

# JUCM<sup>®</sup>

THE JOURNAL OF **URGENT CARE** MEDICINE<sup>®</sup>

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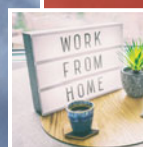
ORIGINAL RESEARCH

## Don't Test Patients' Patience

### Why You Must Break Through Bottlenecks

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## LETTER FROM THE EDITOR-IN-CHIEF

# A Rational System for Charting Has Finally Arrived



Remember the fall of last year—when the nation and world pined for an expedient end to 2020, as if such an arbitrary change as turning a page on the calendar could somehow reverse our collective fortune? Unsurprisingly when January 2021 arrived,

all our woes were not magically and immediately remedied. In fact, the start of this year was among the most grim in U.S. history: nearly a quarter of a million new cases were being diagnosed and several thousand people were dying every day from COVID-19 in the U.S. alone, vaccination rollouts were off to a rocky start, and an unruly mob broke into the Capitol building, threatening the security of our democracy.

And this was only the first week of the year—a less auspicious start than we'd hoped for.

It was against this backdrop that, on January 1, a major overhaul to outpatient (including urgent care) billing and coding came into effect in the U.S. The changes made were dramatic, yet the news of their arrival was largely drowned out. In fact, amidst the tumult of the pandemic this extensive revision in CPT coding, which in any other year would have certainly caused a commotion, took effect without much chatter in the UC clinician community at all.

I'll bet many of you can recall little more than a few mutterings on the topic buried amongst the onslaught of daily emails sent from your administration discussing changes in various COVID-related policies. Or perhaps you simply noticed the templates in your EMR had been annoyingly rearranged. Regardless, this year the American Medical Association released its first major update in the evaluation and management CPT coding structure since 1997.

You may be asking: why now?

It's true, coping with a significant change can feel overwhelming. Most of us are frankly already exhausted from change at present. Unsurprisingly, this has fostered a situation of relatively slow acceptance for the new E/M coding guidelines in the UC world. The providers I supervise mostly continue to chart as they always have, making only slight modifications in the medical decision-making (MDM) sections of their templates (I suspect to avoid being nagged more than all else).

In a way, it's tragic that this revision came when it did.

We've been asking for a rational system for coding our documentation for years. When it finally arrived, however, many of us were too distracted to notice, much less appreciate it. Sure, the old system was familiar. We'd memorized how many areas of the body we needed to examine, how many systems we needed to chart as "reviewed," and when we needed to include some rarely useful piece of family history to get a level 4 or 5 chart.

The *Catch-22*-esque absurdity of the system was laughable, if you stop and think about it. But, for most of us it's the only way we'd ever known, and we'd resigned ourselves to its eternal dominion over our charts.

Based on the nature of this situation, it's no wonder that documentation demands have routinely topped the list of reasons cited for provider burnout. None of us went into medicine for the love of charting, yet studies on provider behavior have shown we spend much more time interacting with our EMR than we do with our patients.

This has been largely driven by a nonsensical demand for excessive and irrelevant data in our history and physicals, which has taken our time and energy away from patient care and led to what has come to be referred to as "note bloat." We've all experienced note bloat—the challenge of finding relevant information when reviewing a patient's previous visits because it's buried in a novella of immaterial macros.

Ironically, this distracting data, which we frustratingly have had to sift through on our quest to find the useful information required to take good care of patients, was inserted for the specific purpose of telling payers how hard we're working taking care of patients. (I wonder why we've faulted our patients for complexity for years, but rarely blamed the payers who've demanded this sort of soulless form of charting.)

Thankfully, the AMA's new system for coding puts an end to the madness. Clinicians are now able to collect and document as much or as little data as we feel is indicated in our H&Ps without worrying about billing. Instead, billing will be based on the documentation of our thought processes and risk assessment in the MDM.

The advantage of this new system for the busy UC provider is twofold.

First, focusing efforts on showing our work in the MDM

*“Engaging with this new and much more rational paradigm for charting, you’ll exponentially improve your efficiency in documentation.... Charting better and more efficiently means more time with patients and less burnout.”*

forces us to reconsider the relevant aspects of each case and offers us a chance to review our assessment as we put it into writing. This can be done quickly and in real time, subverting cognitive errors in the moment of care that could lead to poor outcomes for patients.

Secondly, this alleviates the onus for templates, macros, and dot phrases and consolidates the salient aspects of the note into a reliable location (ie, the MDM section). This promises to significantly streamline our process of reviewing data when scanning through prior documentation.

Admittedly, charting in this way will require breaking old

habits and forming new ones. Because documentation is such a painful topic of discussion and a common source of burnout, I fear that many providers will not embrace this change and the opportunity to make our clinical lives more enjoyable that it offers. Indeed, rethinking and retraining how we chart is considered by few to be a fun process. It’s like spending time practicing on the putting green. Most who play golf would much prefer to spend their time at the driving range; however, any experienced golfer will tell you that it’s your skill in the short game that most influences how few strokes it takes to play the course.

Similarly, documentation is the short game for UC practice. By engaging with this new and much more rational paradigm for charting, you’ll exponentially improve your efficiency in documentation, which again is what we spend most of our time doing. Charting better and more efficiently means more time with patients and less burnout.

So, as painful as it may sound, work on the “short game” of your UC practice and take an afternoon to learn the new E/M documentation rules and revamp your templates. The work of dialing in your charting probably won’t be fun, but it will allow you to enjoy the game a lot more the next time you find yourself on the course. ■



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## ORIGINAL RESEARCH

# 25 More Timely Care: Effect of Online Queuing vs Change in Hours of Operation on Hourly Arrival Volumes. A Practice Management Reflection

Bottlenecks can be the bane of the urgent care operator's existence. What's the best solution (or better yet, preventive measure), though?

Aimy Patel, MD; Jennifer Johnson, MD; Brian R. Lee, PhD, MPH; Amanda Montalbano, MD, MPH

## CASE REPORT

# 21 A 'Red Herring' Chief Complaint



The patient's accounting of what brought them to your urgent care center is the foundation of the history. However, falling victim to anchoring bias could have devastating consequences.

Ryan Hagan, PA-C and Christina Gardner, DHSc, MBA, PA-C

## CLINICAL

# 34 Managing Concussion in Acute Care



Knowing the best approach to managing patients who may have sustained a concussion starts with recognizing the signs and grasping the relative merits of the rest vs return-to-activity approaches.

Jordan Wackett, MD, MPH, Joshua Kornegay, MD, and Craig Rudy, MD

## NEXT MONTH IN JUCM

The sight of blood is always unsettling to the patient and their loved ones. While it's likely to be less disconcerting to healthcare professionals, bleeding without an obvious cause is concerning even when the presentation is something as common as epistaxis. Vital signs, location of the bleeding, and patient history are essential to understanding the etiology. Familiarity and comfort with certain procedures are necessary for a positive outcome. Reading the cover article in the July/August issue of JUCM will help you feel confident that you'll be prepared.

## PRACTICE MANAGEMENT

# 31 What Does a Hybrid Workforce Look Like for Urgent Care?



COVID-19 threw a wrench into our collective understanding of how a "normal" workplace functions. What happens now that restrictions are easing?

Alan A. Ayers, MBA, MAcc



## PEDIATRIC URGENT CARE

# 38 Febrile Seizure: An Urgent Care Overview



Identifying the type of seizure and causes of fever are the essential first steps.

Tiffany Addington, MD

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## JUCM CONTRIBUTORS

Ensuring efficient throughput is an essential component of every urgent care operator's mission to give every patient an experience they will want to remember (and repeat, when necessary). In *More Timely Care: Effect of Online Queuing vs Change in Hours of Operation on Hourly Arrival Volumes. A Practice Management Reflection* (page 25), authors **Aimy Patel, MD; Jennifer Johnson, MD; Brian R. Lee, PhD, MPH; and Amanda Montalbano, MD, MPH** share the results of an internal research project designed to decode what would work best in a pediatric urgent care center.

Dr. Patel is assistant professor in the Department of Pediatrics, University of Missouri-Kansas City School of Medicine. Dr. Johnson is an assistant professor in the Department of Pediatrics, University of Missouri-Kansas City School of Medicine. Dr. Lee is research assistant professor of pediatrics, University of Missouri-Kansas City School of Medicine. Dr. Montalbano is an associate professor in the Department of Pediatrics, University of Missouri-Kansas City School of Medicine.

Unfortunately, concussions are a year-round occurrence in urgent care. That doesn't mean they're "common" in the sense that presentations are all the same, of course. Patients who've sustained a blow to the head but don't seem to be exhibiting symptoms can be especially challenging. We're grateful to **Jordan Wackett, MD, MPH; Joshua Korngay, MD; and Craig Rudy, MD** for sharing the infographic they created with us. You can see *Managing Concussion in Acute Care* starting on page 34. The authors are colleagues at The Ohio State University Department of Emergency Medicine.

Sometimes, the challenge is zeroing in on what's really ailing the patient. The presenting complaint is a good start in most cases, but sometimes it may serve to distract you from the true nature of the problem. **Ryan Hagan, PA-C and Christina Gardner, DHSc, MBA, PA-C** describe just such a case in *A 'Red Herring' Chief Complaint*, starting on page 21. Mr. Hagan is a physician assistant at Carilion Clinic. Dr. Gardner directs the Advanced ACP Fellowship in Urgent Care and Rural Health at Carilion Clinic and is director of clinical education for the Radford University PA program.

Certain pediatric presentations can be misleading, at first, too. As **Tiffany Addington, MD** reminds us in *Febrile Seizure: An Urgent Care Overview* (page 38), an event that's very frightening to the parents may be completely benign. However, it's essential to rule out life-threatening causes at the outset. Dr. Addington is director of professional development and engage-

ment, Division of Urgent Care, Children's Mercy Kansas City; medical director, Children's Mercy East Urgent Care; clinical associate professor of pediatrics, University of Missouri-Kansas City School of Medicine; and clinical assistant professor of pediatrics, University of Kansas School of Medicine.

Predicting just how well businesses will settle back into a routine once COVID-19 restrictions are lifted can be guesswork. Urgent care is no exception. Sure, clinicians have always been on site, but some functions have been performed just fine remotely. Should everyone be brought back into the office? **Alan Ayers, MBA, MAcc** addresses this question expertly in *What Does a Hybrid Workforce Look Like for Urgent Care?*, starting on page 31. Mr. Ayers is president, Experity Networks.

Of course, COVID-19 has also had an interruptive effect on coding practices in urgent care. First it was testing and treating, now it's vaccination. What's the right thing to do to ensure you're staying compliant and being reimbursed fairly for your efforts? Reading this month's *Revenue Cycle Management* column (page 53) by **Monte Sandler** will go a long way toward clarifying things. Mr. Sandler is vice president, revenue cycle management for Experity.

Finally, in this month's *Abstracts in Urgent Care* (page 50), **Ivan Koay, MBChB, FRNZCUC, MD** shares the most urgent care-relevant points in articles published elsewhere concerning the value (or lack thereof?) of light exercise for patients with a mild traumatic brain injury, when it does or does not make sense to employ treatment for asymptomatic hypertension, and more. Dr. Koay is an urgent care physician based in Dublin, Ireland, as well as an Examiner and Trainee Supervisor for the Royal New Zealand College of Urgent Care Education Faculty for the Urgent Care Medicine Fellowship, Royal College of Surgeons Ireland.

### Notice of Retraction

It has been brought to our attention that the publication titled "An Urgent Care Approach to Fishhook Removal" originally published in the June 2021 print edition of *The Journal of Urgent Care Medicine* on June 1, 2021 ("Publication"), contains several changes made during the editing process performed by JUCM which the authors took issue with and subsequently demanded the Publication be retracted. Accordingly, at the request of the authors, Anthony G. Stanley, MD and Jorge Murillo, MD, we have fully retracted the Publication.

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# Getting the Band Back Together

■ LOU ELLEN HORWITZ, MA

Last December when we decided to move our 2021 Annual Convention from April to October it brought both heartbreak and hope. COVID-19 visits were peaking in urgent care and the first vaccine was still in Phase 3 trials, so we knew we couldn't host you in April—but we weren't sure we'd be able to host you by October, either, so rescheduling a face-to-face was a leap of faith for all of us here.

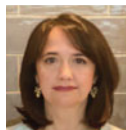
As we deliberated whether to reschedule or do a virtual event, we talked with a lot of you—members and vendors and others who believe in the value of urgent care. You told us what's most important about that gathering. You talked about the special things that happen when like-minded people come together for an extended period of time. You shared past experiences and people you'd met that made all the difference in your success, and talked about others that have become lifelong friends.

These are not things that happen in a virtual event, no matter how great the platform. In the end, it was an easy decision.

Togetherness is important all of the time, but especially in times of change—and urgent care is definitely facing a time of change. External forces wrote our story for us throughout 2020, but now that we've reached the midway point of 2021 it's time for us to start writing our own again. To find a way to truly take control of our future in ways we have not been able to do so far.

The threats facing urgent care are becoming more universal rather than occurring in isolated pockets across the country. If we are going to fulfill our potential in the healthcare continuum, we are going to have to face them together. As you read this, the payer community is downgrading our medical and business models while simultaneously bemoaning our failure to pull visits from the ED; this all has the potential to lead to an unwinnable scenario. The irony is that payers need us, primary care needs us, health systems need us, and emergency departments need us. And yet they continue to make it hard to *be us*.

The time for us to rise up together and fix this is now. Trust



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

*“Serendipity...happens when smart people like you come together and meet each other in a ballroom lobby at a break, introduce someone to someone else at an exhibit hall reception, or deliberately sit down to solve a problem from a new perspective in a workshop.”*

with payers (and vice versa) must be rebuilt into an actual pro-patient partnership, and advanced medical capability must be rebuilt. This won't happen overnight, of course, so we also need more immediate strategies while this rebuilding takes place.

Urgent care has always been at its best when we share with and learn from each other, so in October we are going to do that. We are going to look at different models and experiments and successes and failures to share what's working and what to avoid.

One of my favorite words that came from the “Should we have the Convention in person?” conversations was *serendipity* (thanks, Heather). I am one of those people who still has a print dictionary on my desk and it defines this as: “the faculty of making fortunate discoveries by accident.”

This is what happens when smart people like you come together and meet each other in a ballroom lobby at a break, introduce someone to someone else at an exhibit hall reception, or deliberately sit down to solve a problem from a new perspective in a workshop or discuss a potential deal over dinner. It's almost impossible to do that without coming together—so I am so excited we are going to be able to provide you with that opportunity again.

I'm also so tempted to share in depth what our general sessions are going to be, but I'll just hint that we'll probably make some music, reset the performance bar, and play some offense. Those are going to be awesome.

Urgent care people are some of the most creative, determined, and passionate people around, and we can't wait to gather you again and see what happens. Only a few more months to wait! ■



# CONTINUING MEDICAL EDUCATION

**Release Date:** June 1, 2021  
**Expiration Date:** May 31, 2022

## Target Audience

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

## Learning Objectives

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

## Accreditation Statement



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

The Urgent Care Association designates this journal-based CME activity for a maximum of 3 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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*Member reported no financial interest relevant to this activity.*
- **Michael B. Weinstock, MD**  
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- **Alan A. Ayers, MBA, MAcc**  
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# CONTINUING MEDICAL EDUCATION

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## A 'Red Herring' Chief Complaint (page 21)

### 1. What portion of patients with pulmonary embolism show signs of deep vein thrombosis?

- a. 4%
- b. 9%
- c. 47%
- d. 90%

### 2. Which of the following factors are known to place individuals at high risk for venous thromboembolism (VTE)?

- a. Prior history of VTE
- b. Malignancy
- c. Prolonged immobilization
- d. All of the above

### 3. Which is the most common symptom of pulmonary embolism (PE)?

- a. Cough
- b. Dyspnea
- c. Fever
- d. Swelling of the calf or thigh

## What Does a Hybrid Workforce Look Like for Urgent Care? (page 31)

### 1. Which of the following is considered an advantage (for the urgent care employer) of a hybrid work model?

- a. Access to a wider talent pool
- b. Better parking for workers who continue to report to your location
- c. Less potential for conflict among team members
- d. Employees tend to work longer hours when they're home

### 2. Which of the following is considered a disadvantage (for the urgent care employer) of a hybrid work model?

- a. Decreased innovation
- b. Challenges to private patient data
- c. Disconnection among employees
- d. All of the above

### 3. Which of the following is an example of an urgent care position that should remain on site, even if a hybrid work model is offered:

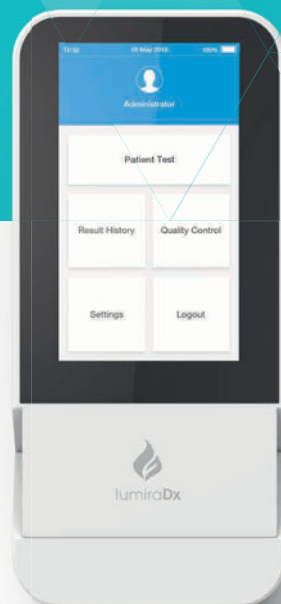
- a. Billing
- b. Payroll
- c. Manager
- d. Human resources



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# A 'Red Herring' Chief Complaint

**Urgent message:** Chief complaints may lead the provider “off the trail” of a more urgent diagnosis. Anchoring bias occurs when relying too heavily on this first piece of information. Providers must remain vigilant for the the nonspecific warning signs of pulmonary embolism.

RYAN HAGAN, PA-C and CHRISTINA GARDNER, DHSC, MBA, PA-C

## Introduction

Chief complaints are used to guide decision-making and may suggest an organ system, but a life-threatening condition may be found in a different organ system. Addressing the patient's concern might satisfy her, but a careful history and exam can reveal a must-not-miss diagnosis. Pulmonary embolism is a potentially life-threatening condition that may present subtly with nonspecific signs or symptoms. Risk factors such as a recent orthopedic surgery should raise the index of suspicion of a must-not-miss diagnosis.

## Case Presentation

Mrs. Q is a 75-year-old female whose chief complaint in the urgent care is “black stools” associated with fatigue and lightheadedness for 4 days.

- Medications: Aspirin, meloxicam, and a multivitamin with iron daily
- Personal medical history: Significant for diverticulitis, colitis, and hemorrhoids
- Past surgical history: Total knee arthroplasty performed 5 weeks ago
- Social history: Former smoker, drinks three glasses of wine per week
- Review of systems: Denies frank bleeding, hematemesis, N/V/D or abdominal pain
- Physical exam/vital signs:  
BP: 180/90  
Resp: 18  
Pulse: 90  
SpO<sub>2</sub>: 99% on RA



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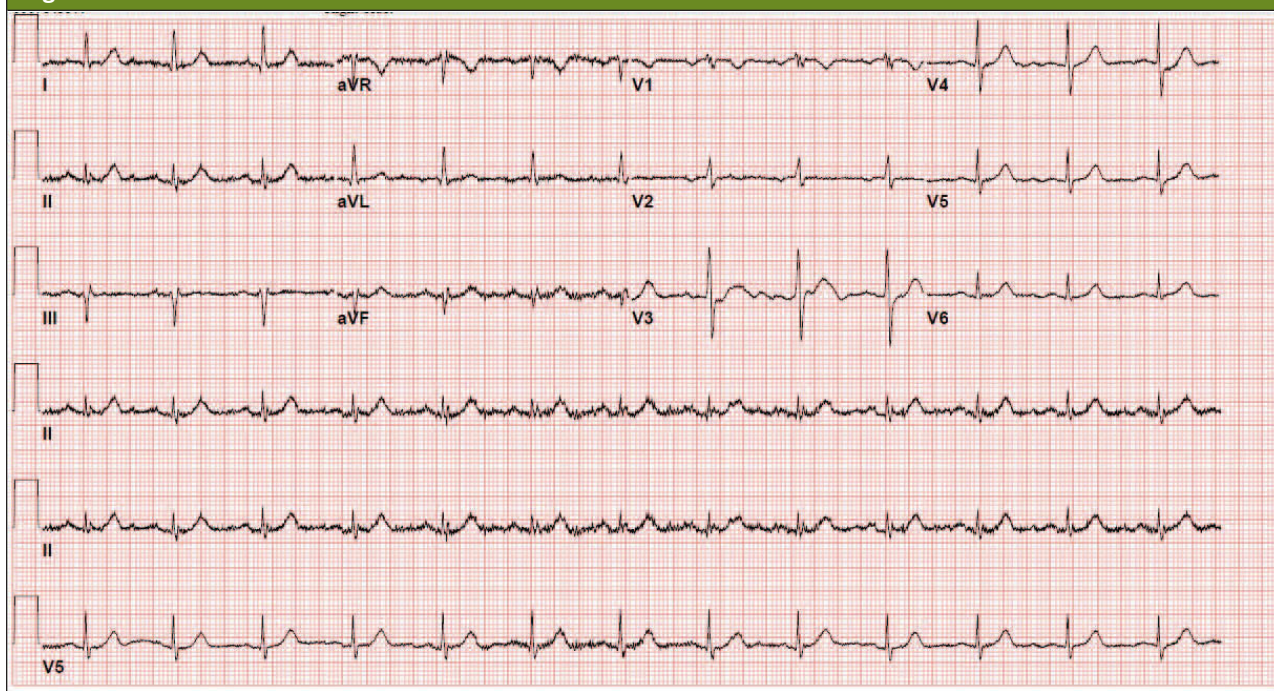
Temp: 99°F

Heart and lung sounds are normal, abdomen is soft and nontender, and she is well-appearing. Stool guaiac is negative for blood.

- MDM/UC course: During the exam she becomes acutely tachypneic at a rate of 24 breaths per minute. Further examination reveals her right knee is swollen, red, tender, and warm. Mrs. Q did not mention her knee symptoms because she attributed these to normal postoperative healing.

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Figure 1.



#### Differential Diagnosis for Pulmonary Embolism

- |                                |                          |
|--------------------------------|--------------------------|
| • Acute coronary syndrome      | • Myocardial infarction  |
| • Anemia                       | • Pericarditis           |
| • Angina pectoris              | • Pneumonia              |
| • Hypersensitivity pneumonitis | • Pneumothorax           |
| • Mitral stenosis              | • Pulmonary hypertension |

- Testing: A STAT EKG showed normal sinus with no ST or T wave abnormalities (**Figure 1**).
- MDM: Mrs. Q has a Well's score for PE of 6 (moderate). With clinical gestalt, her risk for PE is moderate-to-high, and she requires transfer to the emergency department.

#### Differential Diagnosis

EMS transported the patient to the ED where ultrasound showed a right lower extremity DVT. Her chest x-ray was normal, and a CTA chest revealed bilateral pulmonary emboli. The patient was admitted for bilateral pulmonary emboli and treated with heparin. She transitioned to apixaban (Eliquis) prior to discharge 2 days later. Gastroenterology was consulted for the chief complaint, but endoscopy was not indicated as her hemoglobin was stable and the guaiac test was negative. At her PCP follow-up, she was doing well and denied any signs of GI bleeding.

#### Discussion

##### Overview

Deep vein thrombosis (DVT) and pulmonary embolism (PE) are two manifestations of the same disease known as venous thromboembolism (VTE); 47% of patients with PE have signs of DVT.<sup>1</sup> Virchow's triad describes three pathways to thrombus formation: endothelial damage, stasis, and hypercoagulation. Major orthopedic surgery involves endothelial injury, and stasis occurs with immobilization on the operating table and during bed rest. Thus, at least two elements of the triad are present with total knee arthroplasty (TKA).

At baseline, major orthopedic surgeries like TKA place individuals at high risk for VTE.<sup>2</sup> The risk is further increased when there is older age, prior VTE, malignancy, cardiac disease, thrombophilia, longer duration of anesthesia, or prolonged immobilization.<sup>3</sup>

Providers mitigate risk by utilizing pharmacological and mechanical prophylaxis. These include heparin, direct oral anticoagulants (DOACs), pneumatic compression devices, graduated compression stockings, venous foot pumps, and ambulation.

Although thromboprophylaxis reduces risk of VTE in the immediate postoperative period, the risk following total knee or hip arthroplasty extends past the 7 or 10 days of hospital admission.<sup>4</sup> The risk is highest during the first 5 weeks post-op.<sup>5</sup> The cumulative incidence of

DVT and PE for 3 months following TKA is 2.1%.<sup>2</sup>

### Presentation

A postoperative patient with acute and unexplained dyspnea is classic for PE. However, symptoms may vary markedly, ranging in severity from no symptoms to shock or sudden death. Dyspnea is the most common symptom followed by pleuritic chest pain. **Table 1** shows the most common signs and symptoms among patients with no prior cardiopulmonary disease.<sup>1</sup>

### Diagnostics

The most validated decision rules are the Geneva score and Well's score.<sup>6</sup> For low-risk patients, the PERC rule can be used to rule out PE.<sup>7</sup> In these cases, providers may avoid using a D-dimer test.

Low D-dimer levels may be useful to rule out PE when used together with clinical decision rules, but this test is not specific.<sup>8</sup> While D-dimer levels are elevated with VTE, they can also be elevated in surgery, cancer, trauma, renal disease, or age. In patients with recent TKA, D-dimer has limited usefulness. It has shown to always be elevated in the first week following hip and knee replacement.<sup>9</sup> When there is high probability of VTE, D-dimer may only waste time and resources leading up to CTA scanning.

A normal chest x-ray in the setting of hypoxia should raise suspicion for PE. The chest x-ray may show atelectasis or pleural effusion.<sup>6</sup> In rare cases, the specific signs of Hampton's hump (a lateral, dome-shaped opacity) or Westermark sign (oligemia distal to a large vessel occluded by a PE) can be observed. Chest x-ray is more useful for detecting alternative diagnoses than signs of PE.

EKG can be useful in diagnosing PE. The most common EKG abnormalities are sinus tachycardia and non-specific ST or T wave abnormalities. One study found tachycardia is present in 45% of cases.<sup>6</sup> A normal heart rate is common. Right bundle branch block and S1Q3T3 are suggestive but not common. In less than 10% of cases, the S1Q3T3 pattern may be observed showing deep S waves in lead I, and deep Q waves and inverted T waves in lead III.<sup>10</sup> Neither chest x-ray nor EKG can reliably rule out PE.<sup>11,12</sup> Definitive diagnosis of PE is made with CT pulmonary angiography or ventilation-perfusion scanning.

### Disposition

All patients with suspected PE should be transported to the ED. Postdiagnosis, anticoagulation is initiated and patients are observed for complications. ■

**Table 1. Signs and Symptoms for PE Without Prior Cardiopulmonary Disease**

Symptom	Frequency
Dyspnea	73%
Pleuritic pain	44%
Calf or thigh swelling	41%
Cough	34%
Wheezing	21%
Sign	
Tachypnea	54%
DVT signs in calf or thigh	47%
Tachycardia	24%
Rales	18%
Increased P2 heart sound	15%

### Take-Home Points

- Chief complaints do not always suggest the most urgent problem.
- Major orthopedic surgery places patients at high risk for VTE.
- The most common symptoms of PE are dyspnea and pleuritic pain.
- Chest x-ray and EKG cannot reliably rule out PE.
- The most validated decision rules are the Geneva score and Well's score.
- Definitive diagnosis is made by chest CTA scan.

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# More Timely Care: Effect of Online Queuing vs Change in Hours of Operation on Hourly Arrival Volumes. A Practice Management Reflection

**Urgent message:** Hours-of-operation changes may have more effect on leveling patient arrival volumes in a pediatric urgent care compared with an online queueing system alone.

AIMY PATEL, MD; JENNIFER JOHNSON, MD; BRIAN R. LEE, PHD, MPH; AMANDA MONTALBANO, MD, MPH

Citation: Patel A, Johnson J, Lee BR, Montalbano A. More timely care: effect of online queuing vs change in hours of operation on hourly arrival volumes. a practice management reflection. *J Urgent Care Med.* 2021;15(9):25-30.

## Introduction

Customer experience is tied to the perception of waiting in all industries, healthcare being one of them. Maister shared a simple formula that explained a consumer's satisfaction level can be the difference between their expectation and their perception of the value of the delivered service.<sup>1</sup> He hypothesized that consumers perceive wait as more than just time spent, but also is impacted by the uncertainty of the duration of the wait, unfair prioritization of being attended to in a timely manner, unexplained waits, or simply the boredom of unoccupied waiting time. As technology advanced, online queue management systems began to emerge and became a solution to improving consumer's satisfaction level, either adjusting expectations or improving the perception of waiting by providing more transparency. This system was translated for use in the healthcare

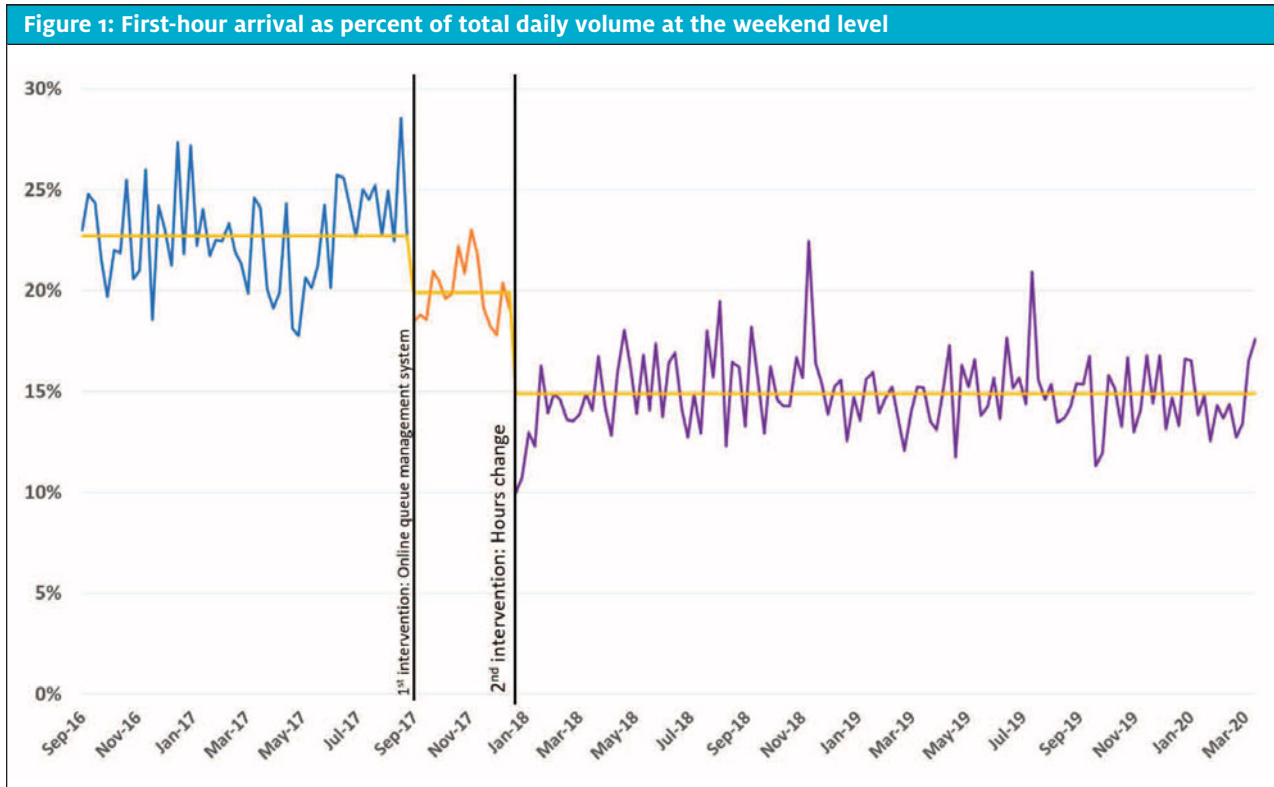


model, specifically the urgent care setting.

In a walk-in patient care model, such as urgent care, challenges arise when boluses of patients arrive, resulting in a longer-than-average wait time. The prolonged

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waits that occur when this happens lead to a secondary problem of providing realistic expectations of wait time that result in decreased patient experience scores, especially in the timeliness category.

As explained above, beyond the added minutes of waiting, the anxiety of “wasted” time is compounded in an acute care setting. When those evaluating the experience reflect on whether their expectation of urgent medical attention was met, the gap can be pronounced if the care being sought was for their child. With over two-thirds of pediatric urgent cares across the nation now using some form of online queue management,<sup>2</sup> we wondered, could an online queueing system overcome the parental expectations of expedited acute care for their child? Was this technology the solution for matching demand to capacity, or could there be another intervention to better address this problem?

We implemented two interventions to level-load our patient arrival volumes, then retrospectively reviewed our data to answer this clinical practice question: How can a pediatric urgent care manage arrival volumes to match clinical capacity and improve patient experience?

### Setting and Background

Children’s Mercy Kansas City is a freestanding inde-

pendent pediatric health organization which has grown from one pediatric urgent care to four in the last 8 years. The freestanding pediatric urgent care centers serve the greater Kansas City metro area and one rural location. Staffing is 36 pediatric physicians within the Division of Urgent Care and 12 advanced practice nurse practitioners (NP), either pediatric or family practice NPs. At the start of the study period in July 2017, hours of operation were noon to 10 PM daily. Patient volumes increased 700% since opening the first urgent care center and by 2019 the annual census was 97,445 patient visits. With this growth, there was a decrease in patient experience scores regarding timeliness of care provided.

Upon further study of patient throughput, there was a recognized pattern that the largest daily volume of patients (20%–25%) presented in the first hour on the weekends. This would result in long wait times and longer lengths of stay on the weekends, including for chief complaints that typically would not require more than a 15–20 minute visit.

### Two interventions

In the fiscal year 2018, our Division of Urgent Care implemented two different interventions across the then

Figure 2. Hourly arrival as percent of total daily volume

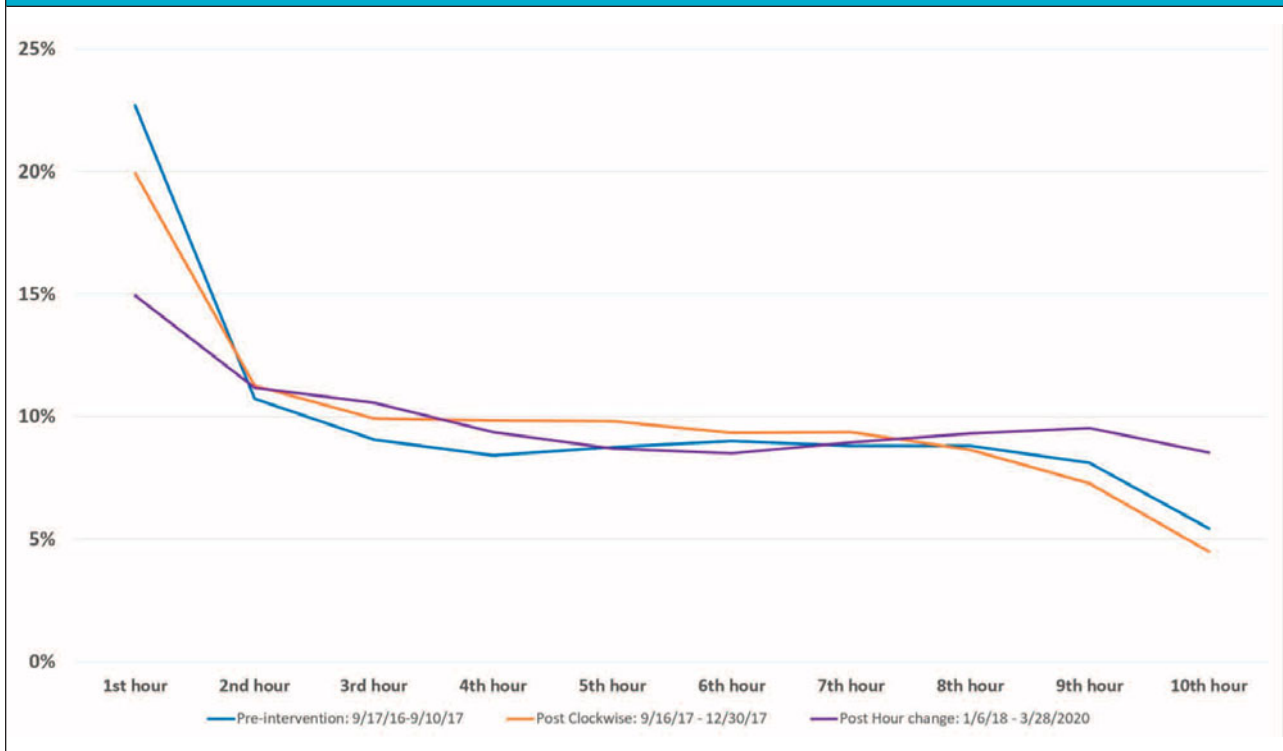
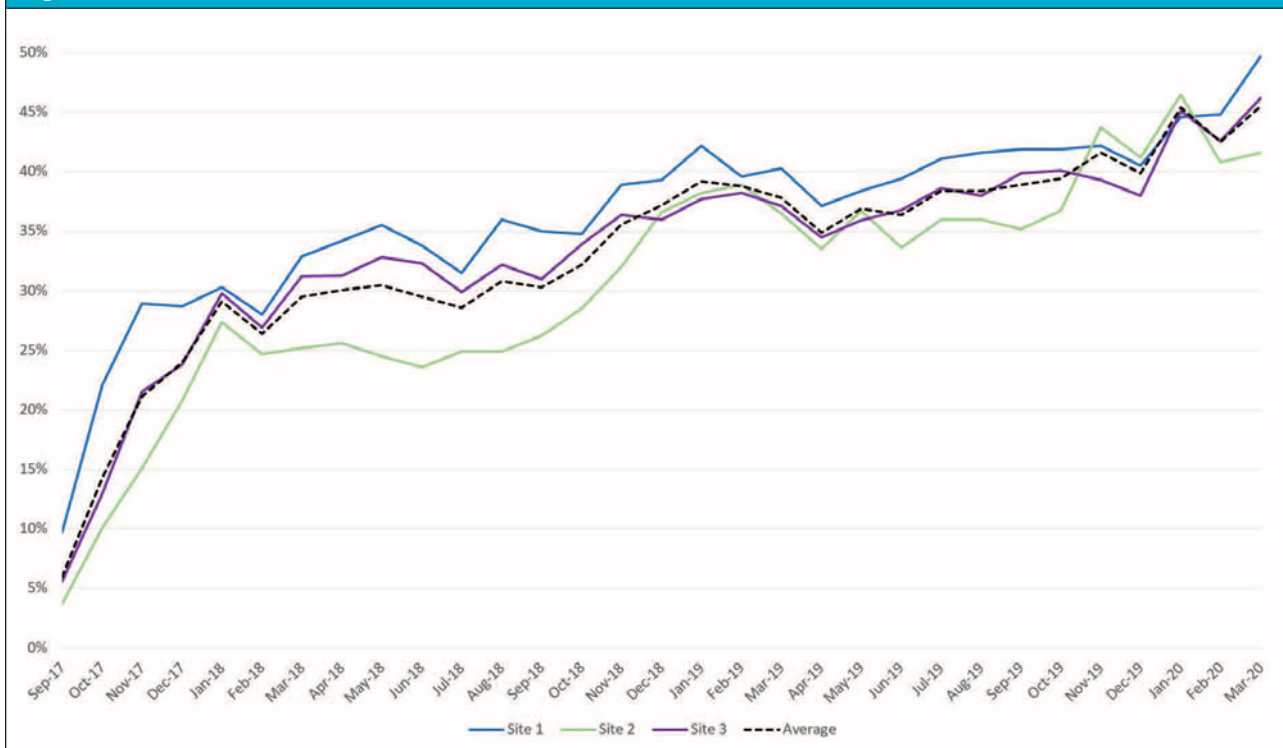
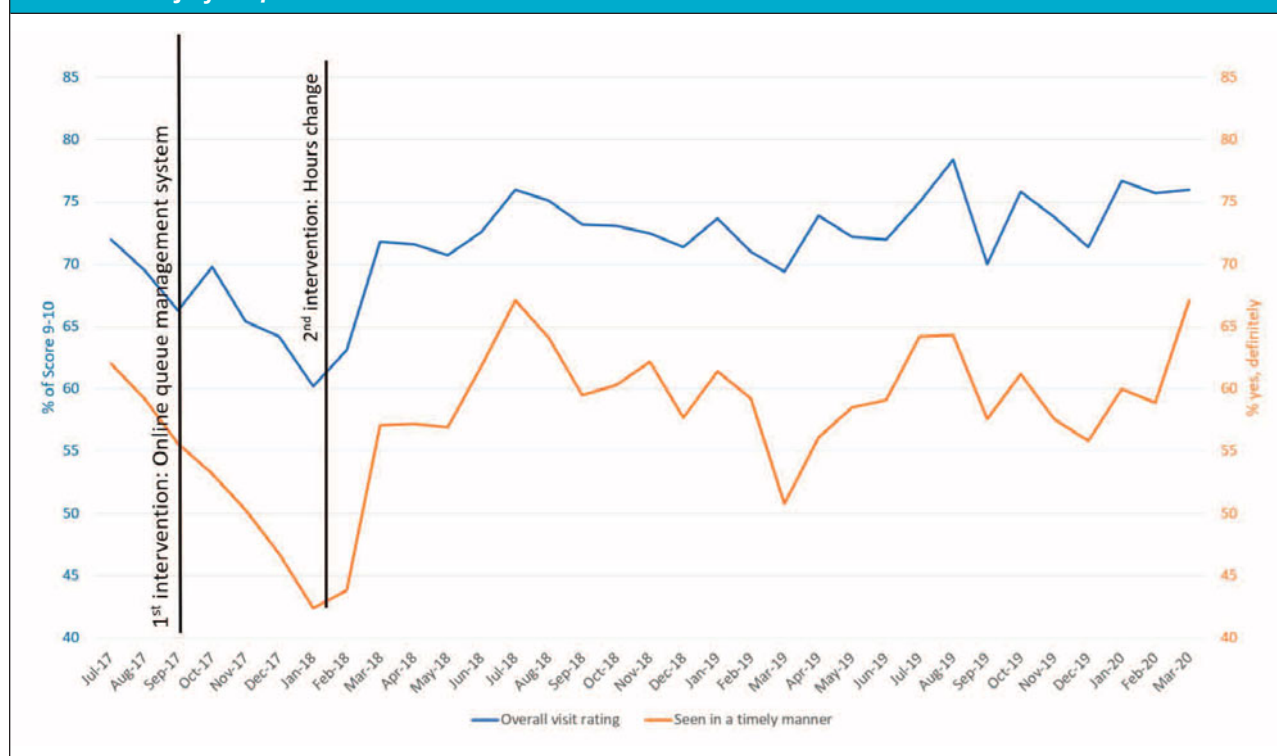


Figure 3. Percent of online reservations.



**Figure 4. Patient experience scores for overall visit rating and timeliness. A change in platform occurred at our institution in July 2017.**



three metropolitan sites. The first was the implementation of an online queuing system in September 2017. This involved several key stakeholders, including the Division Director of Urgent Care, the Manager of Patient and Family Engagement, and the Senior Director of Nursing and Emergency Services with the approval of Strategy, Marketing, and Information Technology (IT). Ultimately the implementation also involved Information Systems (IS), Legal, and Access Representatives.

Eight online queuing systems were identified and researched. Analysis of the different programs consisted of online research followed by user experience phone conversations. The features that our institution looked at included online sign-in capability, proactive communication, customizable reporting, reservation capability, and a visible queue. Additional factors that influenced decision-making included: cost/budgetary constraints, company culture, availability of technical support resources, ability to customize offerings, user interface preferences, and marketing support. The adoption of the final online queueing system allowed patients to save their spot in line from the comforts of their home and arrive 15 minutes prior to their reservation time.

The second intervention was a change in hours of

operation on the weekends. The standard daily hours of operation were noon to 10 PM. Historical arrival data demonstrated that the highest volumes of patients were on the weekends, with the largest percentage arriving at noon upon opening and low arrival numbers after 8 PM. Starting January 6, 2018, we remained open 10 hours a day, but on the weekends adjusted to open 2 hours earlier, operating 10 AM – 8 PM.

Key stakeholders were the Division Director of Urgent Care and the Senior Director of Nursing and Emergency Services. Weekend UC parents were polled; over 65% desired a change in our hours of operation to open 2 hours earlier. We also discussed this potential change with private pediatric practices within the Children's Health Network in Kansas City and none voiced any concerns over the urgent care change in hours. Only one private pediatric group consistently provided weekend or holiday walk-in care. Ancillary services supporting UC also expressed support for the change in hours. A survey of all UC staff (providers, nurses, lab, radiology, environmental services, access representatives, security, respiratory therapy, and social work) showed 75% were in support of the hours change, as well. In comparison to other urgent cares in our service area, most opened

prior to noon and none were open beyond 8 PM; therefore, the new hours would more closely align with our competitors.

### What We Measured

1. First-hour arrival volumes: The main outcome measure was the first-hour arrival volume presented as a percent of total daily volume (TDV) to account for seasonal variability. The numerator was the sum of the first-hour volumes on Saturday and Sunday for each weekend. The denominator was the total volume for each weekend.
2. Hourly arrival volumes: Variation in hourly arrival volumes for each hour of a shift for the weekend as a percentage of TDV for each hour.
3. Percent online reservations: Percentage of patients that used our online queuing system each month.
4. Experience scores in two domains from a validated national patient- and family experience survey:<sup>3-5</sup>
  - a. Overall rating: percent of survey respondents that responded with an overall “rating of visit” a 9 or 10 on a 11-point scale, reported monthly.
  - b. Perception of timeliness: percent of respondents choosing “yes, definitely” on a 4-point Likert scale to their child being seen in a timely manner, reported monthly.

### What We Found

We evaluated arrival volume data for 12 months prior to the interventions, 3 months after the first intervention, and 6 months after the second intervention. We have since added data for an additional 21 months to monitor maintenance.

The first intervention (introduction of the online queuing system) decreased the percentage of first-hour patient arrival volumes from an average of 22.7% to 19.9%. The second intervention (the change in our hours of operation) decreased the percentage of patient arrival volumes in the first hour of operation to an average of 14.3% after 6 months, and 14.9% for the full 27 months evaluated (**Figure 1**). Individual hourly arrival volumes continued to demonstrate a considerable range even after the implementation of the online queuing system (hourly arrival volumes varied 5%-23% vs 5%-20%, pre- and post-queueing system intervention, respectively). However, the change in hours of operation did show a tightening in the variation of the hourly arrival volumes to 9%-14% of total daily volume (**Figure 2**).

The percent of total encounters using the online queuing system increased from a range of 5% to 15%

per urgent care site in the first month up to 55% in the most recent month (**Figure 3**). Overall rating of visit measured by patient experience surveys showed an initial decline for overall rating and timeliness after the introduction of the online queueing system (**Figure 4**). However, it was typical for overall rating and timeliness to decline over the flu season. It was our hope that the intervention of online queuing would stave off the typical dip. While we did not see that happen immediately after the intervention, these scores rebounded and maintained a sustained increase after the change hours of operation, which may have been due to the increase in use of the online queueing system.

Moreover, the late influenza season that hit in March 2019 did not show as precipitous of a decline in either metric. These scores were followed on a monthly average, not specific to the weekend scores; however, using the monthly average increased the overall sample size to reflect a truer average experience for patients and families.

The patient experience survey also captured qualitative feedback (“What else would you like to tell us about your experience?”). After the introduction of the online queueing system, there was immediate positive feedback via the comments, such as “Online check-in was great”, “I loved the ability to reserve a time slot!”, and “I liked the check-in process where you could have your spot held for you so you could come back.” We also saw comments regarding inaccurate long projected wait times—that while the families were happy they didn’t have to wait they wished the times could be more accurate to help them make a triage decision of where to seek care. These types of comments dissipated as we improved our velocity estimations and familiarity with the online queueing platform.

### Conclusion

An online queuing system decreased our first-hour arrival volumes only slightly. It was widely accepted and popular with our patient families as gleaned from the increasing use of the system and from comments received on our patient experience surveys. However, it did not level our hourly arrival volumes as we had hoped.

The change in hours of operation after instituting the online queuing system did show a larger decrease in the first-hour arrival volumes as well as less variation in volume of patients that arrived hourly. Therefore, the hours of operation change helped not only to better meet demand upon opening, but also to level load our patient flow throughout the day compared with the online queuing. These interventions were not taken

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## MORE TIMELY CARE

lightly, and we were able to engage customers, staff, and community members in the process to obtain the best uptake and results.

Online queue management systems have been a game changer for our urgent care patient population. This system has allowed the urgent care service line to manage the psychology of waiting during a high-anxiety situation of requiring acute care needs for a child. It allowed flexibility for families to pick the time that works best for them, thereby allowing them to occupy their time elsewhere and decrease the “waste in waiting” on site. For families that walk in, the system provides a wait time to provide transparency to the length of wait which in turn can appropriately set their expectations. However, with urgent care not being a 24/7 service, the pent-up demand at opening could not be overcome with an online queueing system alone. The additional intervention of an hours-of-operation change helped us further provide care when families were ready to seek care.

### Limitations

While this is the first published report specific to operational changes in a pediatric urgent care setting, the findings may not be generalizable to the general urgent care setting. The retrospective nature of evaluating the interventions reflects the short time frame between our two interventions. There is the possibility that the online queuing system alone might have had more of an effect on our first-hour arrival volumes and level loading our patients over time, if it were able to be monitored for a longer period prior to initiating a change in hours of operation. However, the benefit of both interventions has proven to remain successful with long-term monitoring. ■

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# What Does a Hybrid Workforce Look Like for Urgent Care?

**Urgent message:** As COVID-19 has enabled many non-patient-facing employees to work from home, now urgent care operators must grapple with returning some of those employees to the office or otherwise managing a “hybrid” workforce.

ALAN A. AYERS, MBA, MACC

The COVID-19 pandemic has changed every facet of daily life. Although its impact on the world of medicine is obvious, the virus has also affected how business is conducted across every sector. That includes the administrative side of urgent care.

Companies around the world have adopted remote work policies or hybrid business models out of necessity. However, with the end of the pandemic in sight, many are wondering what comes next.

For urgent care operators, continuing with a hybrid model comes with pros and cons. While the COVID-19 pandemic may have started the work-from-home revolution, it doesn't appear to be going anywhere once the virus subsides.

Hybrid models allow employers to operate with maximum cost efficiency and provide access to a wider talent pool. On the other hand, it's more difficult to build a corporate culture and many employees struggle to develop a healthy work-life balance. In terms of health-care administration, the issue of privacy also comes into play.

So, while a hybrid model may be effective for some, urgent care owner-operators will need to carefully weigh their options when determining how to proceed.

## Hybrid Work Background

Though it might seem simple to shift an in-person workforce to a remote model using all of the technology available today, doing so isn't easy. Managing remote employees is very different from doing so in-person and comes with a unique set of challenges.

Even so, it's clear that remote and hybrid workforces



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are poised to become the new “normal” as the pandemic ends. Although many companies will eagerly return to in-person operations, others have enjoyed the benefits of remote work and will want to continue functioning that way.

The same is true for employees. According to data from Gartner for HR, 64% of employees would like to continue working from home for some or all of the time once the pandemic ends.<sup>1</sup> Moreover, now that employees have had a taste of the remote work lifestyle, many will be hesitant to return to their in-person office job.

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Alan A. Ayers, MBA, MACC is Senior Editor, Practice Management for *The Journal of Urgent Care Medicine* and is President of Experity Networks. The author has no relevant financial relationships with any commercial interests.

Given the overwhelming demand for remote work, companies will have no choice but to adapt. A hybrid workforce model represents the best of both worlds.

It gives employees the flexibility to work when and where they want for the majority of the time. Hours spent in-person can then be focused on collaboration, team building, and productivity. This model works well for many businesses and delivers the benefits of remote work while limiting the drawbacks. However, for urgent care companies, things are a bit more complicated.

*“It goes without saying that it’s impossible to shift a healthcare team entirely to remote work. Hands-on assessment and treatment is at the core of what an urgent care company does. As such, clinic-based personnel have no choice but to work on-site.”*

#### How Do Urgent Care Companies Go Remote?

While most urgent care employees are patient-facing in a facility, urgent care businesses also rely on a team of administrative and support staff to operate successfully. While some of those individuals need to remain on-site (receptionists, managers, etc.) others can fulfill their roles at home.

Those working in areas like billing, accounting, HR, and IT do most of their work on a computer regardless of where they’re located. This means they can make the shift to remote work rather easily.

Of course, urgent care owner-operators need to take the changes associated with this shift into account. Managing a team of employees that rarely meets in-person is challenging. For instance, some employees struggle to remain productive due to the distractions that arise at home. Others have the opposite problem and find it difficult to put work away at the end of the day, leading to burnout and extreme stress.

Employers need to carefully monitor both ends of the spectrum to ensure their teams are operating efficiently and in a healthy manner. This is far easier to do when everyone is in a central location. Hybrid models are more difficult to manage because face-to-face meetings are rare and people may be working on different schedules.

Even so, adopting a hybrid model may be beneficial

for urgent care companies as the pandemic subsides. There are many advantages to consider.

#### Pros of Hybrid Models

Establishing a hybrid workforce has benefits for both the employer and employees. Ultimately, it helps reduce costs and improve satisfaction while giving an organization much more flexibility.

For employers, one of the biggest advantages has to do with money. When employees work remotely, office space can be reduced, printing costs plummet, and expenditures associated with brick-and-mortar locations start to disappear. Obviously, urgent care companies still need to maintain a physical presence. It’s possible, however, to decrease non-clinical office space—such as square footage in a separate building that’s leased for administrative and support staff.

Meanwhile, employers benefit from having a larger talent pool to recruit from. It’s just as easy to hire a remote medical billing expert that lives halfway across the country as one that lives in town. This helps keep companies competitive, with the best talent available. Moreover, allowing employees to work remotely if they choose to is a great way to boost retention.

For employees, there are also financial incentives. Working from home means less money is spent on commuting, lunch, and other day-to-day activities. The more important factor, though, is that employees gain flexibility and autonomy. Working from home isn’t for everyone. However, those who excel at it are able to be more productive by working in a comfortable environment and on their own terms. This allows employees to create a more desirable work-life balance.

In summary, the benefits of a hybrid model include:

- Decreased costs for both employees and employers
- Access to a wider talent pool
- Improved retention of current employees
- More flexibility and autonomy
- A better work-life balance and more comfortable work environment

#### Cons of Hybrid Models

While the benefits of a hybrid model are numerous, there are also serious drawbacks to consider. These issues are compounded by the unique nature of staff working for a company that deals with protected health information (PHI).

On a basic level, one of the biggest disadvantages of remote work is decreased collaboration. It’s easy for a workforce to become disjointed and stale when face-to-

*“The days of entire teams working together in-person are likely gone forever. As more companies take advantage of remote and hybrid models, urgent care owner-operators should be aware of the pros and cons.”*

face meetings and interactions aren’t happening. Many employees feel disconnected from their peers and the company’s culture while working from home. This is especially true when some individuals are working remotely while others are on-site.

The biggest issue related to hybrid models for urgent care companies is privacy. Employees need to have a suitable workspace at home where they can safely and securely handle patient information. This is far easier to manage in-person and can be a challenge for companies using a remote model. Before implementing a hybrid policy, urgent care owners need to ensure that their remote employees have a dedicated home workspace and all the tools necessary to maintain patient data privacy.

While hybrid work can be a great tool for retention and recruiting, it can also be a drawback. Some people simply prefer working in-person and may not want to work from home on a long-term basis. Likewise, it’s difficult to develop and maintain an engaged, “sticky” culture when employees aren’t interacting regularly.

In summary, the disadvantages of a hybrid model include:

- Decreased collaboration and innovation
- Challenges related to patient data privacy
- Difficulty building and maintaining company culture
- Employees may feel disconnected and unhappy
- Retaining individuals who don’t like working remotely

### In Conclusion

After the COVID-19 pandemic ends, the workplace will never look the same. The days of entire teams working in-person at a company office are likely gone forever. As more companies take advantage of remote and hybrid models, urgent care owner-operators should be aware of the pros and cons.

### Making It Official: Creating a Work-from-Home Policy

To safeguard protected health information, a work-from-home policy should include the following elements:

- Employees should not allow any friends, family, etc. to use devices that contain PHI.
- Have each employee sign a confidentiality agreement to assure the utmost privacy when handling PHI.
- Provide encrypted, security-enabled technology or develop a bring-your-own-device policy with clear usage rules.
- Employees who store hard-copy (paper) PHI in their home office need a lockable file cabinet or safe to store the information.
- Employees need a shredder at their location for the destruction of paper PHI once it is no longer needed. The company needs to specify when it is ok to dispose of any paper records.
- Employees must follow the organization’s media sanitization policy for disposal of all PHI or devices storing PHI.
- Make sure employees disconnect from the company network when they are done working. Usually, IT configuring timeouts take care of this.
- Employees cannot copy any PHI to external media not approved by the company. This includes flash drives and hard drives. You may require all PHI to stay on the company network.
- Keep logs of remote access activity, and review them periodically. IT should disable any accounts as soon as access is no longer required.
- Mandate that any employees in violation of these procedures will be subject to the company’s sanction policy and/or civil and criminal penalties.

Adapted from: Meeting HIPAA Requirements. TotalHIPAA. Available at: <https://www.totalhipaa.com/hipaa-compliance-working-remotely>. Accessed May 7, 2021.

With proper management, a hybrid team of administrative and support staff members can be a win-win situation for urgent care companies. Adapting to a hybrid model that balances productivity, culture, and the needs of employees will be key to success in the wake of the COVID-19 pandemic as the world attempts to establish a new normal. ■

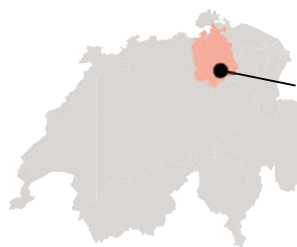
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# Managing Concussions

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*In Acute Care*  
Adapted from the blog, pdxem.com



The Zurich guidelines on concussion management previously called for "complete cognitive and physical rest" as the mainstay of concussion management.<sup>1</sup> These recommendations, however, were largely formed on expert opinion and lacked backing by rigorous research.

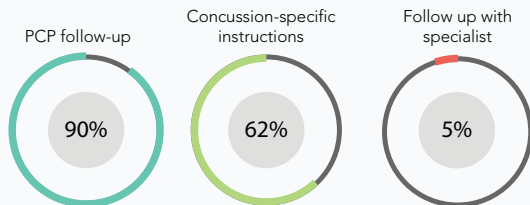
## 24-48 hrs

The most recent recommendation from the Concussion in Sport Group calls for 24-48 hours of rest and a graded return to activity (unrestricted once asymptomatic)<sup>2</sup>.

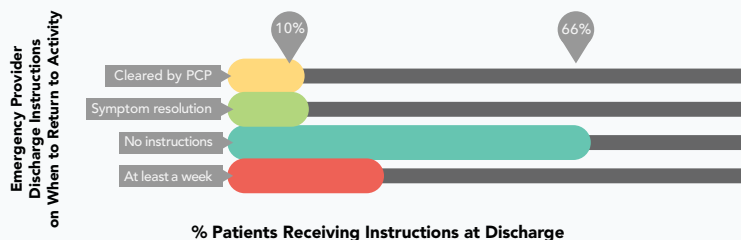


Unfortunately, *asymptomatic* from a concussion standpoint is not always obvious, which can make the new recommendation difficult to implement as patients may remain symptomatic while adhering to rest. Symptomatology is often multifactorial and they may be instructed to rest despite symptoms from etiologies other than concussion.<sup>3</sup>

A 2014 study by De Maio et al<sup>4</sup> found discharge instructions to vary widely among ED physicians. Most recommended PCP follow-up but only a slight majority gave any instructions specific to concussion management.



Instructions on concussion follow-up



% Patients Receiving Instructions at Discharge

In the same study, recommendations on activity restriction were equally variable. Two-thirds of patients didn't get any information regarding when to resume activity at discharge!

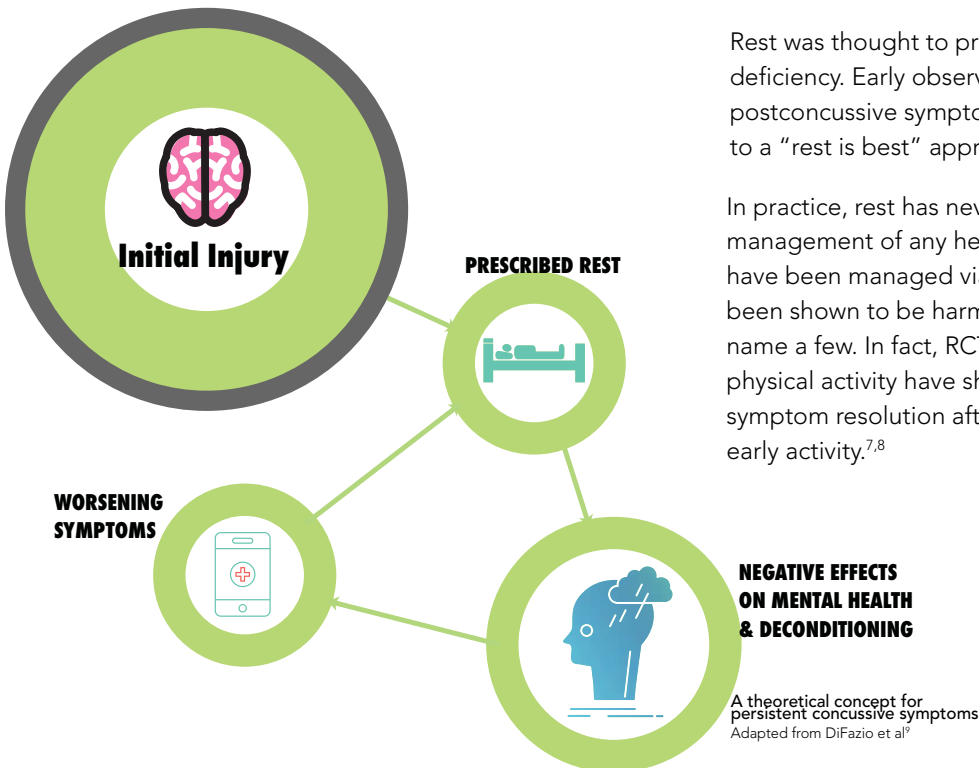
# THE DOWNSIDE OF REST

Animal models have demonstrated loss of ionic gradients in the CNS following concussion and reduced cerebral blood flow.<sup>5</sup> Increased activity of Na/K ATPase leads to a relative insufficiency in ATP.



Rest was thought to prevent exacerbating this energy deficiency. Early observational studies showed worsening postconcussive symptoms with early activity, which led to a “rest is best” approach.<sup>6</sup>

In practice, rest has never really proven to be optimal management of any health condition. Many conditions have been managed via strict rest which has ultimately been shown to be harmful—MI, stroke, back pain, to name a few. In fact, RCTs comparing strict rest to early physical activity have shown no improvement in symptom resolution after a concussion compared to early activity.<sup>7,8</sup>



# THE UPSIDE OF EARLY ACTIVITY

The Concussion in Sport Group recommends a graded return to activity. Recent RCTs and a systematic review have shown that early activity speeds recovery from concussion.<sup>10-12</sup> The key is to keep activity at a level which doesn't worsen symptoms. One approach shown to be effective is to use an increase in two points on a visual analog scale (VAS) to guide activity progression.<sup>11</sup> If symptoms worsen with increased activity, then the patient returns to the previous phase. If the patient's symptoms don't climb two or more points on the VAS for 24 hours at the new activity level, then the patient graduates to the next phase.

## ACUTE POSTINJURY REST

There's universal agreement that second-impact syndrome must be avoided. The goal immediately after injury is to minimize the risk of additional head trauma. **24-48 hours of rest** limits activities which may lead to additional head trauma.



## A good starting point...

40%-60% max heart rate by age

The ubiquity of smart phones and watches means most people can track their heart rate at home. A person's max heart rate can be calculated with the equation  $[220 - (\text{age in years})]$ .

# FACTS



Rest immediately after a concussion is to prevent another head injury, not screen time, per se.

Early, graded activity is safe & likely speeds recovery.



Everyone with a concussion should be given concussion-specific instructions and precautions.



Every patient with a concussion should be seen by a PCP after the acute care setting.

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# Febrile Seizure: An Urgent Care Overview

**Urgent message:** While alarming to parents, febrile seizures in children typically are benign and self-limited. However, the possibility of a life-threatening etiology mandates that the urgent care provider determine the type of seizure and employ appropriate assessments based on factors specific to each case.

TIFFANY ADDINGTON, MD

## Case

A previously healthy 3-year-old boy presented to urgent care after having a seizure at home. He had a fever that morning and was given ibuprofen. His mother also reports he had one loose stool. While resting on the floor watching television, his whole body stiffened and began jerking in a rhythmic pattern. This continued for 2-3 minutes before subsiding. Following the event, the child was minimally responsive and limp. His mother loaded him in the car and headed to the urgent care. On physical examination, he had a temperature of 38.9°C, blood pressure 88/45 mmHg, heart rate 132 beats/min, and respiratory rate 36 breaths/minute. His overall general and neurologic exams were unremarkable by the time he arrived.

## Condition Overview

Febrile seizures are the most common type of epileptic event in children.<sup>1</sup> The American Academy of Pediatrics defines febrile seizure as convulsions in febrile children between the ages of 6 months and 60 months who have no identified intracranial or metabolic cause or afebrile seizure history.<sup>2-4</sup> Febrile seizures occur in 2%-5% of children under the age of 5, with the peak incidence at 18 months. They occur slightly more in males than in females.<sup>1-4</sup> The specific cause of febrile seizure remains unknown.<sup>5</sup>

## Differentiating Seizure Type by History/Exam

The history and physical exam are critically important



for the urgent care provider in differentiating a seizure that carries little risk from a seizure or other movement episode that requires further evaluation. Diagnosis of febrile seizure requires detailed history-taking with close attention to the length of the event, nature of the jerking movements, illness symptoms, recent vaccinations, family history of seizures (with or without fever), and patient's medical history.<sup>1,3-6</sup> Febrile seizures can be categorized as simple or complex.

*Simple febrile seizures* account for two-thirds of pedia-

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**Table 1. Febrile Seizure Characteristics by Category**

Simple Febrile Seizures	Complex Febrile Seizures
Generalized tonic-clonic activity	Focal features
Last less than 15 minutes	Last greater than 15 minutes
No recurrence in 24 hours	Recurrence within 24 hours
Spontaneously resolves	Full recovery is not present within 1 hour

tric febrile seizures.<sup>3,5</sup> They are defined as occurring for less than 15 minutes, with seizure activity characterized as generalized convulsions with no return of seizure activity within 24 hours and no neurologic disease.<sup>2-4,7</sup> While alarming for parents, they are generally benign, and a majority of children have an excellent prognosis.<sup>5</sup>

*Complex febrile seizures* are focal, prolonged (occur for greater than 15 minutes), and associated with a postictal neurologic abnormality and/or return of seizure activity within 24 hours.<sup>3,4</sup> (See **Table 1** for differentiating characteristics.) There is a subset of complex febrile seizures called *febrile status epilepticus*, defined as a complex febrile seizure lasting more than 30 minutes; these account for approximately 5% of febrile seizures.<sup>1,3</sup> Prognosis for each of these categories will be discussed later.

In addition to an accurate description of the seizure to differentiate seizure type, a thorough history and physical exam are important to help localize a possible source for the fever.<sup>4,5</sup> History of recent vaccinations is also important to ascertain because certain vaccines carry a risk of postvaccination febrile seizure.<sup>3,6</sup> With respect to that, families need to receive education about the significant risk for morbidity in children who are not immunized against the diseases a vaccine is intended to prevent.<sup>6,8</sup>

### Physical Examination

Patients presenting with febrile seizure often have or have had a fever greater than 38°C.<sup>4</sup> Completing a full physical examination can help identify the underlying illness, such as upper respiratory infection, otitis media, pneumonia, gastroenteritis, roseola, or influenza. Fever source is often unidentified.<sup>3</sup> Physical examination for these patients should include assessment for meningeal signs, as well as serial neurologic evaluations; these will be valuable throughout the child's medical care.<sup>3,7</sup>

### Diagnostics

#### Bloodwork

Routine serum diagnostic testing is discouraged in evaluation of children with simple febrile seizures, and there are no evidence-based guidelines for complex febrile

seizures in an otherwise healthy child. Therefore, studies such as CBC, BMP, Ca, Mg, and glucose levels after simple febrile seizure in patients over 6 months of age are of limited value unless there are history or physical exam findings which lead to concern about investigating these values.<sup>1,2</sup> Afebrile seizure, children with symptoms of intracranial infection, first complex febrile seizure for an infant less than 1 year of age, or children with an illness associated with significant vomiting or diarrhea are a few examples of when these studies may need to be completed.<sup>1,5</sup> Generally, serum testing is unnecessary in the evaluation of febrile seizures.

#### Urinalysis

Urine studies are to be completed depending on gender, age, and standard guidelines for urinary tract infection evaluation.<sup>3</sup>

#### Lumbar Puncture

The American Academy of Pediatrics (AAP) developed specific guidelines for lumbar puncture following simple febrile convulsions for children 6 months to 60 months of age.<sup>2</sup> Regardless of patient age, the AAP recommends lumbar puncture for any patient who presents with meningeal signs/symptoms or whose history or exam is concerning for meningitis or central nervous system infection.<sup>2</sup> See **Table 2** for additional guidelines.

The recommendation to consider lumbar puncture for children ages 6 months to 12 months with incomplete *Haemophilus influenzae* or *Streptococcus pneumoniae* vaccination or with unknown immunization status is founded in the high morbidity and mortality of bacterial meningitis in this population if it is not treated.<sup>2</sup> Clinicians should also consider lumbar puncture for children with fever and seizure who were recently exposed to systemic antibiotics to evaluate for partially treated meningitis.<sup>2</sup> The extent of this impact relates directly to the specific antibiotic and would include dosage, form of administration, central nervous system penetration, and underlying infectious cause of the meningitis.<sup>2,3</sup>

These guidelines do not apply to patients with com-

**Table 2. AAP Guidelines for Lumbar Puncture with Simple Febrile Seizures**

Infants <6 months of age	Lumbar puncture recommended
Infants 6-12 months of age	Consider for children incompletely immunized or unknown status of <i>H influenzae b</i> and/or <i>Strep pneumoniae</i>
Patient of any age	Persistent lethargy beyond typical postictal length Meningeal signs (neck stiffness, Kernig/Brudzinski's signs, etc.) Pretreatment with antibiotics Clinical suspicion

*“Understanding both risk of recurrence and risk of epilepsy following a febrile seizure can assist medical professionals in effectively educating families at time of discharge from medical care.”*

plex febrile seizures, history of afebrile seizures, central nervous system abnormalities, or neurologic injury.<sup>2</sup>

While no specific AAP guidelines for a lumbar puncture following complex febrile seizure exist, a lumbar puncture could be considered for patients with prolonged mental status change, critically ill patients, or symptoms of an infection of the central nervous system.<sup>2</sup>

### Neuroimaging

Since there is an extremely low likelihood of finding an underlying structural cause of simple febrile seizures, the role of neuroimaging is very limited. Plain skull x-rays are of no value and the AAP does not support routine CT or MRI imaging for patients with simple febrile seizures.<sup>1,2</sup> Since CT imaging results in significant radiation exposure, and because MRI imaging often requires sedation, there may be more risk to performing these procedures than not.<sup>2</sup> CT imaging should be considered when there is risk of trauma or evidence of increased intracranial pressure.<sup>1</sup> MRI scans may have a role for children with complex febrile seizures after consultation with a neurology specialist.<sup>1</sup>

### EEG

Routine EEG is not indicated for assessment of healthy patients with simple febrile seizure because it does not assist in diagnosis or management, nor does it help determine recurrence or epilepsy risk.<sup>1,2</sup> There are no specific guidelines on the value of routine use of EEG in

the evaluation of children with complex febrile seizures, but this can be considered in consultation with a neurology specialist.<sup>3</sup>

### Management

For simple febrile seizures where the child is back to their neurologic baseline, the main priorities are to look for a potential cause of fever and to provide reassurance and education for the family. Intervention is rarely necessary since most febrile seizures are self-limited.<sup>1</sup>

Providers can consider benzodiazepine medication management for seizures that do not resolve within 5 minutes.<sup>1,3,8</sup> Diazepam or lorazepam can be administered IV or IM. Diazepam can also be administered rectally. Midazolam can be administered by buccal or intranasal route with similar efficacy.<sup>1,3</sup> If the first dose of these medications is ineffective, status epilepticus treatment protocol initiation is recommended.<sup>1</sup>

Consultation with a neurologist or referral to a pediatric emergency department may be a consideration for children who present with complex febrile seizures by history.

For infants or children who are post-ictal, it is important to provide supportive care and ensure the child returns to their neurologic baseline. If the child has more seizures, has focal deficits, or does not return to their neurologic baseline, then further evaluation is necessary.<sup>8</sup> Other concerning signs that require hospitalization include meningeal signs, high risk of seizure recurrence, respiratory distress, persistent neurologic findings (ie, Todd's paresis), petechial or purpuric rash, or possible serious infection.<sup>5</sup>

Antipyretics can be utilized to treat fever in children who have symptoms associated with their fever.<sup>5</sup> These medications do not decrease recurrence rates and should not be administered routinely or preventatively.

It is essential for medical providers to explain the antipyretic is not to control or prevent the seizure but to address symptoms of pain or fussiness associated with fever.<sup>3,5</sup>

Healthcare professionals must also recognize that fe-

brile seizures are overwhelming and terrifying for parents to witness.<sup>5</sup> It is extremely important to educate and reassure families about the overall benign nature of simple febrile seizures.<sup>3</sup> In addition, counseling parents about the value of first aid during seizure activity can empower families to effectively keep the child safe during the event. Medical providers can also provide information to the family about when to contact their physician and when to take the child to the emergency department.<sup>1,5</sup>

Long-term/continuous treatment with antiepileptic medications in prevention of recurrent febrile seizures is not recommended due to the risk of adverse reactions associated with these medications being greater than its benefit in this population.<sup>3,5,7,8</sup>

### Home Education

All families should receive education in case a seizure recurs with this or a future illness. Family management of febrile seizures at home involves keeping the child safe during seizure activity, as well as knowing when to contact emergency services or the primary care physician.<sup>5</sup>

Families can keep children safe during seizure activity by positioning the child on their side at the level of the floor, removing any sharp objects. Do *not* place anything in the child's mouth. Expert consensus counsels on providing rectal diazepam to families for home administration for febrile seizures lasting more than 5 minutes.<sup>3</sup> Medical professionals may consider prescribing rectal diazepam for emergency use at home if the child is at high risk for prolonged or multiple febrile seizures or the family does not live near a medical facility.<sup>1</sup>

### Prognosis

Simple febrile seizures are generally benign in nature, without lasting effects.<sup>1,2</sup> They are often self-limited and will stop without intervention.<sup>1,5</sup> Simple febrile seizures do not cause intellectual disabilities and they are not an indication of epilepsy.<sup>2</sup>

Understanding both risk of recurrence and risk of epilepsy following a febrile seizure can assist medical professionals in effectively educating families at time of discharge from medical care. The rate of recurrence for a second febrile seizure is between 30% and 40%, with risk decreasing to 10% for a third or more subsequent febrile seizure.<sup>1-4,6</sup> Risk of recurrence is higher in those children who have a shorter duration of fever before seizure (<1 hour), lower peak temperature, family history of simple febrile seizures, or first febrile seizure occurring at less than 1 year of age.<sup>1,3</sup> (See **Table 3**.) Family history of simple febrile seizures is the only risk

**Table 3. Risk of Recurrence After an Initial Febrile Seizure<sup>9</sup>**

Risk factors	Number of risk factors	2-year risk of recurrence
• Age <18 months	0	14%
• Duration of fever <1 hour before seizure onset	1	>20%
• First-degree relative with febrile seizure	2	>30%
• Temperature <104°F (40°C)	3	>60%
	4	>70%

factor for both initial febrile seizure and risk of febrile seizure recurrence.<sup>1</sup>

The risk of a child developing epilepsy after a simple febrile seizure is comparable to the risk of epilepsy in the general population (estimated to be around 2%-3%).<sup>1,3-4</sup> Patients at risk for epilepsy include those with a family history of epilepsy, those who have a complex febrile seizure/febrile status epilepticus, recurrence of simple febrile seizure at less than 1 year of age, and those who have neuromotor developmental abnormalities at baseline.<sup>1,3</sup>

### Case Conclusion

This patient's fever and fussiness improved with ibuprofen during his urgent care visit. His activity had returned to baseline and physical exam remained unremarkable. No diagnostic testing was required, and he did not have any clinical symptoms or signs requiring inpatient management. He was diagnosed with simple febrile seizure, with fever likely due to viral gastroenteritis. He was discharged home with instructions on first aid for febrile seizures, supportive care for viral gastroenteritis, and fever management. ■

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## A 24-Year-Old Man with Ankle Pain After a Fall

Figure 1.



Figure 2.



### Case

The patient is a 24-year-old male who reports to urgent care with right ankle pain after falling from a ladder while cleaning out the gutters at his parents' home. He reports that he was only a few rungs up but that he landed "awkwardly" and immediately felt a sharp pain on the front of the ankle. He is unable to bear weight but denies any numbness or tingling.

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

## THE RESOLUTION

Figure 1.



Figure 2.

**Differential Diagnosis**

- Ankle sprain
- Adult Tillaux fracture
- Medial malleolus fracture

**Diagnosis**

This patient suffered an adult Tillaux fracture, which is a fracture of anterolateral tibial epiphysis. This occurs more commonly in adolescents and only rarely in adults. This is seen as an oblique lucency extending from the lateral distal tibia toward the midline articular surface of the distal tibia. This is an avulsion fracture of the anterolateral part of the tibial plafond.

**Learnings/What to Look for**

- In adult Tillaux fracture, the avulsed fragment is triangular, while in juvenile Tillaux fracture it is quadrangular
- The mechanism of injury is an inversion of the ankle while the foot is in supination with external rotation resulting in an avulsion fracture of the anterolateral tibial plafond due to a taut intact anteroinferior tibiofibular ligament

- It is not well seen on AP and lateral standard radiographic views of the ankle, so an oblique view (mortise) should be performed if this injury is suspected
- It can rarely be associated with injury of the medial malleolus or deltoid ligament

**Pearls for Urgent Care Management**

- If fracture displacement is  $<2$  mm, this injury can be managed conservatively (ie, non-weightbearing cast or brace for 6 weeks, followed by physical therapy as needed)
- If the fracture fragment is displaced  $>2$  mm, referral to an orthopedist for surgical consideration is warranted. The patient may need to undergo closed reduction or open reduction and internal fixation

**Acknowledgment:** Images and case presented by Experity Teleradiology ([www.experityhealth.com/teleradiology](http://www.experityhealth.com/teleradiology)).



## A 34-Year-Old Man with Pain and Burning in Both Eyes



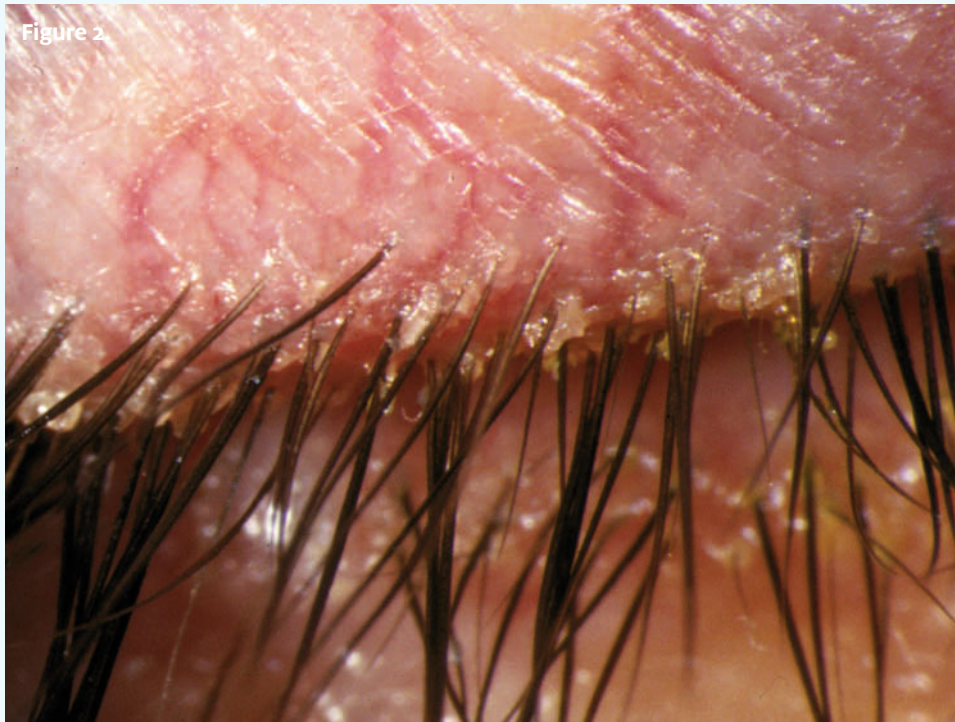
Figure 1

### Case

The patient is a 34-year-old male who presents with bilateral ocular pain and burning. He is noted to have excessive tearing and continuous eye rubbing. He comments that his eyes itch persistently and that both eyes feel as if there is something in them. Scaly plaques and crust are visible along the top and bottom eyelid.

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

## THE RESOLUTION

**Differential Diagnosis**

- Allergic conjunctivitis
- Blepharitis
- Seborrheic dermatitis

**Diagnosis**

This patient was diagnosed with blepharitis, sometimes referred to as meibomitis, which is a chronic inflammatory condition of the eyelid margin associated with eye irritation. It is more common in individuals with fair skin phototypes and closely linked with dry eye syndrome.

**Learnings/What to Look for**

- Patients will commonly describe eyelid erythema, eyelid swelling, eyelid itching, foreign body sensation in the eye, burning of the eye, excessive tearing, blurry vision, photophobia and collections of matter around the eyelashes upon awakening
- Patients with blepharitis are also prone to having multiple styes or chalazions on the eyelids

**Pearls for Urgent Care Management**

- For minor blepharitis, first-line treatment is self-care measures—washing the eyes, lid massage, artificial tears, and applying warm compresses
- If self-care measures do not resolve the problem, consider topical ophthalmic antibiotics (ie, erythromycin ophthalmic, bacitracin ophthalmic) in addition to self-care measures
- For severe cases, oral antibiotics such as tetracycline or doxycycline may be used

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



## A 38-Year-Old Female with Abdominal Pain and Chest Tightness

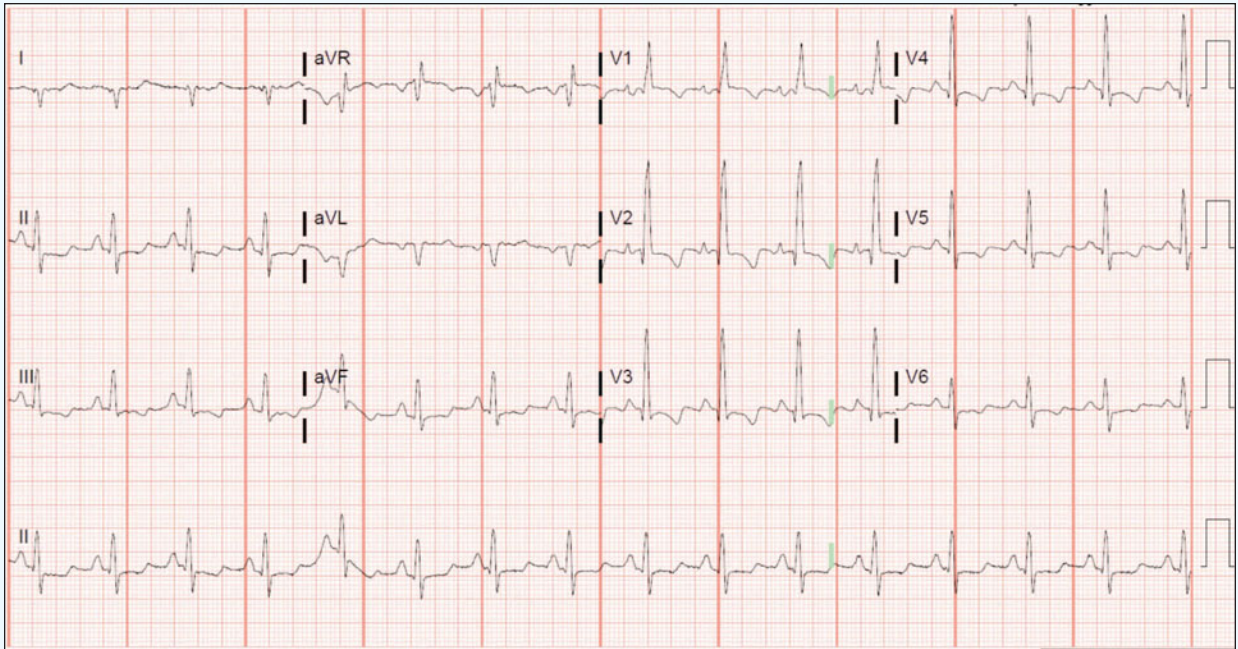


Figure 1.

A 38-year-old female with no past medical history presents to an urgent care with right upper quadrant abdominal pain and chest tightness, worsening for 1 week. She reports that her chest tightness is associated with shortness of breath, and is worse when walking and lying on her side. She denies fever, cough, dysuria, headache, or weakness.

View the ECG taken and consider what your diagnosis and next steps would be.

*(Case presented by Catherine Reynolds, MD, The University of Texas Health Science Center at Houston McGovern Medical School.)*

## THE RESOLUTION

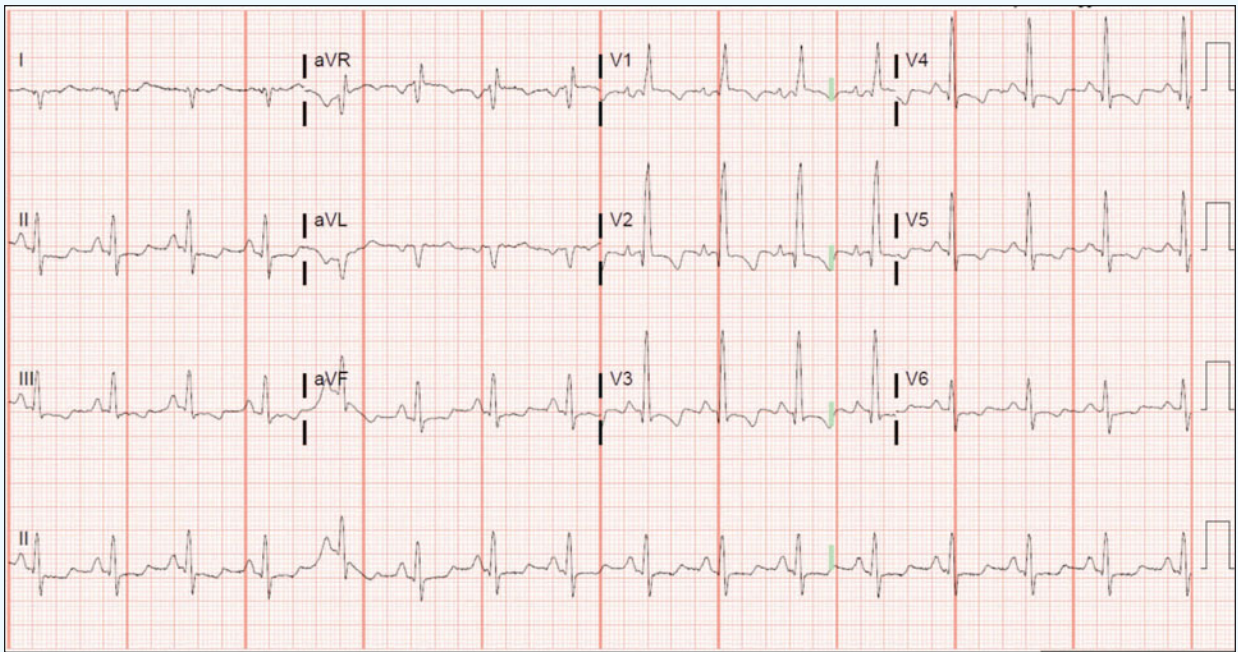


Figure 2.

**Differential Diagnosis**

- Right bundle branch block
- Non ST-elevation myocardial infarction
- Wellens syndrome
- Right heart strain
- Left ventricular hypertrophy

**Diagnosis**

This patient was diagnosed with right heart strain. The ECG shows a regular, narrow-complex rhythm at a rate of 96 bpm. There is a right axis deviation (QRS axis  $>90^\circ$ ). The anterior leads (V1-V4) have T wave inversions, and ST depressions are present in the inferior leads (II, III, aVF). A dominant R wave in V1 is also present.

Together, these findings are concerning for right heart strain or right ventricular strain, a pattern seen in patients with right ventricular hypertrophy or dilatation. Any condition that causes deformation of the muscle of the right ventricle can cause these ECG findings, including but not limited to:

- pulmonary hypertension
- pulmonary embolism
- lateral myocardial infarction
- chronic lung disease such as COPD
- pulmonic stenosis
- bronchospasm<sup>1</sup>

While it is clear that right heart strain is present on this ECG, it is impossible to know from just the ECG what condition is causing this pattern. In this particular case, the patient had a pulmonary embolism causing right heart strain.

This constellation of findings can be easily confused with other conditions and should be viewed within the context of the patient's clinical presentation. For example, patients with Wellens syndrome will classically have anterior T wave inversions whose morphology may resemble those seen in right heart strain. However, in a patient with Wellens syndrome, T wave inversion in lead III is less likely and we would expect the patient to be completely pain-free following a painful episode. Similarly, if an ECG is taken out of context or interpreted incompletely rather than as a whole, it can be easy to mistake a right ventricular strain pattern for a simple right bundle branch block or nonspecific ischemia.

**Learnings/What to Look for<sup>2</sup>**

Some key electrocardiographic features of right heart strain are:

- Right axis deviation
- Dominant R wave in V1
- Dominant S wave in V5 or V6
- T wave inversions and ST depressions in right precordial (V1-4) and inferior leads (II, III, aVF)
- S1Q3T3: a "classic" but not specific or sensitive finding of deep S-wave in lead I, Q wave in lead III, and inverted T wave in lead III

## THE RESOLUTION

- Incomplete or complete right bundle branch block
- Sinus tachycardia

**Pearls for Urgent Care Management**

- ECGs are an important triage tool when assessing for right heart strain—they are easier to obtain than an echocardiogram or CTA, and can convey useful information to help risk stratify patients
- No one specific finding is diagnostic of right heart strain, and it is impossible to know from just an ECG what is causing the right ventricular dysfunction. Use the ECG findings as a building block to help guide your diagnosis and management, and maintain a broad differential
- Right ventricular strain pattern on ECG is associated with poor short-term outcomes in patients with pulmonary embolism and normal blood pressure<sup>3</sup>
- Initiate transfer to the ED in patients where you suspect PE with findings of right heart strain on ECG

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**Acknowledgment:** JUCM appreciates the assistance of ECG Stamped (www.ecgstamped.com) in sourcing content for electrocardiogram-based cases for *Insights in Images* each month.

ECG  STAMPEDE



# ABSTRACTS IN URGENT CARE

- Light Exercise and mTBI
- Asymptomatic Hypertension—What's the Risk?
- Racial Factors in Pain Treatment
- Supplemental Oxygen in ACS
- Shorter Courses of Antibiotics for Pediatric CAP
- Who's Behind that COVID-19 Mask?
- COVID-19 Infection in Healthcare Workers

■ IVAN KOAY, MBChB, FRNZCUC, MD

## Light Exercise for Patients with Mild Traumatic Brain Injury (mTBI)

**Take-home point:** There is no benefit for recovery in patients with mTBI randomized to light exercise compared with standard care.

**Citation:** Varner C, Thompson C, de Wit K, et al. A randomized trial comparing prescribed light exercise to standard management for emergency department patients with acute mild traumatic brain injury. *Acad Emerg Med*. January 22 201. [Epub ahead of print]

**Relevance:** Evidence for postconcussion recommendations has been rapidly evolving, especially with regard to the role of physical activity.

**Study summary:** This was a multicenter, randomized controlled trial conducted in three tertiary care EDs in Ontario, Canada. Adults who sustained a mTBI in the 48 hours prior to presentation were eligible for enrollment. The enrolled participants' baseline function was assessed using the Rivermead Post-concussion Symptom Questionnaire (RPQ). Patients were then randomized to 30 minutes of light exercise (ie, walking) daily (intervention group) or graduated return to usual activities with cognitive rest (control group).

A total of 367 patients were initially enrolled into the study, with 241 patients completing the 30-day follow-up protocol (115 intervention, 126 control). The authors found no difference in the proportion of patients with postconcussion syndrome between the groups (13.4% intervention vs 14.6% control) and no difference in the median change of RPQ scores (13 intervention vs 14 control).



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**Limitation:** Many patients were lost to follow-up in the study. The study design precluded blinding. ■

## Incidental Asymptomatic Hypertension

**Take-home point:** Patients with asymptotically elevated blood pressure do not appear to be at a significantly elevated risk of adverse events in subsequent months and years.

**Citation:** McAlister FA, Youngson E, Howe BH. Elevated blood pressures are common in the emergency department but are they important? A retrospective cohort study of 30,278 adults. *Ann Emerg Med*. 2021;77(4):425-432.

**Relevance:** The incidental finding of asymptomatic hypertension among patients in the urgent care and emergency settings presents an extremely common clinical dilemma. This study suggests that this finding likely demands no urgent or immediate management.

**Study summary:** This was a retrospective cohort study of all patients presenting to the University of Alberta (Canada) Hospital ED. The authors analyzed data from 30,278 consecutive patients that presented to the ED and who were ultimately discharged home. The authors found that 48.6% of patients had a BP of >140/90 mmHg and that 72.9% of this group did not have a known history of hypertension. Among these patients, the most common chief complaints were trauma (25.7%), followed by abdominal symptoms (12.6%), and chest pain (11.1%).

Of the patients with an elevated blood pressure reading without a known history of hypertension, 65.8% were treated within a month in an outpatient setting. Patients with BP measurements of  $\geq 160/100$  without a history of hypertension were only slightly more likely to suffer stroke, transient ischemic attack (TIA), acute coronary syndrome (ACS), heart failure, or death in the subsequent year (3.3% vs 2.5%) or 2 years (5.9% vs 3.8%) than those without. Most importantly, this difference

was no longer significant after adjusting for patient age, gender, and comorbidities.

**Limitation:** This was a single-center study with retrospective design. Admitted patients were not included in the analysis. ■

### Does Patient Race Affect How We Treat Pain?

**Take-home point:** Black and Hispanic patients with renal colic received significantly lower doses of opioids than White patients.

**Citation:** Berger A, Wang Y, Rowe C, et al. Racial disparities in analgesic use amongst patients presenting to the emergency department for kidney stones in the United States. *Am J Emerg Med.* 2021;39:71–74.

**Relevance:** Disparate treatment of pain due to racial bias may be an underappreciated social determinant of health (SDH).

**Study summary:** This was a retrospective review of 266,210 ED patients presenting for renal colic from the Premier Hospital Database (which accounts for 20% of total hospitals in the U.S.). Patient data analyzed included age, gender, insurance status (Medicare, Medicaid, private, or other/unknown) and substance-use history. Race and/or ethnicity was categorized as White, Black, or Hispanic. Patients of unknown race/ethnicity were excluded.

The authors found that White patients received the highest total doses of opioid: 3.3 mg more morphine mg equivalents (MME) than Black patients and 6.0 mg more MME than Hispanic patients. Black patients were less likely to receive ketorolac but there was no difference in ketorolac administration between Whites and Hispanics. Racial and ethnic differences in the cohort persisted even when controlling for regional and urban/rural variations, insurance type, hospital size, teaching hospital status, age, and history of substance abuse.

**Limitation:** The patients included in the analysis were predominantly White (84%) and only 6% were Black. Administrative data retrospectively evaluated are subject to multiple forms of bias. ■

### High-Flow Oxygen in Patients with Suspected Acute Coronary Syndrome (ACS)

**Take-home point:** Patients with suspected ACS and normal saturation levels are unlikely to benefit from supplemental oxygen therapy.

**Citation:** Stewart R, Jones P, Dicker B, et al. High flow oxygen and risk of mortality in patients with suspected acute coronary

syndrome: pragmatic, cluster randomized, crossover trial. *BMJ.* 2021;372:n355.

**Relevance:** Current guidelines recommend supplementary oxygen for patients with suspected ACS only in the setting of low SpO<sub>2</sub> levels. This study investigates the effects administering high-flow oxygen to patients with suspected ACS and normal SpO<sub>2</sub>.

**Study summary:** This was a cluster randomized, pragmatic, crossover trial of all patients with suspected ACS treated by the ambulance service in New Zealand and patients that were included in the All New Zealand Acute Coronary Syndrome Quality Improvement (ANZACSQI) Registry. A total of 40,872 patients with suspected or confirmed ACS were enrolled, with 20,304 in the high-oxygen and 20,568 in the low-oxygen group. Patients were randomized to a high-oxygen group that received oxygen with a flow of 6-8 L/min by face mask, irrespective of SpO<sub>2</sub>. The patients randomized to low oxygen had nasal cannula oxygen flow rate titrated to maintain saturations at 90%-94%.

The authors found neither benefit nor harm in the use of high-flow oxygen as part of routine care in patients presenting with suspected ACS. There was no significant difference found in mortality rates for patients with a final diagnosis of unstable angina, STEMI, or NSTEMI in either group.

**Limitation:** Study protocol pooling of patients meant that many patients included in the analysis did not have ischemic symptoms when seen. ■

### Shorter Courses of Antibiotics for Pediatric Community-Acquired Pneumonia (CAP)

**Take-home point:** A 5-day course of antibiotics is as effective as 10 days for the outpatient treatment of CAP in children.

**Citation:** Pernica JM, Harman S, Kam AJ, et al. Short-course antimicrobial therapy for pediatric community-acquired pneumonia: the SAFER randomized clinical trial. *JAMA Pediatr.* 2021;175(5):475-482.

**Relevance:** Antibiotic stewardship is a key part of prescribing practice within urgent care. The ability to prescribe shorter courses will ensure better compliance and reduce the risk of antimicrobial resistance and adverse reactions.

**Study summary:** This was a dual-centered, blinded, noninferiority RCT conducted in Ontario, Canada. Patients aged 6 months to 10 years with CAP not requiring hospital admission were enrolled into the study. Patients were randomized equally to receive either 10 days of amoxicillin or 5 days of amoxicillin followed by 5 days of placebo tablets. The primary outcome

*“The higher the cumulative community incidence of COVID-19 in the weeks prior to the antibody testing, the higher the risk of the healthcare worker being antibody positive.”*

for this study was clinical cure at 14 to 21 days postenrollment.

Two hundred eighty-one previously healthy pediatric patients were enrolled into the study, with a total of 126 included in each group for final analysis. The authors found that short-course antibiotic prescribing was noninferior to 10 days of therapy. Additionally, caregivers for the patients with the short-course group reported significantly less absenteeism from work than the caregivers of the standard course group.

**Limitation:** Most pediatric pneumonia is viral in etiology. The authors acknowledge that they could not definitively establish bacterial infection in the enrolled participants. Ten percent of subjects were lost to follow-up. ■



## COVID-19 Literature Reviews

### Mask Use and Masked Facial Expressions

**Take-home point:** Clear masks improve perceptions of physician-patient communication.

**Citation:** Kraztke I, Rosenbaum M, Cox C et. al. Effect of clear vs standard covered masks on communication with patients during surgical clinic encounters: a randomized clinical trial. *JAMA Surg.* March 11, 2021. [Epub ahead of print]

**Relevance:** With clinician mask use during the COVID-19 pandemic, limiting barriers for physician-patient interactions is more critical than ever.

**Study summary:** This was a single-center randomized trial in the southern U.S. Fifteen surgeons were randomly assigned to wearing a standard surgical mask or a clear mask with equivalent protection. A survey adapted from the Clinician and Group Assessment of Healthcare Providers and Systems was used to measure the quality of communication in physician-patient interactions. Two hundred patients were enrolled and divided equally between consultations with clear vs standard surgical masks. The authors found that patients in the clear mask group had significantly more positive responses (99%) compared with those in the standard mask group (85%). Similarly, patients in the clear mask group trusted the surgeon's decisions more frequently (94% vs 72%). Patients perceived higher surgeon empathy in the clear mask group, as well.

**Limitation:** This was a single-center study and examined only surgeons' interactions with patients. It is unclear if this would be generalizable to other regions and/or specialties. ■

### Infection Among Healthcare Workers with COVID-19

**Take-home point:** COVID-19 infection in healthcare workers (HCWs) does not appear to be linked to workplace factors, including roles, environment, or contact with COVID-19 patients

**Citation:** Jacob J, Baker J, Fridkin S, et al. Risk factors associated with SARS-CoV-2 seropositivity among U.S. health care personnel. *JAMA Network Open.* 2021;4(3):e211283.

**Relevance:** Protection of HCWs encountering COVID-19 in the workplace is crucial for their health and wellbeing, as well as function of the healthcare system.

**Study summary:** This was an infection-prevention screening program assessing seroprevalence of COVID-19 in HCWs from a large healthcare system affiliated with four Prevention Epicenters in Atlanta, (Emory Healthcare), Baltimore, (Johns Hopkins Medicine and University of Maryland Medical System), and Chicago (Rush University System). All badged HCWs were eligible to participate in a voluntary serological survey. The serological test used met the U.S. FDA emergency use criteria, and all measured immunoglobulin G (IgG).

The final analysis included 24,749 participants. Most HCWs reported working predominantly in acute care hospitals (87.1%), with smaller proportions working in ambulatory settings (5.3%) or long-term care or inpatient rehabilitation facilities (2.5%). Nurses constituted the most common role among the participants (31.6%) and half of the participants reported caring for patients with COVID-19.

The authors found a low seroprevalence (4.4%) of SARS CoV-2 IgG among HCWs across multiple, geographically diverse health care systems. There was no clear association between workplace contact with patients with COVID-19 and antibody positivity. They also noted that the higher the cumulative community incidence of COVID-19 in the weeks prior to the antibody testing, the higher the risk of the HCW being antibody positive. Therefore, community contact with COVID-19 was most associated with an increased the risk of seropositivity among these HCWs.

**Limitation:** This study used a convenience sample leading. The authors were also unable to analyze the risk associated with specific activities, such as aerosol-generating procedures based on the lack of granularity in the demographics data. ■



# Can I Bill Patients for COVID-19 Vaccine Administration?

■ MONTE SANDLER

As practices start offering vaccinations for COVID-19 to their patients, we are getting a lot of questions about whether the patient can be asked to pay any portion of the administration fee. The answer is an emphatic *No*.

The Office of the Inspector General has received complaints from patients about charges they are asked to pay at time of service when getting their COVID-19 vaccines. So, on April 15, 2021, the Principal Deputy Inspector General Christi A. Grimm issued a message regarding provider compliance with the COVID-19 Vaccination Program. All participating organizations and providers must administer the COVID-19 vaccine with no out-of-pocket cost to the patient. Providers that have charged impermissible fees must refund them and ensure that individuals are not charged fees for the COVID-19 vaccine or vaccine administration in the future.

Practices also may not deny anyone vaccination based on the vaccine recipient's coverage status or network status; may not charge an office visit or other fee if COVID-19 vaccination is the sole medical service provided; and may not require additional medical services to receive COVID-19 vaccination.

That's fine for patients who have insurance that pays the full allowable, but what about patients who have no insurance, or their insurance plan doesn't cover vaccinations? What if the claim is applied to the deductible or the patient has a co-insurance?

There are solutions so the practice gets paid appropriately for administering the vaccine.

### First Solution: The COVID-19 Uninsured Program Portal

The CARES Act Provider Relief Fund included allocations for coverage of COVID-19-related services to uninsured patients. The program is overseen by the Health Resources & Services Ad-

ministration (HRSA; <https://coviduninsuredclaim.linkhealth.com/>), administered by United Health Group, and covers the same services as Medicare. However, it is not a United Health or Medicare program and you do not need to be credentialed with either of these payers.

Those practices that have not taken advantage of this program will need to do so. Vaccine administrations are covered the same as Medicare (\$40 per dose as of March 15, 2021). Prior to that date, reimbursement is \$16.94 for the first dose, and \$28.39 for the single or second dose. Timely filing requirements are the same as Medicare—1 year from the date of service. Providers must agree to:

- Verify each patient has no other healthcare coverage
- Accept the program payment as payment in full
- Confirm the patient was told they will not be billed
- Accept the terms and conditions. Claims may be subject to post-reimbursement review

Payments are received via Optum Pay Direct Deposit to the same bank account on file for United Health Group. All claims submitted are final. No corrected claims, late charges, or appeals are accepted. United Health Group has Smart Edits in place to assist in clean claim submission.

To obtain a temporary member ID to bill the program, this information is required:

- First and last name
- Date of birth
- Gender
- Social Security Number (SSN) and state of residence; if not available, enter state identification/driver's license
- Date of service
- Address, middle initial, and patient account number are optional.

If you do not have an SSN and state of residence or state identification/driver's license for the patient, you will need to attest that you attempted to capture this information before submitting a claim and the patient did not have this information at the time of service. Temporary member IDs are only valid for 30 days.



**Monte Sandler** is Executive Vice President, Revenue Cycle Management of Experity (formerly DocuTAP and Practice Velocity).

Providers will be required to attest that they checked for healthcare coverage eligibility and confirmed that the patient is uninsured.

## Second Solution: The COVID-19 Coverage Assistance Fund Portal

On May 3, 2021, the U.S. Department of Health and Human Services announced a new program to cover the costs of administering the COVID-19 vaccines to patients who do have insurance, yet it either does not cover vaccinations or applies cost-sharing to the patient. This population is referred to as the “underinsured”.

The COVID-19 Coverage Assistance Fund (CAF; see <https://www.hrsa.gov/covid19-coverage-assistance>) is also funded by the Provider Relief Fund Program and overseen by the HRSA. It is specifically for COVID-19 vaccine administration fees.

This program is administered by the SSI Group. There is no credentialing or contracting involved. Providers can enroll at [covid19coverageassistance.ssigroup.com/enroll](https://covid19coverageassistance.ssigroup.com/enroll) and must attest to the following:

- They have submitted a claim to the patient’s primary health insurance plan and there is a remaining balance from that health insurance plan that either does not include COVID-19 vaccination as a covered benefit or covers COVID-19

vaccine administration, but with cost sharing.

- They have verified that no other third-party payer will reimburse them for COVID-19 vaccine administration fees for that patient encounter, or other patient charges related to that COVID-19 vaccination, including copays for vaccine administration, deductibles for vaccine administration, and co-insurance.
- They will accept defined program reimbursement as payment in full.
- They agree not to balance bill the patient.
- They agree to program terms and conditions and may be subject to post-reimbursement audit review.

This program may be a little easier than the uninsured program, as the practice does not have to obtain a temporary member ID for each patient.

Claims can be submitted going back to December 14, 2020 when the first vaccine received an Emergency Use Authorization. Reimbursement is at the national Medicare rates listed above, and for any patient cost-sharing related to vaccination (ie, copays, deductibles, and co-insurance). Practices should receive an electronic remittance advice (ERA) with ACH payment in 5 business days on clean claims.

Bottomline, this is not a cash service. Stay compliant and take advantage of the programs available to you. ■

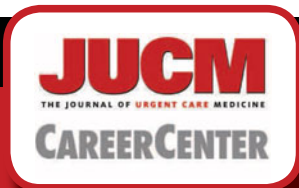
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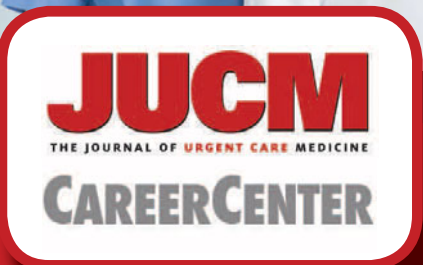
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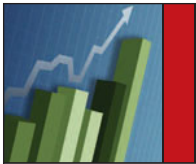
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# Millennials Are Drifting Away from Primary Care—Just as They Need a Physician Most

There's no gentle way to put it: Members of the Millennial generation simply are not as interested in having a traditional relationship with a primary care provider as their predecessors have been. That shouldn't be surprising, though, given that each successive generation seems to drift farther from that model of care. Where 82% of Baby Boomers (those born between 1946 and 1964) report having a primary care provider, the same can be said for only 74% of Gen Xers (1965–1980) and just 65% of Millennials (1981–1996).<sup>1</sup>

Here's what's interesting about the Millennials, though: If you were paying attention, you noted that the first batch of Millennials are turning 40 this year. And as they creep toward middle age, they'll need more than just episodic care in growing numbers.

That trend has already begun, actually. According to research

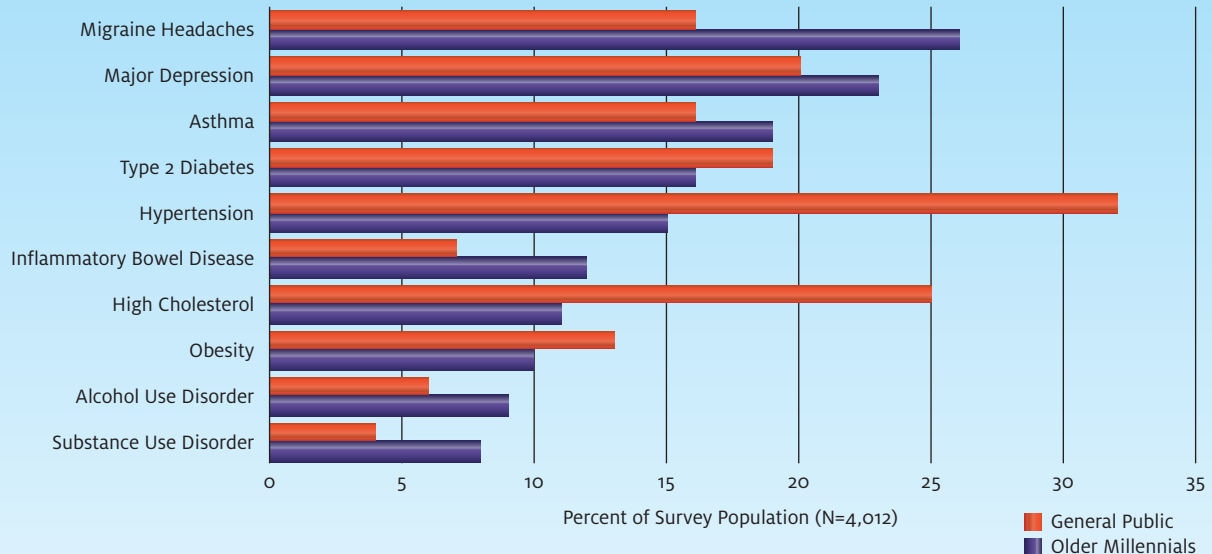
conducted by The Harris Poll, at the behest of CNBC, roughly 44% of Millennials born between 1981 and 1988 report having at least one chronic health condition already.<sup>2</sup> Given these patients' apparent disdain for having a "regular" doctor, this could be a golden opportunity for urgent care providers who are well versed in conditions that would typically be treated in a traditional primary care environment.

Check out the graph below to see which conditions we're talking about, specifically. ■

1. Employee Benefit Research Institute. Attitudes toward primary care providers differ by generation. Available at: [https://www.ebri.org/docs/default-source/infographics/46\\_ig-cehcs2-6feb20.pdf?sfvrsn=64793d2f\\_4](https://www.ebri.org/docs/default-source/infographics/46_ig-cehcs2-6feb20.pdf?sfvrsn=64793d2f_4). February 6, 2020. Accessed May 13, 2021.

2. Leonhardt M. 44% of older millennials already have a chronic health condition. Here's what that means for their futures. CNBC. Available at: <https://www.cnbc.com/2021/05/04/older-millennials-chronic-health-conditions.html>. Accessed May 13, 2021.

### SELECT CHRONIC HEALTH CONDITIONS OLDER MILLENNIALS\* VS GENERAL PUBLIC



\*33-40 years of age

Adapted from: Leonhardt M. 44% of older millennials already have a chronic health condition. Here's what that means for their futures. CNBC. Available at: <https://www.cnbc.com/2021/05/04/older-millennials-chronic-health-conditions.html>. Accessed May 13, 2021.



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## The Effect of COVID-19 on Reimbursement in 2020

During 2020, the urgent care industry experienced evolutionary change as COVID-19 swept across the country. While urgent care providers were challenged by the lack of available personal protective equipment, everchanging COVID-19 information and regulations, and visit volume peaks and valleys, it was difficult to navigate the financial landscape and stay profitable.

Read the full issue to access the revenue metrics, data, and trends that defined reimbursement in the urgent care industry in 2020:

- Fluctuating visit volume and revenue
- Reimbursement trends
- Increase in new patients
- Top billing challenges

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