



## **URGENT CARING**

*A Peer-Reviewed Publication from the College of Urgent Care Medicine*

**Fourth Quarter, 2022**

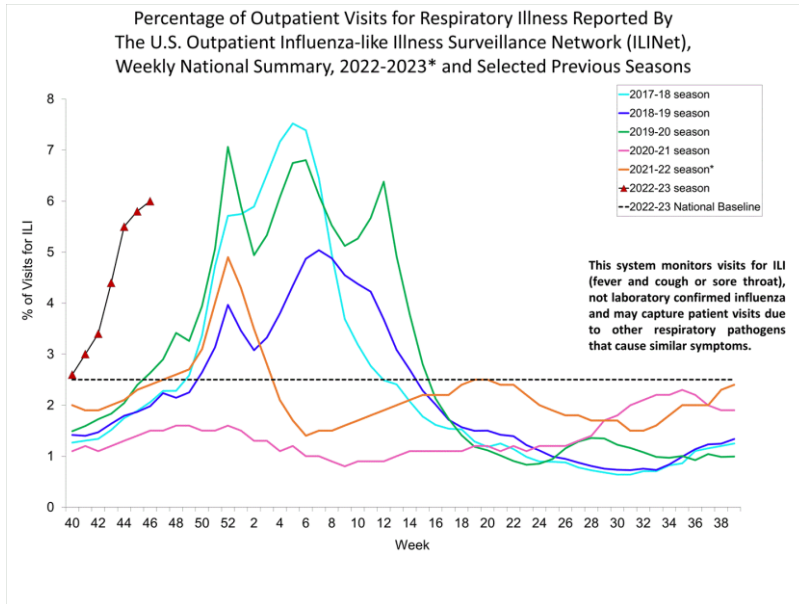
**Volume 6 Issue 11**

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## From the President of the College of Urgent Care Medicine



As 2022 ends, I have a sense of déjà vu. Once again, we are facing high patient volumes across Urgent Care centers due to an early and severe influenza season as well as outbreaks of other upper respiratory infections including RSV and COVID-19. We know this is true not only from our experience, but CDC data confirming the trend.



Source: [Weekly U.S. Influenza Surveillance Report | CDC](#)

Providers and Urgent Care staff are overwhelmed, tired and facing burnout. Our waiting rooms are consistently full of patients who feel sick and demand immediate relief. The day is unrelenting, mental fatigue sets in after the 20<sup>th</sup> patient with “flu-like symptoms,” and the onslaught does not stop.

Hang in there. We are all in this together and the College of Urgent Care Medicine is here for you. Reach out to a colleague and fellow member and ask how they are doing. It is therapeutic to hear from colleagues and to know that we are not alone!

In case you missed it, November 18-24 was Antibiotic Awareness Week. Through the efforts of public health agencies and the Urgent Care industry, we have made significant progress on educating the public on appropriate antibiotic use. As a result of this effort, most patients recognize that antibiotics are ineffective against viral upper respiratory infections. Yet, we still have patients that demand their “Z-packs” for their flu-like illness, cold, or even COVID. During busy times, it is easy for the provider to give in to patient demands.

## **Please Don't.**

A number of callbacks are complaints, including, "The antibiotic didn't work," and "I want a stronger antibiotic." When I ask the provider why they prescribed the antibiotic I will usually get the answer of, "I was too exhausted to fight with the patient," "I didn't want a complaint on social media," or that there is anxiety over "satisfaction scores."

It is easy to say no to a patient when they demand a controlled substance but harder to say no when they demand an antibiotic. We often forget that antibiotics are not benign medications, and the risks and percentage of patients who develop side effects are significant. I tell my viral URI patients, "Unfortunately you have a viral upper respiratory infection, and antibiotics will not make you better faster. Let's talk about what you can do to make you feel better." Most patients will respond, "I thought so but I wanted to make sure I didn't have anything serious." We are getting the message across. Patients want explanations, and the time you spend with the patient translates to higher patient satisfaction.

When waiting rooms are full and every patient seems to complain of "flu-like symptoms" it is easy to get complacent. Early signs of flu and COVID-19 are non-specific. Last week, a colleague presented a case where a patient reportedly had flu but ended up having diverticulitis. The patient reported direct flu exposure, fever, chills, nausea, vomiting and cough. The antigen flu test was negative, but the patient was started on oseltamivir for a clinical diagnosis of flu. Fortunately, the patient returned the next day with increased abdominal pain and was promptly diagnosed with diverticulitis. I appreciated the reminder to be cautious, especially when someone does not present with significant upper respiratory symptoms. In my career I have seen early presentations of rickettsia spotted fever, pyelonephritis, necrotizing fasciitis and appendicitis all masquerade as "flu." Don't be fooled.

In close, I'd like to wish everyone a happy holiday season. Stay well, and I look forward to the New Year, including seeing you at the Urgent Care Convention in Las Vegas (March 31-April 5). Mark your calendars now and ask for that time off!



Chris Chao, MD  
President, College of Urgent Care Medicine Board of Directors

## From the Editors

November 18-24 was highlighted by the CDC as U.S. Antibiotic Awareness Week (USAAW). Educational materials were made available online to highlight the dangers of antibiotic resistance and the principles of antibiotic stewardship for medical professionals, hospitals, long-term care facilities, and the public. UCA and CUCM supported the CDC's efforts by sharing resources and bringing attention to the importance of antibiotic stewardship.

For some background, each year, close to 3 million antibiotic resistant infections occur in the U.S. alone, and of those, over 35,000 patients die as a result. These numbers are increasing yearly. In 2021, over 211 million antibiotic prescriptions were dispensed in the U.S., with the highest antibiotic prescription rate being in the southern U.S. Unintended consequences of antimicrobial use include toxicity, side effects, allergic reactions, selection of pathogenic organisms such as *C. difficile* and *Candida albicans*, and antibiotic resistance.

In the outpatient setting 13% of visits on average result in an antibiotic prescription. Studies indicate this percentage is higher in Urgent Care. Of those prescriptions written, it is estimated that at least 25% were inappropriate. Other studies have shown that over 75% of patients with respiratory tract infections seen in outpatient clinics result in an antibiotic prescription; more than half of these were unnecessarily prescribed for a viral, not bacterial, infection.

Appropriate antibiotic use can be boiled down to the **right antibiotic at the right dose for the right duration**. Antibiotic stewardship is the process by which providers commit to appropriate use through the development of programs to identify areas of improvement and implementing change to make that improvement. From where we sit, education is the key to this process.

We all know that the common cold is not treated with antibiotics. So why then are so many patients who clearly have a viral illness leaving Urgent Care with an antibiotic prescription? One of the most common reasons I hear from providers is patient expectations. Many providers believe that the patient is expecting an antibiotic, and if they do not receive that antibiotic it may result in a bad review, loss of business, patient complaints, or other consequences. It is also easier to just write the prescription than explain why you are not. Would you prescribe a drug you know is inappropriate because the patient asks for it for any other disease? Would you write for an antihypertensive for a patient who is concerned they might have high blood pressure without demonstrable proof? Would you order chemotherapy because the patient thinks they might have colon cancer? Of course not. Although these examples may be dramatic, they illustrate the same principle.

But do all patients really expect that antibiotic? The perception by the provider that the patient wants an antibiotic is often incorrect. In a study by the CDC, 54% of providers believed that patients wanted antibiotics for cough or sinus symptoms, when only 26% actually had that expectation. Many just want to know **if** they need the antibiotic and may be perfectly happy to be told "not this time." Patient education may be all that is required to satisfy the patient.

Providers should also frequently review clinical guidelines published by reputable organizations to determine if, when, and how antibiotics should be prescribed. Medical literature and recommendations change and it is our responsibility to stay up to date. These guidelines are where you will find evidence-

based recommendations for antibiotics choices, strengths, and duration. The CDC offers free—yes, free—CME courses in all aspects of antibiotic resistance and stewardship.

We would like to challenge you for the New Year to take at least one step in the coming months to do your part to combat antibiotic overuse. Keeping in mind the **right drug at the right dose for the right duration**, identify one practice habit that you could change and do it! Some examples would be trying a little harder not to write that azithromycin or amoxicillin for a cold, cutting down your duration from 10 days to 7 days (very few infections now require 10 days), review a clinical guideline for pneumonia, UTI, sinusitis, otitis media, or others (and follow it), and review treatment recommendations for bronchitis and treat it like the viral infection it is. (We can get around this with patients by calling it a chest cold, not bronchitis.)

Baby steps can make a meaningful difference in both your practice and others'. Whether we realize it or not, those that are younger, newer, or less experienced follow our lead and copy our behaviors. If we set a good example, others will follow.

We urge you to make just one little change to combat the overuse of antibiotics in our country. Commit to using the **right antibiotic at the right dose for the right duration**. The multi-drug resistant infection you may help to prevent may be your own or your family's.

For more information about antibiotic stewardship and free CME:

[www.cdc.gov/antibiotic-use](http://www.cdc.gov/antibiotic-use)

[www.train.org/training\\_plan/3697](http://www.train.org/training_plan/3697)

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## New Content & Contributors in This Quarter's *Urgent Caring*

This edition of *Urgent Caring* now has the addition of a column dedicated to coding in Urgent Care. We welcome Brad Laymon, PA-C, CPC, CEMC from Novant Health/GoHealth Urgent Care as the Section Editor for Coding Corner. We also welcome new authors and content from Michael Weinstock, MD, John George, PA-C, and Jennifer Carlquist, PA-C, ER CAQ.

Finally, the staff of *Urgent Caring* and the Board of Directors of the College of Urgent Care Medicine would like to wish you and yours a **happy and healthy holiday season**. We hope you get to spend some quality time with whomever you celebrate. May you find peace and happiness in the New Year.

Your Co-Editors in Chief,



Tracey Q. Davidoff, MD, FCUCM



Cesar Mora Jaramillo, MD, FAAFP, FCUCM



## Clinical Presentations—Case Study #1

### How Much Should I Care About this EKG?

Jennifer Carlquist, PA-C, ER CAQ



Providers often wonder, “How much should I worry about this EKG?” We know how to pick up the big things like STEMI, but it is the gray area EKG findings that keep us up at night.

The way to stay safe is to recognize the “faces” of those high-risk findings that the machine will miss. Most of these patterns will be labeled by the machine software with some version of “nonspecific ST-T wave changes.” This phrase is a “catch-all” and is what the software identifies no STEMI, but not normal either. Rarely does it mean something is not wrong. The machine just doesn't know what it is.

There are 5 patterns that are potentially lethal but will be read as nonspecific ST T wave changes by the machine are:

- Posterior STEMI
- Wellens Warning
- De Winters T Waves
- Widespread ST Depression with 1mm of Elevation in AVR
- Hyperacute T Waves

Let’s consider this case that could happen in any Urgent Care, any day. A 36-year-old female presents with dry cough for 3 days. She has had some fatigue and was having a hard time chasing the toddlers around at the school where she worked.

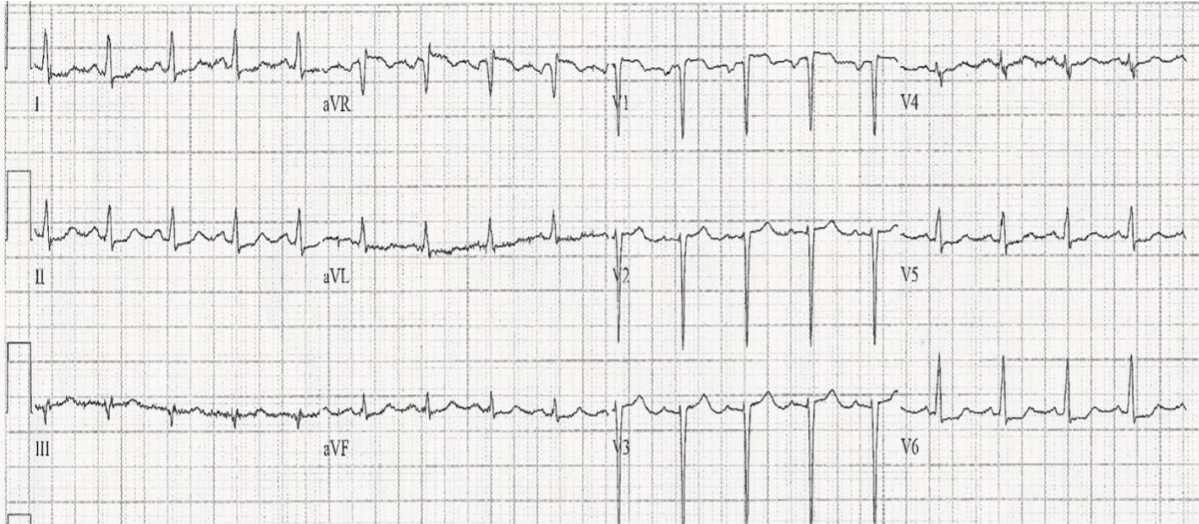
She had no significant past medical history. She did not smoke.

She had no fever. The HR was slightly elevated at 109bpm. The remaining vitals were normal. On exam, she had a high BMI. Her lung sounds were diminished the base on the left. There was no S3 or S4. She had 1 + bilateral lower extremity edema.

At this point, what are your differentials? PE? Pneumonia? CHF? Bronchitis?

Because of her cough, a chest X-ray was performed. It was read by the provider as concern for infiltrate and she was referred to the emergency department. On arrival an EKG was performed.





The EKG machine read this as “non-specific ST-T wave changes.”

On closer inspection, there is some minor ST depression in multiple leads and more than 1mm of ST elevation in AVR.

Her CXR was repeated in the emergency department and was read by a radiologist as pleural effusion, unilateral. No infiltrate.

Labs were normal except for a BNP of 6929 and a glucose of 310mg/dl. Troponin, CBC and CMP were otherwise normal.

A CTA was performed, and no PE was seen.

She was admitted to the hospital and had a nuclear stress test and was noted to have a low EF of 32% and occlusive disease in her RCA and LAD. CABG was recommended.

So how does a 36-year-old female come to Urgent Care with cold symptoms end up with a CABG? She was unfortunately an undiagnosed diabetic and had familial hyperlipidemia that was undiagnosed and untreated. These two risk factors made her heart age significantly older than her chronological age.

The ACC Update Expert Consensus Decision Pathway on the Evaluation and Disposition of Acute Chest Pain in the Emergency Department released in JACC November 15, 2022, now lists widespread ST depression with 1mm of ST elevation as worrisome for involvement of left main or triple vessel disease and warrants immediate angiography (Kontos, 2022).

Widespread ST depression in the setting of chest pain when the patient also has more than 1mm of ST elevation in AVR is consistent with diffuse subendocardial ischemia and usually requires immediate angiography. This widespread depression can be seen in conditions like demand ischemia if a patient is tachycardic, so this pattern is only accurate when the patient has a normal heart rate.



In Urgent Care, the history, physical, EKG and X-ray are often the only tools we have to make critical decisions. The bottom line is that as Urgent Care providers we have less tools and need to be experts in the tools we have. Knowing these patterns could save your next patient's life, as well as your reputation.

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## Clinical Presentations—Case Study #2

### The Case of the Exploding Eye Socket

Tracey Quail Davidoff, MD, FCUCM



A 55-year-old male presents to Urgent Care following a slip and fall in the bathroom in a hotel room the day before. The patient reports that he struck the lateral side of his cheek on the corner of the sink. There was no loss of consciousness. The fall was witnessed by his partner who reports the patient was dazed for a few seconds but then normal. The patient immediately developed swelling and ecchymosis in the area that improved slightly with ice and ibuprofen. The patient was not feeling badly, so he went about his normal activities.

The next day the patient attended a theme park, going on rides including roller coasters. At midday, he felt congested and blew his nose. While doing this, he felt a bubbling sensation in his left cheek and noticed immediate swelling under his left eye. His eye then became nearly swollen shut. He reports no change in vision if he pries his eyelids apart. Otherwise, the eye lid is obstructing his view. He has a mild headache, no nausea, no dizziness, no weakness or numbness of the extremities. He had no nosebleed at any point. He has no significant past medical history and is not on any form of anticoagulation including aspirin.

Exam reveals a well-developed, well-nourished healthy appearing male in no distress, but with obvious facial trauma. His is awake, alert, and oriented x 3, and his partner states he is acting completely normal and himself without personality change. Vital signs and visual acuity are normal. There is swelling and bruising around the left eye, with tenderness to the inferior orbital ridge and the zygomatic arch. There is crepitus in the soft tissue under the eye, but not to the bony areas. The opening of the eye is a slit. The lids are easily parted manually revealing a normal globe without subconjunctival hemorrhage or hyphema. The pupil is normal and reactive to light and accommodation. Extraocular muscles are intact in all directions without pain or diplopia. The external nose is normal, there is no bleeding in the nostrils, the nasal septum is midline, and there is no septal hematoma. There is no other trauma noted.

What is the best Urgent Care management of this patient?

- A. Call EMS to take patient to ED immediately
- B. Plain X-rays of the facial bones
- C. Reassure the patient and recommend ice and ibuprofen
- D. Outpatient referral for imaging and evaluation by an ophthalmologist in the next 48 hours

E. Amoxicillin/clavulanate 875mg twice a day for 10 days

Based on history and exam, this patient likely has an orbital floor fracture, and possibly a zygomatic arch fracture. The swelling of the face and bubbling in the soft tissues is subcutaneous emphysema that came from air being forced out of the fracture line in the roof of the maxillary sinus when the patient blew his nose. Although very frightening for the patient, and dramatic appearing in the clinic, these injuries are relatively benign, if there is no injury to the globe or the intraocular muscles.

Orbital floor fractures — Fractures of the floor of the orbit, sometimes known as "blowout fractures," typically occur when the eye socket is struck by a fast moving, hard object such as a fist or a baseball. Due to forces transmitted, and the thin bone of the orbital floor compared to the other sides of the orbit, the most common wall ruptured is the orbital floor, which also serves as the "ceiling" of the maxillary sinus. The sinus may fill with blood which may be seen on plain X-ray or CT scan.

Many patients with an orbital floor fracture will have symptoms of only bruising and swelling. However more severe cases may have entrapment of the inferior rectus muscle and/or orbital fat. Ischemia and subsequent loss of muscle function may occur either because of entrapment of muscle within the fracture fragment (more likely in children) or as the result of edema and hemorrhage of muscle and extraocular fat that have prolapsed through the fracture into the maxillary sinus (more likely in adults). Patients with these complications will have gross loss of movement of the extraocular muscles with pain on testing. Orbital dystopia (the eye on the affected side is lower in the horizontal plane than the other) may occur because entrapped muscle and orbital fat pull the eye downward.

Injury to the infraorbital nerve may occur as the result of an orbital floor fracture. This results in decreased sensation along the cheek, upper lip, or upper gingiva.

Trauma to the globe itself must be excluded immediately in all patients with these injuries as it may result in permanent loss of vision. These injuries include: a ruptured globe, orbital hematoma, optic nerve sheath hematoma, retinal detachment, and hyphema. Every effort should be made to gently pry apart swollen eyelids and inspect the globe beneath, as well as assess and document visual acuity. Care should be taken not to put pressure on the eye, which, in the presence of a globe rupture, could cause extrusion of intraocular contents. If this is not possible in the Urgent Care setting, the patient should be referred to the hospital for further evaluation.

Common signs and symptoms of orbital fracture include bony tenderness and swelling, periorbital ecchymosis, diplopia, decreased sensation in the distribution of the infraorbital or supraorbital nerves, and/or orbital emphysema. Injury to the lacrimal duct should also be excluded. A focused examination of the facial bones, soft tissues surrounding the eye, and the eye itself should be performed. The eye should be examined with visual acuity performed as quickly as possible because soft tissue swelling may make it difficult for the patient to open their eyes or for the clinician to separate the eyelids.

Examination of the eyelids and surrounding soft tissue may demonstrate crepitus, indicating orbital emphysema as the result of fracture into a sinus. Injury to the lacrimal ducts can occur as the result of lacerations or soft tissue injury along the medial canthus. Decreased sensation indicates injury to the supraorbital nerve (forehead) or infraorbital nerve (cheek).

Pupillary reactivity, size, and shape, as well as extraocular movements and visual acuity should be evaluated. Funduscopic examination may identify vitreous hemorrhage or retinal injury. Finally, a slit-

lamp examination should be performed if possible. Injuries that may be identified more easily with the slit-lamp include hyphema, iritis, lens dislocation, and ruptured globe.

The following features are indications of significant, vision threatening eye injury and should prompt immediate emergency evaluation.

- Proptosis (orbital hematoma)
- Extrusion of intraocular contents, severe conjunctival hemorrhage, and/or a tear-shaped pupil
- Afferent pupillary defect
- Signs of orbital compartment syndrome ("rock hard" eyelids and decreased retro-pulsion (resistance to attempts to push the eye deeper into the orbit, sometimes referred to as a "tight orbit"))
- Widened intercanthal distance (disruption of the medial canthal ligament)
- Limited or painful extraocular motility
- Orbital dystopia and/or enophthalmos (orbital floor fracture with entrapment)

The remaining facial bones should be carefully palpated, and any abnormality documented. Tenderness, crepitus, and step-offs on palpation of the malar eminences, zygomatic arches, or orbital rims may indicate an underlying fracture.

Imaging — Plain films are very unreliable and may miss orbital fractures about 50% of the time, limiting their usefulness. They should not be performed in Urgent Care. If it is determined imaging is necessary, computed tomography (CT) should be performed. Patients without findings of complicated injuries can be imaged as outpatients. Patients with concerns of possible complicating factors should be scanned emergently the same day either as outpatients or if not possible, the emergency department.

### **Initial Management**

The initial priority for the management of patients with orbital fracture is to identify and treat life-threatening conditions. The second priority is to ensure there are no vision threatening injuries, as listed above. Most non-displaced orbital fractures without evidence of complication do not require operative repair and can be treated conservatively.

This would include ice, elevation by elevating the head of the bed or recliner 45 degrees to reduce swelling, avoidance of nose blowing or snorting, and pain management with acetaminophen or ibuprofen. Narcotic pain medication should be avoided if there is any question of head injury. The patient should be discharged to the care of a competent adult who can observe the patient for complications of the orbital fracture or head injury.

In the past, patients with sinus fractures were routinely treated with antibiotics, however evidence of benefit of prophylactic antibiotics is lacking. More recent evidence from small observational studies suggests that the risk of infection in adult patients with this injury is quite low and that antibiotic prophylaxis is not necessary, although it may be reasonable for patients with recent sinusitis,

immunocompromise, or uncertain follow-up. If antibiotics are prescribed, suggested regimens are the same as for patients with sinusitis.

Phone consultation with an ophthalmologist or facial trauma specialist prior to discharge can help facilitate close follow-up and to determine the timing of imaging. Any patients who seem unreliable, cannot be observed, or have any concerns of complications should be evaluated in the nearest appropriate emergency department. This would include intoxicated patients, elderly patients, homeless patients, those living alone without support, patients with multiple trauma, and victims of violence.

**Conclusion of the Case**

This patient was visiting from out of town and had no health insurance. He was returning home the following day. He was offered local specialty referral or evaluation at a local free-standing emergency department, which he declined. He was told to ice, elevate, and take ibuprofen, and to seek specialty care upon returning home, contact his primary care physician to help arrange this, if necessary, or to go to his local emergency department. The patient's spouse was with him and agreed to observe the patient for signs of head trauma and complications. He was given amoxicillin/clavulanate.



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## Case Study #3

### Rash with Hyperkalemia

John George, PA-C. Go Health Urgent Care, New York



A 67-year-old female with a past medical history of hypertension on lisinopril and no known drug allergies presents with a chief complaint of flu-like symptoms for two days. The patient stated she had tactile fever, diffuse myalgias, and chills for 2 days and requested a flu test.

Vitals: T: 99.6°F, P: 88bpm, BP: 144/94, SpO2:99%

Rapid flu and rapid molecular COVID test were negative.

Upon examination, the patient was noted to have diffuse urticarial rashes on her chest, abdomen, back and few on her bilateral arms and legs. When questioned about the rash the patient added that she recently had a breast abscess that was drained by surgery and had been prescribed trimethoprim-sulfamethoxazole (TMP-SMX) for 7 days. She was currently on day 5 of the antibiotic when she presented to Urgent Care. The rash had been present for 2 days. The patient denied any other new exposures, itch, or pain to rash. There was no chest pain, shortness of breath, hematuria, nausea, vomiting, or dizziness; she voiced no other complaints.

The patient seemed well otherwise and was able to tolerate food and fluids.

Since the patient was taking TMP-SMX and was on lisinopril, there was a possibility that hyperkalemia could be responsible for the patient's symptoms. STAT labs including a CBC and CMP were drawn and sent to the lab. The patient was discharged from Urgent Care and advised that she would be called with the lab results in a few hours.

The results were received 2 hours later with unremarkable CBC. Potassium levels were noted to be 9.5 mmol/L (normal: 3.5 to 5.2 mmol/L), creatinine was within normal limits.

The patient was advised to go to the nearest emergency department for emergent treatment of hyperkalemia. Repeat potassium was 9.8mmol/L. Nephrology was consulted and diagnosed hyperkalemia induced by TMP-SMX with concomitant use of lisinopril.

At 3 day follow up the patient reported that the rash was subsiding, and she was feeling better overall.

Among older patients treated with ACEIs or ARBs, the use of TMP-SMX is associated with a major increase in the risk of hyperkalemia-associated hospitalization relative to other antibiotics. Alternate antibiotic therapy should be considered in these patients when clinically appropriate.

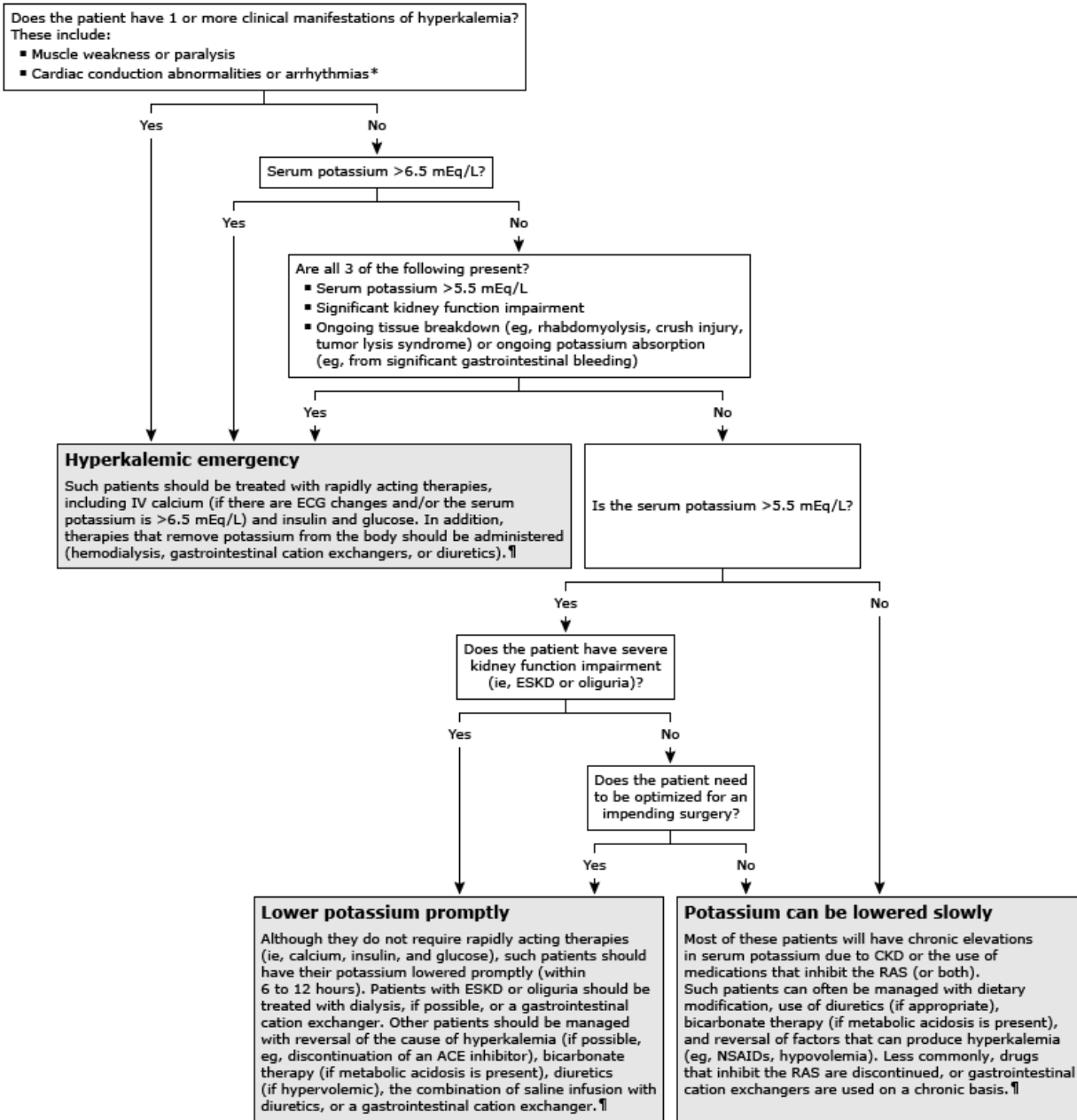
Trimethoprim-sulfamethoxazole can interact with a variety of drugs that may require adjustment of therapy and more frequent monitoring. Interacting drugs include oral anticoagulants such as warfarin, cyclosporine, oral hypoglycemics, rifampin, dapsone, phenytoin, methenamine, and possibly angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs).

Trimethoprim may enhance the hyperkalemic effect of angiotensin-converting enzyme (ACE) inhibitors. Serum potassium should be monitored closely if this combination is used. Consider using an alternative to TMP-SMZ when possible, particularly in patients with other risk factors for hyperkalemia (e.g., renal dysfunction, older age, use of other drugs or supplements that can increase potassium, use of higher-dose TMP-SMZ, etc.). Hyperkalemia is an established, though often unrecognized, side effect of trimethoprim.

Trimethoprim appears to reduce renal potassium excretion, acting similarly to the structurally similar potassium-sparing diuretic amiloride. Patients at high risk of developing trimethoprim-induced hyperkalemia appear to include the higher dose trimethoprim, older age, renal insufficiency, use of prednisone, and concurrent use of drugs that can cause or exacerbate hyperkalemia (such as ACEIs, ARBs, aldosterone antagonists, etc.).

Hyperkalemia is a medical emergency that can result in life-threatening arrhythmia. Identification is imperative and treatment should be swift. If suspected or identified an EKG should be performed immediately to determine if arrhythmia and cardiac arrest is impending. Treatment may include calcium, insulin, glucose, cation exchange resins, diuretics, and in severe cases, hemodialysis. See table below. Any inciting medications or combinations of medications should be discontinued.

# Treatment of Hyperkalemia in Adults



From: [https://www.uptodate.com/contents/search?search=hyperkalemia%20treatment&sp=0&searchType=PLAIN\\_TEXT&source=USER\\_INPUT&searchControl=TOP\\_PULLDOWN&searchOffset=1&autoComplete=true&language=&max=0&index=1~10&autoCompleteTerm=hyperkale&rawSentence=](https://www.uptodate.com/contents/search?search=hyperkalemia%20treatment&sp=0&searchType=PLAIN_TEXT&source=USER_INPUT&searchControl=TOP_PULLDOWN&searchOffset=1&autoComplete=true&language=&max=0&index=1~10&autoCompleteTerm=hyperkale&rawSentence=), accessed online 10/31/22

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## Coding Corner

### Patient Presents Post ED Visit Due to No Established PCP

Brad Laymon PA-C, CPC, CEMC



Consider the following documentation of an Urgent Care office visit:

#### Subjective

A 49-year-old male (new patient) presents for evaluation after an ED visit 4 days ago. He went to the ED for headache, fatigue, and diaphoresis. He states he had blood work done, EKG, CT of his head, and was given IV fluids. He was diagnosed with HTN, started on HCTZ and told to follow up with his PCP. He states he does not have a PCP, so he was told to come here. He states he is feeling better. Minimal headache currently. He denies CP, SOB, DOE, dizziness, or rash. He also denies anorexia, diarrhea, nausea and vomiting.

#### Past Medical History

- Kidney stone - 2015

#### No Known Drug Allergies

#### Social History

##### Socioeconomic History

- Marital status: Married

#### Occupational History

Employer: ABC Health

#### Tobacco Use

- Smoking status: Former Smoker
- Smokeless tobacco: Former User

#### Substance and Sexual Activity

- Alcohol use: No; Alcohol/week: 0.0 standard drinks
- Drug use: No
- Sexual activity: Yes

## **Objective**

BP: 125/87 | Pulse: 92 | Temp: 98.8 °F (37.1 °C) (Oral) | Ht: 5' 7" (1.702m) | Wt 195lb 12.8oz (88.8kg) | SpO2: 99% | BMI: 30.67 kg/m<sup>2</sup>

General appearance: alert, appears stated age, cooperative and no distress

Head: Normocephalic, without obvious abnormality, atraumatic

Eyes: conjunctivae/corneas clear; PERRL, EOMs intact

Ears: EACs and TMs non-erythematous; No discharge

Nose: turbinates moist

Throat: lips, mucosa, and tongue normal; teeth and gums normal

Neck: supple, no adenopathy, no JVD, no bruits

Lungs: clear to auscultation bilaterally

Heart: regular rate and rhythm, S1, S2 normal, no murmur, click, rub or gallop

Abd: soft, non-tender, BSX4, no G/R/R

Skin: Skin color, texture, turgor normal; No rashes or lesions

### Blood work and findings from his ED visit were reviewed:

CBC was WNL except his hemoglobin was elevated at 17.8g/dl

CMP shows kidney and liver function were WNL. Electrolytes WNL. Glucose elevated (not fasting) at 156mg/dl.

TSH was 3.3mU/L

CT head shows no acute bleed or abnormalities.

EKG shows sinus tachycardia at 110bpm. No Q waves or ST-T abnormality.

## **Assessment/Plan**

BP is controlled today. He will continue his HCTZ at 25mg once daily. No adjustment needed at this time.

I have referred him to a PCP. He will check his BP daily and start a log. He can return to our Urgent Care for any problems or concerns until he sees the PCP. ED for CP, SOB, or severe headache. He understands and agrees to these instructions.

### Encounter Medications

Outpatient Encounter Medications as of 10/7/2022:

- HCTZ 25mg - Take one tablet by mouth daily
- Multivitamin plain - Take 1 tablet by mouth daily
- No facility-administered encounter medications on file as of 10/7/2022.

Pre-visit planning was completed via snapshot and review of chart.

I reviewed the patient instructions on the visit summary with the patient/family verbalized to me that they understood what their problem is, what they need to do about it, and why it is important that they follow instructions.

The patient/family voices understanding of all medications. No barriers to adherence were noted. Patient is taking all medications as prescribed and is tolerating well. Plan for follow-up as discussed or as needed if any worsening symptoms or change in condition.

After Visit Summary was given to patient/or sent to MyChart.

### Determination of Level of Service (LOS):

We will break this case down by referring to the MDM Elements:

#### Number and Complexity of Problems Addressed

Patient complaint is a follow up from an ED visit. He was diagnosed with HTN and prescribed medication. This would meet the criteria for, “1 stable chronic illness” which is a “low” Level 3.

#### Amount and/or Complexity of Data To Be Reviewed and Analyzed

In this case, the provider did not order any new labs. The provider reviewed a CBC, CMP, and TSH which was well documented. Reviewing these three labs meets the criteria for “review of the result(s) of each unique test” which is a “moderate” Level 4. A CT head and EKG were also documented in the note.

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

The patient’s BP is currently controlled so the provider documented, “BP is controlled today. He will continue his HCTZ at 25mg once daily. No adjustment needed at this time.” This counts towards “prescription drug management” which meets the criteria for “moderate” Level 4 risk.

2 of the 3 Elements of MDM need to be met when choosing your level of service. We successfully met Level 4 *problems addressed* and Level 4 *risk*. The correct E/M code is a **99204**.

## Occupational Medicine

### Maintaining Your DOT Medical Examiner Certification in 2023

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



FMCSA has announced plans to step up enforcement of the rules and regulations that govern the National Registry of Certified Medical Examiners. Certified Medical Examiners should regularly visit the FMCSA CME website to ensure that their account and personal information is up to date, and that they stay current with FMCSA communications.

DOT Certified Medical Examiners should take several steps now and in early 2023 to remain fully compliant with FMCSA.

#### 1) Create An Account with *Login.gov* –

- According to FMCSA, “Effective immediately, all medical examiners listed on the National Registry of Certified Medical Examiners (ME) must create an account with login.gov to access their National Registry account.”

- Once you set up an account on *login.gov*, go to <https://nationalregistry.fmcsa.dot.gov/> and sign in. Answer a few questions and you're ready to go.
- Helpful Hint: Always login to your *login.gov* account before going to the National Registry sign-in page. Even after you have set up your account, you will always have to be on *login.gov* to enter the FMCSA National Certified Medical Examiner sign-in page.

## 2) Update your Profile Page on the NRCME Website

Visit <https://nationalregistry.fmcsa.dot.gov/> regularly to keep your account active and up-to-date.

- Initially, and on an annual basis, the ME must agree to the National Registry's terms of use.
- Your ME profile must be updated, within 30 days, to reflect any changes to address, phone number, or email address.
- ME must update medical license information upon renewal or change in status.
- Not updating your profile is grounds for removal from the National Registry.

## 3) Maintain Periodic Training and Recertification – 5-Year Periodic Training Requirement

If your initial certification was in 2018 or earlier, you are now eligible to take the FMCSA Periodic Training and Recertification course that is available without cost on your FMCSA Certified Medical Examiner profile page. The process is simple:

- There are four modules – read and study each.
- Upon completion, print the Certificate of Completion at the end of Module 4.
- Save a copy of the Certificate on your computer for upload to your National Registry account.
- Return to the periodic training menu item in your National Registry account to attest that you have completed the training and to upload your Certificate of Completion.

## 4) Maintain Periodic Training and Recertification – 10-Year Periodic Training Requirement

Beginning in January 2023, the 10-year periodic training and recertification will be available for those who have had at least nine years after the date of issuance of the initial Medical Examiner certification credentials.

- It will be necessary to take a third-party training course and be issued a certificate of completion similar to the initial certification process.
- Once completed, the ME will need to take the CME exam at a testing center similar to initial certification.
- This is our current understanding. We suggest that you check the FMCSA Certified Medical Examiner website regularly to see if there are any updates.

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# Wound Management

## Suture Material: The Surgeon's Knot and Knot Tying

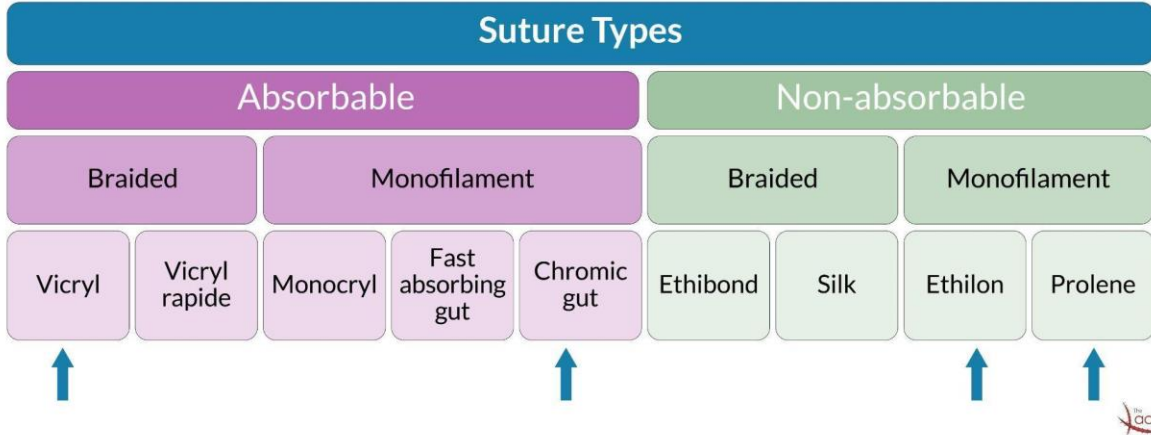
**Patrick O'Malley, MD**

Section Editor, Wound Management



There is a lot of confusion amongst clinicians when it comes to suture materials and their names. Terms such as monofilament, braided, and polypropylene get thrown around a lot, and we often do not have this explained to us. Furthering the confusion is the interchangeable use of the generic and trade names. For the sake of simplicity, let's break it down into absorbable vs non-absorbable. See Diagram 1 below. The arrows indicate the preferred type of suture material to have readily available to handle almost all situations in the Urgent Care setting.

**Diagram 1**



Absorbable sutures (what a lay person would call dissolvable) are primarily used for deep sutures. These are treated with different agents or processes to facilitate more rapid degradation. Common options include chromic gut, fast absorbing plain gut, or polyglactin (Vicryl, Vicryl Rapide). They can be used externally and are being advocated for use in the pediatric population or for patients who may not reliably return for suture removal. (1)

Non-absorbable sutures can be categorized into braided or monofilament, most UCC and emergency departments use non-braided monofilament exclusively. The main options here are polypropylene (Prolene) or nylon (Ethilon) These have some subtle differences, with polypropylene being a bit more rigid, whereas nylon has some “elasticity,” or stretch, when pulled. Both nylon and polypropylene suffer

from the characteristic known as “memory.” (2) This is seen when the suture is removed from the package and it retains the shape it held in the package. This is more prominent with larger gauge material (3.0 vs. 6.0) The memory characteristic can be overcome by pulling the suture material through your fingernails to straighten it out. Another trick is to cut the suture thread in half if you are only putting in a few sutures, making the thread more manageable. A quick demonstration can be seen [here](#).

Choosing one monofilament over the other likely comes down to personal preference and past experience. Try both out for yourself and see what has a better feel for you, as patient outcomes are felt to be similar. That being said, I do recommend polypropylene (Prolene) when you are suturing in hairy areas such as eyebrows, beards and mustaches. This is because blue (Prolene) is much easier to see when placing sutures and when they come back in for suture removal. Fun fact: The reason we don't have fluorescent-colored suture material is that the dye needed to provide the color is not FDA approved for human use but is available for veterinary use.

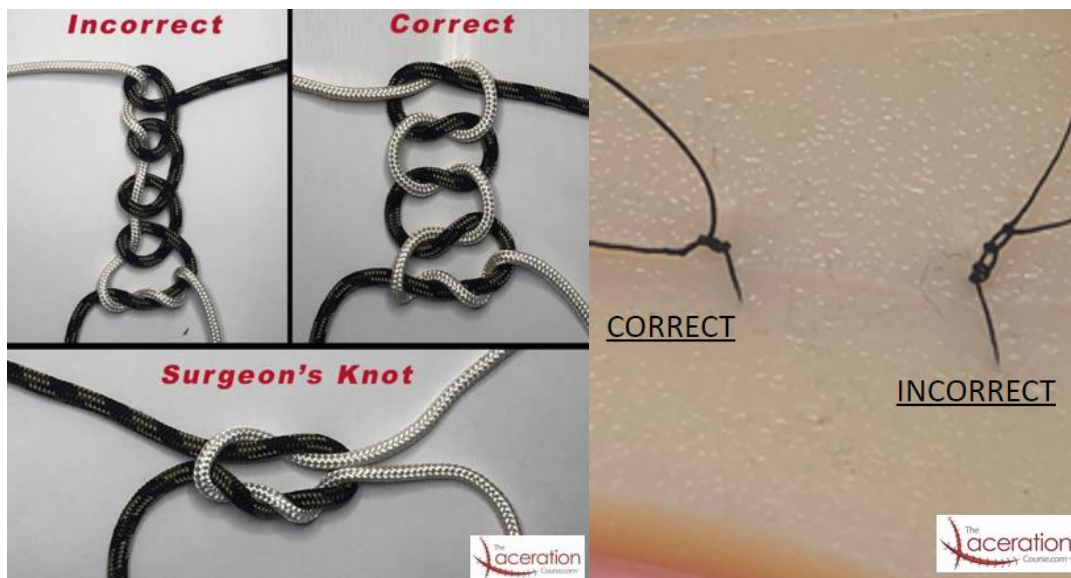
Now that we know **what** we are using, let's discuss **how** we use it. Suturing is something that we all do frequently, but how much attention have you devoted to your technique? How do you properly tie a suture knot? What exactly is a surgeon's knot? We all place a “few throws” down, but have you ever paid close attention to the mechanics of this? The surgeon's knot is defined as:

*A **surgical knot** is a simple modification to the **reef knot**. It adds an extra twist when tying the first throw, forming a **double overhand knot**. The additional turn provides more friction and can reduce loosening while the second half of the knot is tied (3-5).*

The instrument tie is the cornerstone of suturing wounds. Our goal is to create a “squared knot” that is secure and does not unravel after it has been tied. Improper technique may lead to sutures coming out and wound dehiscence. Once the thread has been passed through the tissue, pull the distal end or “tail” until there is about an inch or so of material available for you to grab with the needle driver to tie your knots. Too small of a tail makes it difficult to grab and tie. Leaving the tail too long will cause the tail to get caught in the knot when tying it and will use more suture material than necessary. This could result in needing a second package...and it's expensive!

Follow this [link](#) for a detailed video tutorial. Place the needle driver over the center of the wound and wrap over and around the needle driver towards the tail end of the thread **two** times. Open the needle driver, grasp the tail and pull in the opposite direction so the suture material lies down flat over the wound. Place the needle driver over the center of the wound, wrap the thread around the needle driver, towards the tail **one** time, grasp the tail of the thread and pull in the opposite direction from your first “throw”. You now have completed a **squared knot**. Do this 2-3 more times, making sure that you go in the opposite direction each time. This is the key. **You have to go in the opposite direction each time.** If you repeatedly pull the tail in the same direction, you get a knot that is more likely to unravel, which can lead to suture failure and wound dehiscence. See Diagram 2 below.

Diagram 2



The actual number of throws needed will depend on what type and size suture material being used. 3.0 nylon such as Prolene may require 4-5 throws, whereas 6.0 absorbable may do fine with 3. Lastly, cut the ends of the suture material with your scissors. Leave a few millimeters of thread above the knot, as cutting too close may lead to the knot unraveling. I recommend leaving the tails longer when repairing a wound in an area with hair, such as an eyebrow. This allows for easier identification and removal of the sutures. Diagram 2 also demonstrates the end result of both proper and improper technique.

To many of you this may seem elementary and basic, but I encourage you to take a closer look at your practice and ensure that you are doing it correctly.

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To learn more about mastering the art of suturing and laceration management, check out

**The Laceration Course** at [www.thelacerationcourse.com](http://www.thelacerationcourse.com)

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## Expert Insights

# Twenty Questions (And Answers) About Atrial Fibrillation (AF)

Michael B. Weinstock, MD

### How Common Is Atrial Fibrillation?

Atrial fibrillation is the most common dysrhythmia in adults, present in 37% of those over the age of 55. Incidence increases with age.

### What Are Risk Factors for Atrial Fibrillation?

Risk factors include older age, coronary artery disease, male, European ancestry, hypertension, obesity, smoking, diabetes, obstructive sleep apnea, and a family history of atrial fibrillation in a first-degree relative.

### Of Patients Newly Diagnosed With Atrial Fibrillation, How Many Had an Acute Precipitant?

Wang et al. looked at more than 10,000 patients over 14 years and found that 19% had an acute precipitant such as cardiac surgery (22%), pneumonia (20%), and non-cardiothoracic surgery (15%).

### Does an Acute Precipitant Predict Recurrence?

Interestingly, those with an acute precipitant had less chance of recurrence (41% compared to 52%). This was also demonstrated by Lubitz et al, with the finding that of patients with new onset atrial fibrillation 31% had an acute precipitant including cardiothoracic surgery (30%), infection (23%), other surgery (20%) and acute MI (18%)

### What Are Causes of Atrial Fibrillation?

One way to break down causes are cardiac and noncardiac.

- A. Cardiac
  - 1. Valvular
  - 2. Post-surgical (cardiothoracic surgery)
  - 3. Heart failure
  - 4. Hypertension
  - 5. Myocardial ischemia/infarction
  - 6. Pericarditis/myocarditis
  - 7. Infiltrative (amyloid, sarcoidosis)
  - 8. Congenital

- B. Non-cardiac
  - 1. Pulmonary – Pulmonary embolism (PE), pneumonia, sleep apnea, cor pulmonale
  - 2. Alcohol
  - 3. Medications – Sympathomimetics, antidepressants, digoxin, theophylline
  - 4. Electrolyte abnormalities
  - 5. Fever/hypothermia
  - 6. Thyrotoxicosis

### **What Is the Pathophysiology of Atrial Fibrillation?**

Changes in the electrophysiology of the atrial myocytes including fibrosis (though this is debated).

### **What Are the Risks of Atrial Fibrillation?**

Interestingly, patients don't *usually* get into trouble from the rate or the rhythm; the main risk is associated with increased risk of stroke (men risk by factor of 4 and women factor of almost 6), heart failure (men factor 3 and women factor 11), and dementia (increased by a factor of 1.4). Death is increased by factor 2.4 in men and 3.5 in women. The dementia associated with AF is likely from strokes and cerebral hypoperfusion.

### **What Symptoms May Be Present in Patients With Atrial Fibrillation?**

Atrial fibrillation patients may experience fatigue, palpitations, or decreased ability to exercise. When AF is present with tachycardia, there may be syncope, hypotension, chest pain from angina, or acute pulmonary edema.

### **When Do We Need To Use Caution?**

Patients with Wolff-Parkinson-White Syndrome (WPW) and AF will display an irregularly irregular *wide* complex but with polymorphic QRS complexes (complexes are not of uniform morphology) that do not demonstrate right or left BBB morphology AND will have a short PR interval. The rate is often *very* elevated at 250-300 beats per minute.

Atrial flutter is often interpreted by the ECG machine as sinus tachycardia.

### **What Rate Risks Are There With AF?**

Atrial fibrillation with rapid ventricular response (RVR).

Atrial fibrillation with an elevated heart rate/rapid ventricular response (RVR) is often not the etiology behind the patient's decompensation. AF that is chronic or refractory may not convert to sinus rhythm. Synchronized cardioversion is also the preferred treatment for AF with RVR in the setting of pre-excitation (such as WPW).

### **Which Patients with AF Need to be Transferred From the UC to the ED?**

Patients that need to be transferred are those:

Who are hemodynamically unstable or with suspected acute congestive heart failure (CHF) or acute coronary syndrome (ACS).

Who require treatment of their underlying etiology (such as PE or valvular problems).

With a rapid ventricular response (caveat that if rate is greater than 100 but due to an underlying problem in patients with chronic AF, they would not necessarily need to be transferred).

Who are unable to be safely discharged for other reasons (i.e., social, support) require admission to the hospital.

### **Which Acute or Chronic Rate Control Medications Are Recommended for Management of AF?**

Calcium channel blockers, beta blockers, digoxin.

### **When Should a Patient Be Emergently Cardioverted?**

Unstable, hypotensive, altered level of consciousness if there is associated WPW.

### **Why Aren't All Patients Cardioverted?**

There is an increased risk of stroke especially for patients with AF which has been present for longer than 48 hours.

### **What Is More Effective for Chronic Management of AF, Meds or Catheter Ablation?**

Catheter ablation (especially for paroxysmal atrial fibrillation).

### **What Is Atrial Flutter and Is It Managed Differently?**

Atrial flutter is produced by a macro-reentrant loop in the right atrium just above the AV node. The atrial rate in atrial flutter ranges from 240 to 360bpm, and the resulting ventricular rate is determined by the AV node, which may have fixed (producing a regular ventricular rate at a multiple of the atrial rate) or variable conduction (producing a regularly irregular rhythm with R-R intervals at varying multiples of the atrial rate).

In most physiologic states, the AV node conducts the atrial circuit in a 2:1 fashion, resulting in a regular rhythm around 150bpm without rate variation. The atrial flutter circuit usually produces a continuous sawtooth pattern best visualized in leads II and V1, but occasionally appears only as small narrow spikes with the false appearance of a return to baseline between them.

The sawtooth baseline of atrial flutter may simulate or hide ST-segment changes.

### **What Is the Risk of Stroke in Patients With AF?**

Risk of stroke ranges from 1% to nearly 20%. It is estimated that one-sixth of strokes are the result of AF.

### **How Do We Calculate Recommendations for Anticoagulation in Patients With AF?**

The most common way is by using the CHA<sub>2</sub>DS<sub>2</sub>-VASc score. Calculators are available in apps such as MDCalc or CorePendium. The elements involved include:

- A history of CHF or known LV dysfunction
- Hypertension
- Age
- History of diabetes
- History of prior stroke, TIA, or thromboembolic event
- History of vascular disease
- Gender

Patients with a score of 0 do not need anticoagulation.

Patients with a score of 1 should be considered for a daily aspirin or anticoagulation.  
Patients with a score >1 require anticoagulation

### **What Are the Best Anticoagulants To Use?**

Direct oral anticoagulants (DOACs) are now recommended as the agents of choice by the 2019 American College of Cardiology (ACC) and American Heart Association (AHA) guidelines for patients with AF. However, patients with severe valvular disease or mechanical valves require anticoagulation (AC) with warfarin and not DOACs.

- Anticoagulation can reduce the risk of a stroke by up to 80%.
- There is also some evidence that the early initiation of AC can prevent vascular dementia in patients with AF.

### **How Can We Gauge the Risk of Bleeding?**

- The decision to initiate AC must be balanced with the risk of bleeding.
- Calculate the bleeding risk rather than citing clinical concern alone. Clinician estimates of bleeding risk do not correlate with calculated risks, with fall risk being the most cited reason for withholding AC.
- The HAS-BLED Score demonstrated superior performance compared with others. This can be estimated with the risk calculator in CorePendium
- Patients with a score >2 are at an increased risk of bleeding, and the decision to initiate AC must be taken with caution.

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## **Human Trafficking: What Clinicians Need to Unlearn in Order to Take Better Care of Victims**

**Victoria Pittman, MPAP, PA-C**

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Victims of human trafficking come through the doors of our Urgent Care centers every day, without us even knowing. Human trafficking is when someone exploits another person by compelling them to

perform some type of labor. We often think of sex trafficking, but victims of human trafficking can be coerced into any form of labor, including hospitality, agriculture, construction, and domestic services. It is hard to quantify the extent of the human trafficking issue, but experts estimate that some 24.9 million people are victims of trafficking worldwide.

Human trafficking is a public health issue and experts have been pushing to get human trafficking on the radar of clinicians for some time. Dr. Hanni Stoklosa is one of them. Dr. Stoklosa is a nationally recognized human trafficking expert and advocate, an EM physician at Brigham and Women's Hospital, a faculty member at Harvard Medical School, and the Founding CEO of the organization HEAL Trafficking.

Most of us carry some assumptions about what human trafficking is, often shaped by what we see in the media. Dr. Stoklosa shares things clinicians can “unlearn” to take better care of people being trafficked.

### **Unlearning #1: It's Not About Rescue; It's About Planting Seeds.**

Our natural inclination is to rush in and help people out of trafficking situations. But this takes power and control away from the victim. Additionally, our good intentions can sometimes cause harm. An example of this is involving law enforcement. For many reasons, trafficking survivors may see law enforcement as foe and not friend. Instead, clinicians should focus on planting seeds of resilience by acknowledging the victim's strengths, providing resources, and assisting with safety planning.

### **Unlearning #2: The Biases We Have About Who Experiences Human Trafficking.**

All humans, including health care workers, have biases about who experiences trafficking and how trauma manifests. Victims of human trafficking can be of any age, gender, race, ethnicity, immigration status, and socioeconomic status. Know your biases and mitigate them. Dr. Stoklosa recommends using the [Harvard Implicit Bias](#) test as a tool to help identify your biases.

### **Unlearning #3: Stop With the Screening Tool Frenzy!**

Bulleted, screening checklists are not helpful when it comes to identifying trafficking survivors. Instead, we should focus on person-centered, trauma-informed approaches to assess victims of trafficking. Dr. Stoklosa recommends the [PEARR](#) Tool. This is an acronym that stands for **P**rovide privacy, **E**ducate, **A**sk, **R**espect, and **R**espond. Potential inquiry/screening questions include:

- Have you ever worked, or done other things, in a place that made you feel scared or unsafe?
- Have you ever been tricked or forced into doing any kind of work that you did not want to do?
- Have you ever been afraid to leave or quit a work situation due to fears of violence or threats of harm to yourself or your family?
- Has someone you worked for ever controlled the money you earned, or kept money you earned in exchange for transportation, food or rent without your consent?
- Have you ever received anything in exchange for sex (e.g.: a place to stay, gifts, or food)?

What if a patient discloses that they are a victim of trafficking? First of all, be aware of your clinic or health care system's protocols and the resources available to you (e.g., social work). The National Human Trafficking Hotline (1-888-373-7888) is a helpful resource for clinicians as well as patients. This hotline is available 24-7 and can provide information on support services in your community. Survivors can also text “Be Free” or 233733 to access this hotline and its resources.

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## Risk Management Pitfalls for Urgent Care Management of Pharyngitis

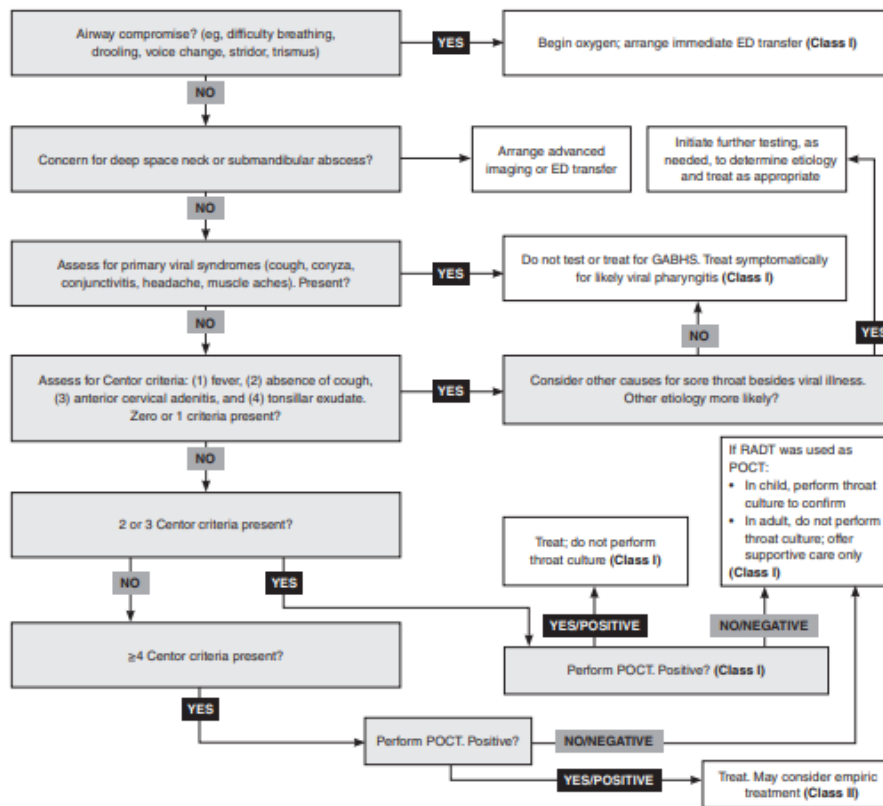
1. **“It was just a sore throat, so I didn’t think she needed to be transferred for intravenous fluids.”** Pharyngitis can be a simple diagnosis, but adequate pain control must be ensured to allow oral rehydration. Failing to assess PO intake initially and prior to discharge can lead to poor outcomes and readmissions.
2. **“I discharged him with viral pharyngitis after a negative NAAT. I didn’t expect him to end up in the intensive care unit with multiple septic emboli.”** Lemierre syndrome is a rare but well-described complication of pharyngitis, normally associated with *Fusobacterium* species instead of GABHS. It is most commonly seen in adolescent patients shortly outside of the “acute” (3-5 day) pharyngitis window, and results in internal jugular venous thrombosis and sepsis. Patients should always be given clear return precautions and follow-up plans.
3. **“I didn’t ask about his sexual history.”** Gonorrhea can cause an exudative pharyngitis and should be considered in the broad differential for pharyngitis. Chlamydia trachomatis, HIV, and herpes simplex virus can all also produce pharyngeal syndromes and symptoms. Failing to take a good history prevents the diagnosis of these conditions.
4. **“She told me her voice sounded funny, but it sounded fine to me.”** Patients presenting with sore throat can have serious airway complications. Voice change (other than hoarseness associated with postnasal drip and cough) should be taken as a sign of deep space neck infection or epiglottitis; further investigation with direct visualization or imaging to identify a cause should be strongly considered.
5. **“He had a cough, runny nose, and hoarseness, but I still gave penicillin for his sore throat. He had never had an allergic reaction to an antibiotic before.”** Inappropriate use of antibiotics can lead to unnecessary costs, antibiotic resistance, and allergic or other unpleasant reactions for patient. Antibiotic use should be limited to only those patients with a clear indication. Patients with obvious evidence of viral pharyngitis,  $\leq 1$  Centor Criteria, or negative POC testing should not be treated with antibiotics.
6. **“I gave antibiotics, but the patient is very upset that she developed a peritonsillar abscess and had to come back.”** Antibiotics have been shown to decrease suppurative complications, but complications can

still occur. Patients should be counseled on the possible complications of pharyngitis and given strict return precautions and a follow-up plan.

7. **“I never felt under his tongue.”** Given the broad differential associated with pharyngitis, the clinician’s best tools for success are a thorough history and physical examination. Ludwig angina (submandibular abscess) results in “woody” induration of the submental space. Forgetting to fully examine the entire oral cavity or other relevant structures (skin, spleen, etc.) can result in missed diagnoses.
8. **“The patient reported a penicillin allergy, so I gave cephalexin. I never asked what the reaction was.”** Penicillin is the treatment of choice for GABHS pharyngitis, but in penicillin-allergic patients, there are other options. Cephalosporins have low cross-reactivity to penicillin, have been proven effective against GABHS, and can be used if a patient had a minor reaction. However, if a patient has had a severe allergy to penicillin such as anaphylaxis, Stevens-Johnson syndrome, or other airway involvement, cephalosporins should not be used.
9. **“It was just a sore throat. Why would I think about cancer?”** Infectious pharyngitis should last only 3 to 5 days, and anyone presenting with a longer course needs a broader differential. In older patients or patients with other risk factors for malignancy (smoking, obesity, heavy alcohol use), it must be considered or it will most certainly be missed.
10. **“The patient had an isolated sore throat and negative strep test. It clearly wasn’t a case of COVID-19.”** Like other viral respiratory infections, the symptoms of COVID-19 can evolve over the course of illness. Additionally, data on more recent SARS-CoV-2 strains have shown that SARS-CoV-2-positive patients are now more likely to report sore throat as a symptom than patients who had earlier strains of the virus.
11. **“I saw the patient yesterday and diagnosed her with viral pharyngitis. She didn’t need any treatment. I don’t know why she is back.”** Pharyngitis can be very painful for patients, and even if antibiotics are not prescribed, the UC clinicians should counsel the patient on methods for pain control. NSAIDs, acetaminophen, lozenges, and gargles can all be effective. Even though most of these medications are available over the counter, patients should still be instructed on what to use and how to use it in order to prevent repeat visits.



## Clinical Pathway for Managing Pharyngitis in Urgent Care



Abbreviations: ED, emergency department; GABHS, group A beta-hemolytic *Streptococcus*; POCT, point-of-care test; RADT, rapid antigen detection test.

### Class of Evidence Definitions

Each action in the clinical pathways section of *Evidence-Based Urgent Care* receives a score based on the following definitions.

<p><b>Class I</b></p> <ul style="list-style-type: none"> <li>• Always acceptable, safe</li> <li>• Definitely useful</li> <li>• Proven in both efficacy and effectiveness</li> </ul> <p>Level of Evidence:</p> <ul style="list-style-type: none"> <li>• One or more large prospective studies are present (with rare exceptions)</li> <li>• High-quality meta-analyses</li> <li>• Study results consistently positive and compelling</li> </ul>	<p><b>Class II</b></p> <ul style="list-style-type: none"> <li>• Safe, acceptable</li> <li>• Probably useful</li> </ul> <p>Level of Evidence:</p> <ul style="list-style-type: none"> <li>• Generally higher levels of evidence</li> <li>• Nonrandomized or retrospective studies: historic, cohort, or case control studies</li> <li>• Less robust randomized controlled trials</li> <li>• Results consistently positive</li> </ul>	<p><b>Class III</b></p> <ul style="list-style-type: none"> <li>• May be acceptable</li> <li>• Possibly useful</li> <li>• Considered optional or alternative treatments</li> </ul> <p>Level of Evidence:</p> <ul style="list-style-type: none"> <li>• Generally lower or intermediate levels of evidence</li> <li>• Case series, animal studies, consensus panels</li> <li>• Occasionally positive results</li> </ul>	<p><b>Indeterminate</b></p> <ul style="list-style-type: none"> <li>• Continuing area of research</li> <li>• No recommendations until further research</li> </ul> <p>Level of Evidence:</p> <ul style="list-style-type: none"> <li>• Evidence not available</li> <li>• Higher studies in progress</li> <li>• Results inconsistent, contradictory</li> <li>• Results not compelling</li> </ul>
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Excerpted from Pochick K. Evaluation and Management of Patients with Pharyngitis in Urgent Care. *Evidence-Based Urgent Care*. 2022 October 1;1(7).

## Urgent Care Evaluation of Patients with Chest Pain

No single component of the history, physical examination, or initial diagnostic testing can reliably exclude acute coronary syndrome (ACS), but various clinical risk scores incorporate this information to identify patients at low risk for ACS or serious short-term outcomes. The use of clinical decision pathways is advised by the 2021 American Heart Association/American College of Cardiology chest pain guideline.<sup>1</sup> The goal should be to promptly identify and assess patients presenting with chest pain in order to recognize those who are actively having ACS. Time matters in these patients. Intervention before myocardial damage is the desired outcome; the most commonly used metric is a door-to-balloon time of less than 90 minutes.<sup>2</sup> It is reasonable to postpone the comprehensive patient check-in process until an initial assessment has been done, with high-risk patients expedited to a higher level of care. Patients who are identified as low risk can return to the standard check-in process and then undergo a full clinical evaluation.<sup>3</sup>

### **History**

A focused history should be obtained from all stable patients. Historical features of a patient's chest pain cannot reliably rule in or rule out ACS but may be associated with a higher or lower likelihood of ACS. A 2015 review that included 58 studies found that pain radiating to both arms, pain similar to prior ischemia, and a change in the pattern of pain over the past 24 hours were the most helpful historical features in predicting ACS. These features had a positive likelihood ratio (LR)  $\geq 2.0$  and a 95% confidence interval (CI) excluding 1.0.<sup>4</sup> This review also found that pleuritic pain is less likely to be associated with ACS (positive LR, 0.35-0.61; 95% CI excluding 1.0). Using the same criteria, a 2005 review found that chest pain that radiates to the shoulders or arms, pain that is associated with exertion, or pain associated with diaphoresis was most predictive of ACS. Conversely, pain described as sharp or stabbing, pain not associated with exertion, and pain described as pleuritic, positional, or reproducible with palpation (colloquially referred to as "the 3 Ps") were least predictive.<sup>5</sup> Women, older adults, and patients with diabetes are more likely to present with "atypical" symptoms of ACS (e.g., pain outside of the chest, lack of pain, or symptoms such as nausea or dyspnea).<sup>6,7</sup>

Several landmark studies have shown that patients' age and gender and their description of symptoms are associated with the presence of clinically significant CAD.<sup>8-10</sup> However, these studies examined patients who had undergone invasive angiography, a population that differs from most patients presenting to EDs or UCs with chest pain. A more recent study of patients with chest pain who underwent noninvasive CCTA has suggested that these historical features greatly overestimate the actual prevalence of CAD.<sup>11</sup>

In general, classic cardiac risk factors (hypertension, hyperlipidemia, diabetes, smoking, and family history of CAD) are not independently predictive of ACS in patients presenting to the ED with chest pain,<sup>12,13</sup> however, these classic cardiac risk factors may be more useful in younger patients. A prospective analysis of nearly 11,000 patients found that among those aged <40 years, the presence of zero risk factors had a negative LR of 0.17 for ACS (95% CI, 0.04-0.66), and the presence of 4 or more risk factors had a positive LR of 7.39 (95% CI, 3.09- 17.67).<sup>14</sup>

### **Physical Examination**

The physical examination in patients with chest pain is often normal, and abnormalities found on examination are often nonspecific for ACS. Hypotension, the presence of a new mitral regurgitation

murmur, and the presence of a third heart sound all increase the likelihood of ACS.<sup>15</sup> Chest pain that is reproducible on palpation is perhaps the most useful finding in lowering the likelihood of ACS; a systematic review showed that this finding had a LR of 0.28 for ACS (95% CI, 0.14-0.54).<sup>16</sup> However, none of these features can be used to reliably rule in or rule out ACS. As such, the physical examination is perhaps more important for assessing overall hemodynamic function and the likelihood of alternative diagnoses of chest pain. For example, the examination findings of oxygen saturation < 95% or unilateral leg swelling are strongly associated with pulmonary embolism.<sup>17</sup> A prospective cohort study of 250 patients found that an aortic regurgitation murmur, pulse differential (absence of unilateral carotid or upper extremity pulse), or blood pressure differential >20mmHg between the arms are independent predictors of thoracic aortic dissection. Focal neurologic signs may also suggest dissection but were seen in only 13% of patients in this study.<sup>18</sup> A brief dermatologic examination may uncover vesicular lesions suggestive of herpes zoster.

Excerpted from Johnson L. Identifying Urgent Care Patients with Chest Pain Who Are at Low Risk for Acute Coronary Syndrome. *Urgent Care*. 2022 November 1;1(8).

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## Best Practice from the College of Urgent Care Medicine

### Brief Resolved Unexplained Event (BRUE)

Date Reviewed	November 14, 2022
Subject	Brief Resolved Unexplained Event (BRUE) Best Practices
Patient Population	Infants < 1 year of age
Rationale	Infants are frequently brought to Urgent Care Centers after an acute event of unexpected change in breathing pattern, appearance, or behavior. Clinicians must avoid unnecessary testing, prolonged observation or transferring to Emergency Department when it is not needed. The clinical challenge is to identify and stratify patients as high or low risk for recurrence or for having an underlying condition.
Introduction	In 2016 The American Academy of Pediatrics recommended to replace the term apparent life-threatening event (ALTE) with brief resolved unexplained event (BRUE) to describe any event of transient unexpected change in breathing patterns, appearance, or behavior that remains unexplained after an appropriate individualized medical evaluation. <sup>1-5</sup> Epidemiology is very limited as the new term was changed recently. An apparent life-threatening event includes a subset of brief resolved unexplained events accounted for approximately 0.6% to 0.8% of all Emergency Department (ED) visits and 0.6 to 2.6 per 1000 live births. <sup>1</sup>
Evidence Based Guideline with	The term BRUE better reflects the transient nature of the event and that no clear etiology is identified. Effective communication and detailed history and physical exam are essential interventions. Additionally, AAP has provided evidence-based recommendations: <sup>5</sup> <ol style="list-style-type: none"> <li>1. Patient evaluation approach that is based on the risk that the infant will have a repeat event or has a serious underlying disorder.</li> </ol>

Strength of Evidence	<p>2. Management recommendations, or key action statements, for lower-risk infants. Effective communication, detailed history and physical exam are evidence-based interventions when assessing patients with BRUE.</p>
Discussion	<p>BRUE is not considered a specific diagnosis, but rather a chief complaint as the term should be applied only when the infant is asymptomatic on presentation.<sup>4</sup></p> <p>The pathophysiology of these events is unknown, but the estimated duration of the event is usually less than one minute (and typically &lt;20 to 30 seconds). Clinicians must identify infants who may benefit from further testing and prolonged observation. The stratification should be based on factors that suggest an identifiable underlying diagnosis or risk for subsequent events. This approach will mitigate the risk of unnecessary testing, monitoring, and hospital admission.<sup>4</sup></p> <p>Most but not all infants with BRUE are at low risk for recurrence or for having a serious underlying problem.</p> <p><b>BRUE Criteria:</b> Sudden, brief, and now resolved episode of one or more of the following in an infant &lt; 1 year age:</p> <ul style="list-style-type: none"> <li>● Cyanosis or pallor</li> <li>● Absent, decreased or irregular breathing</li> <li>● Marked change in tone (hyper- or hypotonia)</li> <li>● Altered responsiveness</li> <li>● No explanation for the event with full history and exam</li> </ul> <p><b>Low Risk Criteria:</b></p> <ul style="list-style-type: none"> <li>● Age &gt; 60 days</li> <li>● Gestational Age <ul style="list-style-type: none"> <li>○ Born ≥ 32 weeks gestation and post-conception age ≥ 45 weeks</li> </ul> </li> <li>● No CPR by trained medical provider</li> <li>● Event lasted &lt; 1 minute</li> <li>● First event</li> <li>● No repeat events</li> <li>● No concerning history</li> <li>● No concerning physical exam</li> </ul> <p>A complete and detailed history and physical exam must be performed. History should include event characteristics, interventions, pertinent past including medical history, birth history, medications, family history and social history. See table #1.</p> <p>Concerning physical examination findings include any signs of injury, including bleeding, bruising (especially on the scalp, trunk, face, or ears), or bulging anterior fontanel; altered sensorium; fever or toxic appearance; respiratory</p>

distress; heart murmur or gallop; decreased pulses; hepatomegaly or splenomegaly; and abdominal distension or vomiting.<sup>3,4</sup>

Patients who meet low risk criteria are considered to have minimal risk for a recurrent event, serious underlying disorder, or sudden death.<sup>1,4</sup>

The main risk factors for acute events in infants are feeding difficulties, recent upper respiratory symptoms, and age younger than two months, or a history of previous episodes.<sup>4</sup> These patients need in depth assessment, evaluation and management and transferred to a higher level of care should be considered.

Low risk infants require minimal additional work-up or observation.

#### Management

##### **Recommended Steps:**

- Educate caregivers about BRUEs, and the low risk for infants with these characteristics.
- Offer resources for training in cardiopulmonary resuscitation (CPR).
- Engage in shared decision-making about further evaluation and disposition.
- Observe for 1-2 hours while feeding.
- Arrange for a follow-up check with a medical provider within 24 hours to identify infants with evolving medical concerns that would require further evaluation and treatment.

##### **Optional Steps:**

- Observation for more than 2 hours but less than 4 hours with continuous pulse oximetry and serial observations.
- 12-lead electrocardiogram with attention to QT interval. Especially if concerns due to cardiac family history.
- Testing for pertussis (especially for infants with suggestive symptoms, unimmunized patients).

Infants who do not meet these low-risk criteria are thought to be at higher risk for a recurrence or serious underlying disorder and require more extensive evaluation.<sup>4</sup>

##### **Not Recommended:**

- The American Academy of Pediatrics guideline specifically recommends against evaluating for systemic infection (white blood cell count, blood culture, or cerebrospinal fluid analysis or culture); laboratory testing for anemia; metabolic disease (electrolytes, calcium, ammonia, urine organic acids, plasma amino acids or acylcarnitines); respiratory disease (chest radiograph or blood gas testing); echocardiogram; electroencephalogram (EEG); or studies for gastroesophageal reflux (GER).
- RSV testing or respiratory panels.

	<ul style="list-style-type: none"> <li>● Routine testing with a urinalysis, blood tests (glucose, bicarbonate, or lactic acid), or neuroimaging, or admission to the hospital only for cardiorespiratory monitoring.</li> <li>● Home cardiorespiratory monitoring.</li> <li>● There is no role for medications including acid reflux reducers or epilepsy treatment or specialist consultations.</li> </ul> <p><b>Disposition Considerations</b></p> <ul style="list-style-type: none"> <li>● No repeat event during ED stay</li> <li>● Successful PO trial</li> <li>● Evaluation negative for any concerning illness</li> <li>● Parent comfortable with discharge to home</li> <li>● Safe sleep, co-sleeping teaching</li> <li>● Close follow up is available</li> </ul>
Summary	<p>Approximately 4% of infants presenting with BRUE have a serious underlying cause. BRUE and ALTEs are not considered a precursor to, or risk factor for, SIDS. The vast majority of SIDS victims do not experience apnea prior to death, and the epidemiology and risk factors for SIDS are very different from those for BRUE and ALTE. Clinicians must be familiarized with the evaluation of patient presents after a sudden event and categorize patients as high or low risk to avoid unnecessary tests or transfer to emergency room. Shared decision-making with caregivers should be part of the overall management strategy.</p>
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Reviewers	Cesar Mora Jaramillo, MD FAAFP FCUCM

Table #1: BRUE Detailed History

<b>Event Characteristics</b>	<ul style="list-style-type: none"> <li>● Preceding illness or injury</li> <li>● Event Description <ul style="list-style-type: none"> <li>○ Location, position, feeding, environment, timing of the event</li> <li>○ Choking, gagging</li> <li>○ Tone, movement</li> <li>○ Mental status</li> <li>○ Level of distress</li> <li>○ Color change - pallor, red, blue</li> <li>○ Breathing ability - apnea, shallow breathing, or difficulty breathing</li> <li>○ Duration</li> <li>○ Interventions</li> <li>○ Return to baseline</li> </ul> </li> </ul>
<b>Pertinent Past</b>	<ul style="list-style-type: none"> <li>● Prematurity (gestational age &lt; 32 weeks)</li> <li>● Previous episode, BRUE diagnosis</li> <li>● Newborn screening results</li> <li>● Growth and development</li> <li>● Breathing problems</li> <li>● Reflux</li> <li>● Medications</li> </ul>
<b>Family</b>	<ul style="list-style-type: none"> <li>● Sudden unexplained death</li> <li>● Cardiac disease, arrhythmias</li> <li>● Metabolic/genetic disease</li> <li>● Households with similar events</li> </ul>

<b>Social</b>	<ul style="list-style-type: none"> <li>● Environment, exposures, illness contacts</li> <li>● Family structure, individuals in home</li> <li>● Caretakers</li> <li>● Stressors</li> <li>● Specific/relevant social history (e.g., sleeping/co-sleeping, sleep surface)</li> <li>● Consideration for possible child abuse: <ul style="list-style-type: none"> <li>○ Previous children service/law involvement</li> <li>○ Inconsistency of event history, history not compatible with age</li> <li>○ Unexplained PE findings (bruising)</li> </ul> </li> </ul>
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Source: <https://www.chop.edu/clinical-pathway/brief-resolved-unexplained-event-history-and-physical-examination>

**Position Statement from the Clinical Response Committee of the College of Urgent Care Medicine**

**Evaluation of Patients Presenting for Treatment  
When Required Care Is Outside the Scope the Urgent Care Center or Not Available**

<b>Date</b>	10/17/2022
<b>Subject</b>	Evaluation of Patients Presenting for Treatment When Required Care Is Outside the Scope the Urgent Care Center or Not Available
<b>Patient Population</b>	All
<b>Rationale</b>	Patients with a wide variety of medical complaints present to Urgent Care for evaluation and treatment, sometimes with conditions that require services that are beyond the scope of practice of the Urgent Care, exceed the capabilities of the Urgent Care, or require services that may be temporarily unavailable at the location of the Urgent Care. Urgent Care centers should have a policy in place delineating how to safely evaluate and direct these patients to the appropriate level of care. It is recognized that Urgent Care organizations vary in scope, and some may provide more extensive services than others.

<p><b>Discussion</b></p>	<p>A wide variety of patients of any age may present to an Urgent Care center (UCC) for evaluation and treatment and most patient presentations fit within the scope of an Urgent Care center.</p> <p>Clinical scenarios that need special attention and a written policy to safely evaluate the patient and determine the appropriate site of care:</p> <ol style="list-style-type: none"> <li>1. Non-acute or chronic conditions that may be outside the individual Urgent Care center’s defined scope. Examples may include but are not limited to: administrative physical exams, refills on routine medication, routine lab draws or X-rays for outside providers, routine screening tests/lab work that are more appropriately within the scope of another specialty of medicine, etc.</li> <li>2. Acute conditions that normally could be handled in the UCC, but due to staffing or non-clinical issues, cannot be appropriately managed at the time of presentation. Examples include but are not limited to: X-ray staffing or machine down, supply shortages, etc.</li> <li>3. Conditions beyond the scope of the UCC that may require a higher level of care. Examples may include but are not limited to: stroke, active MI, intracranial bleed, potentially major trauma.</li> </ol> <p><b>Patients in Category 1</b> have no risk of morbidity or mortality due to delay of care if evaluation and treatment is not provided at the time of presentation to the UCC. No harm would come to the patient should they be told by the front desk staff the care they are seeking is not available at the UCC. The UCC may elect to provide a list of these unavailable administrative services to be followed by the front desk staff. Medical staff should be consulted if any question exists. All actions should be taken in the best interests of the patient’s safety.</p> <p><b>Patients in Category 2</b> have a risk of morbidity or mortality due to delay of care if evaluation and treatment is not provided at the time of presentation to the UCC. Good practice requires licensed personnel (LPN, RN, MD, DO, PA, NP) to evaluate the patient and determine if the care required can be provided, if the patient needs to be referred to another provider or another level of care, and if the care can be delayed or should be provided immediately. Any orthopedic injuries should be stabilized, and wounds dressed. Medication for pain should be considered, if necessary. Every effort should be made to assist the patient in securing appropriate transportation. The receiving facility should be notified if possible. A note, even if brief, should be placed in the patient’s chart. All actions should be taken in the best interests of the patient’s comfort and safety.</p> <p><b>Patients in Category 3</b> have a significant risk of morbidity or mortality due to delay of care if evaluation and treatment are not provided at the time of</p>
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	<p>presentation to the UCC. Good practice requires evaluation by a licensed provider such as an MD, DO, NP, or PA to determine if the care required can be provided or if the patient needs to be evaluated at a different facility. The receiving facility should be notified if possible. Recommendations should be made for the mode of transportation to the receiving facility, e.g., EMS vs private vehicle. A note, even if brief, should be placed in the patient’s chart. Initial stabilizing treatment should be provided if possible. All actions should be taken in the best interests of the patient’s safety.</p> <p>Any patients with an acute medical complaint (Category 2 or 3) should be evaluated, even if briefly, by medical staff regardless of the patient’s insurance status or ability to pay.</p> <p>Urgent Care centers subject to EMTALA or other government regulated programs should evaluate and treat patients according to these regulations.</p>
<b>Summary</b>	<p>The very nature of Urgent Care encourages patients with a wide variety of medical concerns to present for care which cannot always be provided. Urgent Care centers need to have written policies outlining which patients may be safely turned away, which should be assessed by staff to determine the appropriate site of care, and which should be seen by a provider and emergency care arranged. Regardless of their ability to pay, no patient with a potentially life or limb threatening complaint should be refused initial stabilization, and every effort should be made to direct the patient to the appropriate location for care. Documentation in the medical record is good practice. All actions should be taken in the best interest of the patient’s safety.</p>

**Urgent Care Q&A**  
**December 2022**

**What Are the Indications for Chlamydia Infection Test of Cure at 4 Weeks Instead of 12 Weeks?**

CDC recommendations to **retest** all patients with documented chlamydial infection for *C. trachomatis* **three months** after treatment. Test of cure means diagnostic testing to assess whether the administered antibiotic regimen eradicated the pathogen. Test of cure is not routinely warranted except in certain situations when there is a risk of suboptimal microbiologic cure rates:

- Pregnancy, regardless of treatment administered
- Persistent symptoms
- Concern for nonadherence to the regimen
- Use of a regimen with inferior cure rates, such as erythromycin or amoxicillin
- Azithromycin treatment of patients with or at high risk for rectal infection

In these situations, a test of cure should be performed **no sooner than four weeks** after treatment is completed. This is especially important when NAATs are used because *C. trachomatis* nucleic acid may still be detectable several weeks after treatment despite an absence of viable organisms.

Source: [UpToDate](#)

### **What Are Risk Stratification Scores Used in Settings Without Troponin Testing?**

The Marburg Heart Score and the HEAR Score can help to identify low-risk cardiac pain in settings without access to troponin testing. The Marburg Heart Score awards 1 point for each determinant found. Scores of 3 to 5 points were treated as positive predictors for CAD, while scores of  $\leq 2$  points were treated as negative. The score had a sensitivity of 86.4%, with a NPV of 97.3% and a false negative rate of 2.7%. The HEAR score is a modification of the HEART Score that omits the troponin level. Initial research on the validity and specificity of the score for identifying low-risk cardiac pain has been supportive.

Source: [Evidence Based Urgent Care](#)

### **Are Score Systems Reliable in Diagnosing or Ruling Out Appendicitis?**

The most commonly used scoring systems are the Alvarado score and the Appendicitis Inflammatory Response (AIR) score. The Alvarado score system has a 99% sensitivity but is only 43% specific. This is because of the setting of the threshold. If the threshold is increased from 5 to 7, the specificity increases to 81% at the cost of a lower sensitivity, down to 82%. That is why the Alvarado score system is most useful for ruling out appendicitis, rather than diagnosing it. The AIR score has a sensitivity of 92% and a specificity 63%.

The use of a scoring system alone for the diagnosis of acute appendicitis is not recommended by the World Society of Emergency Surgery (WSES), which prefers a stepwise diagnostic approach pathway depending on age, sex, and clinical signs and symptoms of the patient.

Source: [JUCM](#)

**Email your clinical questions to the Editors:**

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Cesar Mora Jaramillo, MD, FAAFP, FCUCM [cmjaramillo@coucm.org](mailto:cmjaramillo@coucm.org)

Disclaimer: This material is for educational purposes only. Medical practice and knowledge are constantly evolving and changing. This information is peer-reviewed but should not be your only source. Providers of care should use discretion when applying knowledge to any individual patient.

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## Urgent Updates: December 2022

### **Extended Follow-up of Microbiome Therapeutic SER-109 Through 24 Weeks for Recurrent *Clostridioides Difficile* Infection (RCDI) In a Randomized Clinical Trial**

In a phase 3 trial (ECOSPOR III), SER-109, an investigational microbiome therapeutic composed of purified Firmicutes spores, was superior to placebo in reducing the rate of rCDI by week 8 (12% vs 40%; relative risk [RR], 0.32 [95% CI, 0.18-0.58]) SER-109 durably reduced rCDI rates and was well-tolerated through 24 weeks in patients with prevalent comorbidities. The benefit of SER-109 was evident as early as week 2, highlighting the need for rapid microbiome repair after completing standard-of-care antibiotics.

Full Access: [JAMA](#)

### **Most Global Bacterial Deaths in 2019 Linked to Five Pathogens**

Overall, lower respiratory infections were responsible for 4 million deaths, bloodstream infections accounted for 2.91 million deaths, and peritoneal and intra-abdominal infections for 1.28 million deaths. The findings, published in *The Lancet*, point to *Staphylococcus aureus* as the leading cause of bacterial death in 135 countries and *Streptococcus pneumoniae* associated with the most deaths in children younger than 5 years. The three other most clinically significant pathogens were *Escherichia coli*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*. Full Access: [Lancet](#)

### **Paxlovid for Treatment of Long Covid (STOP-PASC)**

The purpose of this study is to compare whether being treated with Paxlovid (nirmatrelvir plus ritonavir) for 15 days works better than being treated with placebo (plus ritonavir) to reduce severe symptoms of Long Covid. Participants will have 5 planned visits to the study clinic over 18 weeks and will take the drug (or placebo) for the first 15 days. An exploratory sub-study will investigate the correlation of physical activity and biometric parameters from digital wearable devices with the subjective symptom severity and other patient-reported outcomes in the main study. Full Access: [Clinical Trials](#)

### **FDA: Amoxicillin Shortage Hits U.S., How This Antibiotic Is Misused for Respiratory Illnesses**

Since October 28, amoxicillin oral powder for suspension has been on the U.S. Food and Drug Administration's (FDA's) list of drug shortages. But a shortage of a commonly prescribed antibiotic like amoxicillin can be much more serious, it means that there may be one less option should you develop a bacterial infection in your ears, nose, throat, respiratory tract, urinary tract, or skin. Full Access: [Forbes](#)

## **WEEK 2 (12/08)**

### **Endemic Mycoses: Underdiagnosed and Underreported**

Blastomycosis, coccidioidomycosis, and histoplasmosis are the endemic mycoses that are most prevalent in North America. Exposure within the focal endemic regions is often unavoidable, and patients are frequently unaware of activities that increase individual risk. After the infectious "spores" are inhaled, these fungal pathogens often survive macrophage ingestion and escape, thereafter replicating and producing clinical illness. Full Access: [Annals of Internal Medicine](#)

### **Shorter Duration of Antibiotics Noninferior for Lyme Disease**

A shorter course of oral doxycycline is effective in treating erythema migrans, the most frequent manifestation of early Lyme borreliosis, and can reduce harmful antibiotic use. The trial, conducted in Slovenia, randomly assigned 300 adults with solitary erythema to receive oral doxycycline, 100mg twice a

day for 7 or 14 days. Although 7 days of oral doxycycline is effective for treating Lyme disease in adult European patients, the authors called for a similar study to be conducted in the US. **Full Access:** [JAMA](#)

### **Analysis of Antibiotic Exposure and Early-Onset Neonatal Sepsis (EOS) in Europe, North America, and Australia**

In this cross-sectional study of 757,979 neonates born in 13 networks from 11 countries, 2.86% received antibiotics during the first postnatal week (range across networks, 1.18%-12.45%). The incidence of EOS was 0.49 cases per 1000 live births, and the EOS-associated mortality rate was 3.20%. Early postnatal antibiotic use was high compared with the rate of sepsis and varied across networks, suggesting it could be lowered safely. **Full Access:** [JAMA](#)

### **Could NSAIDs Like Ibuprofen, Aleve Make Arthritic Knees Worse?**

Over-the-counter pain relievers like aspirin, Aleve or ibuprofen don't do a thing to slow the progression of knee arthritis, and might even make things worse, a new study suggests.

Knee arthritis patients who regularly took nonsteroidal anti-inflammatory drugs (NSAIDs) wound up with worse knee inflammation and weakened cartilage, compared to a "control" group not taking the medications. **Full Access:** [Healthday](#)

## Cause for Applause



We would like to welcome the following new Fellows of the College of Urgent Care Medicine. These fellows represent the best of us who work every day to provide the highest quality of medicine and advance the specialty of Urgent Care Medicine. They should be honored for their dedication and contributions.

Amanda Cowan, MD, FCUCM

Daniel Dabbah, MD, CPE, FCUCM

Janae Walsh, RN, BSN, FNP-C, FCUCM

Jasmeet Bhogal, MD, MBA, FCUCM

Nandini Koka, MD, FCUCM



Interested in becoming a Fellow? The CUCM Fellowship program is open to practicing physicians, PAs, and NPs who have a solid foundation in Urgent Care and who have been active members of CUCM for at least one year. Further requirements can be found [here](#).

Those who achieve fellowship status will be entitled to use the initials FCUCM (Fellow of the College of Urgent Care Medicine) for as long as they are members in the College.



We also want to recognize Urgent Caring's Co-Editor-in-Chief, **Tracey Davidoff, MD, FCUCM** for serving on a medical mission to Honduras through AdventHealth Global Missions. AdventHealth accomplished this through a partnership with Hospital Adventista in Valle de Angeles, Honduras. The mission involved travel to five mountain villages where churches and schools were converted into medical clinics. Dr. Davidoff was accompanied by four other medical providers, nurses, pharmacists, and support staff. The team ultimately

provided Urgent Care services to over 1,000 patients. All patients were provided antiparasitics, acetaminophen, ibuprofen, and multivitamins—and even a pinata for the children!

Thank you, Dr. Davidoff, for volunteering to be a part of this impactful team! Volunteers such as yourself make the world a better place.



## **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 on-demand 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 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 Resources->CME Information->Claiming CME Form. 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](mailto:learning@ucaoa.org) with questions.

### **CUCM CME Planning Committee**

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Reports no financial interest relevant to this newsletter

Tracey Davidoff, MD, FCUCM

Reports no financial interest relevant to this newsletter

Chris Chao, MD

Reports no financial interest relevant to this newsletter

John George, PA-C

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Michael Weinstock, MD

Reports no financial interest relevant to this newsletter

### **Disclaimer**

Medical practice and knowledge are constantly evolving and changing. This information is peer-reviewed but should not be your only source. Providers of care should use discretion when applying knowledge to any individual patient.

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