Health District (SNHD) was notified of a higher-than-expected number of pediatric patients hospitalized with intracranial abscesses; similar concerns were previously reported nationally. This rare infection is associated with significant morbidity. **Full Access:** <u>CDC</u>

Kidney Ultrasonography After First Febrile Urinary Tract Infection in Children - A Systematic Review and Meta-analysis

In this systematic review and meta-analysis of 29 studies and 9170 children, the prevalence of abnormalities detected on kidney ultrasonography was 22.1%. Of the 8 studies with 2569 children that reported clinically important abnormalities, the prevalence was 3.1%. This study results suggest that 1 in 4 to 5 children with a first febrile UTI will have a urinary tract abnormality detected on kidney ultrasonography and 1 in 32 will have an abnormality that changes clinical management. **Full Access:** JAMA

Are Children with Prolonged Fever at A Higher Risk For Serious Illness? A Prospective Observational Study

Children with fever ≥ 5 days and their risks for serious bacterial infection (SBI) were compared with children with fever <5 days, including diagnostic accuracy of non-specific symptoms, warning signs and C-reactive protein (CRP; mg/L). Incidence of SBI in children with fever ≥ 5 days was higher than in those with fever <5 days (8.4% vs 5.7%). **Full Access:** <u>BMJ</u>

Spotlight on Our Members

Jennifer Carlquist, PA-C, ER CAQ



Jennifer Carlquist is a PA who has a passion for hearts. Working in cardiology, emergency medicine, and developing and providing EKG education to Urgent Care providers, she also finds time to paint!

Previously a paramedic, Jennifer turned to painting as a way to cope with the trauma she was seeing on the streets. As she continued her medical education, she found herself drawn to cardiology, both literally, and figuratively through her art.

Jennifer has about 40 paintings related to hearts hanging in her cardiology office as well in the emergency department

where she works. Many have writing weaved through them with inspirational messages. She often gives her art to her patients.

She says, "For me personally, I don't ever have a plan when I paint, and the style of painting that I do is abstract; it comes from an intuitive place. The best part about it is I just turn off my mind, my medical mind and any of the noise, and let the creativity just take over. Sometimes things I never could have planned happen. I paint for my patients, but I also paint for me. Everyone wins!"



From Our Colleague: Priya Radhakrishnan, MD, FACP

The Accent

She walked the streets of New York With five dollars for the day She stopped at Starbucks Pressed her nose to the door Sat outside till the crowd thinned She stepped into a Starbucks Her thirst was strong She stood in line Timid was she for this was a first She was taken aback When suddenly swarms of people did come She sauntered in from the cold Stylish she thought she was Little did she know That others saw her as gauche All she desired was a taste of home Where they called it 'expresso' The corner café served the yummy drink Frothy, sugary milk with a touch of coffee With an almond biscuit on the side Was manna from Heaven She stood in line All she wanted was her 'expresso' When her turn came She stammered her order Burnt by the scorn that Barista added to her order When she got her coffee It was black and dark Bitter as the humiliation she felt There was no trace of the milky frothy goodness of her childhood drink For in America her 'expresso' Was a cappuccino An almond biscuit there was none Her language was foreign Her accent too thick She sipped her coffee She was naive She was sad

Priya Radhakrishnan, MD, FACP Dr. Radhakrishnan is Chair of the Board of Governors, American College of Physicians

Cause for Applause Q2 2023

CAUSE for applause



This quarter, we'd like to recognize our colleagues who received the 2023 Urgent Care Foundation Awards and were deservedly recognized at the 2023 Urgent Care Convention as well as the Urgent Care Foundation Celebration.



Kevin DiBenedetto, MD received the Lifetime Achievement Award. Dr. DiBenedetto has been a driving force in the Urgent Care industry for over two decades. As founder of Premier Health, Dr. DiBenedetto and his partner, Dr. Graham Tujague, opened their first center in 1999, in partnership with a well-known hospital, making Premier Health one of the first Urgent Care operators to specialize in health system partnerships. Today, Premier manages the day-to-day Urgent Care operations of more than 90 health systems and joint venture centers across 13 states.

Dr. DiBenedetto has played key roles in advancing UCA's initiatives in the areas of Antibiotic Stewardship and opioid prescribing guidelines. He has also been instrumental in ongoing industry lobbying efforts for legislation favorable to patients and the Urgent Care industry, such as the passage of the Mission Act in Congress, giving our veterans access to Urgent Care services for the first time.



Tracey Davidoff, MD, FCUCM, received the Humanitarian Award. In addition to her work as a full-time clinical provider, Dr. Davidoff participates in medical mission trips to underserved populations, most recently to Honduras with co-workers from AdventHealth in association with Hospital Adventista. She landed in Tegucigalpa, Honduras at the beginning of November, with a team giving it all they could. They treated children, adults, and the elderly. On day five they saw 358 patients in a one-room church, and they finished the week seeing over 1,000 patients.

Dr. Davidoff was also the second recipient of the Sean McNeeley, MD,

FCUCM Advancing the Specialty Award. Dr. Davidoff has tirelessly volunteered her time and expertise to the College of Urgent Care Medicine in multiple capacities including as a board member, board officer,

Clinical Response Committee member, Editor-in-Chief of this publication, chair of the Clinical Consortium, and serial advocate for evidence-based medicine.



Anupama Pani, MD was awarded the Becky Burress Unsung Hero Award. A board-certified family practitioner, Dr. Anupama Pani has 20 years of experience in Urgent Care and family medicine. In February 2020, she opened her own Urgent Care, Immediate Medical Care MD. She has dedicated her practice to the compassionate and thorough care of patients with a focus on families. In 2020, Dr Pani was honored by the Ossining Hispanic Parents Committee of her community and named a "Hero" for helping and saving the lives of all her patients during Covid pandemic. Also in 2020, her Urgent Care center was also named Best Urgent Care in Westchester and Fairfield Counties by the prestigious "Doctors of Distinction." Most recently, she was named as one of Westchester's top Women in Business for 2022. Dr. Pani works

tirelessly to provide outstanding care to her community.



Joe Toscano, MD, FCUCM, was recognized as a Lifetime Member. Dr. Toscano has served as a board member for the Urgent Care Association (UCA) and College of Urgent Care Medicine (CUCM) as Clinical Content Advisor for many years, developing the clinical curriculum for the annual Urgent Care Conventions. Moreover, Joseph has published articles within JUCM, served as facilitator and faculty for CUCM and UCA Learning Experience webinars, is a leading contributor to the UCA Listserv, and generally contributed in various ways above and beyond the role he officially serves within the Urgent Care Association. Current efforts include leading the work on advancing Urgent Care medicine as a specialty, representing UCA in ongoing conversations with board

certification organizations, and volunteering on the CUCM Clinical Task Force.

Additionally, Dr. Toscano was awarded the inaugural and eponymous Joseph Toscano, MD, FCUCM Inspiring Excellence Award at the annual CUCM Member Lunch. Dr. Toscano continues to support education, clinical best practices, and evidence-based medicine with a palpable passion for the Urgent Care industry. This award will recognize future industry contributors who inspire clinical excellence.

Congratulations to these 2023 award recipients! We are all proud to have you as colleagues in advancing Urgent Care medicine and influencing quality healthcare in our communities and beyond.

CONTINUING MEDICAL EDUCATION (CME)

Target Audience

This CME activity is intended for medical professionals who practice medicine in the on-demand space including Urgent Care, retail medicine and other similar venues. These providers may include physicians, nurse practitioners, and physician assistants.

Designation Statement

The Urgent Care Association (UCA) designates this enduring material activity for a maximum of 3 AMA PRA Category 1 Credit(s)[™]. Physicians should claim credits only commensurate with the extent of their participation in the activity. Credits may be claimed for one year from the date of release of this issue.

CME Objectives

1. Provide updates on the diagnosis and treatment of clinical conditions commonly managed by ondemand providers

2. Alert on-demand providers to potential unusual cases that may present to them

3. Utilize tips and tricks to improve patient care in the on-demand space

Accreditation Statement

This activity has been planned and implemented in accordance with the accreditation requirement and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the Urgent Care Association and the College of Urgent Care Medicine. UCA is accredited by the ACCME to provide continuing medical education for physicians.

CME Credit Instructions

Once you have read the article, please log into your UCA profile. Once you are logged in go to Learn-> CME->Request CME. Complete the survey with the requested information for Urgent Caring. Your certificate will then be emailed to you within 3-5 business days. Please email learning@ucaoa.org with questions.

CUCM CME Planning Committee

Chris Chao, MD Reports no financial interest relevant to this publication Tracey Davidoff, MD, FCUCM Reports no financial interest relevant to this publication Ryan Grabeic, FNP Reports no financial interest relevant to this publication Patrick O'Malley, MD Reports no financial interest relevant to this publication Cesar Mora Jaramillo, MD, FCUCM Reports no financial interest relevant to this publication Brad Layman, PA-C, CPC, CEMC Reports no financial interest relevant to this publication Max Lebow, MD, MPH, FACEP, FACOEM Reports no financial interest relevant to this publication Sean McNeeley, MD, FCUCM Reports no financial interest relevant to this publication Gita Pensa, MD Reports no financial interest relevant to this publication Victoria Pittman, PA-C Reports no financial interest relevant to this publication Michael Weinstock, MD Reports no financial interest relevant to this publication

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URGENT CARING STAFF MEMBERS

Editors-in-Chief Tracey Q. Davidoff, MD, FCUCM Cesar Mora Jaramillo, MD, FAAFP, FCUCM

Occupational Medicine Section Max Lebow, MD, MPH

Advancing the Specialty/Antibiotic Stewardship Section Joseph Toscano, MD, FCUCM

Wound Management Section Patrick O'Malley, MD

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