

# JUCM<sup>®</sup>

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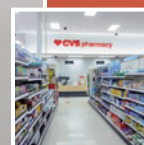
CLINICAL **cme**

## Once in Court, Your Defense Is Only as Good as Your Documentation

### ALSO IN THIS ISSUE

**cme**

- 18 **Case Report**  
An Atypical—and Life-Threatening—  
Source of Headache
- 23 **Original Research**  
Curbing Excessive Antibiotic Use for  
Pediatric UTIs
- 41 **Practice Management**  
Urgent Care's Top 100 (by Number of  
Locations)



**cme**  
Practice Management  
Is 'Big Retail' Giving Up  
Its Pursuit of Primary  
Care Relevance?



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# Boost Charting Efficiency: A Sure-Fire Path to Better Job Satisfaction

■ DAVID GAHTAN MS, PA-C and JOSHUA RUSSELL, MD, MSc, FCUCM, FACEP

Whether we like it or not, electronic medical records are here to stay. And their takeover has been swift. Over recent decades, the EMR has gone from an obscure, bare-bones, often clunky digital notepad to a ubiquitous and powerful tool which tracks enormous amounts of patient data. To continue to practice medicine, we've had no choice but to go along for the ride. It's noteworthy that, during the course of this transformation, the amount of engagement the EMR has asked of us has increased consistently; not coincidentally, at the same time we've also seen proportional increases in provider burnout.<sup>1,2</sup> Perhaps nowhere is this issue more palpable than urgent care.

In our busy UC clinics, our primary duty is evaluating and managing a seemingly ever-growing volume of patients. Since the beginning of the pandemic, these pressures have only increased with staffing shortages and increasing gaps and delays in primary and specialist care. This creates a daily challenge of using our limited resources to safely, yet efficiently, provide excellent care for our patients.

In other words, we are tasked with not missing serious diagnoses while ensuring excellence in patient experience, all while not falling behind.

But when things get busy, as they inevitably do, the most universal part of our practice to suffer is staying caught up with our documentation. It's like sleep. When life gets busy and we are task-saturated, compromising on how much we sleep is most often how we try to "make time" to try to get more done in a day. And like forsaking sleep, postponing charting until the end of a shift (or worse, another day) catches up to us quickly and the results are painful. The knowledge of a mounting pile of un-

finished charts weighs on the mind through the day and the feeling of demoralization only grows when that pile is staring us in the face at the end of an already busy shift. That's why working towards more efficient documentation is a powerful strategy to improve overall job satisfaction and mitigate burnout.

Synchronous chart completion has also been identified as a best practice. The Centers for Medicare & Medicaid Services specifically advises clinicians that "the service should be documented during, or as soon as practicable after it is provided, in order to maintain an accurate medical record."<sup>3</sup>

While this may not always be immediately practical, or even possible, it's worth noting that timely medical documentation has been so specifically identified as a quality-defining metric because it has obvious implications for patient safety.

Making this practice a habit is important for the protection of our patients for several reasons.

First, the speed and accuracy with which we are able to notate the patient's history and exam is greatest during or immediately after our evaluation, while the details are still fresh in our working memories. We can recall details like recent changes in the patient's blood pressure medications or when they last were treated for a UTI more accurately and include them in the chart, which may prove to be important data points in their care and follow-up.

Secondly, putting our thought processes in writing forces us to reflect further on the patient's presentation. Who among us hasn't had this experience? A patient comes in with a headache. The clinic is busy so you see them quickly, don't note any red flags, and discharge them promptly so you can move onto the next patient. "I'll get to their note later when things slow down," you think to yourself. But *later* rarely comes before the end of the shift. Then, with some struggle, you try to piece together the details of their headache story from memory and realize that you forgot to ask about recent trauma and anticoagulation use.

If you'd done most or all of the charting before the patient had left the clinic, these omissions in history would've been revealed and corrected by just asking a few more



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questions. Not only is concurrent charting more efficient, therefore, but also protective against gaps in thought processes which might negatively influence outcomes.

Finally, many patients will go on to receive subsequent care in the days following a UC visit for an acute issue. When our charting is incomplete, it leaves subsequent clinicians taking care of the patient in the dark as to your medical decision-making and plan. In fact, it's best to think of a patient's visit as incomplete until the chart has been created and signed. This has the added benefit of unburdening your cognitive bandwidth so you're able to move on and focus fully on the next patients.

Hopefully, the concept of concurrent charting isn't novel. We suspect many of you aspire to this with every shift. But if you're falling short, you're certainly not alone and there is hope for improvement with relatively few modifications in your practice.

The 80/20 rule (also known as the Pareto principle) states, roughly, that 80% of results come from the most important 20% of techniques.<sup>4</sup> Thankfully, this holds true for improving documentation efficiency.

We have found the six principles and tactics described below to yield remarkable and rapid boosts in documentation efficiency and provider productivity—and, consequently, their level of job satisfaction. As you'll see, these are practices that can be easily learned.

**1. Maximize the use of “smart tools.”** All EMRs have similar efficiency tools, and it's worth investing the effort to customize them for anything you document frequently.

- If you're writing anything repetitively, create a *dot phrase* or macro (eg, pertinent negatives for patients with chest pain or a normal hand exam).
- Customize your user dictionary to convert common abbreviations to plain English (eg, f/u = follow-up or SOB = short of breath). In the age of the 21<sup>st</sup> Century Cures Act, this can also spare you the conflicts that may arise when patients read these acronyms.
- Include the exclusion criteria for clinical decision rules you use commonly (eg, PERC score or NEXUS C-spine rule) within your note with a dot phrase/macro rather than going to an outside resource to calculate them.

**2. Take advantage of any *superpowers* available.** Scribes and voice-recognition dictating give us something akin to a superpower. Getting used to using these tools may take time, but once you get over the hump, they're huge time savers. You can even try dictating with whatever software your organization uses on a computer in the patient's room. Skin exams can be complex and hard to template, as can medical decision-making for moderate to complex

cases. Consider dictating this information right in front of the patient. In our experience, the response has been almost universally positive. Patients appreciate the enhanced transparency, and you save time by not having to repeat your reasoning as a soliloquy later.

**3. Use templates judiciously.** Templates can be extremely helpful timesavers. The top 10 complaints, including things like cough, sore throat, ear pain, and dysuria, make up the vast majority of UC patient visits.<sup>5</sup> These all require similar points in the history of present illness and evoke fairly limited differentials. Starting from a nearly completed template with relatively few blanks for the pertinent data saves an enormous number of clicks and keystrokes.

Over time, see where you're spending the most time in these templates and continue to make incremental adjustments to hone them. This format, compared with starting a blank note for each patient, can also prompt us to ask certain questions which we may otherwise forget (eg, date of last menses, recent antibiotic use, etc.).

**4. Resist “note bloat.”** Long templates take more time to complete. For most UC complaints, a very limited history and physical is sufficient. While it may feel helpful to import the patient's entire past medical history, medications, and family history, this information can be found elsewhere in the EMR and could distract both you and future readers from the information relevant for the patient's current UC presentation. Other examples of problematic *note bloat* include copy-and-pasting long portions of prior visits rather than summarizing them and including irrelevant, overly detailed review of systems and physical exam comments. (Recall that since the 2021 CMS updates in E/M billing criteria, levels of service are now only determined by our MDM).<sup>6</sup>

**5. Consider timing of discharge.** Our UCCs use queuing software which adjusts open visits depending on the rate at which patients are seen. When using such systems, clicking the “discharge” button essentially indicates that the patient's care is complete. But if the note isn't finished, it's not accurate to say that care is complete. As we discussed earlier, only the patient-facing portion has been accomplished. Instead, consider completing the chart *before* discharging the patient. This also has the previously mentioned benefit of forcing us to review and stress-test our clinical reasoning while the patient is still in the clinic.

**6. Recognize complicated cases and be prepared to spend more time on those charts.** It's helpful to broadly lump patients into two categories: low-risk/straightforward or high-risk/complex.

- For low-risk patients, keep charting focused and short. Excessive history, exam, or MDM in these cases is a waste of your mental energy and a source of note bloat. Get charts for things like otitis media, cystitis, and sore throat done quickly and move on. You don't need long paragraphs of MDM explaining why you think someone just has a cold.
- For high-risk patients, slow down. Older patients, patients with multiple comorbidities, abnormal vital signs, and/or potentially dangerous chief complaints like chest pain or abdominal pain require a more time-intensive and thoughtful evaluation. While this is the vast minority of UC patients, thankfully, you probably will see at least a few of them each shift. Use the time that you've saved by avoiding overcharting on the simpler cases to focus more attention on the assessment and documentation for these more complex cases.

The Pareto principle reminds us that strategically making targeted changes in our practice habits can have a disproportionate impact on our overall efficiency. Charting, for most clinicians, is the least appealing part of the job. This can lead to a tendency to simply slog through our

documentation, like the chore that it may often feel like. However, paradoxically, by consciously turning towards changing our habits and implementing strategies like those we've discussed, documentation can quickly become much less time-consuming and onerous. And, extending the Pareto principle, if we make the 20% of our job that's least pleasant even a little less painful, we can expect a disproportionate increase in the enjoyment we're able to rediscover in our work. ■

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**CLINICAL**

## 13 Six Tips to Bulletproof Your Chart: Lessons from the Exam Room and the Court Room

You may provide excellent care to every patient who enters your urgent care center. Unfortunately, that's not enough to ensure you won't wind up in court when a bad outcome occurs. If you do find yourself mired in litigation, you'll discover that your defense is only as good as your documentation.

*William Sullivan, DO, JD*

**CASE REPORT**

## 18 More than a Simple Headache: Using the SNNOOP<sub>10</sub> Criteria to Screen for Life-Threatening Headache Presentations



Vigilance for risk factors and appropriate use of validated screening criteria are essential in ruling out life-threatening etiologies for patients who present with headache.

*Paul Hansen, MD*

**PRACTICE MANAGEMENT**

## 30 'Big Retail' Pivots Are a Retreat from 'On Demand' Care



Retailers, including pharmacy chains, grocery stores, and big box outlets keep trying—most often unsuccessfully, to date—to bolster their healthcare offerings by offering urgent care-like services. There are signs their approach could be shifting, however.

*Alan Ayers, MBA, MAcc*

**IN THE JULY/AUGUST ISSUE OF JUCM**

Low-dose naltrexone (LDN) is becoming more common as a treatment option for pain and, thus, is expected to be increasingly prevalent for patients presenting to the urgent care setting. A thorough medication history, prioritization of nonopioid treatment options, and timely referral or transfer for severe uncontrolled pain are important considerations in the management of patients using LDN. We'll explore this evolving issue in the next issue of *JUCM*.

**ORIGINAL RESEARCH**

## 23 A Quality Improvement Project to Improve Management of Urinary Tract Infections in a System of Pediatric Urgent Care Centers



The risk of overprescribing antibiotics is as high as the occurrence of urinary tract infections in pediatric urgent care. Examining prescribing habits can be an effective first step toward ensuring they're prescribed only when warranted.

*Benjamin Klick, MD; Tammy Speerhas, DNP, FNP-C; Jessica Parrott, DNP, CPNP-PC, CNE; Jeffrey Bobrowitz, MD; Anne McEvoy, MD; Debra Conrad, MD, Jade Eves, PA-C; and Theresa Guins, MD*

**PRACTICE MANAGEMENT**

## 41 Urgent Care's Top 100—by Number of Locations

The appeal of urgent care to established hospital systems, venture capitalists, and even insurers has fueled explosive growth in the urgent care industry. As such, the major players in the industry keep changing, at least in terms of how many locations are under their umbrella. We present a snapshot of the landscape as it exists right now.

**DEPARTMENTS**

- 1 Urgent Perspectives
- 9 From the UCA CEO
- 10 Continuing Medical Education
- 37 Abstracts in Urgent Care
- 45 Insights in Images
- 51 Growing the Business
- 53 Developing Data

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## JUCM CONTRIBUTORS

Congratulations—you've achieved a reputation for providing excellent care and your urgent care operation is thriving! Before you get too excited, though, the bad news is that one of the rare patients unsatisfied with the care they received in your UCC is suing. Now the nagging self-questioning begins: Could the patient have a point? Was anything missed, misread, or misdiagnosed? Thankfully, the documentation should make everything clear and you can reassure yourself that everything will be just fine.

Or will it? Even if the patient really did receive typically top-notch care and any bad outcome that followed was just an unfortunate turn of events, unless your documentation is as good as your care you may find yourself in real trouble as both a clinician and a businessperson. In other words, your prospects may be only as good as your charts.

This issue's cover article, *Six Tips to Bulletproof Your Chart: Lessons from the Exam Room and the Court Room* (page 13) by **William Sullivan, DO, JD** provides specific steps to take in order to ensure that the documentation regarding patients seen in your center does exactly what it's supposed to do: provide evidence that you did the job you were trained to do, to the maximum of your ability.

Dr. Sullivan is an attending emergency physician, St. Margaret's Hospital, Spring Valley, IL; clinical assistant professor, Northwestern University, Downers Grove, IL; and has a private legal practice, Frankfort, IL.

If the mere mention of "documentation" conjured up images of squinting through tired eyes at the end of a long shift, take heart. With the right approach—which is to say, the most efficient approach—charting can not only be less taxing than you think, but it can even enhance your sense of fulfillment as a professional. That's the message of *Boost Charting Efficiency: A Sure-Fire Path to Better Job Satisfaction*, an Urgent Perspectives piece that starts on page 1. If you skipped past it, you would do well to go back and give it a read. We appreciate **David Gahtan MS, PA-C** and **Joshua Russell, MD, MSc, FCUCM, FACEP** sharing their perspectives there. Mr. Gahtan serves Legacy-GoHealth as a provider and informatics professional. Dr. Russell's name may be familiar to you, as he is editor-in-chief of *JUCM*. In addition he is a clinical educator at the University of Chicago Pritzker School of Medicine and staff physician at Northshore University Health & Legacy Go-Health Urgent Care.

Obviously, the most on-point documentation will do you no good if the care you provide isn't optimal. And that can mean employing all your clinical skills to perform a relatively complex urgent care procedure or simply following good antibiotic prescribing practices. The latter is the focus of A Quality

Improvement Project to Improve Management of Urinary Tract Infections in a System of Pediatric Urgent Care Centers, which begins on page 23. Authors **Benjamin Klick, MD; Tammy Speerhas, DNP, FNP-C; Jessica Parrott, DNP, CPNP-PC, CNE; Jeffrey Bobrowitz, MD; Anne McEvoy, MD; Debra Conrad, MD, Jade Eves, PA-C; and Theresa Guins, MD** report on a project designed to *increase* the odds that providers and institutions ensure antibiotics are prescribed only when necessary, and to *decrease* the rate of unnecessary prescribing.

The authors' professional affiliations all overlap at Children's Hospital of the King's Daughters. In addition, Dr. Klick serves at Eastern Virginia Medical School; Dr. Speerhas at Eastern Virginia Medical School and Old Dominion University; Dr. Parrott at Eastern Virginia Medical School and Old Dominion University; Dr. Bobrowitz at Eastern Virginia Medical School; Dr. McEvoy at Eastern Virginia Medical School; Dr. Eves at Eastern Virginia Medical School; and Dr. Guins at Eastern Virginia Medical School.

Like pediatric urinary tract infections, headache is one of the most common presenting complaints in the urgent care center. Assuming that makes all those visits low risk could be a grave mistake, however. Regardless of how mundane the case may seem, it's essential to be vigilant for red flags and mindful of appropriate use of validated screening tools. More than a Simple Headache: Using the SNOOP10 Criteria to Screen for Life-Threatening Headache Presentations (page 18) relays the case of a real-life 68-year-old woman with a severe headache that had been worsening for 3 days. Aside from elevated blood pressure, her vital signs were normal and she had no obvious cause for concern—although several elements of the SNOOP10 criteria suggested there could be cause for alarm. We thank **Paul Hansen, MD, FAAP, FACP**, who works in the Department of Ambulatory Care at Mercy Clinic and serves as national chair clinical quality for GoHealth Urgent Care, for presenting it.

More of a potential existential threat than a health-related one, retailers of every stripe continue to be optimistic that entering the healthcare space could be great for their business. Some of them, particularly retail pharmacies, do, in fact, contribute to the well-being of the same patients you see every day. Their attempts, and those of grocery stores and mass retailers, to provide what would be essentially primary care (or perhaps primary care light) have faltered, however—to the point that some are looking for other ways to become more profitable in caring for patients. **Alan A. Ayers, MBA, MAcc** explains it all in "Big Retail" Pivots Are a Retreat from "On Demand" Care starting on page 30. Mr. Ayers is president of Experity Consulting and is senior editor, practice manage-

ment, of *The Journal of Urgent Care Medicine*.

What those retail companies may not understand is just how dynamic the urgent care industry is. As formidable as it is now, it's still growing. And individual companies are still committed to growing themselves, as well. There are multiple ways of achieving growth, however, and **Heather Real** examines some of them in *De Novo vs Acquisition: What's the Best Pathway for Urgent Care Growth?*, this month's Revenue Cycle Management feature (page 51).

Ms. Real is senior consultant for Experity Consulting.

Finally, in Abstracts in Urgent Care (page 37), **Ivan Koay MBChB, MRCS, FRNZCUC, MD** offers essential insights into urgent care-relevant articles featured across the medical publishing landscape recently. This month, he summarizes articles on whether virtual reality can be helpful when treating anxious children, assessing for elbow fracture, the question of whether epinephrine is appropriate for patients with croup, the STANDING algorithm for vertigo, new insights into returning to school after concussion, and managing epistaxis in the UCC.

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# Downtime

■ LOU ELLEN HORWITZ, MA

It's a weird time right now, isn't it? On one hand, visit volumes seem to be back to our pre-COVID "norms." This should be business-as-usual to us, but it feels scary because everyone got used to volumes being so high for so long. On the other hand, everyone is short-staffed, so it's a good thing we aren't busier, but being short-staffed is also scary because we feel unprepared for the coming months when volumes go up again.

From time immemorial (and thank you to Experity for letting me see some of their longitudinal data) Urgent Care visit graphs have had a saddle shape. We peak in January/February then slope down to June/July and slowly back up to peak again in November/December, depending on when influenza arrives. Average monthly volumes have grown steadily year over year—ie, the "saddle" got taller. In 2018 and 2019 daily visits to most average Urgent Cares peaked in the low to mid-30s during the "busy season" and were in the low to mid-20s in the saddle seat. Up and down we went, year over year.

An industry focus was often on how to deal with those summer doldrums. Low visit counts meant we felt "over-staffed" (even if we knew it was only temporary). We tried to compensate with occ med and summer physicals to introduce Urgent Care to new customers who would ideally come back when they got sick later in the year.

Then, COVID—and everyone hung up their yardsticks because they weren't long enough anymore. Everything was "unprecedented," and while it was exhausting and messy and horrible it was also sometimes exhilarating to see what Urgent Care was truly capable of. If you'd said to your 2019 teams that soon they'd be seeing 70-plus patients a day, they might have revolted. But look what they did. So now that those yardsticks are relevant again, picking them up as our measure of success feels a little like failure.

Here's what I want to encourage you all to remember: You are as good at this part as you were at responding to

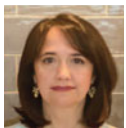
COVID. You are good at walking on shifting sands and evolving. You are good at navigating rough waters and uncertain territories. You are good at figuring things out and finding a way through. You are good at shifting your grip and changing your rhythms. This challenge is just one more—and it's going to get better—and all of Urgent Care will come out better for it.

Rather than waste any energy being nervous about the future, I'd like to suggest that you double-down on your investment instead—by refocusing on training your teams and tightening up your operations. We've always bemoaned not having bandwidth to really do great training of our center staff (or managers). If you are low on visits, you have bandwidth. If you aren't low on visits, remember that a similar staffing model did 70-plus patients a day a year ago. Maybe your centers even have a little bit of bandwidth for staff development.

We are seeing in some Accreditation surveys that the pandemic also did a number on compliance programs and inventory management and overall ship-shapeness. You had higher priorities and no time—but less training and shakier ops are part of what lead to staff burnout and turnover. While recruiting may seem out of your control, retention is not.

And happily, the investments you put into retention will also help with recruiting. Great training programs and smooth operations improve your reputation as an employer. Take this time to regrow your team's skills. Regain your capacity for higher acuity so you can show your communities (and payers) *everything* Urgent Care can do. If we are going into a summer slump like "normal," let's use it wisely and advance what we are doing.

Before I sign off, I want to tell you about two upcoming chapter conferences: the Western Regional Conference hosted by the California Urgent Care Association September 16-18 in Monterey, CA and the North East Regional Conference hosted by the North East Regional Urgent Care Association November 6-7 in Atlantic City, NJ. Both of these conferences are fantastic, bringing great education, community, networking, and exhibits that are curated especially for regional audiences. Visit [caluca.org](http://caluca.org) and [neruca.org](http://neruca.org) for more information and I'll see you there. ■



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



# CONTINUING MEDICAL EDUCATION

**Release Date:** June 1, 2023  
**Expiration Date:** May 31, 2024

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

### Learning Objectives

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

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### Six Tips to Bulletproof Your Chart: Lessons from the Exam Room and the Court Room (page 13)

**1. Which of the following may be helpful in providing objective evidence for higher-risk patients?**

- a. Incorporate clinical decision rules into your assessments
- b. Incorporate the opinion of a trusted colleague
- c. Document that the patient's severe pain is definitely from drug-seeking
- d. All of the above

**2. Noting appropriate pertinent positive and negative clinical findings will:**

- a. Take too much time and should not be done
- b. Give you 100% legal protection
- c. Show that you considered alternative serious medical conditions during your physical exam
- d. Have no bearing on the clinical outcome, and therefore is of no value

**3. Which of the following provides substantial evidence that a patient is getting better and not worse prior to being sent home?**

- a. A family member who asks to take the patient home
- b. Reevaluating the patient and documenting a response to IV fluids, pain medications, or any procedures performed
- c. The patient informing the clinician that they have a follow-up appointment in 7 days
- d. None of the above

### More than a Simple Headache: Using the SNNOOP<sub>10</sub> Criteria to Screen for Life-Threatening Headache Presentations (page 18)

**1. In the mnemonic SNNOOP-10, 'P' stands for:**

- a. Papilledema
- b. Positional headache
- c. Pattern change or recent onset of headache
- d. All of the above

**2. Incidence of secondary headache in higher-acuity or tertiary referral settings compared with primary care clinics has been quantified as:**

- a. 42% vs 20%
- b. 20% vs 12%
- c. 20% vs 2%
- d. 16% vs 2%

**3. Medication overuse is characterized by use of over-the-counter analgesics, other analgesics, or combinations of medication:**

- a. For 10 to 15 consecutive days
- b. At 30% or more above the recommended daily dosage of any of these medications
- c. 10-15 or more days per month for 3 months
- d. 15 or more days per month for 6 months

### "Big Retail" Pivots Are a Retreat from "On Demand" Care (page 30)

**1. Among the following retailers, which has the most in-store clinics?**

- a. CVS
- b. Kroger/The Little Clinic
- c. Walgreens
- d. Walmart

**2. The top eight food, drug, and mass merchandise chains represent:**

- a. 38% of all retail clinics
- b. 53% of all retail clinics
- c. Nearly three quarters of retail clinics
- d. Over 95% of all retail clinics

**3. Out of consumers who used a virtual visit for an "urgent care issue" during the COVID-19 pandemic, what proportion say they would do so again?**

- a. 6%
- b. 20%
- c. 33%
- d. 48%

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# Six Tips to Bulletproof Your Chart: Lessons from the Exam Room and the Court Room

**Urgent message:** In the event that you are taken to court over care that is alleged to have been insufficient, negligent, or otherwise poor, your own documentation at the time care is provided can be your saving grace or your undoing.

William Sullivan, DO, JD

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Key words: documentation, charts, charting, litigation

## Introduction

Providing proper medical care in urgent care centers is only half of the battle. As the medical record grows in prominence in our practice, the importance of charting has never been greater. This article is an adaptation of a lecture I give on emergency medical documentation, but many of the lessons apply in an urgent care setting as well. These six high-yield tips have been modified to reflect the realities of UC practice.

## Why Do We Create Medical Records, Anyway?

Many urgent care providers would likely tell you that they would do away with (or at least completely hand off responsibility for) medical records *today* if they could. Ensuring proper medical documentation is tedious and eats up time we would prefer to spend with patients.

While that may be true, properly created and maintained medical records are necessary for the practice of urgent care medicine. Medical records document patient flow and facilitate better communication between healthcare providers as patients traverse the medical system. For example, consider the cardiology maxim



that “the best EKG is an old EKG,” meaning that the most effective means of determining whether abnormal findings are concerning is by comparison to a prior EKG.

Medical records are also an integral part of receiving proper reimbursement. Treatment for high-acuity patients may justify higher billing codes—but only if that higher acuity is reflected in the medical record.

Documentation may also help illustrate *why* a treatment was rendered (or not rendered) Without a thorough accounting, it would be impossible to differentiate the complexities of a visit from an asthma patient seeking a refill of a metered dose inhaler vs an asthma patient presenting with dyspnea, hypoxia, and retractions.

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By maintaining accurate and detailed medical records, providers can protect themselves against legal liability by clarifying their thought processes and management.

When creating a medical record, it is also important to think about how the documentation will appear to the many different parties that will read those records. For example, consider the different ways that your care would be evaluated if your chart is subsequently read by a colleague who is providing continuing care for the patient, by the health system CEO, by a state medical board representative, or if projected onto a large screen in a courtroom in front of a jury.

Professionalism and competence are often judged by what is contained in a patient's medical records.

Based on my experience as both a physician and as an attorney representing medical providers, here are six tips that I think will help urgent care providers bulletproof their medical documentation.

#### Documenting the Vitals Is as Essential as Taking Them

Appropriate documentation of vital signs begins with ensuring they're taken correctly. For example, a 2017 study in the *Chinese Journal of Traumatology* showed that nursing staff did a good job at measuring heart rates, but they measured respiratory rates far less accurately. In the study, 59% of patients had a documented respiratory rate of exactly 20 and another 27% had a respiratory rate of exactly 15.<sup>1</sup> This is physiologically and statistically highly unlikely to be accurate.

Once we obtain vital signs, it is a good practice to document that we have at least considered them. A 2006 study by Hafner, et al showed that about 11% of ED patients had "very abnormal" vital signs and that 15% of patients with "very abnormal" vital signs were discharged without repeat vital signs being documented.<sup>2</sup>

Unsurprisingly, abnormal vital signs have been shown to have predictive value for hospital admission. A 2017 study by Gabayan showed that patients >65 years old who were discharged with at least one abnormal vital were twice as likely to be admitted within the next 7 days.<sup>3</sup> Those discharged with two or more abnormal vital signs were nearly three times as likely to be admitted within the next week.

While abnormal vital signs may be a sign of serious underlying disease, they are usually transient and of little clinical significance. For this reason, documentation of serial vital signs can help to show appreciation for the potential implications of abnormal vital signs. If the vitals normalize when rechecked, this provides reassurance for the provider, and anyone reviewing the chart, that serious conditions were considered but felt

to be less likely because the vital signs improved.

If a patient has normal vital signs and is being discharged after evaluation for a minor complaint, one set of vital signs is probably sufficient. If a patient has abnormal vital signs or is receiving treatments in the clinic (eg, nebulizer treatments, pain medications, or antipyretics), consider repeating vital signs to demonstrate normalization or stability prior to sending the patient home. If the vitals remain significantly abnormal, either explain the reason (eg, "The patient remains mildly tachycardic after receiving nebulizer treatment but reports good improvement in symptoms") or consider further testing/referral to the ED to determine a cause for persistently "very abnormal" vital signs.

#### Address the Chief Complaint

While it may sound obvious, documentation can often be improved by simply addressing a patient's complaints prior to formulating a diagnosis. In a review of 1,557 ED medical malpractice claims between 2010 and 2019, the insurance company Coverys found that 57% of malpractice events related to clinical judgment involved issues surrounding patient assessment and diagnosis.<sup>4</sup>

A study by Kachalia, et al showed that of 122 closed malpractice claims alleging missed or delayed diagnosis in the ED, 42% involved failure to perform an adequate medical history or physical exam.<sup>5</sup> Keep in mind that this was a retrospective review, so the issue was not necessarily that the medical providers didn't evaluate the patients thoroughly, but rather that they did not *document* an adequate medical history or physical exam.

My review of malpractice cases has revealed a surprising number of medical records where the clinician fails to even address a patient's chief complaint. One patient who presented for evaluation of abdominal pain and vomiting had no documentation of an abdominal exam having been performed. She was admitted for a diagnosis of pneumonia, vomiting, and "high WBC count." Unfortunately, her perforated duodenal ulcer was diagnosed later that week—at autopsy.

I reviewed the case of a 28-year-old patient complaining of chest pain radiating to his back; he was diagnosed with an "exacerbation of scoliosis" and sent home with anti-inflammatories. There was no mention of his chest pain and no exam of the lungs or heart in the medical records. His symptoms were instead related to an acute myocardial infarction and he developed a severe cardiomyopathy as a result of the event.

Yet another patient who presented with atraumatic leg pain after playing soccer had a cursory exam of the leg documented on the medical record and was discharged



home with a diagnosis of “leg strain.” The following day, the patient underwent emergency fasciotomies for compartment syndrome, but developed foot drop and complex regional pain syndrome (CRPS) of the extremity. A jury awarded the patient \$7 million in damages.

When evaluating a patient for any given complaint, focus on that complaint. Although no longer required for evaluation and management codes, consider including previous CMS bullet points in the patient’s HPI such as location, quality, severity, duration, timing, context, modifying factors, and associated signs/symptoms.

In patients with straightforward complaints and physical examinations, it is probably sufficient to address only a few pertinent elements in the patient’s history. In patients with more complicated or potentially serious complaints or those with concerning findings on physical exam, consider addressing more of these elements within the patient’s history.

### WCGW?

The website Reddit has a section dedicated to asking WCGW? (“What Could Go Wrong?”). The sub-Reddit includes videos of people texting while driving, climbing wet rocks, and even lighting a firecracker held between the eyelids. The videos demonstrate the unfortunate, but foreseeable, outcomes of those actions.

Approaching documentation in the medical record involves similar foresight. When a patient presents with a complaint, think “WCGW” related to that complaint. Let your medical record reflect that you’ve considered some of the more potentially serious diagnoses.

For example, the complaint of ear pain doesn’t require a binary decision whether or not otitis media is present. Otolgia may be caused by bullous myringitis, otitis externa, dental infections, TMJ syndrome, or mastoiditis. Documentation reflecting that you have considered these issues might read something like “No dental tenderness to percussion. No visible caries. No gum swelling. No TMJ clicking or tenderness to palpation. No parotid or mastoid swelling or tenderness. Tympanic membrane (TM) and external auditory canal (EAC) intact with no bullae or discharge.”

Similarly, severe nontraumatic leg pain could represent a deep vein thrombosis, cellulitis, a stress fracture, a pulled muscle, referred lumbar radicular pain, or a \$7 million case of compartment syndrome. Noting the location, timing, aggravating and alleviating factors and physical exam findings to detect some of the more serious etiologies (eg, “no palpable cords, compartments soft, no crepitus, no point tenderness”) will help narrow the differential diagnosis and justify your treatment plan.

### Despite Its Virtues, Beware the Template

Medical record templates can be quite useful because they populate a large amount of information into a patient’s medical record with relatively few keystrokes. Templates can also remind providers of important questions to ask during a history, list pertinent findings to check during a physical exam, and provide detailed situation-specific discharge instructions. Unfortunately, this same convenience also has disadvantages. Overdocumentation of EMRs is common. For example, why document or perform a thorough head, neck, chest, and abdominal exam on a patient with a simple ankle sprain? This additional information is unlikely to have any bearing on the diagnosis or treatment. Overdocumenting a simple complaint wastes time, bloats the medical record, and encourages overbilling. Focused ROS and physical exams for simple medical complaints will improve your efficiency and improve the usefulness of your documentation.

Templates also make it easy to unintentionally insert conflicting information into the medical record. One clinic chart I reviewed contained a note stating that the patient had complaints of nonproductive cough, fever, sore throat, nasal congestion, headaches, and body aches. The review of systems stated that the patient “denies fever, chills, earaches, sinus trouble, congestion, throat pain, coughing, shortness of breath, headaches...” among about 20 additional system points including “hot flashes, polydipsia, polyuria, and suspicious moles.” Not only did the review of systems contradict the patient’s complaints, but it contained a significant amount of irrelevant information—drawing into question whether the physician actually asked about the symptoms that were reportedly “denied.”

Remember who will be reviewing your medical documentation. Such discrepancies may cause a smirk and a headshake from a colleague who reads the patient’s chart. However, a medical board may take corrective action and a plaintiff’s attorney will use the discrepancies to argue that the provider is careless and can’t be trusted.

Another common template pitfall occurs when documenting the evaluation of an infant. Infants cannot deny chest pain, shortness of breath, or abdominal pain because they haven’t sufficiently developed their language skills. For this same reason, an infant cannot be “oriented x 3” or deny abdominal tenderness on a physical exam. Don’t make these documentation errors. Documented complaints should be limited to objective findings noted by the patient’s parent or caregiver.

It is appropriate to use medical templates, but use those templates wisely. Double check that the HPI and

ROS in your documentation do not contain conflicting information. Also make sure that you have revised your documentation to remove questions from your template that you did not ask, and to remove findings that you did not perform.

If you are going to use medical templates, consider creating different templates for different patient presentations. For example, you may consider creating different templates for infants, children, and adults. You may also consider creating different templates for simple complaints vs more complex complaints and for medical complaints vs traumatic complaints.

### Algorithms Make Everyone Look Smarter

While clinicians provide medical care based on their experiences and clinical wisdom, in many cases, decision-making can be bolstered by using evidence-based support aids or clinical decision rules. For example, if a patient complains of chest pain, a low-risk Wells' score coupled with a negative pulmonary embolism rule-out criteria score may exclude a PE without additional testing. A HEART Score <3 in the same chest pain patient has a >99% negative predictive value for MACE within the following 30 days.<sup>6</sup>

Seeing a child with a head injury? Calculating the Pediatric Emergency Care Applied Research Network score can guide your decision whether to perform a head CT. Will a patient with syncope benefit from ED referral or hospital admission? Check the Canadian Syncope Risk Score, the OESIL score, or use the Rose rule.

While none of these scores reaches 100% accuracy, calculating the scores and documenting the results on a patient's medical record demonstrates awareness of evidence-based practices and provides objective evidence for your treatment decisions. These and other algorithms can be found at MDCalc.com. You can even download the algorithm results and copy them directly into a patient's medical record.

### The Reexamination

Reexamination of patients is a simple way to demonstrate conscientiousness and vigilance. Consider a tragic case of a child who presents for evaluation of an asthma exacerbation, receives a nebulizer treatment, is discharged home, and who later suffers a cardiac arrest. Now imagine that the patient's medical record shows tachypnea and hypoxia with mild respiratory distress and retractions, but no follow-up exam after the nebulizer treatment was administered.

Even if the child were doing better prior to leaving the clinic, it would be easy to second-guess the pro-

vider's decision to discharge the patient based upon the bad outcome. On the other hand, it would be much more difficult to second-guess the provider's decision to discharge the patient if the chart reflects that the patient was given steroids and nebulizer treatments, was reevaluated an hour later, had normal vital signs, had normal oxygen saturation, exhibited no retractions, was breathing normally, was acting normally per the parent, the parent was comfortable taking the child home for continued outpatient treatment, appropriate outpatient medications were prescribed, and follow-up for evaluation the next day was recommended.

Similarly, reevaluating a patient and documenting a response to IV fluids, pain medications, or any procedures performed provides substantial evidence that a patient is getting better and not getting worse prior to being sent home. Conversely, if a reevaluation suggests that a patient is not improving, this gives the clinician cause to reassess a provisional diagnosis and disposition decision.

### Summary

Medical documentation can improve patient care when used properly, but can be damaging to clinical care and detrimental to a provider's defense if used improperly. If using templates, use them wisely. Consider incorporating clinical decision rules into your assessments to provide objective evidence for higher risk patients. Noting appropriate pertinent positive and negative clinical findings will show that you considered alternative serious medical conditions during your physical exam. In patients with higher-risk presentations, documenting reexaminations and repeat vital signs helps support a determination whether a patient is improving and stable or deteriorating and unstable. Add these recommendations to your documentation and you'll be well on your way to a bulletproof medical record. ■

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# More than a Simple Headache: Using the SNNOOP10 Criteria to Screen for Life-Threatening Headache Presentations

**Urgent message:** Headache is most often a benign complaint among patients presenting to urgent care. Vigilance for risk factors and appropriate use of validated screening criteria are essential to uncovering potentially life-threatening etiologies.

Paul Hansen, MD

**Citation:** Hansen P. More than a simple headache: using the SNNOOP10 criteria to screen for life-threatening headache presentations. *J Urgent Care Med.* 2023;17(9): 18-21.

## Abstract

**Introduction:** Headache is most commonly a benign complaint among urgent care patients. Chronic subdural hematomas, however, are potentially life-threatening and can have a more insidious presentation. Applying the SNNOOP10 criteria can help identify patients at risk of life-threatening causes of secondary headache who may require referral to a higher level of care.

**Clinical presentation:** A 68-year-old female presented to an urgent care facility with a severe headache for the last month which had significantly worsened over the previous 3 days. The headache was constant and global. The patient reported no alleviating factors; aggravating factors included moving her head, flexing neck, and bending forward. Several elements of the SNNOOP10 criteria used to screen for secondary headache risk factors were positive.

**Physical exam:** A complete neurological exam was un-



remarkable, as was her general exam. Her vital signs were normal except for elevated blood pressure.

**Case resolution:** Due to the risk factors for serious secondary headache etiologies present in the SNNOOP10 criteria, the patient was referred to the emergency de-

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partment. She underwent CT scan of the head, which revealed an acute 12 mm thick left cerebral convexity subdural hematoma with 7 mm rightward midline shift.

**Conclusion:** The patient underwent placement of a left frontal subdural drain. The patient was doing well at 3-week outpatient follow-up. The SNNOOP10 mnemonic proved valuable as a screening tool and identified this patient's risk for a serious cause of headache.

### Introduction

Headache is a common presenting complaint in urgent care settings. When a patient presents with a headache, it is important to consider potentially life-threatening causes, such as intracerebral hemorrhage, subarachnoid hemorrhage, and meningitis. The SNNOOP10 screening criteria is a useful guide for identifying warning signs and symptoms that may suggest an underlying serious pathology.

### Case Presentation

A 68-year-old female presented to an urgent care facility with a severe headache that had been ongoing for over a month. She had initially been diagnosed with viral sinusitis on the 7th day of symptoms. Her headache severity significantly worsened over the previous 3 days. She now describes it as the worst headache of her life. The headache was constant and global in location without radiation, with associated symptoms of mild photophobia. The patient reported no alleviating factors. Aggravating factors included moving her head, flexing neck, and bending forward. The patient denied head trauma, dizziness, tremors, seizures, syncope, speech difficulty, vomiting, and weakness. Vitals were only notable for elevated blood pressure (177/97). A neuro exam was unremarkable, as was her general exam.

### Differential Diagnoses

Tension headache, migraine, vasculitis, infectious intracerebral hemorrhage, intracranial mass or malformation, and medication overuse.

### Management and Outcome

Although the patient appeared well and had an unremarkable exam, there was a clinical suspicion for a dangerous secondary headache etiology given that several elements of the SNNOOP10 screening criteria were positive. She was referred from the urgent care to the ED, where a CT scan of the head revealed a 12 mm thick left cerebral convexity subdural hematoma with 7 mm rightward midline shift.

The patient underwent placement of a left frontal subdural drain and was discharged home on 7 days of levetiracetam. The imaging postsubdural placement revealed almost complete resolution of the subdural hematoma. The patient was doing well at 3-week outpatient follow-up.

### Discussion

Headaches are a common clinical problem; the prevalence of self-reported migraine or severe headache affects around 15% of U.S. adults quarterly.<sup>1</sup> Headaches are generally classified as either primary (which are not attributed to another underlying etiology such as migraine or tension headaches) or secondary (attributed to an underlying disorder). Although medication overuse, resulting from the use of simple over-the-counter analgesics, other analgesics (triptans, opiates), or combinations of medications (simple OTC analgesics and caffeine, benzodiazepines, etc.) 10-15 or more days per month for 3 months in the setting of a primary headache disorder is most common, the differential of secondary headaches includes life-threatening etiologies that may warrant urgent or emergent evaluation.<sup>2</sup> The prevalence of secondary headache varies widely by clinical setting. A trend of increasing secondary headache incidence in higher acuity or tertiary referral settings relative to a primary care clinic has been noted (near 20% vs near 2%, respectively).<sup>3</sup>

### The SNNOOP-10 Mnemonic

The *original* SNOOP mnemonic (systemic symptoms/signs and disease, neurologic symptoms or signs, onset sudden or onset after age 40 years, and change in headache pattern) was proposed in 2003 as a red flag screen for secondary headaches. Additional screening items have since been added based on expert opinion, creating the current SNNOOP10 criteria (Table 1). While not a formally derived or validated screening tool, it is widely recommended in medical reference material and international guidelines.<sup>4,5</sup>

### Use of SNNOOP10 Criteria in the Urgent Care Setting

Patient disposition remains a decision to be made on a case-by-case basis via shared decision-making depending on the differential, your urgent care's diagnostic capabilities, and the patients' specific clinical context.

A patient with a history of headaches and no red flags is at a low risk of a serious or life-threatening etiology for their headache and will be unlikely to require transfer.

Alternatively, the combination of multiple red flags (as were present in this case) or abnormal exam findings

Table 1. The SNNOOP <sub>10</sub> Criteria	
Sign or Symptom	Related Secondary Headaches
Systemic symptoms including fever	Headache attributed to infection or nonvascular intracranial disorders, carcinoid or pheochromocytoma
Neoplasm in history	Neoplasms of the brain; metastasis
Neurologic deficit or dysfunction (including decreased consciousness)	Headaches attributed to vascular, nonvascular intracranial disorders; brain abscess and other infections
Onset of headache is sudden or abrupt	Subarachnoid hemorrhage and other headaches attributed to cranial or cervical vascular disorders
Older age (after 50 years)	Giant cell arteritis and other headache attributed to cranial or cervical vascular disorders; neoplasms and other nonvascular intracranial disorders
Pattern change or recent onset of headache	Neoplasms, headaches attributed to vascular, nonvascular intracranial disorders
Positional headache	Intracranial hypertension or hypotension
Precipitated by sneezing, coughing, or exercise	Posterior fossa malformations; Chiari malformation
Papilledema	Neoplasms and other nonvascular intracranial disorders; intracranial hypertension
Progressive headache and atypical presentations	Neoplasms and other nonvascular intracranial disorders
Pregnancy or puerperium	Headaches attributed to cranial or cervical vascular disorders; postdural puncture headache; hypertension-related disorders (eg, preeclampsia); cerebral sinus thrombosis; hypothyroidism; anemia; diabetes
Painful eye with autonomic features	Pathology in posterior fossa, pituitary region, or cavernous sinus; Tolosa-Hunt syndrome; ophthalmic causes
Post-traumatic onset of headache	Acute and chronic post-traumatic headache; subdural hematoma and other headache attributed to vascular disorders
Pathology of the immune system such as HIV	Opportunistic infections
Painkiller overuse or new drug at onset of headache	Medication overuse headache; drug incompatibility

Adapted from: Do TP, Remmers A, Schytz HW, et al. Red and orange flags for secondary headaches in clinical practice: SNNOOP<sub>10</sub> list. *Neurology*. 2019;15;92(3):134-144.

should increase clinical concern. If the patient appears unstable or has focal neurologic deficits, altered level of consciousness, or rapidly progressive signs or symptoms they should be transferred emergently to the ED.

Additionally, screening for secondary headache etiologies prior to management of pain is essential. NSAIDs may be contraindicated prior to definitive imaging depending on your clinical concern for intracranial hemorrhage, and a headache in the setting of pregnancy may warrant care coordination with the obstetrician.

### Headache and Fever

The combination of headache and fever frequently occurs with infectious processes that do not involve the central nervous system. That said, the clinician should consider neurologic infections such as bacterial meningitis, encephalitis, or brain abscess, in addition to non-infectious etiologies such as vasculitis or inflammatory disorders. Headache with fever is particularly alarming and warrants escalation of care when co-occurring with either neck stiffness or other SNNOOP<sub>10</sub> criteria, such

as neurologic deficit or altered level of consciousness.<sup>3</sup>

### Headache and Age Over 50

Varying age cutoffs from ages 40 to 65 years have been suggested to raise clinical concern for secondary headache. Rather than considering a single age cutoff as increased risk, it may be prudent to consider age as a continuous variable above age 50, with increasing risk as age advances, while giving particular concern to patients aged 65 or older as they may be at a 10-fold increased risk of a serious underlying cause of headache.<sup>3</sup>

### Post-Traumatic Headache

For post-traumatic headache, the clinical context can inform the level of concern and next steps in care. A post-traumatic headache that is chronic (>3 months) and without other positive SNNOOP-10 criteria (ie, progressive pattern, age, etc.), concerning historic features (such as antiplatelet or anticoagulant use), or findings on exam may be appropriate for further evaluation with a primary care provider or neurologist.<sup>3</sup>

### Subdural Hematomas

A subdural hematoma (SDH) is a collection of blood that develops between the dura and arachnoid matter, with a significant risk for long-term morbidity or mortality. Head trauma is the most common etiology, although the trauma may be subclinical or the bleed may be spontaneous (as was the case in this patient).

Other risk factors include advancing age, with patients >70 being at particularly high risk, male gender, excessive alcohol consumption, antiplatelet or anticoagulant use, or structural brain abnormalities.<sup>6-8</sup> The incidence of SDH is expected to increase given our aging population and the increasing use of antiplatelet agents or anticoagulants.<sup>7,8</sup> Headache, altered mental state, or neurologic symptoms in the setting of recent head trauma or the risk factors mentioned should raise clinical suspicion.

Acute SDH may resorb, but progresses to chronic SDH (21 days duration) in roughly 20% of patients.<sup>6,8</sup> SDH appear crescent-shaped on head CT, and cross skull suture lines, which is a distinguishing feature from epidural hematomas. They typically appear hyperdense with acute bleeding on CT relative to the brain parenchyma for the first week, then generally progress from isodense in the second week to hypodense in the chronic phase.

Patients presenting from chronic SDH often do so after a latency period lasting from weeks to years where they may be asymptomatic as the hematoma slowly expands, eventually resulting in symptoms from in-

creased intracranial pressure. Between 10% and 20% present with seizures, 2% to 15% with coma, and 2% with brain herniation.<sup>7</sup> Both acute and chronic SDH are complicated by a significant risk of recurrence.<sup>7,8</sup>

Surgical intervention is often required if the SDH is symptomatic, clot thickness is >10 mm, there is a midline shift of >5 mm, or if there are abnormal pupillary findings. Conversely, asymptomatic SDH <10 mm may be conservatively managed by neurosurgery with serial assessment and imaging.<sup>6</sup>

### Conclusion

- Patients presenting with a headache should be carefully evaluated for potential life-threatening causes, particularly in cases where the headache is severe, sudden in onset, or associated with neurological deficits.
- The SNNOOP10 screening criteria is a useful guide for identifying warning signs and symptoms that may suggest an underlying serious pathology and warrant prompt referral to an ED setting.
- In this case, the patient's headache was initially assumed to be due to viral sinusitis, but several positive elements of the SNNOOP10 screening criteria on representation led to the diagnosis of a subdural hematoma.
- The SNNOOP10 criteria provides a useful mnemonic and could be included in a headache template to serve as a reminder to screen for concerning headache findings that could warrant escalation of care.

**Ethics statement:** The patient gave full consent for the use of her story in the publication of this case report. ■

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# A Quality Improvement Project to Improve Management of Urinary Tract Infections

**Urgent message:** Urinary tract infection is a common diagnosis in pediatric urgent care. As such, efforts must be made to ensure antibiotics are prescribed only when necessary and to decrease the rate of unnecessary prescribing.

Benjamin Klick, MD; Tammy Speerhas, DNP, FNP-C; Jessica Parrott, DNP, CPNP-PC, CNE; Jeffrey Bobrowitz, MD; Anne McEvoy, MD; Debra Conrad, MD, Jade Eves, PA-C and Theresa Guins, MD

**Citation:** Klick B, Speerhas T, Parrott J, Bobrowitz J, McEvoy A, Conrad D, Eves J, Guins T. A quality improvement project to improve management of urinary tract infections in a system of pediatric urgent care centers. *J Urgent Care Med.* 2023;17(9):23-29.

## Abstract

**Background and objective:** Urinary tract infections (UTIs) are a common problem in pediatric urgent care medicine. There are multiple quality improvement (QI) projects related to the management of UTIs documented in the pediatric literature. We developed a project to decrease the prescribing of ultimately unneeded antibiotics for possible UTIs in a pediatric urgent care setting. A similar project has not been described in the pediatric literature.

**Methods:** We first reviewed the charts of patients presenting to a system of pediatric urgent care centers with a possible UTI over a 2-year period. We then launched a QI project with three plan, do, study, act cycles to decrease the prescribing of antibiotics for patients who ultimately were found to not have a UTI based on urine



culture results. We tracked the number of patients who needed to be started on antibiotics after their urgent care visit as a balancing measure, and also tracked mul-

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multiple secondary measures throughout the project. Balancing measures are tracked to make sure that unintended negative consequences do not occur from a QI project. In this case, the concern was that patients who should have been started on antibiotics for a UTI may have had a delay in care because of the project.

**Results:** The absolute percentage of antibiotics prescribed that were ultimately unneeded decreased by an absolute 15% during the project, and met special cause variation criteria. There was no special cause variation noted for our balancing measure. All of our secondary measures showed improvement during the project.

**Conclusions:** A large-scale QI project at a system of pediatric urgent care centers was able to decrease the unneeded prescription of antibiotics for possible UTIs.

## Introduction

Urinary tract infections (UTIs) are a common problem in pediatric urgent care medicine. About 1.5% of children under 2 years old<sup>1</sup> and over 6% of females under 6 years old<sup>2</sup> have had at least one UTI. Current treatment recommendations for the diagnosis and management of patients below the age of 2 are based on 2011 American Academy of Pediatrics practice guidelines.<sup>3</sup> There is less standardization of recommendations for pediatric patients over 2 years old, although European guidelines do exist which apply to children of all ages.<sup>4</sup>

There have been multiple previous quality improvement (QI) projects related to the diagnosis and management of pediatric UTIs. One project standardized proper ordering and collection of urine specimens as well as adherence to recommended antibiotic prescription for UTIs in an emergency department setting.<sup>5</sup> Another developed a process map to decrease the incidence of missed UTI diagnoses<sup>6</sup> in an emergency department setting. A third project sought to increase the rate of prescribing of narrow-spectrum antibiotics for UTIs in both an emergency department and urgent care setting.<sup>7</sup> The authors are unaware of any reports in the literature of a pediatric urgent care quality improvement project focusing on decreasing the rate antibiotics were prescribed in cases where it was presumed that a patient had a UTI based on urinalysis, but where urine culture results were not consistent with a UTI.

This QI project took place at a system of pediatric urgent care centers associated with a large children's hospital system in a catchment area of approximately 2 million patients. There were between three and four urgent care centers in the system during the study

period, with a combined patient volume of over 90,000 visits per year at their busiest point. This urgent care system has a robust system of clinical care guidelines, including one for the diagnosis of UTIs. However, prior to initiation of the project, there had never been a quantitative evaluation of either the effectiveness of or adherence to this guideline.

## Methods

### Project initiation

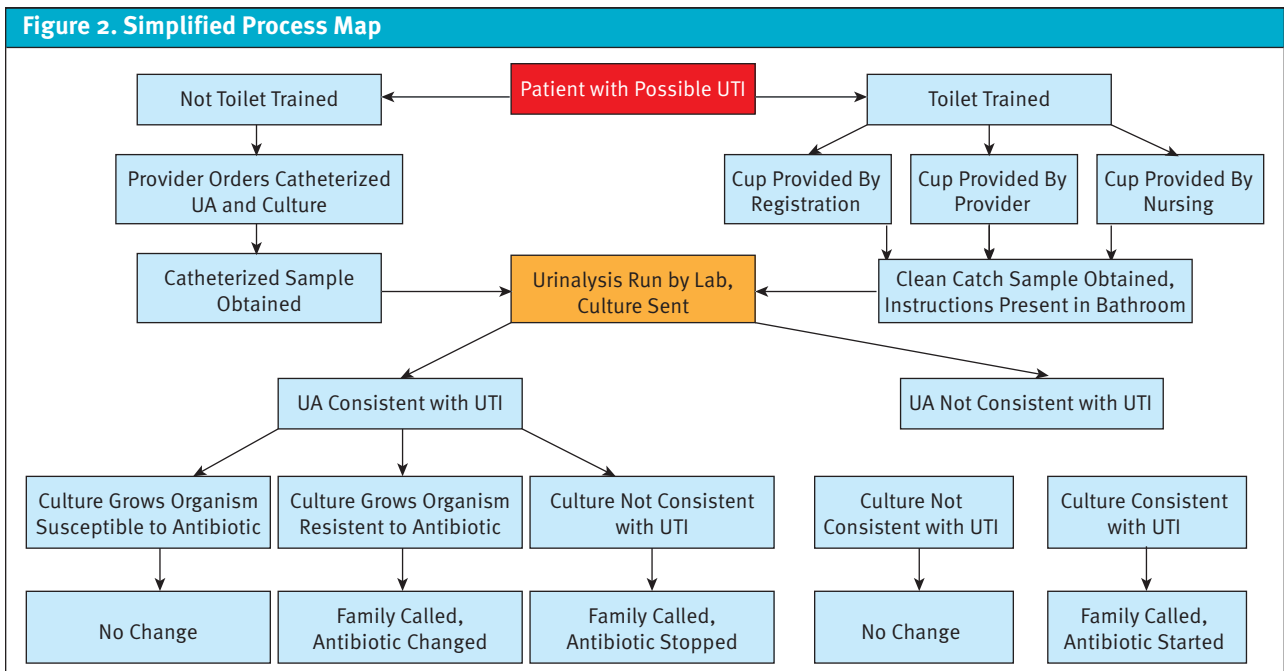
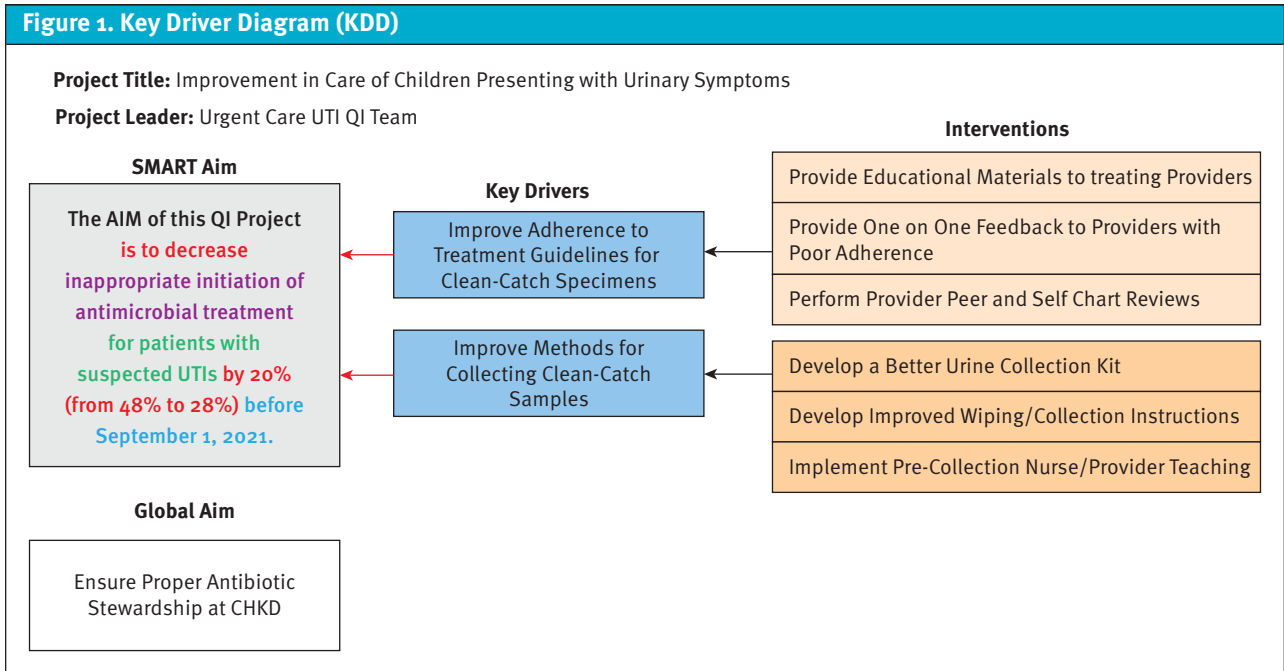
Planning for this QI project began in late December 2019. Collecting data on the current diagnosis and management of UTIs at our urgent care centers was a major obstacle to project initiation. However, at the beginning of the COVID-19 pandemic, patient volumes declined precipitously in the pediatric population. This was used as an opportunity to launch the project.

The first step in our project was to review enough previous charts to decide if there were any issues in our diagnosis or management of UTIs that needed to be addressed. We chose to look at the 2 years prior to project onset to assure we would have sufficient data. As soon as all the data was collected it was analyzed. Once analysis was completed we began our plan, do, study, act (PDSA) cycles.

### Initial data collection

There were a total of 6,548 patients who had a urine culture ordered between April 2018 and April 2020. All these charts were reviewed by an urgent care provider (physician, nurse practitioner, or physician assistant) and data were collected on all charts where both a urinalysis and urine culture were performed. Providers preferentially reviewed charts of patients who they had treated. The records of patients who had been treated by a provider who was no longer employed by our system of urgent care centers were divided up among the current providers. All data associated with the project were securely stored on RedCAP. Collected data included demographics, history, physical exam, laboratory findings and treatment.

Demographic information included age, sex, and insurance type. Insurance type was collected as a marker for socioeconomic status. The history and review of systems sections from each patient chart were used to answer if the patient had any vomiting, fever, or history of constipation. This historical information may affect the probability of a UTI. The physical exam section was reviewed to see if a urogenital physical exam was documented and if circumcision status was documented when appropriate. Laboratory findings included urinalysis, urine culture results as well as gonorrhea, chlamy-

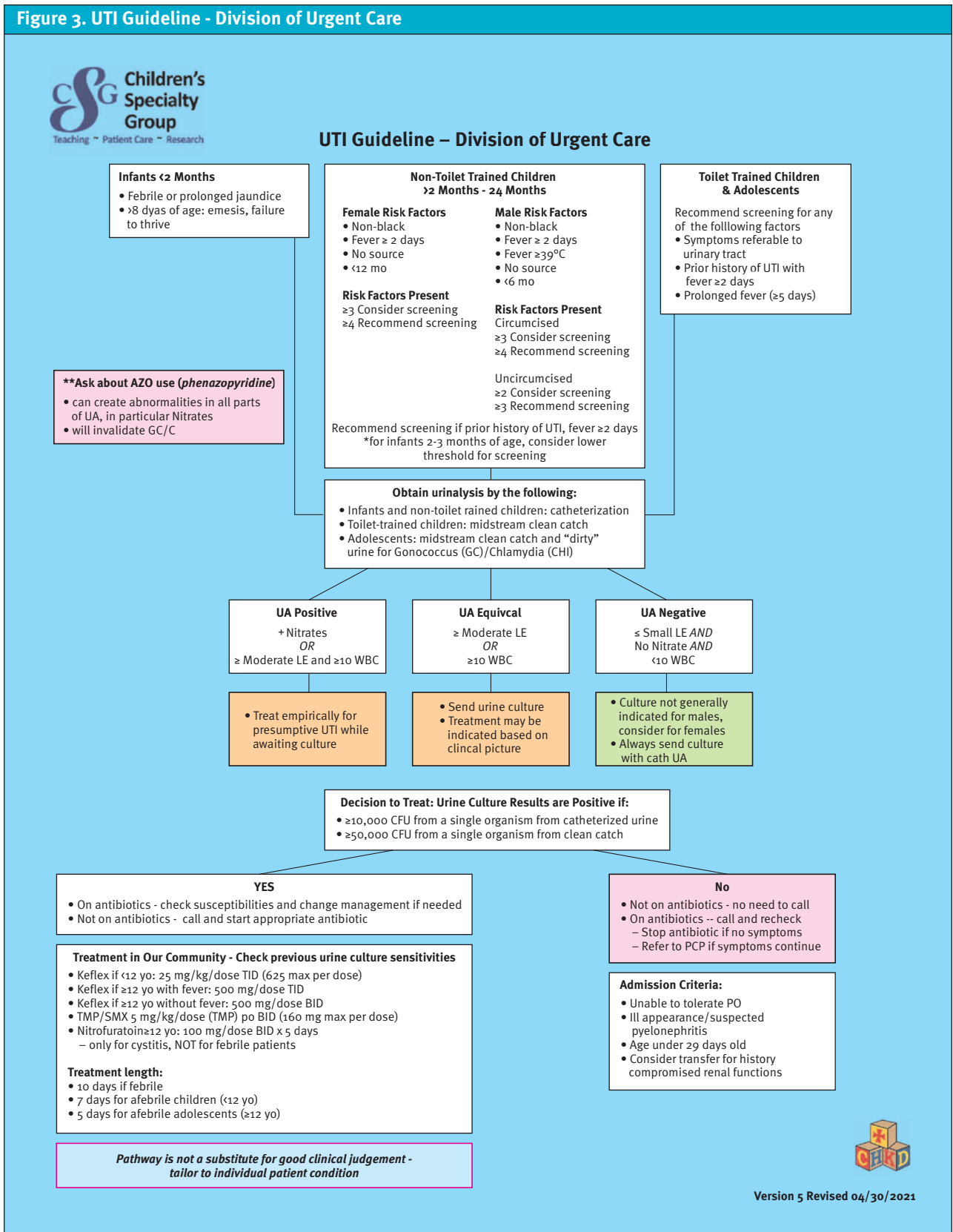


dia, and pregnancy testing when appropriate. The review included whether a patient was treated for a UTI, and if so, which antibiotic was chosen and duration of therapy. Lastly, we evaluated if proper hygiene practices were documented for all patients.

Using these initial data, several areas for improvement were identified. These included documentation of gen-

ital exams and circumcision status, use of a first-generation cephalosporin for treatment, and duration of therapy for afebrile patients. However, the largest area for improvement was in presumptive antibiotic treatment based on the initial urinalysis results: 47.9% of the patients treated for a presumed UTI proved to not meet criteria for continued treatment based on urine culture

Figure 3. UTI Guideline - Division of Urgent Care



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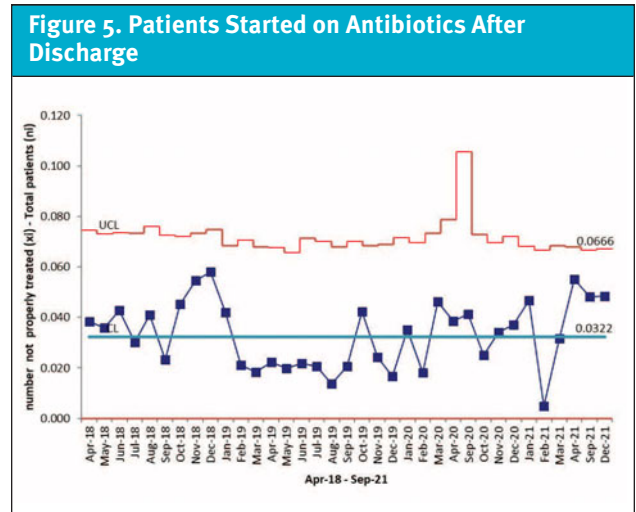
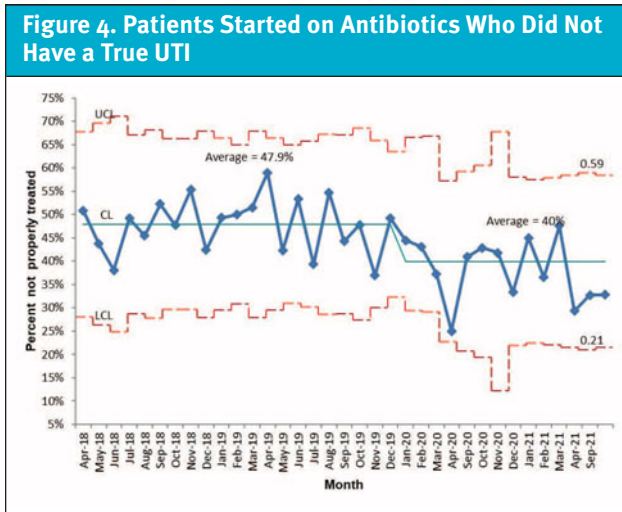
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results. This became the primary target for this QI project, while the other measures mentioned above were also monitored throughout the project.

Our criteria for a UTI based on urine culture were at least 10,000 colony forming units of either a single or predominant organism for catheterized specimens or 50,000 colony forming units for a clean-catch specimen. These cutoffs had been selected to minimize the risk of undertreatment of possible UTIs. Prior to launching our project, we submitted it for Eastern Virginia Medical School institutional review board approval, and it was determined that the project fell under QI and not research.

Our overall project aim statement was to decrease the number of patients who were started on antibiotics for a presumed UTI at the time of their urgent care visit and then had a subsequent negative culture result by an absolute 20%, from 48% to 28% within a year. Our system of urgent care centers has always called patients in cases when antibiotics needed to be stopped based on urine culture results, and this practice was not affected by this QI project. Our main balance measure would be patients who needed to be started on antibiotics based on urine culture results. We developed a key driver diagram (Figure 1) and process map (Figure 2) to aid us in this goal. Major areas for potential improvement that were identified included provider adherence to treatment guidelines for presumed UTIs and clean-catch urinalysis collection technique. Updating our current guidelines regarding treatment of a presumed UTI was another area of focus. We then began the first of three plan, do, study, act cycles.

**PDSA Cycle 1**

PDSA cycle 1 started in September 2020 and finished

in October 2020. It focused on decreasing contamination of clean-catch urine samples with educational interventions. Proper urine collection technique was reviewed at pre-shift huddles with nursing staff and providers, as well as with staff educational poster boards placed at each center. A new urine collection kit with extra wipes was developed and placed in all patient rooms. Large posters with collection instructions were placed in bathrooms. Starting with charts from October 2020, providers began a real-time chart review of their peers and stopped reviewing their own charts with the goal of learning from how others practiced. An additional aspect to the PDSA 1 cycle was a reflective practice survey that was distributed to all participating providers. The survey included questions regarding provider demographics, a reflective practice questionnaire, and perceptions on clinical practice.

Utilizing this interprofessional (physicians, nurse practitioners and physician assistants) reflective practice methodology, several significant and positive findings were discovered regarding perceived provider improvement of care and demonstrated value in the interprofessional reflective process.

Exploration of these results was presented as a poster at the 2022 Society for Pediatric Urgent Care conference. Additionally, we presented an overview of the project in September 2020 at our health system-wide quality and safety meeting, just as the first PDSA cycle was starting.

**PDSA Cycle 2**

PDSA cycle 2 started in November 2020 and ran through December 2020. It continued and expanded the interventions from PDSA 1. Urine collection instructions were translated into Spanish and laminated handouts with instruc-

Measure	Pre-project	PDSA 1	PDSA 2	PDSA 3	April 2021	September 2021	December 2021
Male genital exams documented	65.7%	87.6%	74.5%	85.5%	80.9%	81.0%	73.1%
Female genital exams documented	43.5%	61.6%	60.8%	62%	70.6%	51.5	48.9%
Circumcision status documented	45.7%	74.2%	73.4%	73.7%	78.7%	66.7%	53.8%
Duration (in days) of therapy for afebrile patients	8.76	7.81	8.0	7.7	7.8	N/A	N/A
First-generation cephalosporin use	62.4%	77.7%	77.1%	76.6%	74.3%	N/A	N/A

tions were created for patient rooms. Finally, an email was sent to all providers reminding them to follow divisional guidelines regarding the treatment of presumed UTIs.

### PDSA 3

PDSA 3 started in January 2021 and ran through March 2021. Prior to starting the third cycle, our divisional guidelines regarding criteria for a presumed UTI were updated based on the information gathered from the chart review. Our health system's antibiogram shows excellent sensitivity to first-generation cephalosporins by common UTI pathogens, which is why it has remained our recommended first-line treatment option on our guideline. The updated guideline (**Figure 3**) recommended empiric treatment for a UTI only if both positive leukocyte esterase (at least moderate on dipstick) and white blood cells (at least 10-25 per high-powered field) were present, rather than if either of these criteria were met.

Empiric treatment for patients with positive nitrite on dipstick was still recommended, but a note about possible false positive nitrites from use of phenazopyridine was included. Recommendations for when to obtain a urine culture if the urinalysis was negative were added, as well. These recommendations were to always obtain a culture for catheterized specimens and to consider a urine culture for female patients. For males with a normal urinalysis, it was recommended that a urine culture is generally not indicated. These divisional guideline changes and associated provider education were the major interventions in this cycle.

### Later Steps

In April 2021, the formal PDSA cycles stopped due to a significant increase in patient volumes related to COVID-19 trends in the pediatric population. Project monitoring continued periodically through December 2021. Fewer data were collected during this time; in particular, mean antibiotic duration for afebrile patients and use of first-generation cephalosporins were no

longer tracked. This is because improvement in these measures had occurred in the first PDSA cycle and had remained consistent throughout the other PDSA cycles. During that time, project updates were presented twice at the health system-wide quality and safety meetings. Our findings were also presented at our institution's annual research day and as a podium presentation at the 2021 Society for Pediatric Urgent Care conference.

### Results

The initial aim of obtaining an absolute 20% reduction of unneeded antibiotic initiation within a year was not achieved. However, this number did drop to 32.8%, an absolute reduction of approximately 15%. When plotted on a p-chart, 15 consecutive data points starting when the project was first discussed prior to the COVID-19 pandemic were also below the original 48% average, which meets special cause variation (**Figure 4**). The center line of our p-chart was adjusted at the end of PDSA 3 to reflect improvement since the time that the project was first discussed. The percentage of patients who needed to be started on antibiotics after their urgent care visit, again plotted on a p-chart, did not meet special cause variation, which was also the desired outcome (**Figure 5**). All our secondary outcomes also improved (**Table 1**). Periodic data collection and analysis will continue to take place, and data from summer 2022 is currently being analyzed.

### DISCUSSION

The COVID-19 pandemic created many problems in urgent care centers and in our own health system, but it also created opportunities. The initial substantial decrease in patient volumes at the onset of the pandemic allowed the launch of initiatives that would not normally be feasible. It is also an example of how a system-wide project requiring effort from all clinicians can succeed. Every outcome measure that was tracked during this project improved without any significant worsening of our balancing measure. We hope to see this

positive change sustained and intend to use the lessons learned as a foundation for other division wide quality improvement projects. ■

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jamin Klick participated as a co-project leader throughout the duration of the project. He was on the project leadership team during project planning and implementation. He helped with data collection and analysis. He was the primary author of the manuscript. Tammy Speerhas participated as a co-project leader throughout the duration of the project. She was on the project leadership team during project planning and implementation. She helped with data collection and analysis, and helped with manuscript editing and revision. Jessica Parrott, Jeffrey Bobrowitz and Anne McEvoy were on the project leadership team during project planning and implementation. They helped with data collection and analysis, and helped with major manuscript revisions. Debra Conrad and Jade Eves were on the project leadership team during project planning and implementation. They helped with data collection and analysis, and reviewed the manuscript. Theresa Guins participated as a co-project leader throughout the duration of the project. She was on the project leadership team during project planning and implementation. She reviewed the manuscript. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.



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# 'Big Retail' Pivots Are a Retreat from 'On Demand' Care

**Urgent message:** Food, drug, and mass retailers continue to explore the healthcare space and seek profitable ways to leverage their massive footprints. As they shift their strategies in favor of primary care, especially for Medicare populations, they are relinquishing control of the transactional health market to urgent care.

Alan A. Ayers, MBA, MAcc

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Key words: retail health, urgent care

The healthcare sector in America continues to be a crowded place. As retail giants flex their consumer experience and brand awareness, their expansions into healthcare are evolving. While the health efforts of companies like CVS, Walgreens, and even Walmart might have been considered a threat to traditional urgent care, experience has proven otherwise and the forecast is looking much different now.

A global pandemic and changing consumer demands have the nation's largest retailers rethinking how they plan to deliver healthcare services to the public. The data suggest a move away from transactional visits with a new focus on primary care, behavioral health (often via telemedicine), and risk-based Medicare.

This article will look at four retail chains and their involvement in healthcare today.

## CVS Acquires an EMR

For the better part of a decade, CVS has discussed turning its nearly 10,000 pharmacy locations into primary care hubs. So far, this has resulted in little action as MinuteClinic, which penetrates approximately 10% of its stores, remains its main healthcare resource. But after a string of recent acquisitions, this could change soon.

MinuteClinic has long been limited by itself. Often



staffed by a solitary nurse practitioner and unable to perform procedures or utilize x-ray for diagnosis, these clinics have been relegated to driving foot traffic for convenience items, including recommending high-margin over-the-counter medications.

Although CVS expanded the square footage of

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MinuteClinic to become HealthHub, adding a “conciierge” to assist with chronic conditions like diabetes and sleep apnea, including fitting durable medical equipment, anecdote is that the concierge is rarely available. The 1,500 announced HealthHubs in 2019 haven’t materialized.<sup>1</sup> Because a key performance indicator in retail is “sales per square foot,” it appears HealthHub has helped CVS performance not through incremental visits, but by reducing selling space and thus increasing sales per square foot of general merchandise.

CVS now appears to be searching for a more profitable path through acquisitions.

Perhaps the most notable is the pharmacy giant’s \$100 million investment in Carbon Health in February 2023. The 125-unit tech-enabled chain specializes in primary care and urgent care.

On the surface, this is an interesting acquisition for a company with a sprawling nationwide presence. Carbon Health has a strong presence in California, where its coverage generates some value-based care PCP contracts. But outside The Golden State, its geographic presence is thin and its patient experience and service offerings are inconsistent and observed to be low volume.

So what value does CVS likely see in Carbon Health? The pharmacy giant’s real interest may not be in the company’s brick-and-mortar offerings, but rather in its proprietary EMR and patient engagement platforms. CVS has used a limited version of Epic in its MinuteClinic locations, a remnant of a previous iteration focused on hospital joint ventures. But with the acquisition of Carbon Health, it gains access to a smarter, more tailored platform. Having their own EMR changes the MinuteClinic business model to that of tech-enabled provider, similar to Oak Street Health and others discussed in this article.

Speaking of...Carbon isn’t the only noteworthy investment CVS has made recently. It also spent \$10.6 billion in February 2023 to acquire Oak Street Health. This Medicare-focused chain of 169 sites caters to older adults with primary care, prevention, and wellness services. The acquisition puts CVS on par with Walgreens in the Medicare space as the two largest providers in the Medicare Advantage market.

As “captive” or “gatekeeper” HMOs, Medicare Advantage plans often create hurdles like preauthorization or referral for the use of urgent care, so this is a trend for operators to monitor as the boomer generation ages into Medicare.

So, while MinuteClinic’s limitations push it further from the realm of competitiveness with traditional urgent care, CVS is beginning to outline its path forward.

### Risk-Based Medicare Advantage 101

“Accountable care,” which ties payment to clinical outcomes and medical cost savings, will likely touch all health-care providers at some point. “Risk-based Medicare” has spawned an industry of tech-enabled companies looking to capitalize.

The most basic economic case of being a risk-based provider in a Medicare Advantage plan entails three points:

- A Medicare or dual-eligible (Medicare/Medicaid) patient, rather than face the 20% cost-sharing of traditional Medicare, agrees to administration of their government benefits by an HMO.
- Medicare Advantage (MA) HMOs offer patients “benefits” like integrated drug coverage, transportation, fitness classes, nutrition assistance, and no copays for basic services. The caveat is that the patient is “captive” to the HMO’s network of providers, including approval for most specialist and diagnostic referrals by the HMO’s “gatekeeper” primary care physician. In short, participants trade freedom of choice for lower out-of-pocket costs in a closed system.
- MA providers participate “at risk,” meaning the government will pay the beneficiary’s premium to the HMO. If that premium is, say, \$1,000/month and the provider can deliver care for less, say \$750, then the provider can share in the savings. But if the patient’s care costs \$2,000, the provider would “lose” on the patient.

Considering this general framework, it does beg the question of what happens if (or more likely when) government premiums shrink—for example, if the government were to reduce the \$1,000 premium in the example to \$750 or even \$650? It also begs the social policy question of whether multibillion-dollar companies should be “profiting” on Medicare?

While historically there have been no “risk” models in urgent care, due to its transactional nature, as urgent care converges with primary care we likely will start to see value-based contracts with payers in urgent care—likely starting with providers in rural and other underserved markets where “risk models” do not currently exist.

Soon we may see the pharmacy ditch transactional care in favor of primary care and catering to Medicare members. Only time will tell if the company’s recent acquisitions are enough to finally spark change.

### Walgreens and Multispecialty Care

Unlike CVS, Walgreens has been challenged with its

in-store clinic offerings. After closure, divesture, or conversion to VillageMD of most of its co-location partner sites with MedExpress, the company sold many of its clinics to third-party health systems such as Advocate in Chicago and TriHealth in Cincinnati. The number of these health system-affiliated clinics still in operation is not found on the retail website. However, it's clear Walgreens doesn't view them as the future of its health-care offerings.

Walgreens has shifted focus to its majority interest in VillageMD, a 680-site primary care group focused on Medicare Advantage members. Also including dual-eligible customers who seek value-based care and homecare expands its reach to additional populations. In January 2023, VillageMD acquired Summit Medical and CityMD in New York City and in March 2023, Starling Physicians of Connecticut, further growing its portfolio and lineup of services to include urgent and specialty care.

This expansion of VillageMD's services and footprint in the tristate region of New York, New Jersey, and Connecticut enables the company to be not just a primary care provider but a multispecialty group for the most dense population in the country. It also gives Walgreens an opportunity to build a foundation in accountable care—an important consideration when caring for an aging population facing widespread chronic disease.

Ultimately, Walgreens' Summit/CityMD acquisition could be a sign of things to come if VillageMD continues to branch out. While the focus thus far has been regional, absorbing additional multispecialty groups to expand its services nationally seems a likely possibility.

### Walmart Tries Again

Despite having a smaller brick-and-mortar pharmacy footprint (4,742) than Walgreens and CVS, Walmart remains the weekly "go to" store for millions of U.S. households. Yet, this presence hasn't been enough to uplift the company's previous attempts with the in-store clinic model.<sup>2</sup>

The latest iteration, Walmart Health, continues to operate 30 locations and offers an array of services including primary care, dental, vision, and behavioral health. Each center has a separate entrance to delineate it from the attached supercenter. More importantly, Walmart Health offers a range of services typical to federally qualified healthcare centers (FQHC) by offering primary care, dental, and mental health services. As a result, these centers are well-positioned to become Medicare Advantage providers. Reportedly, patient outcomes have been strong although information on profitability has not been released. Walmart Health also went

through significant executive turnover, according to reports.

*“One Medical...promotes same-day access as a key benefit. But in reality, this leads to centers staffed by providers with excess capacity and thus idle time.”*

Telemedicine could be helpful. Walmart's May 2021 purchase of MeMD, a startup providing virtual care services, created public relations parity as Amazon expanded its digital offerings by signaling the company's shift away from in-store clinics toward the virtual space. But in the time since, telemedicine company stocks have plummeted across the board as the pandemic's impact on in-person care wanes and consumer adoption remains lackluster.

So what comes next for Walmart Health?

Despite the battleground for "mass market" telemedicine, MeMD is an asset the company can offer to its 1.6 million employees. Walmart continues to grow its health centers with a new approach catering to UnitedHealthcare and AARP members with value-based care plans. The AARP partnership brings Walmart in line with CVS's Oak Street Health and Walgreen's VillageMD investments.

While Walmart Health may not be a direct competitor for urgent care centers, its presence in the healthcare space is still noteworthy. Its real estate restrictions alone have a huge impact on urgent care placement. The giant requires corporate approval for both urgent care and dental businesses before they can be placed in any retail strip the company owns.

Walmart's size alone makes it worth monitoring. Although the company continues to scratch around the in-store healthcare delivery space—not yet achieving even 3% coverage of its own rooftops—count on Walmart to scale rapidly if it does. With over 4,700 Walmart locations in the U.S. and powerful brand recognition, a quality, affordable healthcare offering could turn heads.

### Amazon's Focus on Technology

A titan in the e-commerce space and arguably the greatest logistics company in the world, Amazon has also upped its healthcare offerings significantly in recent years.

	CVS	WALGREENS	WALMART	AMAZON
<b>Brick-and-Mortar Pharmacies</b>	9,667	8,886	4,742	N/A
<b>Covered Lives</b>	105M Caremark PBM members 34M Aetna members		1.6M US employees (self-insured)	1.6M US employees (self-insured) One Medical membership sold to 8,000 employers
<b>Urgent Care</b>	1,100 MinuteClinics (part of expanded, in-store HealthHub) 125 Carbon Health sites	Walk-ins welcome at VillageMD 400 in-store clinics spun-off to local health systems in 2016 (number still open is not published) 150 CityMD sites through VillageMD acquisition of Summit Health	In-store "Clinic at Walmart" operated by local health systems (number still open is not published) Walk-ins welcome at Walmart Health	Same-day appointments at One Medical
<b>Primary Care</b>	\$8B investment in Signify Health's value-based care network of 10,000 physicians in September 2022 \$100 million investment in Carbon Health, a 125-unit tech-enabled primary care/urgent care chain in February 2023 \$10.6 billion acquisition of Oak Street Health, a Medicare-focused primary care with 169 sites, in February 2023	Majority interest in primary care group VillageMD with 680 sites, currently 200 co-located in Walgreens (expanding to 1,000 by 2027) focused on Medicare Advantage \$8.9B VillageMD purchase of NY/NJ-based Summit Medical/CityMD providing primary, urgent and specialty care in January, 2023	30 Walmart Health locations in Florida, Georgia, Texas, Illinois, and Arkansas (offering primary care, dental, vision, and behavioral health services) Value-based health partnership with UnitedHealth Group, focused on AARP Medicare Advantage members	\$3.9B purchase of One Medical (membership-based, tech-enabled primary care) in July 2022 One Medical owns Iora Health, a Medicare-focused value-based model
<b>Virtual Care</b>	Partnership with Amwell	Partnership with MDLIVE	Purchased MeMD in May, 2021	Launched Amazon Clinic, serviced by two or three telemedicine operators, for a limited number of common conditions, often leading to a prescription One Medical offers 24/7 virtual care as part of membership
<b>Behavioral Health</b>	CVS-employed licensed social workers at HealthHub or virtually Array Behavioral Care investment of \$25M in January, 2023	Virtual through MDLIVE	Virtual through MeMD Virtual for UnitedHealthCare members	Virtual through Ginger partnership
<b>Clinical Trials</b>	Added CTS, Clinical Trial Services in May, 2021	Introduced tech-enabled clinical trial service in June, 2022	Launched Healthcare Research Institute in October, 2022	
<b>Home Health</b>	Coram infusion services	\$392M CareCentrix investment for post-acute and home care in October, 2022		
<b>Prescription Delivery</b>	Home delivery pharmacy	Home delivery pharmacy	Mail order pharmacy	Purchased PillPack in 2018, rebranded Amazon Pharmacy Amazon Prime RxPass benefit w/ free unlimited delivery of 60 generic meds for \$5/month

Sources: Company websites and press releases.

Its July 2022 purchase of One Medical for \$3.9 billion cemented its intentions. Along with the brick-and-mortar locations, Amazon gained access to One Medical's

polished EMR, patient engagement platform, and mobile app. These digital assets should be valuable as the company continues to branch out into healthcare. If

### Leading Retailers Hosting In-Clinics

The number of retail host model clinics has remained steady since 2019, averaging 1,750, give or take a yearly variance of 1.5%. In short, there has been little growth in the space, except for a shifting of rooftop count from national players like Walmart to regional chains like Publix Supermarkets and Meijer.

The top eight food, drug, and mass merchandise chains on the list represent >95% of all retail clinics. CVS MinuteClinic represents 65%. Yet, the average clinic penetration of these retailers is only 5% of their own stores. So you can't say any have been an overwhelming success. None of the national players have realized the growth announced in their initial press releases.

Regional supermarket chains like West Des Moines, Iowa-based Hy-Vee, Inc. have, perhaps, grown under the radar by partnering with health systems like Mayo Clinic, Catholic Health Initiatives, and University of Missouri Health Care. Same with Meijer and Publix, which lease space to health system affiliated clinics.

The challenge with in-store clinics offering "on demand" care has been a limited set of conditions treated due to the absence of x-ray and procedure room. Thus these clinics have always been considered a great referral source for urgent care.

Rank	Retail Host	Number of Clinics	Number of Stores	Penetration
1	CVS Health (MinuteClinic)	1,139	9,609	11.9%
2	Kroger Company (The Little Clinic)	225	2,720	8.3%
3	Walgreens (excluding VillageMD)	171	8,802	1.9%
4	Walmart	52	4,635	1.1%
5	Publix	46	1,361	3.4%
6	Hy-Vee	36	285	12.6%
6	Target	34	1,948	1.7%
8	Meijer	13	265	4.9%

Source: National Urgent Care Realty, April 2023 data and company websites.

NOTE: Walmart numbers include all iterations including The Clinic at Walmart, Walmart Care Clinic, and Walmart Health. Walgreens numbers include remnant clinics sold to health systems as well as remnant co-located MedExpress sites but exclude VillageMD as it's a primary care and Medicare Advantage model now in over 200 stores.

However, One Medical's operating model has raised some eyebrows. Members face a \$200 per year fee just to gain access, which has been sharply discounted in recent months. Then, each interaction is billed separately—including telemedicine and PCP visits. This drives healthcare costs higher and ultimately positions One Medical as a "luxury product" in the space. In some locations, such as Ohio where billing is carried out through a partnership with The Ohio State University, a fee-for-service visit costs about 30% more than a normal urgent care visit in that market, according to one patient's Explanation of Benefits.

One Medical has positioned its memberships as a B2B offering, making primary care access easier for employees. But the cost "savings" are largely based on the long-term health benefits of improved PCP access—something that could be achieved by anyone with a primary care relationship—because unlike accountable care arrangements, the cost of individual visits is still hitting the self-insured employer.

One Medical also presents a financial challenge for the online shopping giant. The service promotes same-day access as a key benefit. But in reality, this leads to centers staffed by providers with excess capacity and thus idle time. Not to mention the expensive rent these centers pay for premium locations in affluent neighborhoods, upscale fashion malls, and toney downtown districts. Adjacency to Nordstrom and Saks Fifth Avenue likely adds no value in the delivery of primary care services.

So what's the answer? Amazon's own 1.5 million employees could help fill the void. However, there seems to be a geographical mismatch between the posh positioning of One Medical's centers and where Amazon's hourly employees live.

This trend carries over into One Medical's recent acquisition of Massachusetts-based Iora Health, which specializes in risk-based Medicare Advantage services. While this could add value, Medicare Advantage in Massachusetts traditionally appeals to a blue collar consumer, not the millennial upmarket audience One Medical appears to market itself to.

One area where Amazon could shine is in the prescription pharmacy space. Thanks to its 2018 acquisition of PillPack and the recent launch of its Amazon Prime RxPass benefit, consumers can get free unlimited delivery of 60 generic medications for just \$5 per month. This brings monthly out-of-pocket costs below insurance prices for most consumers and could be a profitable foray into healthcare for Amazon.

Whether the e-commerce giant can solve its market inconsistencies and leverage its talent for wooing con-

there's one area Amazon excels, it is creating a fantastic customer experience using technology.



sumers with frictionless technology will likely dictate its future in the healthcare space. The EMR and PE platform acquired through One Medical will surely take center stage in the days to come.

### Behavioral Health and Telemedicine

If there were ever a “moment in time” for telemedicine, it was when the pandemic stay-at-home orders went into effect and doctors’ offices were closed.

At first, consumers seemed to appreciate the ability to connect virtually with a provider from anywhere. However, time has told a different story. With shares in telemedicine companies falling as much as 80%, this route doesn’t seem like the way forward for urgent care or transactional health visits. Just 20% of consumers who used a virtual visit for an “urgent care issue” during the pandemic said they would again.<sup>3</sup> The anecdote is that consumers love it for routine re-checks with an established primary care provider but it adds inefficiency when, say, a strep test or chest x-ray is required for diagnosis of an “urgent care-type” condition.

So how do retailers who aggressively went in on virtual care pivot? Behavioral health seems promising. CVS, Walgreens, Walmart, and Amazon all offer virtual behavioral health services through a partner or acquired company.

For urgent care, adding behavioral health services to a brick-and-mortar clinic creates unneeded complications. Factors like long intake times clogging flow and throughput, high labor overhead for behavioral health providers like licensed counsellors, social workers, and psychiatric PAs, and requirements to bill “behavioral health” vs “urgent care” contracts are a deterrent to the walk-in behavioral health model.

Perhaps more than any specialty, though, behavioral health is positioned to benefit from telemedicine (especially when it entails “talk therapy).” For both urgent care and the companies discussed throughout this article, the virtual route is a potential way to leverage otherwise languishing telemedicine assets moving forward.

### Research and Clinical Trials

Outside the realm of patient healthcare services, CVS, Walgreens, and Walmart are dabbling in clinical trials. Through their pharmacy operations, they bring both patient data and relationships.

While clinical trials have long been the domain of hospitals and health systems—who have extensive patient data on specific diagnoses—the wide footprint of these pharmacies could change the narrative with convenient, familiar locations acting as ideal sites for par-

ticipant monitoring. Aside from monitoring, pharmacies could also use prescription data to help identify potential candidates for upcoming trials.

Urgent care could also be poised to claim a portion of the market with the right approach. In fact, some operators have already pursued the idea.

*“As these retailers push further into primary care and partnerships with insurance plans, they seem to be leaving ‘transactional health’ to urgent care. This is where urgent care shines.”*

By combining the resources of multiple clinics connected by the same EMR, it’s possible to create a network of sites for participant monitoring similar to those of CVS and Walgreens. However, urgent care’s participation may be limited by the episodic/transactional nature of its patients and the majority of pharmaceutical funding being directed to specialties like oncology, cardiology, and endocrinology.

### Conclusion

Urgent care continues to face competition from every angle, but has proven resilient over time. Recent moves from CVS, Walgreens, Walmart, and Amazon away from episodic care and toward Medicare-based primary care are a positive signal for the urgent care industry.

As these retailers push further into primary care and partnerships with insurance plans, they seem to be leaving “transactional health” to urgent care.

This is where urgent care shines. Thanks to the ability of urgent care centers to perform procedures, offer x-rays and point-of-care lab testing, and dispense medications on-site, consumers will continue to choose urgent care for their immediate health needs. ■

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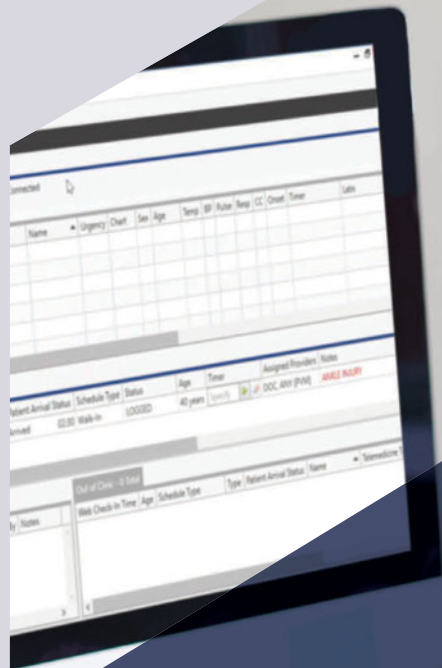
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## ABSTRACTS IN URGENT CARE

- Employing Virtual Reality with Anxious Children
- Assessing for Elbow Fracture
- Epinephrine for Croup (?)
- The STANDING Algorithm for Vertigo
- Postconcussion Return to School
- Managing Epistaxis in the UC

■ IVAN KOAY, MBChB, FRNZCUC, MD

### Immersive Virtual Reality Use in Reducing Pediatric Procedural Anxiety

**Take-home point:** Immersive virtual reality (IVR) use in pediatric patients significantly improved pain and anxiety compared with the control group.

**Citation:** Wong C, Choi K. Effects of an immersive virtual reality intervention on pain and anxiety among pediatric patients undergoing venipuncture: a randomized clinical trial. *JAMA Netw Open.* 2023;6(2):e230001.

**Relevance:** Poorly managed procedural pain and anxiety can have short- and long-term consequences for children. Procedural sedation with pharmacologic agents is generally not available in urgent care centers.

**Study summary:** This was a two-group randomized control trial conducted in a pediatric unit of a regional hospital in Hong Kong. Eligible participants were randomly assigned in a 1:1 ratio. Patients in the control group received standard procedural care, including explanation of the venipuncture procedure and comforting words. Patients in the intervention group wore IVR devices in addition to standard care. The primary outcome was child-reported pain. Secondary outcomes included child-reported anxiety, heart rate, salivary cortisol, length of procedure, and satisfaction of healthcare professionals with the procedure. Outcomes were assessed 10 minutes before, during, immediately after, and 30 minutes after the procedure.

The authors included 149 patients for the study. They found that the IVR intervention effectively mitigated pain and anxiety in children undergoing venipuncture. Sub-

group analysis revealed a large effect on pain and a moderate effect on anxiety immediately after venipuncture in the younger age group only, indicating IVR had stronger effects on younger children. The IVR intervention shortened the length of procedures by an average of slightly more than 2 minutes and improved staff satisfaction.

**Editor's comments:** The nature of the study did not allow for blinding of participants. There are cultural aspects of pain perception and reporting that may limit generalizability. Nevertheless, the use of VR seems to be a win-win: patients and providers prefer it and it allowed for more rapid completion of venipuncture for children in this study. Especially in pediatric-specific urgent care centers, investing in a VR headset to be used with minor procedures may be worthwhile in avoiding referral of procedures that would be otherwise challenging without access to sedation. ■

### Clinical Evaluation of Elbow Fractures

**Take-home point:** Limited elbow extension with and without limited bruising and point tenderness is a sensitive physical exam finding that may help to exclude elbow fracture.

**Citation:** Long B, Gottlieb M. The brass tacks: concise reviews of published evidence—clinical tests to evaluate for elbow fracture. *Acad Emerg Med.* 2023;30:65–67.

**Relevance:** Understanding which clinical tests are adequately sensitive for excluding elbow fractures can help avoid unnecessary radiology studies, especially when many urgent care centers struggle to find radiology technicians.

**Study summary:** This was a systematic review of published studies on elbow fractures, which account for roughly 7% of all fractures. It included studies involving patients presenting with suspected elbow fracture and compared one or more clinical tests to x-ray as the gold standard. The authors identified 12 relevant studies which included 4,485



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patients. They found that absence of restriction in elbow extension, bruising, and tenderness was highly sensitive, but not specific, in adults. Positive likelihood ratios (LR) were also calculated for restriction in elbow supination (14.3), pronation (2.6), extension, bruising, and tenderness (1.3) and elbow extension and point tenderness (1). The authors noted that while several clinical tests, including flexion, pronation, and supination appear to be specific, only one study evaluated supination and pronation, and only two studies evaluated flexion in adults, resulting in a high degree of variability.

**Editor's comments:** The systematic review of the paper depended on available data and quality of the original publications. Additionally, there was no standardized definition for each examination maneuver, leading to heterogeneity. The results noted in this paper may aid decision-making, specifically in patients without bruising, tenderness, and with full extension, given the lack of available validated clinical decision tools for elbow fracture. ■

#### Are Epinephrine Inhalers Safe for Croup?

**Take-home point:** Epinephrine administered by metered-dose inhaler (MDI) may be a safe and effective non-aerosol-generating, non-clinic-based alternative to traditional nebulized epinephrine delivery for the treatment of croup.

**Citation:** Meckler G, Alqurashi W, Eltorki M et al. Epinephrine metered-dose inhaler for pediatric croup. *Acad Emerg Med.* 2023;30(2):144-146.

**Relevance:** In the era of COVID, limiting aerosol-generating treatments helps ensure UC providers' safety while treating respiratory conditions. Additionally, many patients with croup require repeat dosing of inhaled epinephrine, which has historically required additional time in clinic or the emergency department.

**Study summary:** This was a quality assurance study to monitor the safety and efficacy of using epinephrine MDI for the off-label treatment of croup in nine pediatric EDs in Canada. The algorithm studied examined the administration of five puffs (125 µg/puff) of epinephrine delivered via MDI with a valved holding chamber (VHC), followed by an assessment 10 minutes later for clinical improvement using the Westley croup score (WCS). Additional administration of five puffs was recommended up to a total of 15 puffs if there was not significant improvement (<2 points) in WCS and no adverse effects were documented. The primary outcome measure was improvement in the WCS assessed within 60 minutes of medication administration.

Secondary outcome measures were adverse effects including extreme tachycardia (>200 beats/min), arrhythmia, tremor, and agitation.

The authors evaluated data on 210 children who were treated with epinephrine MDI. Pretreatment WCS was mild (score range 0–2) in 27 children (12.9%), moderate (3–4) in 118 (56.2%), severe (5–7) in 60 (28.6%), and impending respiratory failure (≥8) in five (2.4%) children. The vast majority (82%) of children treated with epinephrine using MDI and VHC with facemask had clinically significant improvement in respiratory distress within 1 hour of treatment. A single treatment of five puffs was administered in 165/210 (78.6%) children, two doses in 33/210 (15.7%), and three doses or more in 12/210 (5.7%). The only adverse effects observed were agitation and the continuation of preexisting extreme tachycardia in <1% of epinephrine administration.

**Editor's comments:** Inhaled epinephrine via MDI seemed to be largely effective and safe in this multicenter Canadian ED trial. The severity of croup diagnosed in the UC setting is generally milder, and current practice standards still suggest that patients administered inhaled epinephrine be observed for a longer period of time than may be feasible in many UC centers. ■

#### Predicting Central Causes of Vertigo with the STANDING Algorithm

**Take-home point:** The STANDING algorithm was relatively accurate for ruling out central causes of vertigo in both experienced and novice emergency providers, but not sufficiently sensitive to be used in isolation in cases of high concern for central etiologies.

**Citation:** Grelier C, Fels A, Vitaux H, et al. Effectiveness and reliability of the four-step STANDING algorithm performed by interns and senior emergency physicians for predicting central causes of vertigo. *Acad Emerg Med.* Epub ahead of print January 11, 2023. Available at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/acem.14659>. Accessed May 3, 2023.

**Relevance:** The ability to use clinical examination to reliably predict patients who have peripheral rather than central causes for vertigo is highly useful in the UC setting where expert consultation and advanced imaging is not readily available.

**Study summary:** This was an investigator-initiated, single-center, prospective assessment of the effectiveness and reliability of the four-step STANDING algorithm in an ED in Paris, France. The algorithm involved:

1. Identification of spontaneous nystagmus with and without Frenzel glasses
2. Assessment of spontaneous nystagmus direction as gaze-evoked, vertical, or multidirectional nystagmus (indicating a potentially worrisome etiology)
3. Assessment of vestibulo-ocular reflex through head impulse test (HIT), with a bilaterally normal HIT indicating a potentially worrisome etiology and a positive HIT (ie, overt or covert catch-up corrective saccades) indicating an acute peripheral vestibulopathy
4. A systematical review for abnormal standing position as such as ataxic gait, imbalance, or inability to stand (all indicating a potentially worrisome etiology)

The primary outcome was the diagnostic accuracy (sensitivity and specificity) of the STANDING algorithm performed by junior residents for diagnosing central causes of vertigo.

The authors analyzed a cohort of 312 patients who all underwent brain MRI as well as clinical evaluation. Based on imaging, 59 patients had central causes for vertigo and 253 had peripheral diagnoses. They found that the algorithm showed sensitivities of 84.8% (95% CI 75.6%–93.9%) and 89.8% (95% CI 82.1%–97.5%), negative predictive values of 96.2% (95% CI 93.7%–98.6%) and 97.5% (95% CI 95.5%–99.5%), specificities of 88.9% (95% CI 85.1%–92.8%) and 91.3% (95% CI 87.8%–94.8%), and positive predictive values of 64.1% (95% CI 53.5%–74.8%) and 70.7% (95% CI 60.4%–81.0%), respectively. The agreement between interns and senior EPs was strong overall (B-statistic coefficient: 0.77) and for each step individually: (1) 0.87, (2) 0.98, (3) 0.95, and (4) 0.99.

**Editor’s comments:** The study was not randomized and was a single-centered study. While negative predictive value was strong, the sensitivity of the STANDING algorithm is not sufficient to use in patients with high pre-test probability for central causes of vertigo. ■

**Timing Postconcussion Return to School**

**Take-home point:** Prolonged absence from school after a concussion is associated with a greater symptom burden and may be detrimental to recovery.

**Citation:** Vaughan C, Ledoux A, Sady M, et al. Association between early return to school following acute concussion and symptom burden at 2 weeks postinjury. *JAMA Network Open.* 2023;6(1): e2251839.

**Relevance:** Concussion presentations are extremely common in urgent care. Among the most common questions

parents ask concerns return to normal daily activities, which most notably includes school.

**Study summary:** This was a secondary analysis of a prospective, multicenter observational cohort study. Participants were pediatric patients 5-18 years old presenting with an acute (<48 hours) concussion in nine Canadian pediatric emergency departments. At 7, 14, and 28 days postinjury, participants were contacted via web survey or telephone and asked to provide information, including their return to school (RTS) date and current symptom burden. Parents responded for children between 5 and 7 years of age, while participants over 8 years old responded to the questions themselves. The primary outcome was symptom burden measured by the Post-Concussion Symptom Inventory (PCSI) score.

The authors analyzed 1,630 participants across three age groups (5.0-7.9 years, 283 [17.4%], 8.0-12.9 years, 700 [42.9%], and 13.0-17.9 years, 647 [39.7%]). They found the mean number of school days missed due to concussion was 3 to 5 days. Younger children returned to school after concussion more quickly than older children. Earlier RTS (ie, in 2 days or fewer) was associated with lower symptom levels at day 14. Additionally, earlier RTS was associated with lower symptom levels at day 14 among those with higher initial symptoms.

**Editor’s comments:** RTS timing was not randomly assigned prospectively during the initial study, and thus, causality cannot be determined. It is possible that there is actually reverse causality (ie, the patients returning to school earlier did so because they had fewer symptoms). These results, while not definitive, do suggest that delaying RTS may be harmful and it seems reasonable to allow children who feel ready to return to school to do so. ■

**Managing Epistaxis**

**Take-home point:** A stepwise approach toward addressing epistaxis can achieve reliable control in the majority of patients, beginning with a presumption that bleeding is coming from an anterior source.

**Citation:** Gottlieb M, Long B. Managing epistaxis. *Ann Emerg Med.* 2023;81(2):234-240.

**Relevance:** Knowledge of the various approaches to treatment of epistaxis can increase UC provider confidence and competence and avoid unnecessary ED visits.

**Study summary:** This was an educational feature on the management of epistaxis. Epistaxis accounts for approx-

imately one out of every 200 ED visits in the U.S. Initial assessment includes assessing for airway compromise, respiratory distress, and hemodynamic instability. The use of personal protective equipment (eg, face mask, eye protection, gloves) is recommended as part of the assessment process. Application of direct pressure is the initial treatment of choice in both the clinical setting and for patients at home. This involves having the patient sit upright and lean forward to reduce the risk for aspiration. Pressure can be applied with nasal clips or even two tongue depressors taped together. This may be more effective than manual compression using fingers, especially because patients have difficulty maintaining constant pressure for sufficiently long periods of time. If bleeding continues despite adequate compression, topical vasoconstrictors may be necessary. These can be applied by spray or by soaking cotton pledgets. Patients should blow clots from their nose prior to vasoconstrictor application. Cauterization should be considered if the bleeding site is visualized and excessive bleeding is not present. Chemical cautery with silver nitrate has higher efficacy in controlling epistaxis and lower pain scores than nasal packing.

Various thrombogenic resorbable foams and gels that

promote thrombogenesis and tamponade of bleeding are available. Fibrin sealants provide rapid hemostasis with greater reduction in edema, mucosal atrophy, and nasal discharge compared with electrocautery, chemical cautery, and non-resorbable packing. Tamponade devices are useful in refractory cases of epistaxis and are effective in 90% to 95% of cases failing other treatments. Common devices include the Rapid Rhino and Merocel. Rapid Rhino is a balloon catheter that is coated in a procoagulant and inflated to create a tamponade effect on the nasal mucosa. Merocel is an absorbent nasal tampon consisting of a synthetic polymer. If posterior bleeding is identified or there is suspicion for a posterior etiology (eg, refractory high-volume bleeding), posterior packing may be necessary.

**Editor's comments:** This educational series provided a useful look at present methods and equipment available for treatment of epistaxis. UC providers should approach these cases based on their own level of experience, training, and comfort in managing epistaxis. It is often impractical and unsafe to deal with complex epistaxis in UC and in cases of suspected posterior epistaxis, early EMS activation is advisable. ■



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# Urgent Care's Top 100— by Number of Locations

If urgent care had a family tree, it would show an ancestry rich in physicians with a pioneer spirit—individuals who wanted to find a way of practicing medicine that they believed to be more sensible, efficient, and economical while still offering excellent clinical care. Based on the decades that followed, up through today and beyond, it's safe to say the “experiment” has been an unqualified success.

This is not a story with a complete beginning, middle, and end, of course. This is a path that continues to evolve. While there are still urgent care operations owned

and managed by entrepreneurs, hospital systems and venture capitalists eventually realized they were missing out on a good thing and jumped on the bandwagon by investing—heavily—in the urgent care market.

Below is a current listing of the 100 largest “private” urgent care operators in the United States, by number of locations. Please note this accounting does not include companies that own only health system urgent care centers, according to April 2023 data from National UC Realty. ■

Rank	Name	HQ State	Total Sites
1	American Family Care*	Alabama	330
2	Fast Pace Health Urgent Care	Tennessee	228
3	WellNow Urgent Care*	Illinois	217
4	CityMD Urgent Care	New York	172
5	NextCare Urgent Care	Arizona	171
6	FastMed Urgent Care*	North Carolina	169
7	MedExpress Urgent Care	Minnesota	151
8	Carbon Health Urgent Care*	California	125
9	Community Care Partners	Tennessee	94
10	Urgent Team*	Tennessee	87
11	CRH Healthcare*	Georgia	83
12	Patient First	Virginia	78
12	PM Pediatrics Urgent Care*	Massachusetts	78
14	Urgent Care Group*	Tennessee	55
15	Doctors Care*	South Carolina	53
16	Low Country, Velocity, Stopwatch UCs, Carolina QuickCare*	North Carolina	49
17	MainStreet Family Urgent Care	Alabama	46
17	Xpress Wellneses	Oklahoma	46
19	UrgentMED	California	45
20	Next Level Urgent Care	Texas	44
21	CareFirst Urgent Care	Ohio	40
21	ConvenientMD	New Hampshire	40
23	MedRite Urgent Care	New York	39
24	Emergence Health Holdings*	New Hampshire	38

URGENT CARE'S TOP 100—BY NUMBER OF LOCATIONS

Rank	Name	HQ State	To
25	Midwest Express Clinic	Illinois	34
26	AllCare Family Medicine & Urgent Care	Maryland	32
26	Exer - More Than Urgent Care*	California	32
28	Doctor's Urgent Care Group	Michigan	31
29	Excel Urgent Care	New York	28
30	Walk In Urgent Care Ohio	Ohio	27
31	Avance Care	North Carolina	26
31	Chai Urgent Care	New York	26
33	PhysicianOne Urgent Care*	Connecticut	25
34	Med First Urgent Care & Family Practice	North Carolina	22
34	Pediatric Urgent Care	Florida	22
36	Maxem Health Urgent Care	Mississippi	21
37	Urgent Care for Children	Alabama	20
38	Docs Urgent Care	Connecticut	19
38	Essen Urgent Care	New York	19
40	Instant Urgent Care	California	18
40	Little Spurs Pediatric Urgent Care	Texas	18
40	MedFast Urgent Care	Florida	18
43	Get Well Urgent Care	Michigan	17
43	HealthCARE Express	Texas	17
45	Accelerated Urgent Care	California	16
45	Nao Medical	New York	16
47	CommunityMed Family Urgent Care	Texas	15
47	QuickVisit Urgent Care	Texas	15
47	Urgent Care Centers of Kentucky	Kentucky	15
47	Vybe Urgent Care	Pennsylvania	15
51	Action Urgent Care	California	14
51	Ashley Pediatrics Day and Night Clinic	Texas	14
51	My Dr Now	Arizona	14
51	Sterling Urgent Care	Idaho	14
51	Xpress Urgent Care Florida	Florida	14
56	Advanced Urgent Care Colorado	Colorado	13
56	MedWise Urgent Care	Oklahoma	13
56	Urgent Care for Kids	Texas	13
59	Centers Urgent Care	New York	12
59	Marque Urgent Care	California	12
59	ModernMD Urgent Care*	New York	12
59	TrustCare Urgent Care	Mississippi	12
63	Total Point Urgent Care	Texas	11
64	LevelUp MD Urgent Care	New York	10
64	Medallus Medical	Utah	10



Rank	Name	HQ State	To
64	QUICKmed Urgent Care	Ohio	10
64	RedMed Urgent Clinic	Mississippi	10
64	Your Kid's Urgent Care	Alabama	10
69	Doctors on Duty	California	9
69	Greater Midwest Urgent Cares (Traverse Point Partners)	Ohio	9
69	Neighborhood Health TN	Tennessee	9
69	OC Urgent Care	California	9
69	Quick Care Med	Florida	9
74	After Hours Pediatrics Urgent Care (TeamHealth)	Florida	8
74	Apple Urgent Care	California	8
74	Atlanta Plus Urgent Care	Georgia	8
74	Avecina Medical	Florida	8
74	Family Urgent Care Ohio	Ohio	8
74	Fast Access Healthcare	Tennessee	8
74	Heal 360 Urgent & Primary Care	Texas	8
74	IEP Urgent Care	Michigan	8
74	Lansing Urgent Care	Michigan	8
74	MedNow Urgent Care GA	Georgia	8
74	Mercy Urgent Care (Catherine McAuley Mercy Foundation)	North Carolina	8
74	Patient Plus Urgent Care	Louisiana	8
86	1st Choice Urgent Care Michigan	Michigan	7
86	Accordia Urgent Care & Family Practice	Georgia	7
86	CareMed Primary & Urgent Care	New York	7
86	Citra Urgent Care	Texas	7
86	Doctor Today TLC	Florida	7
86	Doctors Clinic Houston	Texas	7
86	Dr. G's Urgent Care	Florida	7
86	Express Healthcare MD	Maryland	7
86	Hometown Health Clinic	Tennessee	7
86	Immediate Care of Oklahoma	Oklahoma	7
86	Live Urgent Care	New Jersey	7
85	NOVA Patient Care	Virginia	7
85	Premier Family Medical	Utah	7
85	San Miguel Urgent Care	California	7
85	U.N.I. Urgent Care Center	Maryland	7

\*Reflects both non-health system and health system locations

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

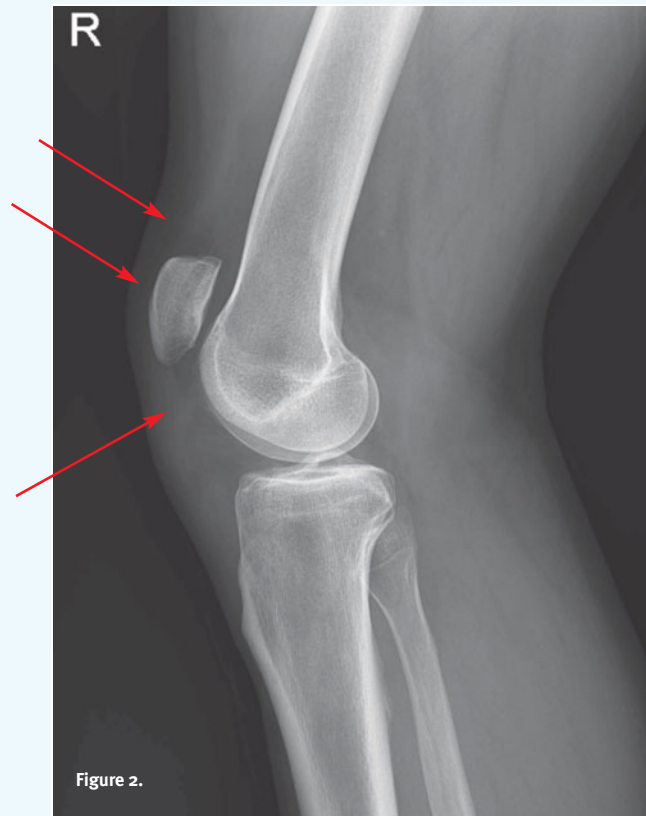
If you would like to submit a case for consideration, please e-mail the relevant materials and presenting information to [editor@jucm.com](mailto:editor@jucm.com).

## A 41-Year-Old with Knee Pain After Playing Basketball



A 41-year-old male presents with knee pain after playing basketball in his driveway with his teenage son. He reports that he had sudden pain and heard a “pop” as he landed after jumping. He is unable to fully extend his leg.

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



### Differential Diagnosis

- Avulsion fracture
- Patellar fracture
- Patellar tendon rupture
- Patellar tendonitis

### Diagnosis

This patient was diagnosed with a rupture of the patellar tendon. The x-ray shows the high position of the patella (patella alta) and thickened, indistinct patellar tendon soft tissues and infrapatellar fat stranding.

### Learnings/What to Look for

- Patellar tendon rupture occurs almost exclusively with trauma at either the patellar or tibial insertion of the patellar tendon and is often associated with a small avulsion fracture
- Risk factors include chronic microtrauma (tendinopathy—"jumper's knee"); prior therapeutic intervention such as direct injection of steroids or previous repair of the anterior cruciate ligament; and many chronic systemic illnesses

### Pearls for Urgent Care Management

- Nonoperative treatment for partial tears with intact extensor mechanism is immobilization in full extension for 6 weeks with weightbearing and rehabilitation
- Complete patellar tendon rupture will require an operative approach

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



## A 59-Year-Old with a Painful Finger Skin Lesion



A 59-year-old woman presents with a painful skin lesion near her fingernail which has developed over the past week. She reports a history of advanced non-small-cell lung cancer, for which she was recently started on erlotinib.

On examination you observe a glistening, hemorrhagic papule at the lateral nail fold with surrounding erythema

and edema. The patient denies trauma or exposure to skin irritants.

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

Figure 2.



### Differential Diagnosis

- Cutaneous metastases
- Drug-induced paronychia
- Felon
- Cellulitis

### Diagnosis

This patient was diagnosed with drug-induced paronychia. Acute paronychia occurs rapidly and is associated with redness, pain, and, in the case of infection, purulent drainage. Chronic paronychia lasts for more than 6 weeks and is associated with erythema, loss of the cuticle, and often nail dystrophy.

### Learnings and What to Look for

- Paronychia is inflammation of the nail folds
- Generally, acute paronychia is due to infectious etiologies, while chronic paronychia is typically due to irritants

- Drug-induced paronychia correlates with the introduction of the drug. Potential culprits include retinoids, lamivudine, cyclosporine, indinavir, azidothymidine (AZT), cephalexin, sulfonamides, cetuximab, gefitinib, fluorouracil (5FU), methotrexate, vandetanib, capecitabine, doxorubicin, and docetaxel

### Pearls for Urgent Care Management

- Drug-induced paronychia typically resolves once the medication is discontinued
- Patients may soak the infected finger(s) in warm water at least 15 minutes daily, and dry the area thoroughly after
- Infectious paronychia can be treated with incision and drainage and/or topical antibiotics
- Chronic paronychia may be treated with topical steroids

*Acknowledgment: Image and case presented by VisualDx ([www.VisualDx.com/jucm](http://www.VisualDx.com/jucm)).*



# A 30-Year-Old Male with Chest and Leg Pain— and a History of Polysubstance Use

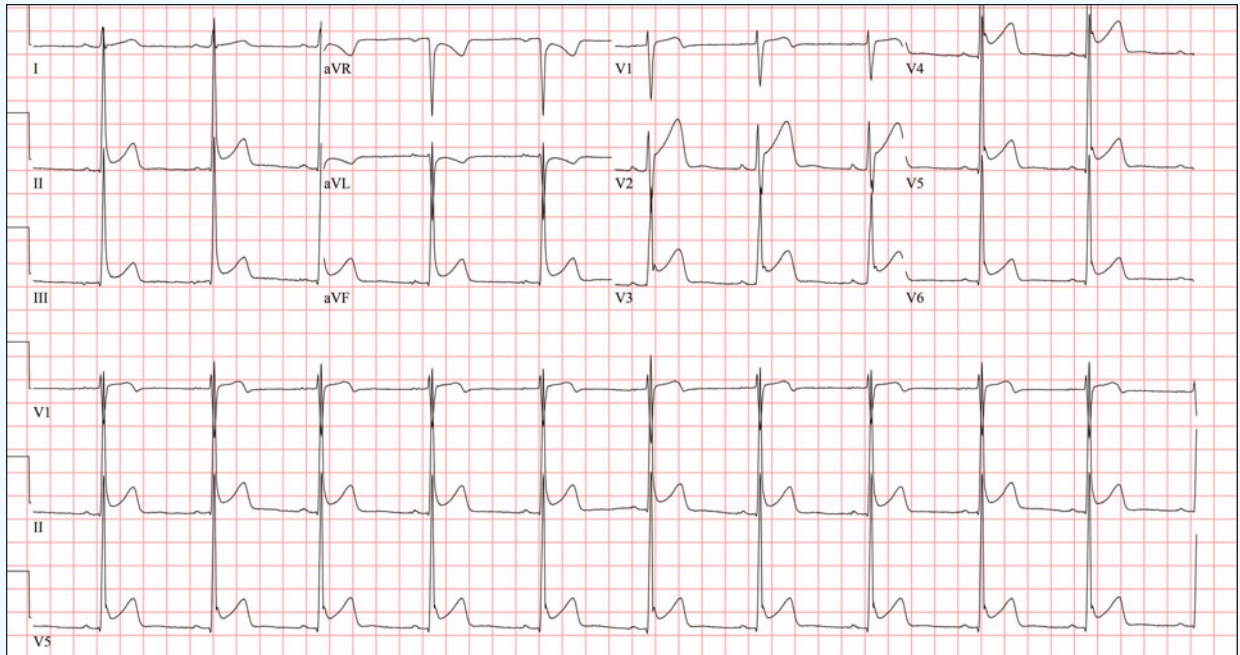


Figure 1. Initial ECG

A 30-year-old male with history of polysubstance use presents after a motor vehicle collision. He reports chest and leg pain, and denies nausea, vomiting, or shortness of breath. He has no known cardiac history.

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

Case presented by Catie Reynolds, MD, McGovern Medical School at UTHealth Houston, Department of Emergency Medicine.)



**Figure 2:** Blown-up image of V3 and V6. The circle shows the J point notching in V3. The asterisks (\*) demonstrates slurring of the ST segment in V6.

### Differential Diagnosis

- Benign early repolarization
- Hypothermia
- Acute pericarditis
- ST-elevation Myocardial Infarction (STEMI)
- Brugada syndrome

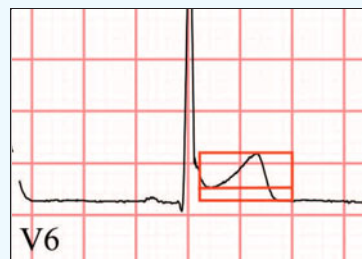
### Diagnosis

Benign early repolarization. The ECG reveals a normal sinus rhythm with a rate of 60 beats per minute. There is diffuse, concave-up ST-segment elevation particularly in precordial (V2-6) and limb leads (II, III, aVF), without reciprocal changes. There is J-point notching and slurring of the ST segment, particularly in the precordial leads. Commonly referred to as “benign” early repolarization, or the “J wave pattern,” this diagnosis features diffuse ST elevations that are most pronounced in V2-V5, with notching or slurring at the J-point (**Figure 2**), and an ST elevation-to-T wave height ratio  $<0.25$  in V6 (**Figure 3**). This ECG diagnosis also characteristically has concordant T waves and lacks reciprocal ST depressions.<sup>1</sup>

Differentiating from other conditions requires a clinician to look at the clinical presentation, additional findings on the ECG, and previous ECGs, if available. Concerning diagnoses to differentiate from benign early repolarization include:

- STEMI: Reciprocal changes are more pronounced and convex (“tombstone” morphology) ST-elevations are expected.
- Pericarditis: Also generalized ST-elevations, but with PR depressions and ST-elevation to T wave ratio  $>25$ .<sup>2</sup>
- Hypothermia: J-point notching is seen in hypothermia, but typically without ST elevation.
- Brugada syndrome: ST-elevation specifically in V1 and V2 (with an R R’ pattern).

There is currently no consensus on the etiology of the early repolarization pattern. Studies have found subgroups of patients with a J wave that also have increased risk of ventricular dysrhythmias and sudden cardiac death. Such cases are rare and most cases of J point elevation are considered benign, particularly in the absence of personal or family history of malignant arrhythmia.<sup>3</sup>



**Figure 3:** Blown-up image of V6. The lines demonstrate the ST elevation-to-T wave height ratio  $<0.25$ .

### Learnings/What to Look for

- The differential for ST elevation includes not only STEMI, but early repolarization, pericarditis, Brugada syndrome, and hypothermia
- Early repolarization is common in patients under the age of 50. Over 50, consider that ischemia may be a more likely cause of ST elevation
- When diagnosing early repolarization, look for diffuse ST elevations that are most pronounced in V2-V5, notching or slurring at the J-point, an ST elevation-to-T wave ratio  $<0.25$ , concordant T waves, and a lack of reciprocal ST depressions

### Pearls for Urgent Care Management

- Typically, early repolarization is benign and requires no treatment or follow-up. However, don’t forget to consider the patient’s symptoms and ask about risk of ventricular dysrhythmias and sudden cardiac death
- If diagnosis is unclear, symptoms are concerning, or patient is over 50, transfer to the ED is appropriate

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

ECG STAMPEDE





# De Novo vs Acquisition: What's the Best Pathway for Urgent Care Growth?

■ HEATHER REAL

The urgent care industry is ever-evolving and flexing to meet the needs of patients and communities. This means the way operators enter the industry needs to be flexible, too.

While starting a new business in a freshly outfitted space in a growing part of town is highly appealing, it may not be a present option in some trade areas. And it certainly doesn't have to be the only option. Just like your future urgent care business, it will serve you well to be a flexible entrepreneur, open to all possibilities. Acquiring an existing business, or facility, may be a better option than building new. There are several factors to be considered.

As with any urgent care startup, you must start your evaluation of the acquisition target with the retail mantra: *location, location, location*. Site validation is a crucial step in evaluating this investment opportunity. Is the site positioning still relevant in the market? Communities age and gentrify and new retail destinations emerge. Does this site still benefit from the necessary consumer draw? Where are the competitors and how well-positioned is this site to maintain or recapture its patient draw? If the site is less than ideal, does a de novo opportunity exist in the trade area? Would you be leaving your investment vulnerable to being outpositioned by a competing urgent care taking the better space?

Beyond the market placement, the physical space and facility of an acquisition vs a de novo can have varying implications. Depending on your perspective, you could find benefit from savings on capital expenditures, such as FF&E, signage, and build-out. Generally, an acquisition will require very little in capex; probably some cosmetic touch-ups from wear-and-tear, and sometimes updates to current styles or personal preference. Some operators find more value in being able to custom design and build the

space to suit their business needs and design choices. In a market where optimal site-positioning can be attained, the de novo is often the better option.

The upfront work and planning required for a de novo vs an acquisition can look very different, too. Some of the more daunting tasks for urgent care entrepreneurs can be developing policies and procedures and hiring and training staff for the new business. A great number of policies need to be written and documented, and the staff then trained on, for the new business. From creating your employee handbook and training manual to standard operating procedures and disaster recovery plans. There are resources available to help get these started and only need your customization to reflect the spirit of your operations. On the other hand, an existing business will already have these documents developed, and may only require review and modifications, as needed.

When a business is acquired, there can be a bit of a shake-up with the staff. Savvy entrepreneurs will be prepared for potential attrition. During the due diligence phase, it's imperative to understand the roles of staff members and how well the business will function if the individuals in each role should change. And perhaps more importantly, what's the culture? If you're going to spend your first 6 months of operations fighting the staff before they resign or can be replaced, you might be better off starting afresh.

There are also benefits and challenges to staffing for a new business. It can be challenging to attract quality candidates for a startup; with no proven track record of success, potential employees may be hesitant to leave the stability of their position with the longstanding physicians' group or hospital to work at the new business that is only starting out.

On the contrary, you might find individuals who are inspired and energized by the opportunity to help build a thriving medical business. Handpicking the right staff can be the ticket to becoming a cornerstone of your community and ensuring your long-term success.



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Acquiring an existing business generally means you can expect to achieve break-even and profitability much faster than a startup. The caveat here is if the target business is challenged, or what might be considered a distressed asset. In this case, the capital expenditures and runway to positive cash flows can be long, but the payoffs can be substantial. Again, during the due-diligence process, the cost-savings and revenue-generating opportunities should be identified so the true value of the acquisition can be evaluated. And this assumes you can get “clean” financials.

There may be an acquisition strategy that has less to do with the physical asset, operating model, or even market positioning. The purpose of the acquisition might be in the less-obvious value, such as a contractual relationship with a major payer that is otherwise closed to new urgent cares.

While location is certainly extremely important for the urgent care business, a top-notch location will not be terribly beneficial if it is out-of-network with your largest payer(s). Acquiring a business with a less-than-stellar location may still pay off big.

The key to this strategy lies in the future plans; since adding facilities to existing businesses does not seem to be as limited as obtaining new contracts, this may be the

only way to enter your desired locale, and it may be the most lucrative option.

When starting in a market with known payer access limitations, there is a unique opportunity to grow the business through rooftop expansion, where other would-be startup operators could find themselves locked out of those coveted payer networks. It is imperative to know your long-term goals if pursuing this acquisition strategy. Prior to closing the deal, be sure you have confirmed the ability to assign the contracts to a new owner, or you may find yourself with a distressed asset and no payer contracts. Finally, when pursuing this strategy, a thorough rooftop growth plan should be developed with access to ample capital to support this growth prior to signing on the dotted line.

When starting your own urgent care, you can custom-build everything from scratch, from the space, to the staff, and everything in-between. Acquiring an urgent care provides the opportunity to enter the market with an already operational business. Both paths can be great starts and both will present benefits and challenges. The best way to determine which path is best for you is to determine which opportunity presents the most potential to grow your investment. ■



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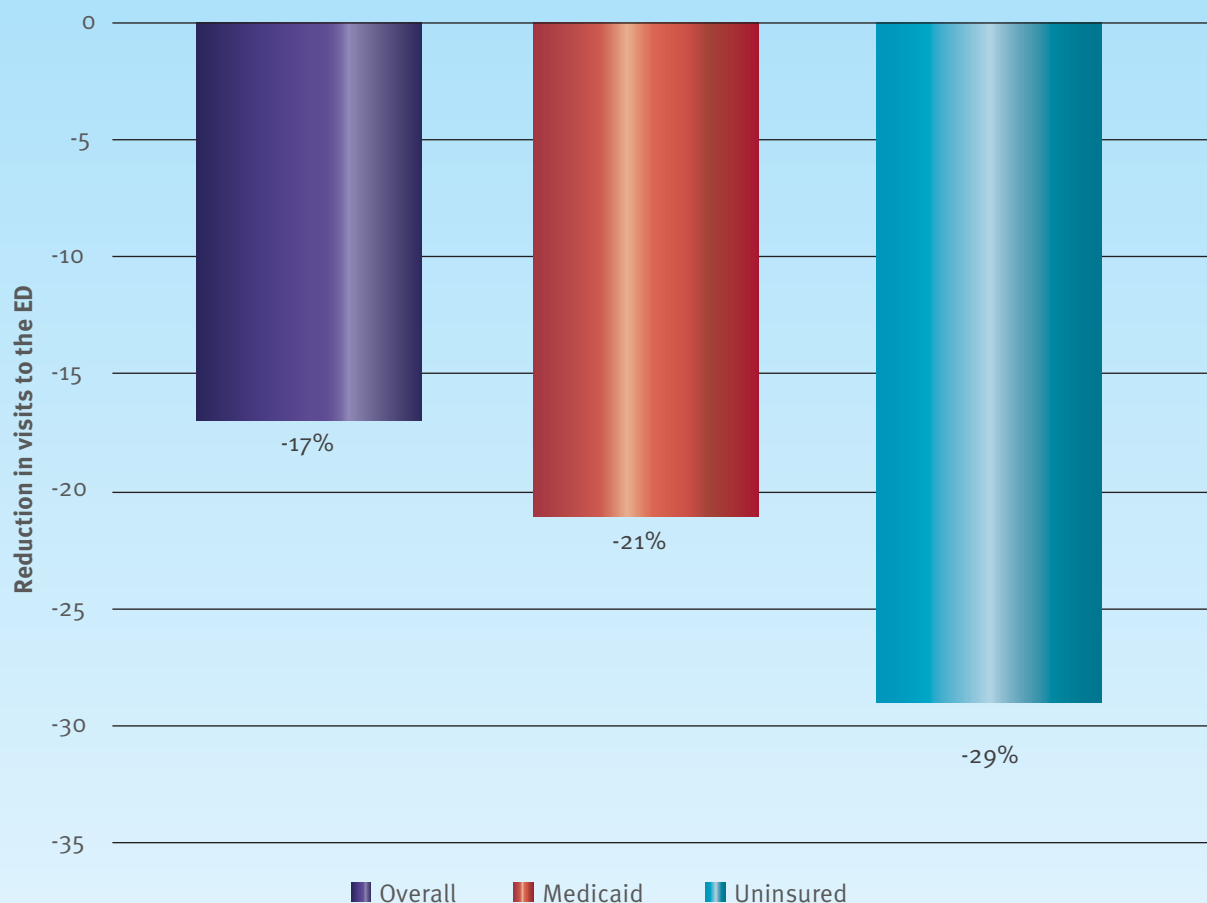
## DEVELOPING DATA

# That Notion That Urgent Care Centers Help Reduce Volume in the ED? It's True

One of the key “selling” points of urgent care has always been that if patients who don’t have limb- or life-threatening concerns are able to get acute care someplace other than the emergency room, they would go there, thereby lowering cost, wait times, and risk associated with the ED. Now there’s evidence to support the first part of this premise, thanks to a new report from Mesirow Investment Banking.

As seen in the graph below, data illustrate that the mere presence of an urgent care center is enough to reduce volume in area EDs, leading the authors of the Mesirow report to conclude that “an explosion in UCCs in recent years... has resulted in a transformation of how people seek urgent medical treatment.” ■

### EFFECT ON VISITS TO THE ED WHEN AN URGENT CARE CENTER IS ACCESSIBLE



Data source: Mesirow Investment Banking. Year-end 2022. Healthcare Sector Report.

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