

# JUCM<sup>®</sup>

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

JULY-AUGUST 2023  
VOLUME 17, NUMBER 10

**UCA** URGENT CARE  
ASSOCIATION

 COLLEGE OF  
URGENT CARE  
MEDICINE

www.jucm.com

The Official Publication of the UCA and CUCM

CLINICAL **cme**

## Demystifying Low-Dose Naltrexone (LDN) Therapy

 **cme**

### ALSO IN THIS ISSUE

- 23 **Pediatric Urgent Care**  
Is Your UCC Prepared to Resuscitate Pediatric Patients?
- 28 **Case Report**  
SARS-CoV-2 Coinfection:  
When It's More Than 'Just COVID'
- 46 **Revenue Cycle Management**  
Why You Need to Get Up to Speed on  
Modifier 25

**cme**



**Health Law and Compliance**  
Moving an Employee from  
F/T to P/T Could Be an HR  
Nightmare—If You Don't Do  
It Right

# CURATED URGENT CARE LEARNING. ANYTIME. ANYWHERE.

## Prioritize Your Proficiency in Urgent Care

Created by experts in urgent care medicine, IUCM offers the only comprehensive self-study training and CME/CE programs purpose-built for urgent care medicine. Explore common presentations and diagnoses to expand your knowledge and boost your career — **in a way that works for you.**

Find your learning path:

- Core Content in Urgent Care Medicine
- Core Content in Nursing and Medical Assisting
- New Topics in Urgent Care Medicine
- Clinical X-Ray Fundamentals for Urgent Care
- JUCM Journal-Based CME

Begin your journey or sharpen your skills while earning your CME/CE credits with IUCM — the proven leader in practical mastery for urgent care professionals.



**IUCM**<sup>®</sup>  
INSTITUTE OF URGENT CARE MEDICINE

LEARN MORE





# Dig a Little Deeper

■ TRACEY QUAIL DAVIDOFF, MD, FCUCM

I was scanning the tracking board during an urgent care shift the other day and, as usual, my brain was five steps ahead. I read the chief complaints and had already determined the questions I'd ask to guide the history based on the differential diagnoses I'd predicted. This is a regular occurrence in the UC and ED, whether we admit it or not. It's part of how we move things along—thinking a few steps ahead.

I was seeing a patient whose complaint was “Foot pain—ball of foot. No injury.” Already I'm working on the possibilities: plantar fasciitis, callus, poor footwear, metatarsalgia. I started asking questions, “Old shoes? Worse in the morning when you first wake up? Better with stretching? Worse at end of night?” Yes, yes, and yes. I glanced at her foot, saw a callus, and a plantar wart. She'd had trouble with the callus before. “Meant to call the podiatrist...I keep forgetting,” she told me.

The callus and the wart were tender, but not red or warm. The foot hurt when I dorsiflexed the toes. Then I noticed some old bruising under the little toe. “You sure there was no injury?” I asked. “Well, maybe,” she replied. Hmm...now there were four possibilities.

I could have diagnosed plantar fasciitis, contusion, callus, and plantar warts and called it a day. In and out in 30 seconds or less and on to the next patient. But for some reason I felt compelled to look at her foot more carefully.

I got a magnifying glass to examine the plantar wart. After some poking and prodding, I was shocked to find that the “plantar wart” was actually a piece of glass embedded in the sole of her foot. Then it hit her. She suddenly remembered walking barefoot in her garage just before the pain started. Oh, and then there was that pickle jar she had dropped out there a few weeks before that she remembered next. I removed the glass with tweezers, and the patient was instantly asymptomatic.

And what is the point of this story, you may ask? So often

our shifts are rushed and overfilled as we are pressured to see patients faster, respond to administrative concerns, keep up with our various inboxes, and the list goes on. I know providers that write up discharge instructions and prescriptions based on the chief complaint to save time before even seeing the patient. Others barely ask more than one or two questions, relying almost entirely on the triage information recorded by the staff or patient intake forms. For COVID concerns, I've seen colleagues walk into the patient's room and just say “negative” and walk out without taking any history at all. Some patients are barely examined.

When we have to see four to six patients per hour and complete all the required documentation, it is tempting to cut these corners in the interest of time.

But what of quality of care? Patients don't always describe their complaints fully or accurately to our support staff. Often the chief complaint is entered by a secretary or MA and not the patient. “Shortness of breath” often turns out to be nasal congestion, “chest pain” often is stomach pain, a “UTI” may be genital herpes, and “sore throat” can actually be neck pain. Foot pain and ankle pain are confused often. I'll admit I've preordered the wrong x-ray based on chief complaint in these cases more than once.

This case demonstrates the value of even a slightly more careful physical exam. A mentor once told me that 80% of diagnoses can be made on history alone. Although I find that is often the case, there is no substitute for careful inspection. I have caught abdominal aortic aneurysms in patients with back pain, pulseless feet in patients with blisters on their toes, shingles on patients with chest pain, and fractures in patients who supposedly hadn't had any injury.

All of these diagnoses, just like the piece of glass in the foot, would've been missed had I not taken that brief extra moment and done a little extra digging. Certainly, with all the pressures we face in UC, it's easy and tempting to do as little as possible. But I want to challenge you to take that extra minute and dig a little deeper. You might be surprised at what you find, and your patients will thank you for it. Just like that woman with the piece of glass in her foot did as she walked out of my clinic without the limp that she'd hobbled in with. ■



Tracey Q. Davidoff, MD, FCUCM is an attending physician with BayCare Urgent Care in Tampa, FL and a member of the JUCM Editorial Board.

# THIS CHANGES EVERYTHING.

Onsite respiratory PCR testing in ~15 minutes.

5 targets or 15 targets  
**YOU DECIDE**



**FDA CLEARED | CLIA WAIVED**

## EXPANDED SYNDROMIC TESTING

BIOFIRE® SPOTFIRE® Respiratory Panel  
1 PCR test. 15 targets. ~15 minutes.

### VIRUSES

Adenovirus  
Coronavirus SARS-CoV-2  
Coronavirus (seasonal)  
Human metapneumovirus  
Human rhinovirus/enterovirus  
Influenza A virus  
    Influenza A virus A/H1-2009  
    Influenza A virus A/H3  
Influenza B virus  
Parainfluenza virus  
Respiratory syncytial virus

### BACTERIA

*Bordetella parapertussis*  
*Bordetella pertussis*  
*Chlamydia pneumoniae*  
*Mycoplasma pneumoniae*

**FDA CLEARED | CLIA WAIVED**

## TARGETED SYNDROMIC TESTING

BIOFIRE® SPOTFIRE® Respiratory Panel Mini  
1 PCR test. 5 targets. ~15 minutes.

### VIRUSES

Coronavirus SARS-CoV-2  
Human rhinovirus  
Influenza A virus  
Influenza B virus  
Respiratory syncytial virus



Product availability varies by country. Consult your bioMérieux representative.



CLINICAL

## 11 Management of Patients on Low-Dose Naltrexone: A Clinical Review for Urgent Care Providers

Whether you prescribed it or (more likely) did not, the odds that you'll treat a patient on low-dose naltrexone are growing. You'll need to be aware of the patient's medication history, prioritization of nonopioid treatment options, and indications for timely referral or transfer.

*Ting-Hsuan Chiang, MD; Kenneth Schmitt, BS; Ariana Nelson, MD*

HEALTH LAW AND COMPLIANCE

## 19 Changing an Employee from Full-Time to Part-Time Status



Staffing needs fluctuate all the time. Before you try to adapt by simply changing a team member's status from full-time to part-time status, you should understand that such changes could have consequences beyond the hours worked.

*Alan Ayers, MBA, MAcc*

CASE REPORT

## 28 COVID-19 and RSV: Coinfection Requiring Hospitalization



Coinfection with COVID-19 and other respiratory pathogens requires careful assessment in the urgent care center. Mishandled, these cases could be headed for a worsening clinical picture and a poor outcome.

*Marcia Taylor, MD, MSCR, FAAFP*

PEDIATRIC URGENT CARE

## 23 A Novel Pediatric Resuscitation Course Designed for the Urgent Care Setting



Urgent care centers, by definition, are set up to manage patients with nonemergent complaints. That doesn't mean emergencies won't occur, however—and when the patient is a child, the team needs to be aware there are special considerations. Protocols need to be in place long before the situation arises.

*Nikhil B. Shah, MD*

PRACTICE MANAGEMENT

## 35 Urgent Care's Top Hospital-Affiliated Urgent Care Operators—by Number of Locations

When urgent care was in its infancy, hospitals and health systems wanted no part of the nascent revolution. Things have changed. We present an overview of which operators have become major players in the hospital-based urgent care business.

IN THE SEPTEMBER ISSUE OF JUCM

The use of all-inclusive kits with compact, table-top analyzers provides a rapid quantification of HbA1c levels in patients. The use of these tests for in-house screening has the potential to increase the diagnoses of early or asymptomatic diabetes in young adults and underserved or overlooked populations. We'll explore this issue in the next issue of *JUCM*.

DEPARTMENTS

- 1 Urgent Perspectives
- 7 From the UCA CEO
- 8 Continuing Medical Education
- 31 Abstracts in Urgent Care
- 39 Insights in Images
- 46 Revenue Cycle Management
- 49 Developing Data

TO SUBMIT AN ARTICLE:

*JUCM* utilizes the content management platform Scholastica for article submissions and peer review. Please visit our website for instructions at <http://www.jucm.com/submit-an-article>

### JUCM EDITOR-IN-CHIEF

**Joshua W. Russell, MD, MSc, FCUCM, FACEP**

Clinical Educator, University of Chicago Pritzker School of Medicine  
Staff Physician, Northshore University Health & Legacy-GoHealth Urgent Care

### JUCM EDITOR EMERITUS

**Lee A. Resnick, MD, FAAFP**

President/Chief Growth Officer  
WellStreet Urgent Care  
Assistant Clinical Professor, Case Western Reserve University, Department of Family Medicine

### JUCM EDITORIAL BOARD

**Alan A. Ayers, MBA, MAcc**

President of Consulting, Network and Strategic Initiatives  
Experity

**Jasmeet Singh Bhogal, MD**

Medical Director, VirtuaExpress Urgent Care  
President, College of Urgent Care Medicine

**Jeffrey P. Collins, MD, MA**

Conviva Physicians Group  
Part-Time Instructor, Harvard Medical School

**Tracey Quail Davidoff, MD, FCUCM**

Attending Physician  
Baycare Urgent Care

**Thomas E. Gibbons, MD, MBA, FACEP**

Medical Director  
Lexington Medical Center  
Northeast Urgent Care

**William Gluckman, DO, MBA, FACEP, CPE, FCUCM**

President & CEO, FastER Urgent Care  
Clinical Assistant Professor of Emergency Medicine at Rutgers New Jersey Medical School

**Glenn Harnett, MD**

CEO, No Resistance  
Consulting Group

**Lou Ellen Horwitz, MA**

CEO, Urgent Care Association

**Sean M. McNeeley, MD, FCUCM**

University Hospitals Urgent Care  
Clinical Instructor, Case Western Reserve University School of Medicine  
UCA Immediate Past President

**Christian Molstrom, MD**

Medical Director, Legacy-GoHealth Urgent Care

**Shailendra K. Saxena, MD, PhD**  
Professor, Creighton University Medical School

**Joseph Toscano, MD**

Chief, Emergency Medicine  
Medical Director, Occupational Medicine  
San Ramon Regional Medical Center  
Board Member, Board of Certification in Urgent Care Medicine

**Ben Trotter, DO**

Medical Director of Emergency Services  
Adena Regional Medical Center

**Kelvin Ward, MBChB (Auckland), FRNZCUC**

Chair, Royal New Zealand College of Urgent Care

**Janet Williams, MD, FACEP**

Medical Director, Rochester Regional Health Immediate Care  
Clinical Faculty, Rochester Institute of Technology

### UCA BOARD OF DIRECTORS

**Payman Arabzadeh, MD**

President

**Max Lebow, MD**

Immediate Past President

**Scott Prysi, MD**

President-Elect

**Gerald Cvitanovich**

Treasurer

**Cassandra Barnette Donnelly, MD**

Secretary

**Danielle Bynum, OMC**

Director

**Gerald Cvitanovich, MD**

Director

**Mike Dalton, MBA, CPA, NHA**

Director

**Tracey Davidoff, MD, FCUCM**

Director

**Heather Fernandez, MBA**

Director

**Jackie McDevitt, PA-C**

Director

**Alicia Tezel, MD, FCUCM**

Director

**Chris Chao, MD**

Ex-officio

**Steve Sellars, MBA**

Ex-Officio

**Lou Ellen Horwitz, MA**

CEO

# JUCM®

### EDITOR-IN-CHIEF

**Joshua W. Russell, MD, MSc, FCUCM, FACEP**  
editor@jucm.com

### EXECUTIVE EDITOR

**Harris Fleming**  
hfleming@jucm.com

### SENIOR EDITOR, PRACTICE MANAGEMENT

**Alan A. Ayers, MBA, MAcc**

**SENIOR EDITOR, CLINICAL**  
**Michael B. Weinstock, MD**

### SENIOR EDITORS, RESEARCH

**Albert Botchway, PhD**  
**Ariana M. Nelson, MD**

### EDITOR, PEDIATRICS

**David J. Mathison, MD, MBA**

**EDITOR, IMAGES**  
**Lindsey Fish, MD**

### EDITOR, ECG IMAGES

**Benjamin Cooper, MD, MEd, FACEP**

### CONTRIBUTING EDITOR, ABSTRACTS

**Ivan Koay, MBChB, FRNZCUC, MD**

### CONTRIBUTING EDITOR, REVENUE CYCLE MANAGEMENT

**Monte Sandler**

### SENIOR ART DIRECTOR

**Tom DePrenda**  
tdeprenda@jucm.com



11 E Sundial Circle, PO Box 5156, Carefree, AZ 85377

### PUBLISHER AND ADVERTISING SALES

**Stuart Williams**

swilliams@jucm.com • (480) 245-6400

### CLASSIFIED AND RECRUITMENT ADVERTISING

**Rachel Barda**

rachel.barda@communitybrands.com • (860) 579-1175

### Mission Statement

*JUCM The Journal of Urgent Care Medicine* (ISSN 19380011) supports the evolution of urgent care medicine by creating content that addresses both the clinical practice of urgent care medicine and the practice management challenges of keeping pace with an ever-changing healthcare marketplace. As the Official Publication of the Urgent Care Association and the College of Urgent Care Medicine, *JUCM* seeks to provide a forum for the exchange of ideas regarding the clinical and business best-practices for running an urgent care center.

### Publication Ethics and Standards

*JUCM* adheres to industry standards for academic medical journals regarding ethical behavior on the part of authors, editors, reviewers, and staff. Authors should review and understand these guidelines to avoid misconduct in manuscript preparation and submission. The following definitions are provided to guide individuals in adhering to these declarations.

### Study Design and Ethics of Research Involving Human Subjects

Research must be conducted to appropriately address the research question while strictly adhering to ethical standards for investigations involving human subjects. *JUCM* affirms the standards for research ethics outlined by the World Medical Association (WMA) in the Declaration of Helsinki, 1964, and its subsequent amendments (last updated 2018). Prospective authors are encouraged to review the Declaration prior to undertaking research, with consideration for conducting appropriate informed consent and whether intended subjects are considered a vulnerable population. Submissions to *JUCM* must comply with the principles of the Declaration ([www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects](http://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects)). Research involving human subjects must comply with the respective Institutional Review Board (IRB) standards. Use of an independent IRB is acceptable for authors within an organization without an IRB. To determine if planned investigations fall within the definition of "human subjects research," consult the National Institutes of Health (NIH) decision tool for clarification: <https://grants.nih.gov/policy/humansubjects/hs-decision.htm>. Manuscripts describing research involving human subjects must include a statement of approval or exemption for the study from an appropriate IRB or other research ethics committee. *JUCM* conforms to standards for research misconduct laid forth by the Office of Research Integrity (ORI) within the U.S. Department of Health and Human Services (HHS). The ORI specifies the following as instances of misconduct in proposing, performing, or reviewing research, or in reporting research results with the definitions cited on its website "Research Misconduct" accessed June 29, 2020, <https://ori.hhs.gov/definition-misconduct>

(a) Fabrication is making up data or results and recording or reporting them.

(b) Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

(c) Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

(d) Research misconduct does not include honest error or differences of opinion.

### Editorial Decision-Making

*JUCM* aims to publish original manuscripts relevant to urgent care practice. Decisions regarding publication are made by multilevel editorial review with consideration for clarity, originality, and audience value. Publication decisions must subsequently be corroborated through the process of peer review. Authors may appeal rejections by resubmitting a revised manuscript with a detailed description of the changes and their grounds for appealing. In the event of publication of a manuscript where errors are subsequently identified, *JUCM* will promptly issue a written correction as appropriate. Concerns regarding errors can be addressed to [HYPERLINK](mailto:HYPERLINK) "mailto:editor@jucm.com" editor@jucm.com.

### Disclaimer

*JUCM The Journal of Urgent Care Medicine* (*JUCM*) makes every effort to select authors who are knowledgeable in their fields. However, *JUCM* does not warrant the expertise of any author in a particular field, nor is it responsible for any statements by such authors. The opinions expressed in the articles and columns are those of the authors, do not imply endorsement of advertised products, and do not necessarily reflect the opinions or recommendations of Braveheart Publishing or the editors and staff of *JUCM*. Any procedures, medications, or other courses of diagnosis or treatment discussed or suggested by authors should not be used by clinicians without evaluation of their patients' conditions and possible contraindications or dangers in use, review of any applicable manufacturer's product information, and comparison with the recommendations of other authorities.

### Advertising Policy

Advertising must be easily distinguishable from editorial content, relevant to our audience, and come from a verifiable and reputable source. The Publisher reserves the right to reject any advertising that is not in keeping with the publication's standards. Advertisers and advertising agencies recognize, accept, and assume liability for all content (including text, representations, illustrations, opinions, and facts) of advertisements printed, and assume responsibility for any claims made against the Publisher arising from or related to such advertisements. In the event that legal action or a claim is made against the Publisher arising from or related to such advertisements, advertiser and advertising agency agree to fully defend, indemnify, and hold harmless the Publisher and to pay any judgment, expenses, and legal fees incurred by the Publisher as a result of said legal action or claim.

### Copyright and Licensing

© Copyright 2023 by Braveheart Group, LLC. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission from the Publisher. For information on reprints or commercial licensing of content, please contact the Publisher.

### Address Changes

*JUCM* printed edition is published monthly except for August for \$50.00 by Braveheart Group LLC, 11 E Sundial Circle, PO Box 5156, Carefree, AZ 85377. Standard postage paid, permit no. 372, at Lancaster, PA, and at additional mailing offices. POSTMASTER: Send address changes to Braveheart Group LLC, 11 E Sundial Circle, Carefree, AZ 85377-5156. Email: [address.change@jucm.com](mailto:address.change@jucm.com)



## JUCM CONTRIBUTORS

**U**rgent care providers are probably less likely to prescribe opioid pain medications or to treat patients for opioid addiction than providers in other settings. So why is our cover article this month focusing on patients taking low-dose naltrexone (LDN)? Simple: Because there are more patients taking LDN, and inevitably many of them will present to urgent care. So, UC providers need to be well-versed in the special considerations that go along with these patients.

As **Ting-Hsuan Chiang, MD; Kenneth Schmitt, BS;** and **Ariana Nelson, MD** illustrate in *Management of Patients on Low-Dose Naltrexone: A Clinical Review for Urgent Care Providers*, that requires taking a thorough medication history, prioritization of nonopioid treatment options, and timely referral or transfer for severe uncontrolled pain. All within the confines of an encounter with a patient the provider has likely never seen before. So, bottom line: It matters.

The authors are all affiliated with the Department of Anesthesiology & Perioperative Care at the University of California Irvine. In addition, Dr. Nelson is one of *JUCM*'s senior research editors. Their article begins on page 11.

Similarly, while the providers are certainly more than capable, urgent care centers are not really designed to handle truly emergent presentations involving any patients, let alone children. Nonetheless, you can't predict who will walk through your door next. It could easily be a young patient whose status goes downhill quickly—and they need your help, immediately. **Nikhil B. Shah, MD**, senior director of provider training for PM Pediatric Care, makes the case for urgent care centers to be prepared for potential calamities such as these in *A Novel Pediatric Resuscitation Course Designed for the Urgent Care Setting* (page 23).

Children are not the only ones at risk for diagnosis with simultaneous respiratory infections. Given the past couple of influenza seasons, it should be clear that anyone could wind up in that situation. **Marcia Taylor, MD, MSCR, FAAFP** of Lexington Medical Center in Batesburg – Leesville, SC treated one such patient not that long ago—and she recounts the case in *COVID-19 and RSV: Coinfection Requiring Hospitalization*. As she explains, dual diagnoses can often lead to a worsening clinical picture that requires careful assessment in the urgent care center. Turn to page 28 to see for yourself.

Urgent care operators face risk of another type when it comes to making tough personnel decisions. Even appropriate, defensible decisions can lead to serious legal consequences if they're not handled correctly. As explained by **Alan A. Ayers, MBA, MAcc** in *Changing an Employee from Full-Time to Part-Time Status* (page 19), there are clear

guidelines to direct your actions. Failure to follow them could have severe consequences for the business. Mr. Ayers is president of Experity Consulting.

We're also fortunate to be able to bring you a guest editorial by long-time *JUCM* Editorial Board member **Tracey Quail Davidoff, MD, FCUCM**. In *Dig a Little Deeper*, she reflects on the value of slowing down appropriately instead of cutting "safe" corners in the interest of keeping the flow of patients moving briskly. If you missed it, turn back to page 1 and it may give you something valuable to reflect on. Dr. Davidoff is an attending physician with BayCare Urgent Care in Tampa, FL.

Ensuring appropriate reimbursement through responsible coding is always valuable to reflect on. It's also essential to get it right for both your practice and the entire healthcare system. Even benign misuse has consequences, either through underpayment or the appearance of impropriety. In *Modifier 25: What You Need to Know* (page 47), **Phyllis Dobberstein, CPC, CPMA, CPCO, CEMC, CCC** explains that while modifier 25 is "overused in the industry" and "has been under scrutiny from payers for decades," it is essential for everyone involved in billing and coding to understand its proper place. Ms. Dobberstein is RCM compliance manager for Experity.

Finally, as always, we appreciate the efforts of **Ivan Koay, MBChB, MRCS, FRNZUC, MD** to keep us all up to date on urgent care-relevant literature published elsewhere recently. This month, he covers race factors in pediatric Lyme disease; the relative predictive value of hyperacute T-waves; the role of POC testing in medical decision-making; whether or not regular feedback can influence prescribing decisions; tips in reducing anterior shoulder dislocation; and dealing with potential language barriers in triage. Dr. Koay is an urgent care physician and medical lead, Kings College Hospital Urgent Treatment Centre, London; convenor Ireland and UK Faculty of the Royal New Zealand College of Urgent Care; and Independent Assessor European Reference Network, Andalusian Agency for Healthcare Quality. Abstracts in *Urgent Care* begins on page 31.

### Call for Peer Reviewers

Every issue of *JUCM* includes select articles on which we ask members of our peer review panel to comment. It's one step we take in trying to ensure all our content is relevant, clearly communicated, and free of bias. If you'd like to be among them, send an email, including your CV, to [editor@jucm.com](mailto:editor@jucm.com). ■



ExperityHealth.com | 815.544.7480

EMR/PM | BILLING | PATIENT ENGAGEMENT | TELERADIOLOGY | CONSULTING

[stream•lined work•flows]

*Defined*

Are shifting patient demands, new technologies, and a changing healthcare ecosystem making it hard to stay profitable? Leverage built-in integrations with labs, business analytics, and Experity Patient Engagement to create a seamless user experience without leaving the EMR/PM.

- Save time and optimize revenue with minimum-click charting
- Increase accuracy with automated tasks and calculations
- Reduce burden on staff with electronic claims
- Support both walk-in and scheduled visits

With a powerful EMR at its core, Experity defines the path to urgent care success, providing the only integrated operating system built to help you effectively manage and deliver on-demand care seamlessly. It's why more than 50% of urgent cares choose Experity.

**Urgent Care. Defined.**  
Definitive EMR solutions for peak performance.



# Differential Competitive Advantage

■ LOU ELLEN HORWITZ, MA

In the May issue of *JUCM*, Josh Russell, MD, MSc, FCUCM, FACEP wrote in his Letter from the Editor-in-Chief about thinking differently about follow-up. If you are not a physician, physician assistant or nurse practitioner and decided to skip his letter that month because it seemed too clinical, I urge you to go back and read it.

One of the aspects of Urgent Care that separates us from other kinds of healthcare operations—or used to—is the tight collaboration between administration and medicine. At the beginnings of Urgent Care this was because administration and medicine were often the same person! All aspects of managing the center and practicing medicine in the center went through the same “double-mesh” filter of the single owner, ensuring that both perspectives were always included.

As we’ve grown—either we’ve gotten busy in a single center or expanded to multiple centers—we’ve had to specialize our teams to be able to manage broad geographies or large numbers. This is just a part of growth, but I think we might have already lost something in the transition that’s affecting how we do things every day in our centers, and how we interact with the larger healthcare environment. Josh’s letter outlines one example of this perfectly.

Making good decisions in medical operations is extraordinarily difficult. One has to balance the risky, messy, customized aspects of practicing medicine on thousands of unique individuals with the needs for structure, consistency, measurability, and predictability to successfully run a business that will be successful in the long term. We all know this, but I’m not sure we are paying enough attention to the “balance” part lately. We seem to be shifting slowly but inevitably into the “us vs them” dynamic within *our* centers that is typical in most healthcare institutions, and there’s danger there.

Desperation makes us want to fall back on the easy things. We are tired of being understaffed, tired of being underpaid by payers, and still tired from the pandemic—

and that makes one tired of fighting to be better, because being better is hard. But here’s another thing we all know—being worse is even harder.

I’d like you to reconsider what “being better” looks like in your Urgent Care and suggest that it looks like closer collaboration between medicine and administration. If those have drifted apart in your centers, look hard at why and figure out how to fix it and try again. One guess as to why: both administrators and clinicians have gotten so absorbed by their “sides” of the organization, because the stakes have been so high for so long, that the specialization of your work has pulled you apart and now you’ve stayed there vs coming back together. It just seems easier to stay in your lane.

If you look at classic decision-making charts, the more collaborative the decision-making, the longer it takes. In an industry with “urgent” in the name, time pressure is always there. But what we have also learned is that the quality of the decision making *and* the stickiness of the decision that’s made also go up with more collaborative approaches. It takes longer but it also lasts longer, because it’s a better decision when it includes diversity of perspectives.

There’s another classic concept: differential competitive advantage. This speaks to something that you can do that makes you different from competitors and is hard to duplicate. Classically, this looked like advanced technology, a patent, a strong brand identity, or superior personnel. In today’s world, however, most of those are either easier to duplicate or easier to completely disrupt than ever before. The rest of healthcare has caught on to the value of medical assistants, walk-ins are doable for almost everyone, and patient experience has become a universal focus—so does Urgent Care even have a differential competitive advantage anymore? I’d like to suggest that we could, and that it’s an iron-clad collaboration between medicine and management for taking Urgent Care forward.

Every other healthcare institution spends more time trying to implement decisions rather than make them, because of the isolated ways the decisions were made in the first place. I’ll admit, I hate making decisions collaboratively because it almost always derails the neat, clean vision I had in the first place, but it almost always leads to better long-term outcomes. ■



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



# CONTINUING MEDICAL EDUCATION

**Release Date:** July 1, 2023  
**Expiration Date:** June 30, 2024

### 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 Institute for

Medical and Nursing Education (IMNE) and the Institute of Urgent Care Medicine. IMNE is accredited by the ACCME to provide continuing medical education for physicians. The IMNE 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.

### Planning Committee

- **Joshua W. Russell, MD, MSc, FACEP**  
*Member reported no financial interest relevant to this activity.*
- **Michael B. Weinstock, MD**  
*Member reported no financial interest relevant to this activity.*
- **Alan A. Ayers, MBA, MAcc**  
*Member reported no financial interest relevant to this activity.*
- **Steve Weinman, MSc, RN, CEN, TCRN**  
*Member reported no financial interest relevant to this activity.*

### Disclosure Statement

The policy of IMNE requires that the Activity Director, planning committee members, and all activity faculty (that is, anyone in a position to control the content of the educational activity)

disclose to the activity participants all relevant financial relationships with commercial interests. Where disclosures have been made, conflicts of interest, real or apparent, must be resolved. Disclosure will be made to activity participants prior to the commencement of the activity. IMNE also requires that faculty make clinical recommendations based on the best available scientific evidence and that faculty identify any discussion of “off-label” or investigational use of pharmaceutical products or medical devices.

### Instructions

To receive a statement of credit for up to 1.0 *AMA PRA Category 1 Credit™* per article, you must:

1. Review the information on this page.
2. Read the journal article.
3. Successfully answer all post-test questions.
4. Complete the evaluation.

### Estimated Time to Complete This Educational Activity

This activity is expected to take 3 hours to complete.

### Fee

There is an annual subscription fee of \$145.00 for this program, which includes up to 33 *AMA PRA Category 1 Credits™*.

### Email inquiries to [info@jucmcme.com](mailto:info@jucmcme.com)

### Medical Disclaimer

As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required. The authors have checked with sources believed to be reliable in their efforts to provide information that is complete and generally in accord with the standards accepted at the time of publication.

Although every effort is made to ensure that this material is accurate and up-to-date, it is provided for the convenience of the user and should not be considered definitive. Since medicine is an ever-changing science, neither the authors nor the Urgent Care Association nor any other party who has been involved in the preparation or publication of this work warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such information.

Readers are encouraged to confirm the information contained herein with other sources. This information should not be construed as personal medical advice and is not intended to replace medical advice offered by physicians. The Urgent Care Association will not be liable for any direct, indirect, consequential, special, exemplary, or other damages arising therefrom.



JUCM CME subscribers can submit responses for CME credit at [www.UrgentCareCME.com](http://www.UrgentCareCME.com). Quiz questions are featured below for your convenience. This issue is approved for up to 3 AMA PRA Category 1 Credits™. Credits may be claimed for 1 year from the date of this issue.

### Management of Patients on Low-Dose Naltrexone: A Clinical Review for Urgent Care Providers (page 11)

#### 1. Daily doses of “low dose” naltrexone range from:

- a. 1 mg to 5 mg
- b. 10 mg to 15 mg
- c. 20 mg to 25 mg
- d. Up to 50 mg

#### 2. Which of the following is among the most common diagnoses related to prescription of opioid medications in the urgent care setting?

- a. Postsurgery pain
- b. Fractures
- c. Throat pain
- d. Eye pain

#### 3. The FDA has approved naltrexone for which of the following indications?

- a. Postsurgery pain
- b. Pain associated with fibromyalgia
- c. Both opioid and alcohol use disorder
- d. Breakthrough pain associated with certain cancers

### Changing an Employee from Full-Time to Part-Time Status (page 19)

#### 1. As relates to the Patient Protection and Affordable Care Act, “small businesses” are defined as:

- a. Those with 12 or fewer employees
- b. Those with fewer than 25 employees
- c. Those with fewer than 50 employees
- d. Those with fewer than 25 full-time employees

#### 2. Per the Internal Revenue Service, the threshold for “full-time” employees vs part-time is:

- a. Working at least 27.5 hours per week, or 119 hours per month
- b. Working at least 30 hours per week, or 130 hours per month
- c. Working an average of 40 hours per week for at least 3 months upon starting work
- d. Working 40 hours or more per week at least 5 months out of the year

#### 3. Employers can legally move an employee from full-time status to part-time status:

- a. For any reason, including the company deciding it will no longer employ full-time workers
- b. Only upon proving that reducing the employee’s full-time status is necessary to maintain profitability
- c. Only upon agreement with the employee, assuming that employee was hired to fill a full-time position when they started working for the company
- d. It depends on which state the business is registered in

### COVID-19 and RSV: Coinfection Requiring Hospitalization (page 28)

#### 1. CDC guidelines state that:

- a. A positive test for COVID-19 or influenza does not exclude that the other virus could be present
- b. A negative test for COVID-19 or influenza proves the patient does not have RSV
- c. A positive test for COVID-19 or RSV definitively excludes the presence of coinfection
- d. A negative test for COVID-19 or RSV proves that the patient does not have influenza

#### 2. Coinfection with RSV and influenza results in:

- a. Increased morbidity, but not increased mortality
- b. Increased mortality, but not increased morbidity
- c. Increased risk for both morbidity and mortality
- d. No impact on risk for morbidity or mortality

#### 3. Although research is still evolving in this area, available studies have found that:

- a. Coinfection with RSV and COVID-19 does not change management
- b. Coinfection involving RSV and COVID-19 results in lower use of ICU care
- c. Coinfection involving RSV and COVID-19 results in lower use of mechanical ventilation
- d. Coinfection involving influenza requires higher use of ICU and mechanical ventilation

# Resilience + Passion

We make diagnostics that **matter**

We recognize your passion for providing accurate results which help diagnose and drive treatment decisions. We also know you are resilient and must navigate through some difficult and chaotic days while providing the best possible service to physicians, patients, and your organization.

At SEKISUI Diagnostics, we are committed to providing high-quality, U.S.-made respiratory health rapid tests that are accurate and easy to use, allowing you to get the answers fast.

Like you, we understand there is a patient behind every answer—and that's what matters most.

**To learn more about our Flu Test promotions, visit [osomtests.com](https://osomtests.com) or call 800-332-1042**



OSOM® MONO TEST

OSOM® ULTRAPLUS FLU A&B TEST

OSOM® ULTRA STREP A TEST



**SEKISUI**  
DIAGNOSTICS

*Because every result matters™*



# Management of Patients on Low-Dose Naltrexone: A Clinical Review for Urgent Care Providers

**Urgent message:** Low-dose naltrexone (LDN) is becoming more common as a treatment option for pain and thus will be increasingly prevalent in patients presenting to the urgent care setting. A thorough medication history, prioritization of non-opioid treatment options, and timely referral or transfer for severe uncontrolled pain are important considerations in the management of patients using LDN.

TING-HSUAN CHIANG, MD; KENNETH SCHMITT, BS; and ARIANA NELSON, MD

Citation: Chiang T-H, Schmitt K, Nelson A. Management of patients on low-dose naltrexone: a clinical review for urgent care providers. *J Urgent Care Med.* 2023;17(10):11-16.

Key Words: naltrexone, opioid, opiate, urgent care

## Introduction

Naltrexone is an opioid receptor antagonist approved by the Food and Drug Administration for the treatment of alcohol use disorder and opioid use disorder at high doses of 50 mg to 100 mg, daily. By binding to opioid receptors, naltrexone blocks the effects and reduces cravings for opioid and alcohol consumption.<sup>1,2</sup>

In contrast, low-dose naltrexone (LDN), with doses ranging from 1 mg to 5 mg per day, has gained popularity in recent years due to its demonstrated efficacy in the management of chronic pain conditions. This novel pharmacologic therapy not only offers a safer alternative to opioid-based medications, but also has fewer side effects.

With the increased use of LDN as an off-label treatment for several chronic inflammatory diseases, urgent care providers may encounter patients on LDN seeking treatment for pain. However, due to its potential effect



on the opioid response, acute pain management in these patients is an area not yet explored in the literature.

This review article focuses on current evidence of LDN for chronic pain and highlights pain management for this specific patient group in the urgent care setting.

**Author affiliations:** Ting-Hsuan Chiang, MD, Department of Anesthesiology & Perioperative Care, University of California Irvine, Irvine, CA. Kenneth Schmitt, BS, Department of Anesthesiology & Perioperative Care, University of California Irvine, Irvine, CA. Ariana Nelson, MD, Department of Anesthesiology & Perioperative Care, University of California Irvine, Irvine, CA. The authors have no relevant financial relationships with any commercial interests.

*“Regardless of the dose of naltrexone patients are taking, conservative dosing and close monitoring with follow-up should be prioritized.”*

### **Pain Management In Urgent Care**

Urgent care centers have rapidly expanded in the past two decades,<sup>3</sup> with patient visits increasing each year. Pain is one of the most common chief complaints in urgent care clinics,<sup>4</sup> and prescription of opioids in urgent care is not uncommon.

A retrospective study examining urgent care in-clinic opioid prescriptions found that fractures, joint dislocations, musculoskeletal pain, and abdominal pain are the most common diagnoses that led to opioid prescription.<sup>5</sup>

Generally, the concomitant use of opioid and LDN should be avoided.<sup>6</sup> LDN is unlikely to precipitate withdrawal symptoms for patients on opioids at these low doses, but it is prudent to recommend that patients on continuous opioid therapy wean entirely off opioids before initiating LDN. Even at low doses, there is a theoretical risk that the blockage of opioid receptors can reduce the effect of opioid agonists to varying degrees.<sup>1</sup> However, the more likely scenario is that the disturbance of the endogenous opioid system by exogenous opioid agonist administration will interfere with the analgesic benefits of LDN and thus the two should not be given together.

Chronic use of naltrexone is known to increase opioid sensitivity through upregulation of mu receptors in the CNS.<sup>7</sup> Although current evidence on opioid hypersensitivity of naltrexone has not been studied in LDN, this potential upregulation increases the complexity of corresponding clinical decisions.

To avoid unnecessary use of opioids, urgent care management for patients on LDN should prioritize nonopioid medications and nonpharmacologic therapies. Nonpharmacologic therapies, including nerve blocks and local anesthetic infiltration, may not be feasible in the urgent care setting. Therefore, nonopioid medications such as NSAIDs should be initially considered. Prompt referral to pain management facilities or urgent transfer to an emergency department may be necessary in some cases if severe pain cannot be adequately addressed, in which case opioid agonists should be employed to ensure appropriate mitigation of patient suffering.

The initiation of opioids in acute pain depends upon the etiology and severity of pain. In situations where opioid-based analgesics are deemed necessary, consider using short-acting, high-affinity, full opioid agonists to

overcome any potential opioid receptor blockade of LDN.

For the FDA-approved dose of oral naltrexone, which is much higher than LDN, and that is used to treat alcohol and opioid use disorder, it is considered safe to initiate opioids after discontinuing naltrexone for at least 72 hours.<sup>8</sup> To overcome the antagonism, patients often require increased dose of opioids and slow titration to effect. As the effect of high-dose naltrexone wanes over time, the opioid agonist should also be decreased to avoid respiratory depression or sedation. This concomitant titration should be conducted with caution and close interdisciplinary coordination, given the potential of patient hypersensitivity to opioid effects with long-term use of naltrexone.

Theoretically, at the lower doses used for analgesic benefit (such as LDN <5 mg), usage of opioid agonists can be much more lenient. Initial doses of opioids for these patients, in contrast to those on full-dose naltrexone, typically do not need to be increased to overcome antagonism. While the co-administration of LDN and opioid agonists has been investigated,<sup>9,10</sup> there are insufficient data on the dosage effect of LDN and concurrent use of opioids.

When initiating opioids, it is important to understand the dose of naltrexone patients are taking and be aware of varying opioid sensitivity over time to guide clinical decisions. Regardless of the dose of naltrexone patients are taking, conservative dosing and close monitoring with follow-up should be prioritized. In addition to the dose, other factors to take into consideration include time of the last dose and any concurrent opioid use.

Pain management in patients on LDN is further complicated by its frequent absence on electronic health record medication lists, as it is often acquired from compounding pharmacies. Additionally, some providers may prescribe higher doses of naltrexone and instruct patients to break pills into smaller portions in order to get coverage from insurance companies if the out-of-pocket cost is difficult for the patient to manage. Reconfirming dose and frequency of LDN administration with patients while acquiring their medication history is therefore critical.

### **Evidence on Chronic Pain Conditions**

Randomized trials have demonstrated efficacy and shown promising safety profiles<sup>11</sup> on the use of off-label LDN for several chronic pain conditions and autoimmune diseases. Current evidence mainly supports the efficacy of LDN for multiple sclerosis, Crohn's disease, and fibromyalgia. Benefits of LDN on outcomes,

FDA-Approved vs Low-Dose Naltrexone—A Comparison		
	FDA-Approved Naltrexone	Low-Dose Naltrexone (LDN)
<b>Indications</b>	Opioid and alcohol use disorder	Off-label use for chronic pain conditions (eg, Crohn’s disease, multiple sclerosis, fibromyalgia, etc.)
<b>Dosage</b>	50 mg-100 mg	0.5 mg-5 mg
<b>Pain management</b>	Prioritize nonopioid medications and treatments for acute pain management. Clear understanding of naltrexone dosage taken is important to guide clinical decisions.	
<b>Concurrent use of opioid</b>	Should generally be avoided. Allow at least 72 hours after last dose of naltrexone before administration. Dosage of opioids may need to be increased due to varying degrees of antagonism. Prompt follow-up and close monitoring with titration are critical.	May be tolerated, but can affect the analgesic benefits of LDN. Most full opioid agonist doses will overcome this antagonism. Dose adjustment typically not required. Close follow-up preferred to wean off agonist promptly and resume LDN monotherapy.

such as improved quality of life, pain, overall stable disease state, and lessened fatigue and anxiety were identified in multiple retrospective and small prospective studies.<sup>12-14</sup> Larger, longer duration randomized trials are warranted for definite conclusions on the efficacy of LDN for different chronic conditions.<sup>15</sup>

*Multiple sclerosis*

Multiple sclerosis (MS) is one of the earliest and most studied chronic diseases with regard to LDN. Clinical studies reported reduced relapse rate, slowed disease progression, stabilized quality of life, and reduced fatigue among MS patients started on LDN.<sup>13,14,16,17</sup> It quickly gained popularity after a Norwegian documentary in 2013, with MS patients claiming significantly improved function after the use of LDN. According to the Norwegian prescription database (NorPD), after this documentary, the number of naltrexone users quickly grew from less than 20 to more than 15,000. With data from NorPD, a study found a significant reduction in opioid consumption and NSAID use among long-term LDN users.<sup>6</sup>

While not all clinical studies prove efficacy of LDN, they all have found that it is well-tolerated, with no documented serious adverse events and few side effects.<sup>18</sup> Among the reported side effects of LDN, headache is the most common. Others include insomnia and nightmares.<sup>17</sup>

*Crohn’s disease*

It is hypothesized that regulation of the innate opioid system could be effective in treating Crohn’s disease

due to the overexpression of mu opioid receptor by CD4+ and CD8+ T-lymphocytes. Therefore, the opioid rebound effect of LDN may contribute to the effects of LDN on Crohn’s disease.<sup>20</sup>

Although limited in sample size, several clinical trials have shown promising results of LDN for the reduction of Crohn’s disease activity index (CDAI).<sup>20,21</sup> Studies reported more than 80% of patients responded with decreased CDAI after using daily LDN.

In a pilot study looking at pediatric patients, remission was reported in 25% of patients and 67% had only mild disease activity after an 8-week course of LDN.<sup>22</sup> Some documented side effects of LDN include fatigue, sleep disturbance, nausea, and headache.<sup>18</sup> However, these side effects are infrequent and usually mild.<sup>12</sup>

*Fibromyalgia*

It is generally believed that the endorphin rebound effect from transient blockade of opioid receptors contributes to the attenuation of pain in fibromyalgia.<sup>23</sup>

Several studies and case reports have shown improvement of pain, physical function, and mood in fibromyalgia patients with the use of LDN.<sup>23-25</sup> A crossover trial of 10 women found the use of LDN increased mechanical and heat pain thresholds in patients.<sup>24</sup> They also reported that response to LDN correlated directly to ESR, suggesting that LDN may be useful in those with signs of inflammation.

As fibromyalgia is a disorder of the CNS with a neuroimmune component, the immunomodulating benefit of LDN has been proposed to play a potential role in the pain attenuating effect.<sup>12</sup> Another crossover trial of

eight women found reduced plasma concentrations of pro-inflammatory cytokines and overall symptoms when treated with 8 weeks of LDN, further supporting the hypothesis of LDN as an anti-inflammatory medication for fibromyalgia.<sup>26</sup>

*“Naltrexone and naloxone have both been shown to cross the blood-brain barrier and, therefore, can conceivably affect central and peripheral immune cell reactivity.”*

Similar to that of MS and Crohn’s disease, current data suggest excellent safety and tolerability of LDN for fibromyalgia.<sup>24,25</sup>

### Low-Dose Naltrexone for Chronic Pain

#### Pharmacodynamics and Pharmacokinetics

As a competitive, reversible opioid receptor antagonist, naltrexone has a high affinity for  $\mu$ -opioid greater than  $k$ -opioid receptors.<sup>2,3</sup> Naltrexone is absorbed orally, and is then metabolized largely via first-pass metabolism in the liver by the enzyme non-cytochrome dehydrogenase to form its active metabolite, 6 $\beta$ -naltrexol.

When orally administered, naltrexone and 6 $\beta$ -naltrexol have a half-life of 4 and 13 hours, respectively. Following intramuscular administration, the half-life increases to 5 to 10 days for both unmetabolized naltrexone and its metabolite.

Naltrexone shares a similar pharmacologic profile with naloxone but diverges when comparing certain pharmacokinetic properties, including a notable increase in oral bioavailability and half-life of the former.<sup>24</sup> Though its elimination occurs primarily via renal filtration and excretion, naltrexone dosage adjustments have been deemed unnecessary for patients with mild renal impairment.<sup>12</sup> Still, further studies are necessary regarding severe renal impairment, and caution is recommended when treating the end-stage renal disease patient populations with naltrexone regimens.<sup>12</sup>

#### Mechanism of action

The mechanism and application of LDN centers on its multimodal cellular effects that is dosage-dependent.<sup>18</sup> Several pathways found in animal and in vitro studies are believed to contribute to the unique analgesic, anti-inflammatory, and immunomodulatory properties of LDN due to varying dose-dependent pharmacological targets.<sup>27</sup>

Naltrexone’s nonlinear analgesic relationship be-

tween doses and pharmacological outcomes can partially be understood by its effects on the  $\mu$ -opioid receptor (MOR) G protein-coupled receptor (GPCR). As a semisynthetic opioid antagonist, naltrexone works similarly to many other prescribed opioids by targeting MORs largely found on neurons linked to pain signaling.<sup>18,28,29</sup> Further studies have suggested a relationship between chronic administration of opioids and shifts in MOR GPCR in partial favor of a Gs-coupled rather than Gi-coupled response.<sup>30</sup>

This understanding holds clinical significance with the display of hyperalgesia, tolerance, and dependence in the setting of chronic MOR stimulation. However, varying doses of certain opioids have shown differing preferences in GPCR response.<sup>31</sup>

From this, the concept of lower-dosage opioid treatment in favor of Gi-couple partiality has been explored. Animal studies on mice have demonstrated that the application of low perfusion doses in combination with opioid treatment has led to notable reductions in action potential propagation and tolerance.<sup>31</sup>

A necessary element in the function and understanding of naltrexone’s downstream cellular effects includes the recognition of a scaffolding protein filament associated with MORs called filamin-A (FLNA).<sup>31</sup> When bound by naltrexone, the MOR Gi-coupling is favored over the Gs-coupling response, promoting the analgesic effects of administered opioid agonists. However, FLNA also has a binding affinity for opioid antagonists and, with the saturation of both agonist and antagonist binding sites, the above-mentioned promising opioid agonist effects are reduced.

#### Opioid rebound effect

LDN has also been shown to induce the increased assembly of endogenous opioids in contrast to higher standard doses of naltrexone.<sup>32-34</sup> Naltrexone administration at doses less than 0.5 mg/kg have been linked to increased levels of endogenous levels of endorphin and met-enkephalin.<sup>12,15-17</sup> Additional literature suggests an associated increase in opioid receptor expression in relation to this “opioid rebound” effect.<sup>32,35,36,37</sup>

#### Anti-inflammatory effects of naltrexone

Naltrexone also shows promising anti-inflammatory effects at lower dose regimens. This is likely induced through interactions with toll-like receptor 4 (TLR4), a key receptor in proinflammatory downstream cellular signaling including the release of interleukin-6 (IL-6) and tumor necrosis factor-alpha (TNF- $\alpha$ ).<sup>38</sup>

Though opioid medications have been linked pre-

viously to the stimulation of proinflammatory effects via TLR4 signaling, low-dose naltrexone has paradoxically been correlated with the promotion of anti-inflammatory effects through the inhibition of TLR4 signaling.<sup>39,40</sup>

Given the high occurrence of TLR4 among microglial cells, LDN potentially possesses additional properties that are immunosuppressive and diminish neuropathic pain. Naltrexone and naloxone have both been shown to cross the blood-brain barrier and, therefore, can conceivably affect central and peripheral immune cell reactivity.<sup>40</sup> Prior in vivo animal studies have highlighted the plausibility of treating neuropathic pain with the inhibition of TLR4 receptors through the administration of naltrexone and naloxone.<sup>39,41,42</sup> Further studies have confirmed LDN's increased affinity for TLR4 receptors, including a minimal selectivity for dopamine, noradrenaline, and serotonin transporters.<sup>43,44</sup> Such findings provide further support for naltrexone as an alternative treatment for neuropathic pain.

#### *Opioid growth factor-opioid growth factor receptor axis regulation*

LDN has additionally been reported to have an influence on the opioid growth factor-opioid growth factor receptor (OGF-OGFr) axis. This can be explained by LDN's transient competitive inhibition of OGFr, resulting in a compensatory feedback response to increase OGF and OGFr expression.<sup>45</sup> Low quantities of naltrexone lead to a short-lived inhibition of OGFr that is rapidly processed prior to subsequent doses, producing a period of amplified OGF and OGFr expression and interaction.<sup>25</sup>

#### *Dosage and expense*

The standard, FDA-approved dose of naltrexone for opioid use disorder and alcohol use disorder is between 50 mg and 100 mg. Therefore, the current commercially available naltrexone oral tablet is 50 mg.

Dosage for such disorders can be further reduced via a tablet cutter and started as low as 25 mg orally to allow for close follow-up and observation for adverse effects or withdrawal symptoms. Naltrexone is also available via intramuscular injection (380 mg), recommended for patients who would benefit from naltrexone treatment of SUD or AUD but find it difficult to be adherent to a daily oral administration regimen.<sup>46</sup>

Intramuscular naltrexone, in comparison to its oral form, is significantly longer acting.<sup>47</sup> Therefore, clinicians will need to maintain vigilance in opioid titration for 5 to 10 days given this longer period of antagonist medication washout. In terms of LDN, dosages range

#### TAKE-HOME POINTS

- Standard, FDA-approved dosage of naltrexone ranges from 50 mg to 100 mg, while low-dose naltrexone dosages range from 0.5 mg to 5 mg.
- Fractures, joint dislocations, musculoskeletal pain, and abdominal pain are the most common diagnoses that lead to opioid prescription, according to research into examining urgent care in-clinic opioid prescriptions.
- Most commonly reported side effects of LDN include headache, insomnia, and nightmares.
- While LDN is unlikely to precipitate withdrawal symptoms for patients on opioids at these low doses, it is prudent to recommend that patients on continuous opioid therapy wean entirely off opioids before initiating LDN.

from 0.5 mg to 5 mg, depending on individual patient requirements and responses.<sup>18</sup>

Such low-dose prescriptions have amassed support for off-label use in a myriad of chronic pain syndromes; however, commercially available LDN continues to be absent on formularies. Lower doses of naltrexone are readily available via compounding pharmacies and can be individualized to patients' needs.

Additionally, while medication pricing fluctuates extensively across the nation, the average cost of LDN, including medication compounding, has previously been reported as \$35 per month. Although patients must pay this fee out of pocket, this is much lower in comparison to several medications used to treat specific chronic pain diseases.<sup>1</sup>

In the current healthcare climate, amongst an opioid epidemic and ever-increasing medical expenses with many having inadequate pain control on higher opioid regimens, alternative strategies considering both optimal pain relief and healthcare expenditure are highly desired.

#### Conclusion

LDN has been defined as the regular administration of naltrexone, usually on a daily basis, in doses that range from 0.5 to 5 mg. LDN has shown promising results in a number of chronic pain conditions, including multiple sclerosis, Crohn's disease, and fibromyalgia. For patients with acute pain who are taking LDN, nonopioid analgesics should be prioritized. When opioids are nec-

essary, FDA-approved naltrexone doses ranging from 50 to 100 mg for the treatment of alcohol- and opioid-use disorder often involve a higher dose to overcome antagonism and cautious titration to take effect. In contrast, off-label LDN regimens typically do not require increased dosages of opioids and are largely dependent on patient-specific tolerance.

Close monitoring and prompt follow-up are critical when concurrently administering opioids and naltrexone. As research continues on its application and benefits, LDN treatment among the urgent care population is expected to increase.

As such, information on management of LDN regimens in the urgent care setting is needed in order to continue to support this patient population. ■

Manuscript submitted March 13, 2023; accepted March 20, 2023.

#### References

- Younger J, Parkitny L, McLain D. The use of low-dose naltrexone (LDN) as a novel anti-inflammatory treatment for chronic pain. *Clin Rheumatol*. 2014;33(4):451-459.
- Toljan K, Vrooman B. Low-dose naltrexone (LDN)-review of therapeutic utilization. *Med Sci (Basel)*. 2018;6(4):82.
- Poon SJ, Schuur JD, Mehrotra A. Trends in visits to acute care venues for treatment of low-acuity conditions in the United States from 2008 to 2015. *JAMA Internal Medicine*. 2018;178(10):1342-1349.
- Rothstein R, Zhen K, Kim RY, Olympia RP. Acuity-appropriate triage of chief complaints found on urgent care center organization websites. *Am J Emerg Med*. 2021;43:276-280.
- Calcaterra SL, Lou Y, Everhart RM, et al. Association between in-clinic opioid administration and discharge opioid prescription in urgent care: a retrospective cohort study. *J Gen Intern Med*. 2021;36(1):43-50.
- Raknes G, Småbrekke L. Low-dose naltrexone and opioid consumption: a drug utilization cohort study based on data from the Norwegian prescription database. *Pharmacoepidemiol and Drug Saf*. 2017;26(6):685-693.
- Suzanne Zukin R, Sugarman JR, Fitz-Syage ML, Gardner EL, et al. Naltrexone-induced opiate receptor supersensitivity. *Brain Res*. 1982;245(2):285-292.
- Vickers AP, Jolly A. Naltrexone and problems in pain management. *BMJ*. 2006;332(7534):132-133.
- Davis M, Goforth HW, Gamier P. Oxycodone combined with opioid receptor antagonists: efficacy and safety. *Expert Opin Drug Saf*. 2013;12(3):389-402.
- Burns LH, Wang H-Y. Ultra-low-dose naloxone or naltrexone to improve opioid analgesia: the history, the mystery and a novel approach. *Clinical Medicine Insights: Therapeutics*. 2010;2:CMT.54870.
- Ludwig MD, Turel AP, Zagon IS, McLaughlin PJ. Long-term treatment with low dose naltrexone maintains stable health in patients with multiple sclerosis. *Mult Scler J Exp Transl Clin*. 2016;2:2055217316672242.
- Patten DK, Schultz BG, Berlau DJ. The safety and efficacy of low-dose naltrexone in the management of chronic pain and inflammation in multiple sclerosis, fibromyalgia, Crohn's disease, and other chronic pain disorders. *Pharmacotherapy*. 2018;38(3):382-389.
- Cree BAC, Kornyeveya E, Goodin DS. Pilot trial of low-dose naltrexone and quality of life in multiple sclerosis. *Ann Neurol*. 2010;68(2):145-150.
- McLaughlin PJ, Odom LB, Arnett PA, et al. Low-dose naltrexone reduced anxiety in persons with multiple sclerosis during the COVID-19 pandemic. *Int Immunopharmacol*. 2022;113(Pt B):109438.
- Sharafaddinzadeh N, Moghtaderi A, Kashipazha D, et al. The effect of low-dose naltrexone on quality of life of patients with multiple sclerosis: a randomized placebo-controlled trial. *Mult Scler*. 2010;16(8):964-9.
- Raknes G, Småbrekke L. Low dose naltrexone in multiple sclerosis: effects on medication use. A quasi-experimental study. *PLoS One*. 2017;12(11):e0187423.
- Turel AP, Oh KH, Zagon IS, McLaughlin PJ. Low dose naltrexone for treatment of multiple sclerosis: a retrospective chart review of safety and tolerability. *J Clin Psychopharmacol*. 2015;35(5):609-611.
- Kim PS, Fishman MA. Low-dose naltrexone for chronic pain: update and systemic review. *Curr Pain Headache Rep*. 2020;24(10):64.
- Philippe D, Dubuquoy L, Groux H, et al. Anti-inflammatory properties of the mu opioid receptor support its use in the treatment of colon inflammation. *J Clin Invest*. 2003;111(9):1329-1338.
- Smith JP, Stock H, Bingaman S, et al. Low-dose naltrexone therapy improves active Crohn's disease. *Am J Gastroenterol*. 2007;102(4):820-828.
- Parker CE, Nguyen TM, Segal D, et al. Low dose naltrexone for induction of remission in Crohn's disease. *Cochrane Database Syst Rev*. 2018;4(4):Cdo10410.
- Smith JP, Field D, Bingaman SI, et al. Safety and tolerability of low-dose naltrexone therapy in children with moderate to severe Crohn's disease: a pilot study. *J Clin Gastroenterol*. 2013;47(4):339-345.
- Metyas S, Chen CL, Yeter K, et al. Low dose naltrexone in the treatment of fibromyalgia. *Curr Rheumatol Rev*. 2018;14(2):177-180.
- Younger J, Mackey S. Fibromyalgia symptoms are reduced by low-dose naltrexone: a pilot study. *Pain Med*. 2009;10(4):663-672.
- Younger J, Noor N, McCue R, Mackey S. Low-dose naltrexone for the treatment of fibromyalgia: findings of a small, randomized, double-blind, placebo-controlled, counterbalanced, crossover trial assessing daily pain levels. *Arthritis Rheum*. 2013;65(2):529-538.
- Parkitny L, Younger J. Reduced pro-inflammatory cytokines after eight weeks of low-dose naltrexone for fibromyalgia. *Biomedicine*. 2017;5(2):16.
- Calabrese EJ. Hormetic mechanisms. *Crit Rev Toxicol*. 2013;43(7):580-606.
- Loh HH, Liu HC, Cavalli A, et al. mu Opioid receptor knockout in mice: effects on ligand-induced analgesia and morphine lethality. *Brain Res Mol Brain Res*. 1998;54(2):321-326.
- Basbaum AI, Bautista DM, Scherrer G, Julius D. Cellular and molecular mechanisms of pain. *Cell*. 2009;139(2):267-284.
- Largent-Milnes TM, Guo W, Wang HY, et al. Oxycodone plus ultra-low-dose naltrexone attenuates neuropathic pain and associated mu-opioid receptor-Gs coupling. *J Pain*. Aug 2008;9(8):700-713.
- Shen KF, Crain SM. Dual opioid modulation of the action potential duration of mouse dorsal root ganglion neurons in culture. *Brain Research*. 1989;491(2):227-242.
- Rahn KA, McLaughlin PJ, Zagon IS. Prevention and diminished expression of experimental autoimmune encephalomyelitis by low dose naltrexone (LDN) or opioid growth factor (OGF) for an extended period: therapeutic implications for multiple sclerosis. *Brain Res*. 2011;1381:243-253.
- Robinson A, Wermeling DP. Intranasal naloxone administration for treatment of opioid overdose. *Am J Health Syst Pharm*. 2014;71(24):2129-2135.
- Immonen JA, Zagon IS, McLaughlin PJ. Selective blockade of the OGF-OGFr pathway by naltrexone accelerates fibroblast proliferation and wound healing. *Exp Biol Med (Maywood)*. 239(10):1300-1309.
- Tempel A, Gardner EL, Zukin RS. Neurochemical and functional correlates of naltrexone-induced opiate receptor up-regulation. *J Pharmacol Exp Ther*. 232(2):439-444.
- Zukin RS, Sugarman JR, Fitz-Syage ML, et al. Naltrexone-induced opiate receptor supersensitivity. *Brain Res*. 1982;245(2):285-292.
- Miskoff JA, Chaudhri M. Low dose naltrexone and lung cancer: a case report and discussion. *Cureus*. 2018;10(7):e2924.
- Cant R, Dalgleish AG, Allen RL. Naltrexone inhibits IL-6 and TNF $\alpha$  production in human immune cell subsets following stimulation with ligands for intracellular toll-like receptors. *Front Immunol*. 2017;8:809.
- Hutchinson MR, Zhang Y, Brown K, et al. Non-stereoselective reversal of neuropathic pain by naloxone and naltrexone: involvement of toll-like receptor 4 (TLR4). *Eur J Neurosci*. 2008;28(1):20-29.
- Wang X, Zhang Y, Peng Y, et al. Pharmacological characterization of the opioid inactive isomers (+)-naltrexone and (+)-naloxone as antagonists of toll-like receptor 4. *Br J Pharmacol*. 2016;173(5):856-869.
- Lewis SS, Loram LC, Hutchinson MR, et al. (+)-naloxone, an opioid-inactive toll-like receptor 4 signaling inhibitor, reverses multiple models of chronic neuropathic pain in rats. *J Pain*. 2012;13(5):498-506.
- Theberge FR, Li X, Kambhampati S, et al. Effect of chronic delivery of the Toll-like receptor 4 antagonist (+)-naltrexone on incubation of heroin craving. *Biol Psychiatry*. 2013;73(8):729-737.
- Northcutt AL, Hutchinson MR, Wang X, et al. DAT isn't all that: cocaine reward and reinforcement require Toll-like receptor 4 signaling. *Mol Psychiatry*. 2015;20(12):1525-1537.
- Hutchinson MR, Northcutt AL, Hiranita T, et al. Opioid activation of Toll-like receptor 4 contributes to drug reinforcement. *J Neurosci*. 2012;32(33):11187.
- McLaughlin PJ, Zagon IS. Duration of opioid receptor blockade determines biotherapeutic response. *Biochem Pharmacol*. 2015;97(3):236-246.
- Dermody SS, Wardell JD, Stoner SA, Hendershot CS. Predictors of daily adherence to naltrexone for alcohol use disorder treatment during a mobile health intervention. *Ann Behav Med*. 2018;52(9):787-797.
- Sullivan MA, Bisaga A, Pavlicova M, et al. A randomized trial comparing extended-release injectable suspension and oral naltrexone, both combined with behavioral therapy, for the treatment of opioid use disorder. *Am J Psychiatry*. 2019;176(2):129-137.

# The AscencioDx makes other diagnostic tests *green* with envy.

Introducing The AscencioDx<sup>®</sup> COVID-19 Test and the Molecular Detector

## GREEN

Detector is reusable for at least 3500 tests, reducing biohazard waste.

## ACCURACY

99.99% coverage of all known COVID-19 variants and subvariants

## MOLECULAR

Proven RT-LAMP diagnostic technology provides superior sensitivity to antigen testing for COVID-19.

New products in development.

## VALUE-ADDED

Secure reporting through a QR code to our cloud-based data portal helps you seamlessly manage patient results.

## US MADE

Count on products that we proudly manufacture in the USA.

A perfect replacement for the discontinued Accula<sup>™</sup> line.

## WORKFLOW

Fast, easy to perform test procedure uses lower nasal swab collection. Actionable results in as little as 20 minutes.



INTRODUCTORY SPECIAL: 1 Detector & 40 Tests

Offer code: "JUCM7"  
Expires: August 31, 2023

25% OFF

**ANAVASI  
DIAGNOSTICS.**

PH: 888-262-8274  
www.anavasidx.com



Scan for more details!

Note: This product has not been FDA cleared or approved, but has been authorized for emergency use by FDA under an EUA for use by authorized laboratories. This product has been authorized only for the detection of nucleic acid from SARS-CoV-2, not for any other viruses or pathogens. The emergency use of this product is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostics for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 360bbb-3(b)(1), unless the declaration is terminated or authorization is revoked sooner.

## [pa•tient sat•is•fac•tion]

# *Defined*

Are shifting patient demands, new technologies, and a changing healthcare ecosystem making it hard to connect with patients and stay profitable? Engage with patients through every critical interaction and turn one-time visits into repeat businesses.

- Easy online scheduling
- Convenient electronic registration
- Shorter wait times
- Reduced front desk effort
- Access to critical engagement data

Experity defines the path to urgent care success, with the only integrated operating system built to help you effectively manage and deliver on-demand care – from registration to claim resolution.

With Experity Patient Engagement, patients are more satisfied, and your clinic is more efficient.

**Urgent Care. Defined.**

Definitive patient engagement solutions for peak performance.





# Changing an Employee from Full-Time to Part-Time Status

**Urgent message:** Whether due to reduced staffing needs or employee preference, some employees in urgent care are no longer scheduled for full-time hours. Changing from full-time to part-time status, however, may have consequences beyond simply working fewer hours.

Alan A. Ayers, MBA, MAcc

There are any number of reasons why an urgent care owner or operator might want to change the status of an employee from full-time to part-time. Generally speaking, an employer is permitted to do so for any reason whatsoever.<sup>1</sup>

## Pros of Hiring Part-Time Employees

There are a number of benefits to hiring part-time employees, including:

- Lower overhead costs
- Flexibility
- Added support
- Cross-training
- Balanced employees<sup>2</sup>

The Internal Revenue Service states that “full-time” is at least 30 hours per week or 130 hours per month.<sup>3,4</sup> Employers should understand, however, that this definition is for statistical purposes and is not the legal definition. Further, urgent care owners should note that the Fair Labor Standards Act (FLSA) does not define full-time employment or part-time employment at all.<sup>5</sup> This is a matter generally to be determined by the employer. Whether an employee is considered full-time or part-time does not change the application of the FLSA, nor does it affect application of the Service Contract Act or the wage and fringe benefit requirements of the Davis-Bacon and Related Acts.<sup>5</sup>

## Full-Time vs Part-Time

Employers must comply with many more requirements



for full-time employees than they do for part-time workers. For example, full-time requires that the employer provide Affordable Care Act-compliant health insurance (minimal essential coverage).<sup>6</sup> Also, the FLSA—which governs federal wage-and-hour laws—does not cover part-time employment.

There are, however, regulations promulgated pursuant to the statute concerning minimum wage and overtime pay, along with exempt and nonexempt employee classification.

The Patient Protection and Affordable Care Act requires employers with more than 50 employees to offer employees who work 30 or more hours per week health insurance benefits to avoid employer penalties.<sup>7,8</sup> “Small

**Author affiliations:** Alan A. Ayers, MBA, MAcc is Senior Editor, Practice Management of *The Journal of Urgent Care Medicine* and President of Expertise Consulting. The author has no relevant financial relationships with any commercial interests.

If an employee voluntarily requests to transition from full-time to part-time status, it's best to document the change with a detailed job description differentiating the former, full-time role from the new, part-time role; to provide an offer letter describing the terms of the new, part-time employment; and to document employee acceptance of the new employment terms.

businesses," those with less than 50 employees, have more discretion in defining coverage eligibility for employees working less than full time and should ensure that the health insurance plan documents are clear regarding benefit eligibility.<sup>9</sup>

In addition, benefits eligibility when employees' hours are reduced can be regulated by both internal policy and law, and the urgent care owner should consult with their benefits administrator and legal counsel when defining benefits eligibility in their policies and insurance plan documents.<sup>9</sup> Nonetheless, the law doesn't infringe upon an employer's rights to determine employee schedules.<sup>10</sup>

Another rule to note is that if a nonexempt hourly or salaried part-time employee works more than 40 hours in a workweek, the employer must pay them overtime.<sup>1</sup> A part-time employee can be nonexempt and salaried. This means that they are eligible for overtime, despite receiving a salary. An employer can adjust the salary to reflect the diminished job responsibilities; however, it can't be less than the federal or state minimum hourly wage. The part-time salary can be based on a fixed number of work hours for the week, or a fluctuating workweek where the work hours vary from week to week.<sup>1</sup>

Significantly, it's usually the employer's decision as to what represents full-time and part-time status within the company. Ultimately, the determination is based on the requirements for the position.<sup>11</sup>

### At-Will Employment

This discussion should also be framed around the concept of at-will employment. "Employment at-will" means that an employer can fire an employee at any time for any reason (except an illegal one). The employer can also terminate a worker for no reason without incurring legal liability.<sup>12</sup>

In addition, at-will employment also means that an employer can modify the terms of the employment relationship with no notice and no consequences. An employer, therefore, can alter wages, terminate benefits,

or reduce paid time off.<sup>12</sup> However, there are three exceptions to the at-will employment doctrine:

- *The public-policy exception.* Under this exception to employment at will, an employee is wrongfully discharged when the termination is against an explicit, well-established public policy of the state.<sup>13</sup> This is the most widely accepted exception and is recognized in nearly every state.<sup>14</sup>
- *The implied-contract exception.* This exception applies when an implied contract is formed between an employer and employee, even though no express, written document concerning the employment relationship exists.<sup>13</sup>
- *The covenant-of-good-faith exception.* The most dramatic alteration from the traditional employment-at-will doctrine, this exception implies a covenant of good faith and fair dealing into every employment relationship.<sup>14</sup> This has been interpreted to mean either that employer personnel decisions are subject to a "just cause" standard or that terminations made in bad faith or motivated by malice are prohibited.<sup>14</sup>

Again, employers typically can change an employee's schedule from full-time status to part-time status at any time for any reason.<sup>15</sup> Most states require employers to provide some type of advance notice when moving from full-time status to part-time status means a loss of wages.<sup>16</sup> The notice requirements are discussed below.

### What Must Occur When an Employee Is Reclassified as Part-Time from Full-Time?

Again, employers generally have free reign as far as em-

Whether an employee qualifies for Minimum Essential Coverage under "Obamacare" is based on a "measurement period"—a period defined by the employer ranging 3 to 12 months in which it's determined whether the employee works an average of 30 hours per week or greater. The measurement period must be applied consistently for all employees. An employee who, say, works 40 hours per week for 6 months and then 20 hours for the remaining 6 months, may still be eligible for health insurance if the 12-month average is 30 hours or greater. It is thus incumbent on employers to understand how the 30-hour minimum is measured when determining benefits eligibility.

Sources: United States Internal Revenue Service. Determining full-time employees for purposes of shared responsibility for employers regarding health coverage. Available at: <https://www.irs.gov/pub/irs-drop/n-12-58.pdf>. Accessed June 8, 2023. The ACA Times. ACA measurement methods are critical for avoiding IRS penalties. Available at: <https://acatimes.com/aca-compliance-a-tale-of-two-irs-measurement-methods/>. Accessed June 8, 2023.

An employee may be eligible for COBRA Continuation Coverage upon a reduction in hours that causes the employee to be ineligible for Minimum Essential Coverage. COBRA requires employers with more than 20 employees to offer a temporary continuation of group health coverage in situations in which it would otherwise be terminated.

An employer subject to COBRA is required to notify its group health plan administrator within 30 days after employment hours are reduced. Within 14 days of that notification, the plan administrator is required to notify the employee of his or her COBRA rights.

Source: Centers for Medicare & Medicaid Services. COBRA continuation coverage questions and answers. Available at: [https://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/cobra\\_qna](https://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/cobra_qna). Accessed June 8, 2023.

employing workers, retaining employees, and reducing employee hours and pay. Employers can legally move an employee from full-time status to part-time status for any reason, including the company no longer wanting to employ full-time workers.<sup>17</sup>

A state may require an employer to notify employees in advance of changes to their employment status, pay rate, or work schedule. As a result, urgent care owners should consult legal counsel before switching an employee from full time to part time.<sup>1</sup> For example, in Maryland, in the absence of an employment contract, agreement or policy which states otherwise, an employer may shorten or lengthen an employee's work hours, or change the shift or times for employment at any time at the employer's discretion.<sup>18</sup>

*Courtesy Notice.* Owners and managers should consider extending the professional courtesy of giving advance notice of changing an employee's status from full time to part time. This may preserve mutual respect between the parties.<sup>17</sup>

*Required Notice.* Under certain circumstances, an employer is required to give 60 days' notice to legally move an employee from full-time to part-time status. The Worker Adjustment and Retraining Notification (WARN) Act mandates a 60-day advance notice when an employer cuts working hours by 50%. The rule applies when the change impacts 50 or more workers for a minimum of 6 months.<sup>17</sup>

### Takeaway

Unless there is an employment contract or bargaining

agreement, an urgent care owner can legally reduce an employee's work hours or cut pay without liability or recourse by the employee.

However, to best protect themselves, employers should establish personnel policies that speak to all key aspects of hiring, employment, discipline, and termination; moreover, they should make certain that their policies comply with applicable federal, state, and local laws. The personnel policies can be part of an employee handbook that should be distributed to all employees. ■

### References

1. Ferguson G. A guide to moving an employee from full time to part time. Zenefits.com Available at: <https://www.zenefits.com/workest/a-guide-to-moving-an-employee-from-full-time-to-part-time/>. Accessed November 18, 2021.
2. Waltower S. Hiring full-time vs. part-time employees. *Business News Daily*. April 3, 2023. (Available at: <https://www.businessnewsdaily.com/15815-full-time-vs-part-time-employees.html>. Accessed June 8, 2023.
3. United States Internal Revenue Service. Identifying full-time employees. Available at: <https://www.irs.gov/affordable-care-act/employers/identifying-full-time-employees>. Accessed June 8, 2023.
4. U.S. Bureau of Labor Statistics. Labor force statistics from the current population survey. Available at: <https://www.bls.gov/cps/definitions.htm>. Accessed June 8, 2023.
5. U.S. Department of Labor. Full-time employment. Available at: <https://www.dol.gov/general/topic/workhours/full-time>. Accessed June 8, 2023.
6. Centers for Medicare & Medicaid Services. Minimal essential coverage. Available at: <https://www.cms.gov/ccio/programs-and-initiatives/health-insurance-market-reforms/minimum-essential-coverage>. Accessed June 8, 2023.
7. United States Internal Revenue Service. Affordable Care Act provisions for large employers. Available at: <https://www.irs.gov/affordable-care-act/employers/affordable-care-act-tax-provisions-for-large-employers>. Accessed June 8, 2023.
8. United States Internal Revenue Service. Affordable Care Act tax provisions for employers. Available at: <https://www.irs.gov/affordable-care-act/employers>. Accessed June 8, 2023.
9. SHRM, the Society for Human Resource Management. How are benefits impacted when an employee's hours are reduced? Available at: <https://www.shrm.org/resourcesandtools/tools-and-samples/hr-qa/pages/reductioninhours.aspx>. Accessed June 8, 2023.
10. *EEOC v. AutoZone, Inc.*, 2022 U.S. Dist. LEXIS 179912, at \*7 (N.D. Ill. Sep. 30, 2022).
11. *Watson v. Kijakazi*, No. 4:20-CV-1144 PLC, 2023 U.S. Dist. LEXIS 21207, at \*37-38 (E.D. Mo. Feb. 8, 2023).
12. National Conference of State Legislatures. At-will employment—overview. Updated April 15, 2008. Available at: <https://www.ncsl.org/labor-and-employment/at-will-employment-overview>. Accessed June 8, 2023.
13. Muhl CJ. The employment at-will doctrine: three major exceptions. *Monthly Labor Review*. January 2001. Available at: <https://www.bls.gov/opub/mlr/2001/01/art1full.pdf>. Accessed June 8, 2023.
14. Watts S. What is at-will employment? *Homebase*. December 28, 2022. Available at: <https://joinhomebase.com/blog/at-will-employment-exceptions/#post-grid>. Accessed June 8, 2023.
15. UpCounsel. At will employment states: everything you need to know. Available at: <https://www.upcounsel.com/at-will-employment-states>. Accessed June 8, 2023.
16. *Carma Developers, Inc. v. Marathon Dev. Cal., Inc.*
17. Mayhew R. Legally moving an employee from full-time to part-time status. *Biz Fluent*. September 26, 2017. Available at: <https://bizfluent.com/info-12086128-legally-moving-employee-fulltime-parttime-status.html>. Accessed June 8, 2023.
18. Maryland Division of Labor and Industry, Department of Labor. The Maryland Guide to Wage Payment and Employment Standards. Available at: <https://www.dlir.state.md.us/labor/wagepay/mdguidewagepay.pdf>. Accessed June 8, 2023.



# GET READY GET SET

Respiratory season is right around the corner and Abbott's ID NOW™ system has you covered. Our easy-to-use, molecular platform rapidly detects infectious respiratory diseases so you can make informed treatment decisions quickly.



**ID NOW™ COVID-19 2.0**  
**6-12 minutes** - EUA authorized for near patient testing environments<sup>1</sup>



**ID NOW™ STREP A 2**  
**2-6 minutes** - Requires no culture confirmation for negative results<sup>3</sup>



**ID NOW™ INFLUENZA A & B 2**  
**5-13 minutes** - Detects up to 20% more true positives than RADTs<sup>2</sup>



**ID NOW™ RSV**  
**< 13 minutes** - Detects up to 25% more true positive than RADTs<sup>4,5</sup>

## CONTACT YOUR ABBOTT REPRESENTATIVE TODAY



SCAN TO LEARN MORE

1. ID NOW™ COVID-19 2.0 Product Insert 2. Marckx J, et al. Diagnostic Accuracy of Novel and Traditional Rapid Tests for Influenza Infection Compared With Reverse Transcriptase Polymerase Chain Reaction: A Systematic Review and Meta-analysis. *Ann Intern Med.* 2017 Sep 19;167(6):394-409. Based on the reported Flu A sensitivities of readers and ID NOW 3. ID NOW™ Strep A 2 Product Insert 4. Chartrand, C. et al. Diagnostic Accuracy of Rapid Antigen Detection Tests for Respiratory Syncytial Virus Infection: Systematic Review and Meta-analysis. *J Clin Microbiol.* December 2015 vol. 53 no. 12 3738-3749 5. ID NOW RSV Product Insert

RADTs, Rapid antigen detection tests (lateral flow)

The ID NOW COVID-19 2.0 product has not been FDA cleared or approved. It has been authorized by the FDA under an Emergency Use Authorization (EUA) for use by authorized laboratories. The test has been authorized only for the detection of nucleic acid from SARS-CoV-2, not for any other viruses or pathogens, and is only authorized for the duration of the declaration that circumstances exist justifying the authorization of emergency use of in vitro diagnostic tests for detection and/or diagnosis of COVID-19 under Section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner. © 2023. All rights reserved. All trademarks referenced are trademarks of their respective owners. Any photos displayed are for illustrative purposes only. Any person depicted in such photos is a model. COL-12804-03 06/23



# A Novel Pediatric Resuscitation Course Designed for the Urgent Care Setting

**Urgent message:** Urgent care centers play a vital role as a gateway into the health system for many children with acute care needs. Some of these needs require identification by the urgent care team, who may then need to stabilize the patient and initiate transfer to optimize clinical outcomes.

Nikhil B. Shah, MD

Citation: Shah NB. A novel pediatric resuscitation course designed for the urgent care setting. *J Urgent Care Med.* 2023;17(10):23-27.

## Introduction

Pediatric office emergencies can be challenging for urgent care staff to manage. These high-stakes events do not occur frequently enough to give staff confidence or experience with the clinical care and team dynamics required for emergency management. Moreover, the consolidation of pediatric hospital care, shifts in utilization patterns, and the increasing prevalence of medically complex pediatric patients has led to a growing influx of critically ill children in the outpatient setting, particularly urgent care. Therefore, it is essential for all members of the care team to be prepared for an office emergency, and every urgent care should train its staff accordingly.

In 2007, the American Academy of Pediatrics (AAP) Section on Emergency Medicine published guidance on essential medications and equipment that outpatient pediatric offices should carry in the event of a pediatric emergency. They advised regular, simulation-based practice to train staff in managing critically ill children and having formal emergency preparedness policies and protocols in place.<sup>1</sup>

Almost 15 years later, a multicenter study examining the impact of these recommendations found that while many of the outpatient offices in their cohort carried

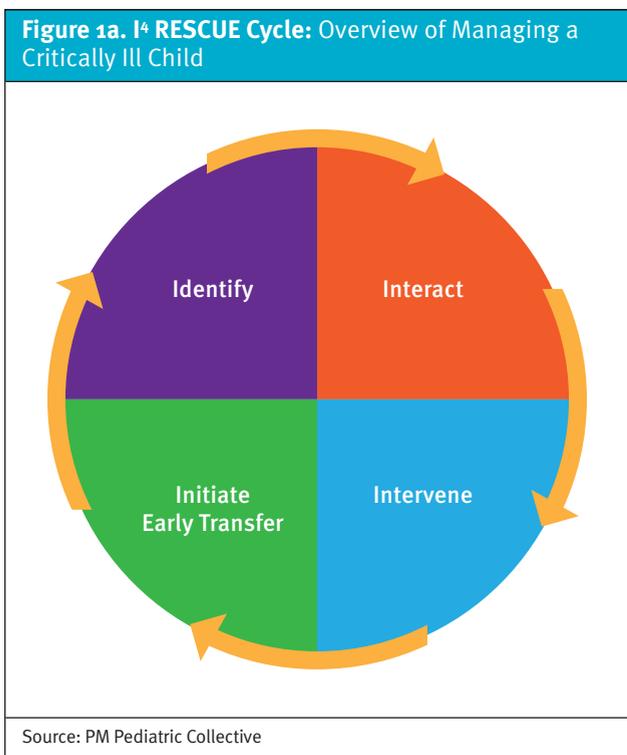


the AAP-recommended supplies, the majority still had not implemented policies or procedures to manage critical events.<sup>2</sup>

There may be myriad reasons for this. Among them are *denial* (What is the likelihood this will happen in my office?). *Liability* may be another concern (If I carry this medication and equipment and my staff are not trained adequately to use it, I could legally be held accountable). *Perceived cost* might play a role. And, finally, *personnel*

---

Author affiliations: Nikhil B. Shah, MD is Senior Director of Provider Training, PM Pediatric Care.



be barriers to implementation.

One challenge for the outpatient setting is that there is no gold standard certification, course, or simulation sequence to prepare staff for medical emergencies. Many practices have embraced the American Heart Association’s Basic Life Support (BLS), Pediatric Advanced Life Support (PALS), or Pediatric Emergency Assessment Recognition and Stabilization (PEARS) courses to teach emergency preparedness and simulation training.

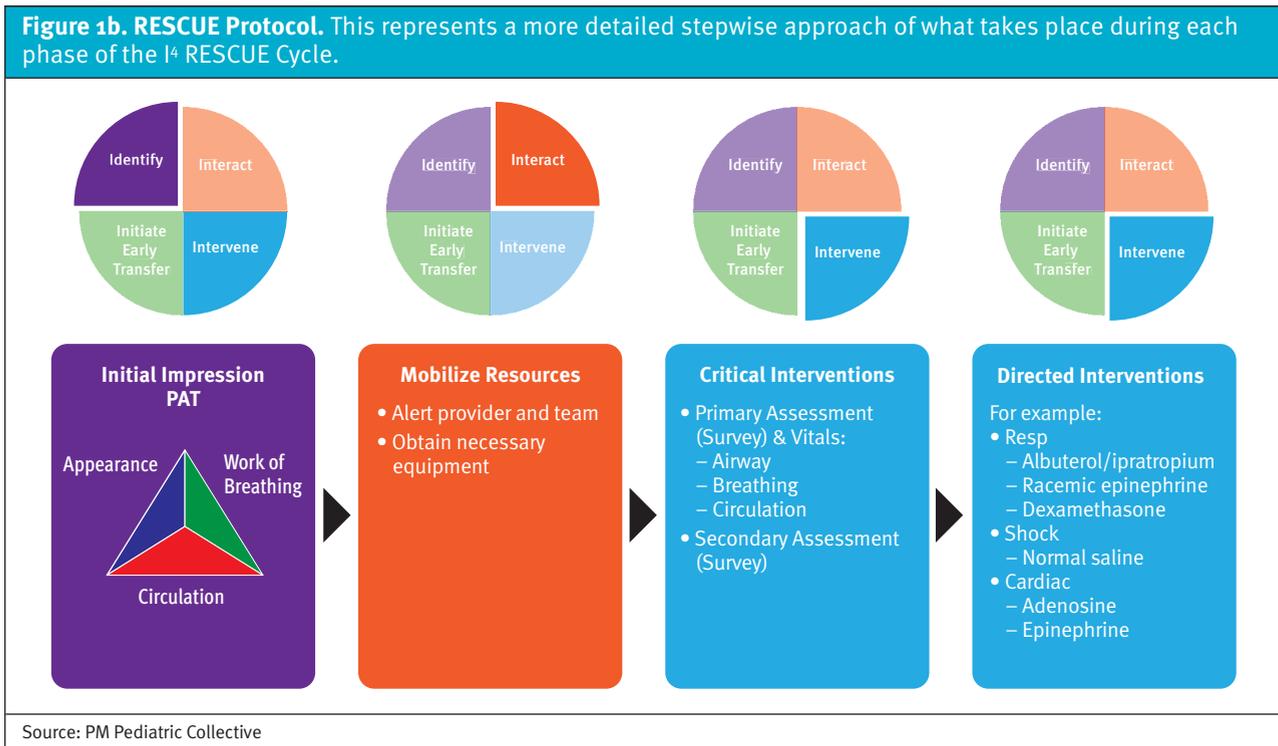
BLS includes training in CPR, bag-valve-mask ventilation, and AED use, but has a limited scope for urgent care and a pre-hospital focus not specific to the problems of children.

PALS, on the other hand, is pediatric-specific and more comprehensive; however, this course features many advanced resuscitation algorithms that are not within the scope of a typical urgent care.

PEARS, which is also pediatric-specific, teaches the fundamentals of assessment and stabilization and is geared towards a broad target audience. However, it may not be comprehensive enough for urgent care clinicians as it does not cover advanced skills and interventions required to stabilize higher-acuity pediatric patients that may be encountered in the urgent care setting.

While PALS may be the most comprehensive course for pediatric emergency management, it has become increasingly apparent that PALS algorithms, equipment,

challenges (I just don’t have the staff to do it, it’s just me and a medical assistant). These concerns, though understandable, may not be entirely valid, and should not





ExperityHealth.com | 815.544.7480

EMR/PM | BILLING | PATIENT ENGAGEMENT | TELERADIOLOGY | CONSULTING

# [deep•er da•ta] *Defined*

Are shifting patient demands, new technologies, and a changing healthcare ecosystem making it hard to connect with patients and stay profitable? Business Intelligence and reporting tools built into Experity's EMR/PM let you use your data to make better decisions about your business. Access, visualize, and act on your urgent care data in ways that inform your path to success.

- Anytime, anywhere access**
- Actionable insights**
- Customizable reports**

Experity defines the path to urgent care success with the only integrated operating system built to help you effectively manage and deliver on-demand healthcare.

Get the insights you need to define the best next steps for your business with Experity Business Intelligence.

**Urgent Care. Defined.**

Definitive business intelligence solutions for peak performance.



## [per•form•ance] *Defined*

---

Are shifting patient demands, new technologies, and a changing healthcare ecosystem making it hard to connect with patients and stay profitable? With the only integrated Operating System purpose-built for urgent care, Experity helps you manage your business and improve outcomes for your patients.

- Faster throughput and door-to-door time**
- More efficient resource use**
- Better patient satisfaction scores**
- Improved business outcomes**
- Confident compliance**

With more than two decades of service to the urgent care industry, Experity is uniquely qualified to help you define your path to success.

EMR/PM

BILLING

PATIENT ENGAGEMENT

TELERADIOLOGY

CONSULTING

BUSINESS INTELLIGENCE

**EXPERITY**<sup>®</sup>

[ Find out why 50% of urgent care  
businesses choose Experity. ]

**Urgent Care. Defined.**

Definitive solutions for peak performance.



## [re•li•a•bil•i•ty] *Defined*

Are shifting patient demands, new technologies, and a changing healthcare ecosystem making it hard to connect with patients and stay profitable? Extend your clinic and its radiology services to ensure a better experience for your patients and exceed the expectations of providers 365 days a year with Experity Teleradiology.

**Industry-leading turnaround times**

**99.97% accuracy rates**

**Real-time access to radiologists**

Experity defines the path to urgent care success, providing the only integrated operating system built to help you effectively manage and deliver on-demand care – and extend your clinic services.

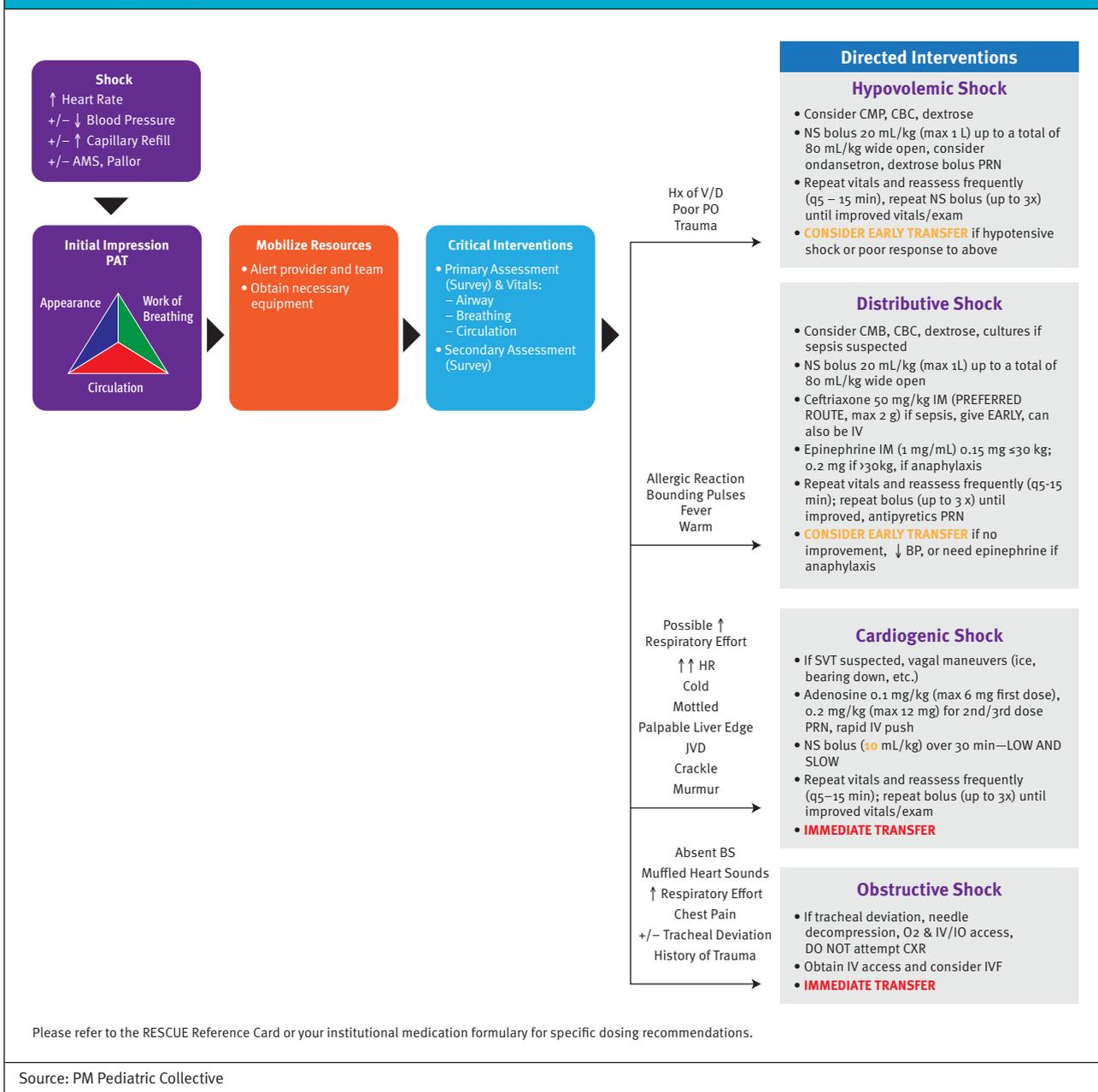
With Experity Teleradiology, patients and providers are more satisfied, and your clinic is more efficient.

**Urgent Care. Defined.**

Definitive teleradiology solutions for peak performance.



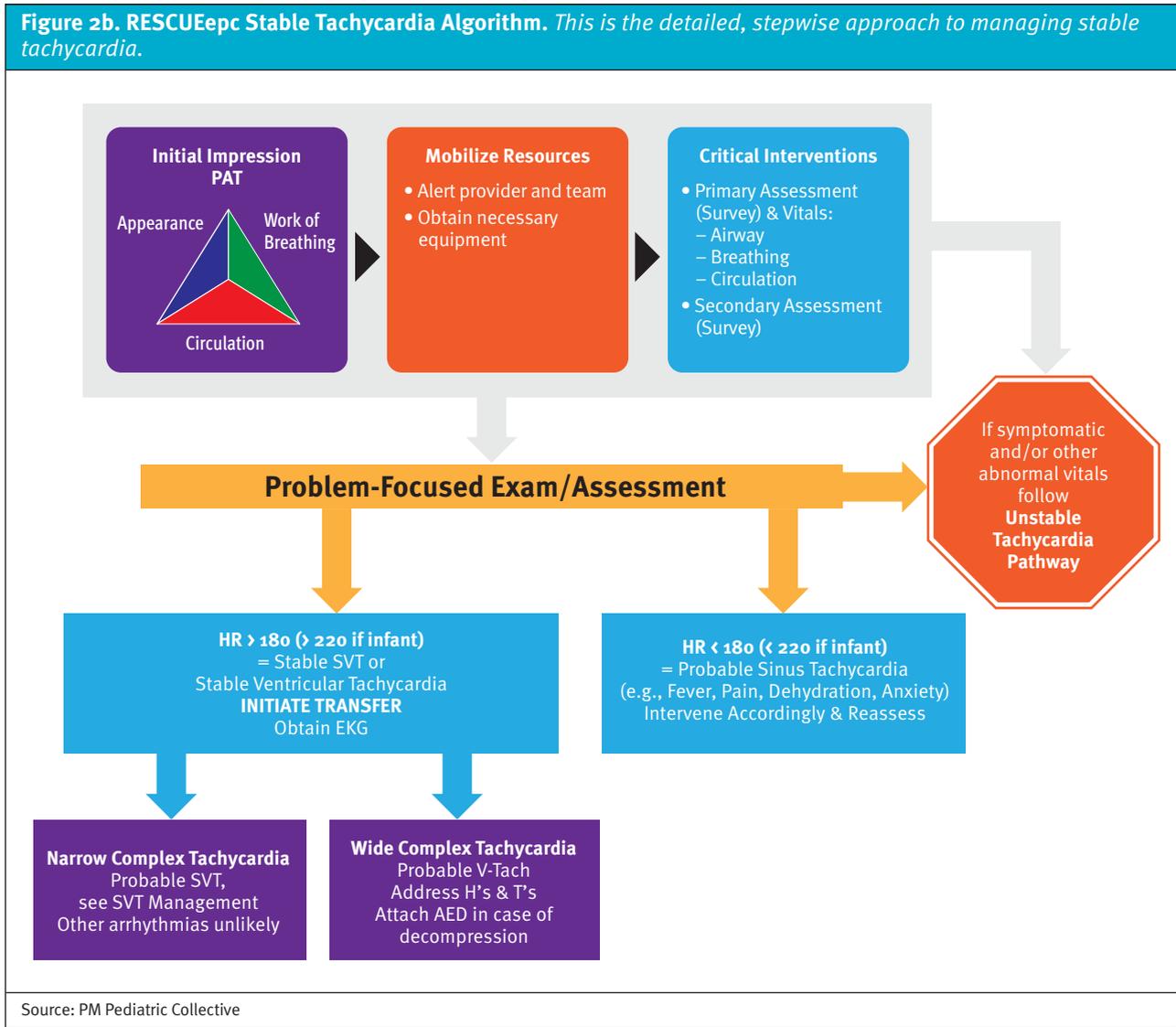
**Figure 2a. The RESCUEpc Shock Algorithm.** This summarizes the overall approach to recognizing and managing the various forms of shock.



medications, and personnel requirements do not adequately translate to urgent care. For example, most non-hospital-based urgent care practices will not have a manual defibrillator/monitor, wall oxygen, and suction; nor do they carry many of the medications and other equipment that are found in the hospital setting. Endotracheal tubes and other advanced airway devices may also be noticeably absent in an urgent care due to medicolegal

concerns arising from staffing with newer, inexperienced providers who may lack training in their use.

Along these lines, as fewer emergency medicine-trained physicians are being relied upon to staff urgent care offices, the management priority is shifting towards stabilization for transfer rather than providing definitive care. The conundrum may lie in training staff to recognize and manage these “sick” but not critically ill



patients who, for example, may simply be in respiratory distress but not failure.

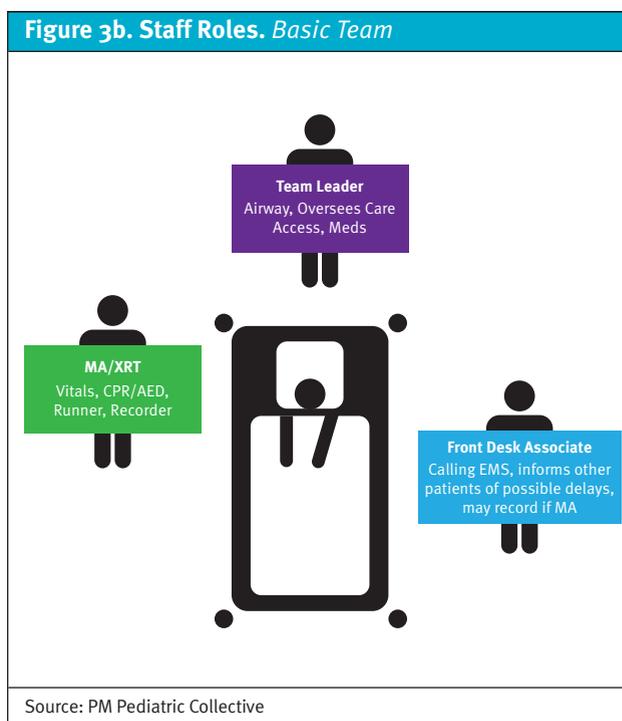
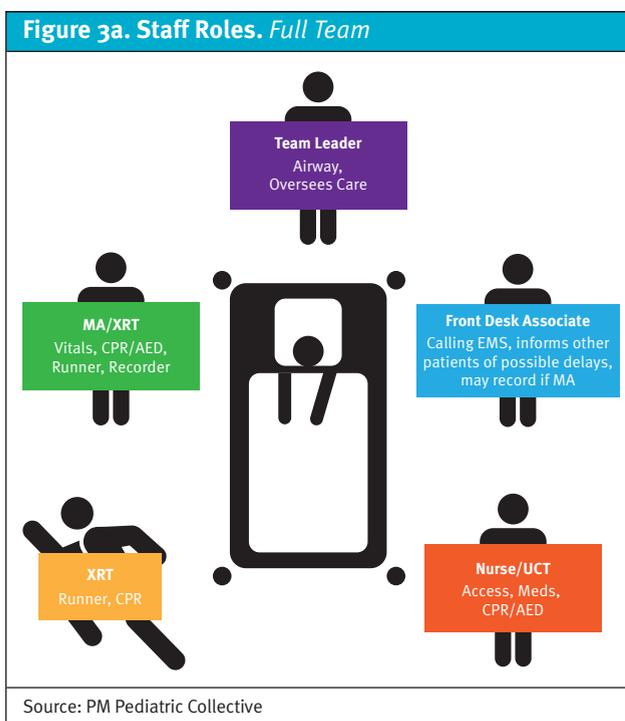
Finally, the staffing makeup of an urgent care office may place a physician or an advanced-practice provider (APP) alongside a medical assistant/receptionist, x-ray tech, or perhaps a nurse, as the care team that must manage a pediatric emergency. This is in stark contrast to the hospital setting in which resources are seemingly inexhaustible and where a critically ill child is more likely to be managed by a multitude of physicians, APPs, and nurses.

This void necessitates the creation of RESCUE<sub>epc</sub> (Resuscitation & Stabilization of Children in the Urgent Care Environment - emergency preparedness course)—a novel training curriculum for managing critically ill

children that focuses on the unique personnel makeup, medications, and equipment found in a resource-limited ambulatory setting.

RESCUE<sub>epc</sub> is a blended-learning activity in which participants must complete pre-coursework in the form of online learning modules (3 hours duration) prior to attending an instructor-led classroom training session (4 hours duration). The foundation for the course is a novel, team-based management approach collectively referred to as the “RESCUE Protocol” (Figures 1a and 1b), which utilizes original, evidence-based, urgent care-specific algorithms (Figures 2a and 2b).

The in-person training comprises a brief review of key points from the online pre-coursework, practice-till-perfect approach to learning urgent care-specific



skills (eg, operating an oxygen tank/attaching a regulator, using a portable suction device, AED, etc.), and simulation-based practice scenarios, with an emphasis on managing critically ill children with both full- and minimal staffing complements (Figures 3a and 3b). The course concludes with an online postassessment and megacode scenario.

Successful completion of the course requires a minimum score of 80% on the online exam and meeting all required competencies delineated in the structured debrief tool for the megacode scenario.

The target audience is similar to that of PALS and includes physicians, APPs, and nurses. On the horizon is a high-yield version of the course with just the essentials (diminutively referred to as RESCUE<sub>epc</sub>-“lite”), intended for clinical support staff such as x-ray techs and medical assistants.

Thus far, RESCUE<sub>epc</sub> has been deployed in multiple regions, comprising over 90 provider and nurse participants. Key competencies highlighted in the course are tied to various quality metrics that will be tracked over time. Ultimately, the success of RESCUE<sub>epc</sub> will depend on whether it has an impact on patient outcomes, which will also be measured.

The next steps for RESCUE<sub>epc</sub> are to complete internal implementation of the course by the end of this year and then launch RESCUE<sub>epc</sub>-lite for clinical support staff in 2024. One advantage of RESCUE<sub>epc</sub> is that it is

scalable to other outpatient settings and can be tailored to their scope of practice. As such, this customizable version of the course will be known by the apropos acronym, SCOPE (Stabilization of Children with Office Pediatric Emergencies), which is currently under development. The goal is to obtain certification for RESCUE<sub>epc</sub> and its offshoots by offering them in partnership with an accrediting body and making them available externally to both urgent care centers and other outpatient practices that take care of children.

Urgent care has differentiated itself as a highly specialized environment that has carved its own niche within the modern healthcare landscape. As such, the field deserves to have training that is specific to its needs and not an amalgamation or adaptation of what already exists. While BLS, PALS, and PEARS are valuable tools, there is a compelling need for a resuscitation course specifically designed for urgent care that addresses the unique considerations of this setting and provides the necessary training to effectively manage a sick child. ■

*Manuscript submitted May 1, 2023; accepted May 30, 2023.*

#### References

1. Frush K. American Academy of Pediatrics Committee on Pediatric Emergency Medicine. Preparation for emergencies in the offices of pediatricians and pediatric primary care providers. *Pediatrics*. 2007;120(1):200–212.
2. Abulebda K, Yuknis ML, Whitfill T, et al. Improving Pediatric Acute Care Through Simulation (ImPACTS). Preparedness for pediatric office emergencies: a multi-center, simulation-based study. *Pediatrics*. 2021;148(3):e2020038463.



# COVID-19 and RSV: Coinfection Requiring Hospitalization

**Urgent message:** Coinfection with COVID-19 and other respiratory pathogens can lead to a worsening clinical picture and requires careful assessment in the urgent care center.

Marcia Taylor, MD, MSCR, FAAFP

Citation: Taylor M. COVID-19 and RSV: coinfection requiring hospitalization. *J Urgent Care Med.* 2023;17(10):28-29.

Key words: COVID-19, SARS-CoV-2, RSV, coinfection, pandemic

## Abstract

Patients who present with symptoms suspicious for COVID-19 and other respiratory conditions, regardless of vaccination status, may require a higher acuity of medical care (although mortality may not be affected). This case report describes a patient with COVID-19 and respiratory syncytial virus coinfection which necessitated hospital care despite the individual being vaccinated against COVID-19.

## Introduction

During the autumn of 2022, clinicians saw the rise of three different respiratory pathogens: COVID-19, respiratory syncytial virus (RSV), and influenza. This allowed for the possibility of coinfections among these three viruses.

Although research is still evolving in this area, available studies have found that individuals coinfecting with influenza required higher use of ICU and mechanical ventilation.<sup>1,3</sup> However, there was no increase in mortality.<sup>1,3</sup> Less research is available for coinfections with RSV as studies generally found lower numbers of this compared with influenza. There appears to be a similar trend of more medical treatment modalities needed,



but no increase in mortality.<sup>1,2</sup>

The following is a case presentation of a vaccinated individual with a coinfection requiring hospitalization.

## Patient Information

A 69-year-old male presented with a 3-day history of sore throat, cough, nasal congestion, subjective fever, and minimal dyspnea. He had exposures to several family members who were diagnosed with pneumonia, but denied exposure to COVID-19. His past medical

Author affiliations: Marcia Taylor, MD, MSCR, FAAFP, Lexington Medical Center, Batesburg–Leesville, SC. The author has no relevant financial relationships with any commercial interests.

history was significant for hypertension and daily smoking. He did receive the initial series of COVID-19 vaccine plus two boosters. His last booster was approximately 14 weeks prior to presentation.

### Clinical Findings

Vital signs were temperature 98.9°F, pulse 113, blood pressure 133/71, respirations 18, and room air oxygen saturation of 78%. He was in no acute distress and was able to give his history in complete sentences despite his hypoxia. Lungs were clear to auscultation bilaterally. Cardiovascular exam was significant for tachycardia, but revealed no murmur, rub, or gallop. Abdominal exam was soft and nontender with normal active bowel sounds. HEENT exam was significant for erythema of nose and oral pharynx with clear rhinorrhea.

### Diagnostic Assessment

Given his level of hypoxia and that this was diagnosed in an ambulatory office setting with limited resources for continued care of severe hypoxia, a very brief and rapid assessment of patient's symptoms was obtained. He was placed on 2L of oxygen via nasal canal and oxygen saturation improved to 98%. Due to his hypoxia and tachycardia, an ECG was obtained to evaluate for any arrhythmia or myocardial injury that may have been contributing to his symptoms. This ECG revealed normal sinus rhythm and no acute ischemic changes.

Differential diagnosis at this time included COVID-19, bacterial pneumonia, and pulmonary embolism. However, given that the patient had been vaccinated against COVID-19 it was unusual that he was presenting with such severe hypoxia.

PCR testing for SARS-CoV-2/RSV/influenza was obtained in-office, but results were not available prior to the patient being transported to the hospital. Chest x-ray was not obtained due to the portable system not being available.

The patient was transferred to the emergency department via ambulance services. Chest x-ray obtained in the ED did not reveal any acute process. D-dimer obtained in the ED was negative. While in the ED, his PCR test returned positive for both COVID-19 and RSV. He was admitted to the COVID-19 unit of the hospital and treated with IV steroids and remdesivir. His clinical condition improved and he was discharged from the hospital 7 days later. At hospital follow-up 8 days later his symptoms were resolved; he denied any breathing difficulties and no longer required supplemental oxygen.

### Discussion

Two studies' coinfection rates of influenza and RSV ranged from 8.3% to 22.3% and 16.7% to 22.3%, respectively.<sup>4,5</sup> Researchers have theorized that coinfection may induce a more severe inflammatory response and thus a worse clinical picture. Studies have suggested that patients with coinfection were more likely to require hospitalization, longer ICU stays, and longer mechanical ventilation.<sup>1-3</sup>

Recent NIH guidelines state that coinfections have been reported and may complicate both the patient's treatment and recovery.<sup>6</sup> CDC guidelines state that a positive test for COVID-19 or influenza does not exclude that the other virus could be present.<sup>7</sup> As the fall of 2022 saw a rise in both RSV and influenza compared with prior years, further research will be needed in this field to develop guidelines and treatment algorithms for patients with coinfection. As coinfections do have an increased risk in morbidity, but likely not mortality,<sup>1-3</sup> these patients should be considered for treatment with antiviral medications.<sup>7</sup> These patient may also necessitate closer follow-up (as telehealth or home pulse oximetry monitoring) given the higher need for hospital treatments. ■

### Informed Consent

The patient consented to publication of this case report.

*Manuscript submitted December 14, 2022; accepted March 27, 2023.*

### References

- Cong B, Deng S, Wang X, Li Y. The role of respiratory co-infection with influenza or respiratory syncytial virus in the clinical severity of COVID-19 patients: a systemic review and meta-analysis. *J Glob Health*. 2022;12:05040.
- Al Sulaiman K, Aljuhani O, Badreldin HA, et al. The clinical outcomes of COVID-19 critically ill patients co-infected with other respiratory viruses: a multicenter, cohort study. *BMC Infect Dis*. 2023;23(1):75.
- Adams K, Tastad KJ, Huang S, et al. Prevalence of SARS-CoV-2 and influenza coinfection and clinical characteristics among children and adolescents aged 18 years who were hospitalized or died with influenza – United States, 2021-2022 influenza season. *MMWR Morb Mortal Wkly Rep*. 2022;71(50):1589-1596.
- Hashemi SA, Safamanesh S, Ghasemzadeh-Moghaddam H, et al. High prevalence of SARS-CoV-2 and influenza A virus (H1N1) coinfection in dead patients in Northeastern Iran. *J Med Virol*. 2021;93(2):1008-1012.
- Trifonova I, Christova I, Madzharova I, et al. Clinical significance and role of coinfections with respiratory pathogens among individuals with confirmed severe acute respiratory syndrome coronavirus-2 infection. *Front Public Health*. Epub ahead of print September 22, 2022. Available at: <https://www.frontiersin.org/articles/10.3389/fpubh.2022.959319/full>. Accessed December 7, 2022.
- National Institutes of Health. COVID-19 treatment guidelines. Available at: <https://www.covid19treatmentguidelines.nih.gov/>. Accessed March 30, 2023.
- Centers for Disease Control and Prevention. Clinical Care Considerations. Clinical considerations for children and adults with confirmed COVID-19. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/clinical-considerations-index.html> Accessed March 30, 2023



ExperityHealth.com | 815.544.7480

EMR/PM | BILLING | PATIENT ENGAGEMENT | TELERADIOLOGY | CONSULTING

[rev•en•ue op•ti•mi•za•tion]  
*Defined*

Are shifting patient demands, new technologies, and a changing healthcare ecosystem making it hard to stay profitable? Remove complexities in urgent care billing, coding, payer contracts, and compliance to get the reimbursement you've earned.

- Medical coding recommendations
- Cleaner claims
- Faster reimbursement
- Stress-free compliance

Experity defines the path to success with the only operating system built for on-demand healthcare. From registration to claim resolution, Experity Billing can help you improve financial performance.

Optimize your revenue with Experity.

**Urgent Care. Defined.**  
Definitive billing solutions for peak performance.





## ABSTRACTS IN URGENT CARE

- Pediatric Lyme Disease and Race
- Predictive Value (or Not?) of Hyperacute T-Waves
- Rapid Influenza Diagnostic Tests and Decision-Making
- IVAN KOAY, MBChB, FRNZCUC, MD
- Does Regular Feedback Influence Prescribing?
- Reducing Anterior Shoulder Dislocation
- Language Barriers in Triage

### Lyme Disease Diagnosis in Children of Different Racial Groups

**Take-home point:** Black children with Lyme disease were more likely to have arthritis rather than cutaneous findings at the time of diagnosis.

**Citation:** Hunt K, Michelson K, Balamuth M, et al. Racial differences in the diagnosis of Lyme disease in children. *Clin Infect Dis.* 2023;76(6):1129-1131.

**Relevance:** Erythema migrans (EM) is commonly felt to represent the first clinical finding in patients with Lyme disease. EM is understandably variable in its appearance depending on skin tone. Appreciating these differences can help clinicians approach Lyme as a diagnostic consideration more equitably across ethnicities.

**Study summary:** This was a prospective cohort study at eight EDs participating in the Pedi Lyme Net clinical research network in the eastern U.S.

The study enrolled children undergoing clinical evaluation for Lyme disease. Demographics collected included clinical history and physical examination findings. Race was reported by the child's caregiver. Treating clinicians assessed the presence or absence of EM (as well as single or multiple lesions) on physical examination and, if present, reported the diameter of the largest lesion.

The authors screened 4,003 children; 957 children (23.9%) had confirmed Lyme disease. Lyme was confirmed in 88 (9.2%) based on a diagnostic EM lesion alone, while 781 (81.6%) had a positive two-tier serology alone, and 88 (9.2%) had both. Black children were less likely to have

Lyme disease diagnosed in the ED after adjustment for age and local Lyme disease incidence (adjusted odds ratio [aOR] = 0.63; 95% CI (0.48-0.81)). Among children with Lyme disease, Black children were less likely to be diagnosed with cutaneous manifestations (aOR = 0.34; 95% CI, 0.14-0.79) and more likely to be diagnosed with a swollen joint on examination (aOR=3.68; 95% CI, 2.13-6.36).

**Editor's comments:** The authors compared Black children with other races in a binary manner. Other skin tones were not examined. Additionally, race has been recognized as a social construct rather than a biologic variable and correlation with actual skin tone is inexact. While a less obvious EM rash may drive this pattern of diagnosis, it's worth noting that other social determinants of health associated with race other than skin tone may also lead to later presentations in cases of Lyme. ■

### Do Hyperacute T-waves Predict Impending Acute Myocardial Infarction?

**Take-home point:** T-wave amplitude greater than the 95th percentile had no useful diagnostic value in determining acute myocardial infarction (AMI) in this study.

**Citation:** Koechlin L, Strebelt I, Zimmermann T, et al. Hyperacute T wave in the early diagnosis of acute myocardial infarction. *Ann Emerg Med.* 2023 Feb 9;S0196-0644(22)01327-0.

**Relevance:** Pronounced T-waves, commonly referred to as "hyperacute T-waves," have been cited as harbingers of impending AMI.

**Study summary:** This was a post-hoc analysis of the prospective international multicenter Advantageous Predictors of Acute Coronary Syndrome Evaluation of patients presenting to the ED with acute chest discomfort. Patients recruited had recorded digital 12-lead ECG data that al-



**Ivan Koay MBChB, MRCS, FRNZCUC, MD** is an urgent care physician and medical lead, Kings College Hospital Urgent Treatment Centre, London; Convenor Ireland and UK Faculty of the Royal New Zealand College of Urgent Care; and Independent Assessor European Reference Network, Andalusian Agency for Healthcare Quality.

*“Estimates from the per-protocol analysis showed no reductions in antibiotic prescriptions between both groups and no differences in infection-related and overall hospitalization rates between both groups.”*

lowed automated quantification of T-waves. Adjudication of the final diagnosis was performed by two independent board-certified cardiologists or cardiology Fellows based on review of medical records, including troponin and coronary angiography findings.

Out of 4,323 patients prospectively enrolled, 2,457 were eligible for the analysis of ECG characteristics. The authors found 445 patients (18%) were ultimately diagnosed with AMI, 82 (3.3%) of whom had a STEMI, and 363 (15%) of whom had an NSTEMI. Patients with AMI tended to have smaller T-wave amplitudes than patients with other causes of chest pain. T-wave amplitude greater than the 95th percentile had no useful diagnostic value in this sample.

**Editor’s comments:** This was an ED-based study and a post-hoc analysis. Patients with end-stage renal disease were not included in the study. Despite these limitations, it seems reasonable that we begin to rethink the classic dogma that prominent T-waves are necessarily concerning as isolated findings. ■

#### Availability of Point-of-Care Tests and Their Effect on Decision-Making

**Take-home point:** There were significant differences in clinician decision-making when rapid influenza diagnostic tests were used during clinical encounters with patients who presented with acute respiratory infection symptoms.

**Citation:** Stamm B, Tammerius J, Reddy S, et al. The influence of rapid influenza diagnostic testing on clinician decision-making for patients with acute respiratory infection in urgent care. *Clin Infect Dis.* 2023 Feb 1; ciado38.

**Relevance:** Most urgent care centers have access to rapid influenza diagnostic tests (RIDT). The use of these tests is frequently a subject of debate.

**Study summary:** This was a post-hoc analysis of data from another study that investigated the patient’s ability to self-collect nasal swabs for rapid testing. Two sets of analyses were performed. The primary analysis compared the RIDT-tested population with a matched non-RIDT-tested

population to determine if differences in clinical decision-making existed when treating patients who presented with ARI symptoms in the presence or absence of an RIDT. The secondary analysis compared participants only in the RIDT-tested population to determine if RIDT (+) patients are treated differently based on the diagnosis of influenza compared with RIDT (–) patients.

Data from 1,166 participants were analyzed. The authors found an 85% reduction in the odds of prescribing an antibiotic in RIDT (+) participants (odds ratio [OR] = 0.15; 95% CI, 0.08–0.27; P<.0001) and a 30% reduction in the odds of prescribing an antibiotic in the RIDT (–) participants (OR, 0.70; 95% CI, 0.57–0.86; P=.001).

The RIDT-tested population, regardless of RIDT result, had a 48% reduction in the odds of antibiotics prescribed compared with non-RIDT-tested participants (OR, 0.52; 95% CI, .43–.63; P<.0001). A 92.3% increase in the odds of prescribing antivirals to RIDT (+) participants was identified when compared with the matched non-RIDT-tested population (OR=10.23; 95% CI, 5.78–19.72; P<.0001).

**Editor’s comments:** This was a rare UC-based study, making the results more relevant than most prior studies on this topic for UC clinicians. In this study, RIDT use reduced antibiotic prescribing and increased antiviral prescribing in patients with acute respiratory illness.

It is worth noting there was a presumption that this was best practice. However, this does not always correspond with evidence-based practice. For example, antivirals that are initiated late in the course of illness or in otherwise healthy patients with influenza may be of no benefit. ■

#### Effects of Regular Feedback on Antibiotic Prescribing Rates

**Take-home point:** In this study, quarterly personalized antibiotic prescribing audits and feedback with peer benchmarking did not reduce antibiotic prescribing amongst primary care physicians.

**Citation:** Aghlmandi S, Halbeisen F, Saccilotto R, et al. Effect of antibiotic prescription audit and feedback on antibiotic prescribing in primary care: a randomized clinical trial. *JAMA Intern Med.* 2023;183(3):213-220.

**Relevance:** Antibiotic prescribing metrics and feedback have become common means of evaluating clinicians in UC practice. It is unclear to what extent this influences practice patterns.

**Study summary:** This was a randomized controlled trial conducted among 3,426 primary care physicians in Switz-

erland with medium-to-high antibiotic prescription rates over a 2-year period. Eligible physicians were randomized to the intervention and control groups in a 1:1 ratio. Quarterly antibiotic prescription feedback was compared with overall prescription rates and antibiotic type per 100 consultations as well as personal prescription rates for the same 3 months of the preceding year. Each category was also compared with the prescription rates of peer physicians. Physicians in the control group were not informed that their antibiotic prescription was monitored for the duration of the trial.

The authors found antibiotic prescription rates in the intervention group additionally increased during the first year by 0.5% (95% CI, -0.1% to 1.2%) and during the entire trial period by 0.5% (95% CI, -0.2% to 1.3%) when compared with the control group.

Prescription rates for specific antibiotics also increased during the intervention period. Estimates from the per-protocol analysis showed no reductions in antibiotic prescriptions between both groups and no differences in infection-related and overall hospitalization rates between both groups.

**Editor's comments:** The study did not examine the appropriateness of prescriptions. This trial involved only Swiss primary care physicians. It is unclear to what extent these results can be generalized to nonphysician prescribers in UC in other countries. ■

#### Anterior Shoulder Dislocation Reduction Techniques: Which Is the Best for Success?

**Take-home point:** The Boss–Holzach–Matter (BHM)/Davos technique and the Fast, Reliable, and Safe (FARES) technique demonstrated the most favorable values for successful reduction. The FARES technique had the lowest rating for pain associated with reduction.

**Citation:** Gonai S, Yoneoka D, Miyoshi T, et al. A systematic review with pairwise and network meta-analysis of closed reduction methods for anterior shoulder dislocation. *Ann Emerg Med.* 2023;81(4):453-465.

**Relevance:** Anterior shoulder dislocation is a common injury. UC practitioners should have familiarity with the most effective, safe, and pain-free methods to attempt initial reduction, especially as delays to ED care can be substantial.

**Study summary:** This was a systematic review using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to evaluate the various closed shoulder dislocation reduction techniques.

The authors screened 1,833 records by title and abstract and included 14 trials that enrolled adult patients with an acute anterior shoulder dislocation, and compared specific reduction methods. Surface under the cumulative ranking (SUCRA) was calculated to evaluate the superiority (or ranking) of each method.

In their systematic review, the authors found the FARES method was significantly less painful than the Kocher technique. Success rates of techniques, such as FARES, BHM, Spaso, modified external rotation, external rotation, and scapular manipulation techniques tend to be higher than others, although many of the results were similar.

In the SUCRA plot of reduction time, modified external rotation was the best in the overall analysis, followed by the FARES method which was similar in value. In comparison of success rates, FARES, Spaso, external rotation, and Milch were significantly more effective than Stimson. The FARES technique was rated as the least painful.

**Editor's comments:** The number of cases for each method was not large enough to evaluate the safety of each technique, and age restrictions for the included studies limits its extrapolation to pediatric patients. As shoulder dislocations are unlikely to be presentations that many UC providers face regularly, this study gives guidance toward the several best methods to become familiar with. ■

*“The most common diagnosis categories for undertriaged visits, including return visits within 14 days, were skin and soft tissue pathology, other gastrointestinal pathology, unspecified viral infections, upper respiratory pathology, and asthma.”*

#### Undertriaging of Children of Non–English-Speaking Parents

**Take-home point:** Children accompanied by caregivers whose preferred language is something other than English were more likely to be undertriaged in this pediatric ED-based study.

**Citation:** Rojas C, Chamberlain J, Cohen J, et al. Undertriage for children with caregivers preferring languages other than English. *Pediatrics.* Epub ahead of print May 16, 2023.

**Relevance:** Equitable care is an issue especially among non–English-speaking patients and parents. The under-

estimation of acuity at triage in UCCs and EDs can result in delays in care.

**Study summary:** This was a retrospective cross-sectional study of visits for patients at two pediatric EDs in the U.S. Patients with a documented caregiver-preferred language in the electronic health record were included in the study.

The authors defined undertriage as encounters in which the patient was assigned an Emergency Severity Index (ESI) score of 4 or 5 and subsequently required hospital admission or significant ED resources, including nebulizer treatments, supplemental oxygen, or intravenous (IV) placement. An additional indicator of undertriage was defined as patients with an ESI score of 4 or 5 who returned to the ED within 14 days and required admission.

The authors found that 124,775 patients were triaged as an ESI of 4 or 5, of which 114,266 (91.6%) had a preferred language documented for analysis. They found that 80.2% had caregivers who preferred English, 19% had caregivers who preferred Spanish, and 0.8% had caregivers who preferred any of 47 other languages. Children of caregivers preferring non-English languages were significantly more likely to be inappropriately triaged (under-

*“While there was no comment in the study regarding whether interpreters were used in these encounters, this is an important reminder that language barriers present obstacles to safe and equitable care.”*

triage rate 3.7% (English) vs 4.6% (Spanish) vs 5.9% (other languages)). The most common diagnosis categories for undertriaged visits, including return visits within 14 days, were skin and soft tissue pathology, other gastrointestinal pathology, unspecified viral infections, upper respiratory pathology, and asthma.

**Editor’s comments:** Parental English fluency may be less relevant for older children who may themselves be fluent in English. There was no comment in the study regarding whether interpreters were used in these encounters. Regardless, this is an important reminder that language barriers present obstacles to safe and equitable care and such cases require increased vigilance on the part of clinicians. ■



## JUCM® is calling—*it’s for you*

JUCM, *The Journal of Urgent Care Medicine* is known as the voice of the urgent care community, thanks to the contributions of urgent care professionals just like you.

**Whether you’re a physician, nurse practitioner, a physician assistant—or an owner, manager, billing and coding specialist, lawyer, or anyone else with expertise that could benefit our readers—you’re qualified to submit an article.**

So, if you’ve ever had a situation arise in your urgent care center and thought *somebody should write an article about this*, maybe you should be that “somebody.” Describe it in an email to [editor@jucm.com](mailto:editor@jucm.com) and we’ll help you get started.

**Our content works for the urgent care community because it comes from the urgent care community. And we aim to keep it that way.**

\*JUCM has garnered 17 awards in the prestigious American Society of Healthcare Publication Editors annual awards competition.

# Urgent Care's Top Hospital-Affiliated Urgent Care Operators—by Number of Locations

The makeup of the urgent care industry has changed considerably since its inception in the 1970s. At the time, it was a radical idea to see patients with non-emergent complaints on a walk-in basis. Certainly hospitals wanted no part of it; that's what they had emergency rooms for. Rather, the UC industry's founders tended to be in private or small group practices, but unsatisfied with how they were practicing.

Over the decades that followed, it became clear that offering patients the chance to see a top-notch health-care provider whenever the need arose was not just convenient for them—it could also be quite profitable for the operator. Now health and hospital systems took

note, and then some.

Today's ownership structures reflect that delayed acceptance. There are still some urgent care businesses owned by entrepreneurial healthcare providers, but many are now part of systems operated by or affiliated with hospital and healthcare systems.

Last month, we shared with you a list of the largest “private” urgent care operators in the country, by number of locations. In this issue, we bring you an accounting of the largest urgent care operators affiliated with hospitals and health systems, according to April 2023 data from National UC Realty. ■

Ranking	Entity Name	Number of Clinics	Health System Affiliation	Unaffiliated	Urgent Care Branding or Hospital Affiliations
1	Hospital Corporation of America	270	270	0	CareNow, MD Now
2	GoHealth Urgent Care	228	228	0	Mercy, Dignity, Hartford HealthCare, ChristianaCare, Northwell, Henry Ford, Legacy, Novant, INOVA and Memorial Hermann
3	Advocate Aurora Health	119	119	0	
4	WellStreet Urgent Care	96	96	0	Corewell Health, Piedmont Healthcare, University Hospitals of Cleveland
5	Providence Health & Services	83	83	0	
6	Premier Health	77	69	8	Franciscan Missionaries of Our Lady, Trinity Health, LCMC, St. Joseph's/Candler, University of Kansas, Hendrick Health, UT Health East Texas
7	Sanford Health	63	63	0	
7	Ascension Health	63	63	0	Excludes WellNow and Urgent Team locations
9	FastMed	169	61	108	HonorHealth, Tenet Healthcare, Baptist Health (Jacksonville)
10	ZoomCare	58	58	0	PeaceHealth
10	AdventHealth	58	58	0	Centra Care
12	CRH Healthcare	83	57	26	Emory Healthcare Network, Memorial Health

URGENT CARE'S TOP HOSPITAL-AFFILIATED URGENT CARE OPERATORS—BY NUMBER OF LOCATIONS

Ranking	Entity Name	Number of Clinics	Health System Affiliation	Unaffiliated	Urgent Care Branding or Hospital Affiliations
13	Sutter Health	54	54	0	
14	Banner Health	52	52	0	
15	WellNow Urgent Care	217	48	169	Ascension, OSF, KSB, St. Peter's, Health Network
16	Bon Secours Mercy Health	47	47	0	Includes 17 American Family Care franchise locations operated by Bon Secours Mercy Health
17	Cleveland Clinic	46	46	0	
17	Intermountain Healthcare	46	46	0	
19	Urgent Team	87	44	43	Ascension, Baptist Health, Huntsville Hospital, Washington Regional
20	MultiCare Health System	43	43	0	Indigo Urgent Care
20	UPMC	43	43	0	
22	UnityPoint Health	42	42	0	
23	OSF HealthCare	41	41	0	Excludes WellNow locations
23	UNC Health Care	41	41	0	
25	NorthShore Edward-Elmhurst Health	38	38	0	
26	Community Health Systems	37	37	0	
26	Ochsner Rush Health	37	37	0	
28	Doctors Care	53	33	20	Medical University of South Carolina
28	MedStar Health	33	33	0	
28	SSM Health	33	33	0	
31	Geisinger Health	30	30	0	
31	Tower Health	30	30	0	
33	Adventist Health	29	29	0	Centra Care Urgent Care
34	Lifebridge Health System	28	28	0	ExpressCare Urgent Care
35	Baylor Scott & White	27	27	0	
35	Corewell Health	27	27	0	Primarily Spectrum Health Urgent Care. Excludes 28 Beaumont Urgent Care by WellStreet locations
37	Baptist Health South Florida	25	25	0	
37	Northwestern Medicine	25	25	0	
37	Texas Health Resources	25	25	0	Breeze Urgent Care
40	PhysicianOne Urgent Care	25	24	1	YaleNewHavenHealth, Tufts Medicine
40	UCHealth	24	24	0	
40	St. Luke's University Health Network	24	24	0	St. Luke's Care Now
43	Essentia Health	23	23	0	
43	Mass General Brigham	23	23	0	
45	Allina Health	22	22	0	
45	Baptist Health Kentucky	22	22	0	
47	HealthPartners Park Nicollet	21	21	0	

URGENT CARE'S TOP HOSPITAL-AFFILIATED URGENT CARE OPERATORS—BY NUMBER OF LOCATIONS

Ranking	Entity Name	Number of Clinics	Health System Affiliation	Unaffiliated	Urgent Care Branding or Hospital Affiliations
47	University of California Health System	21	21	0	
49	Avera Health	20	20	0	
49	CHI Health	20	20	0	
49	Lehigh Valley Health Network	20	20	0	
49	Norton Healthcare	20	20	0	
53	BayCare	19	19	0	
53	Vanderbilt Health	19	19	0	
53	WellSpan Health	19	19	0	
56	Prevea Health	18	18	0	
56	University of Rochester Medicine	18	18	0	
56	WellStar Health System	18	18	0	
56	WVU Health	18	18	0	
60	Velocity Urgent Care	17	17	0	Sentara Healthcare
60	Centura Health	17	17	0	
60	Dignity Health	17	17	0	Excluding co-branded GoHealth centers
60	Memorial Health System (MS)	17	17	0	
60	Mayo Clinic Health System	17	17	0	
60	Universal Health Services	17	17	0	
66	University Hospitals (Cleveland, OH)	16	16	0	Excluding WellStreet managed locations
66	St. Lukes Hospital (St. Louis, MO)	16	16	0	
66	LifePoint Health	19	16	3	Local hospital branding
66	Atlantic Health System	16	16	0	
66	Franciscan Health	16	16	0	
66	OhioHealth	16	16	0	
66	Tampa General Hospital	16	16	0	TGH Urgent Care Powered by Fast Track
73	CHRISTUS Health	15	15	0	
73	Cottage Health	15	15	0	
73	Fairview Health Services	15	15	0	M Health Fairview Urgent Care
73	Hackensack Meridian Health	15	15	0	
73	Hoag Medical Group	15	15	0	
73	St. Dominic's	15	15	0	MEA Same Day Care
79	Aspirus Health Care	14	14	0	
79	Baptist Memorial Health	14	14	0	
79	CoxHealth	14	14	0	
79	Hospital Sisters Health System	14	14	0	
79	MidCoast Health System	14	14	0	MidCoast WellCare
79	Parkview Health	14	14	0	
79	PeaceHealth	14	14	0	Excluding ZoomCare centers

Ranking	Entity Name	Number of Clinics	Health System Affiliation	Unaffiliated	Urgent Care Branding or Hospital Affiliations
79	Scripps Health	14	14	0	
79	Virginia Mason Franciscan	14	14	0	
79	WakeMed	14	14	0	
89	Emergence Health Holdings	38	13	25	St. Joseph's, Exeter Hospital, Lahey Health, UMASS Memorial Health
89	Ballad Health	13	13	0	
89	Erlanger Health System	13	13	0	
89	Mercy Health Systems	13	13	0	Excluding co-branded GoHealth centers
89	Novant Health	13	13	0	Excluding co-branded GoHealth centers
94	AtlantiCare Urgent Care	12	12	0	
94	BJC HealthCare	12	12	0	
94	Froedtert Medical Center	12	12	0	
94	Henry Ford Health System	12	12	0	Excluding co-branded GoHealth centers
94	Indiana University Health	12	12	0	
94	Marshfield Clinic	12	12	0	
94	Rochester Regional Health	12	12	0	
94	University of Maryland Medical System	12	12	0	

Data source: National UC Realty.



## CORE CONTENT IN URGENT CARE NURSING AND MEDICAL ASSISTING

Comprehensive Training for Nurses and Assistive Staff in the Urgent Care Setting

- 6 module program provides 21.75 hours of CEU Credits from the Institute for Medical and Nursing Education.
- More than 250 post test questions to assess competency of all learners, along with completion certificates and CEU credits.
- Procedure video library offering demonstrations of splinting, wound dressing, and much more for supportive content.
- For Office Staff, the program offers Comprehensive OSHA, HIPAA and compliance training.
- \$145. Group pricing is also available, contact us at info@urgentcarecme.com



Save 15% with coupon code JUCM15

www.urgentcarecme.com | 844-814-9135



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

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

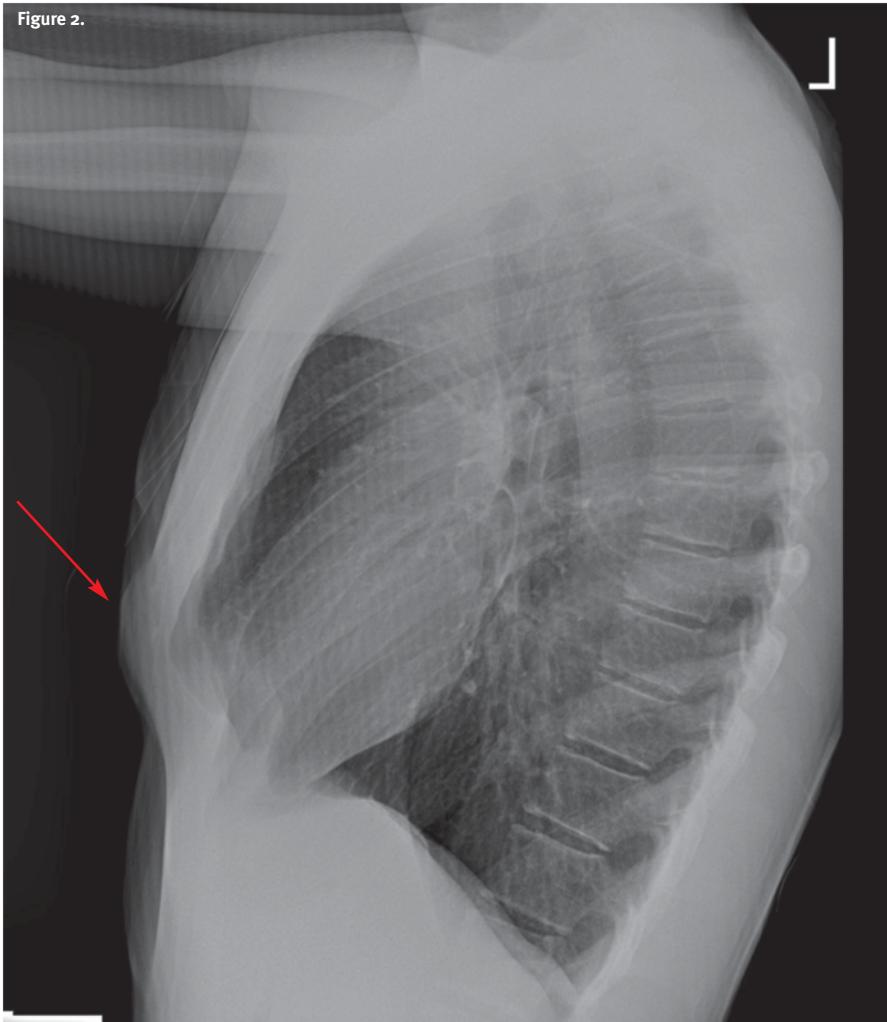
## A 45-Year-Old with Chest Deformity



A 45-year-old man presents with “asthma-like symptoms” that he says have “come and gone” for several years. He denies chest pain or a sense of racing heartbeat. A chest deformity is clear from observation.

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

Figure 2.



### Differential Diagnosis

- Pectus carinatum
- Pectus excavatum
- Poland syndrome
- Pentalogy of Cantrell

### Diagnosis

The x-ray shows an angulated appearance of the lower sternum. This patient was diagnosed with pectus carinatum, otherwise known as a pigeon chest, in which the sternum protrudes anteriorly.

### Learnings/What to Look for

- Shortness of breath and exercise intolerance are common symptoms

- Radiographic features include two patterns of sternal protrusion: chondrogladiolar (protrusion of the middle and lower sternum) and chondromanubrial (protrusion of the manubrium and upper sternum)
- Pectus carinatum can be associated with scoliosis, Marfan syndrome, and other disorders
- Familial occurrence is reported in approximately 25% of cases and usual diagnosis occurs during childhood or adolescence

### Pearls for Urgent Care Management

- Nonsurgical external bracing may be effective, especially in adolescents
- Referral for surgical consideration may be necessary

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



## A 23-Year-Old with a Pruritic, Spreading Rash



A 23-year-old woman presents with a severely pruritic rash that developed on her leg and is spreading. The patient reports that 2 days prior to onset, she had gone hiking with her dog. She recalls going off-trail and brushing up against “woody vines and shrubs.” She denies sustaining insect bites and notes that the sun was particularly intense that day, so she wonders if this may be a sun reaction. She appears well and has no systemic symptoms.

On examination, there are multiple erythematous and edematous, vesiculated and crusted papules and plaques; some are linear and some geometric in outline.

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

Figure 2.



### Differential Diagnosis

- Atopic dermatitis
- Arthropod bite or sting
- Urticaria
- Poison ivy dermatitis

### Diagnosis

This patient was diagnosed with poison ivy dermatitis (also known as *Toxicodendron* dermatitis, along with poison oak and poison sumac). This is a contact dermatitis resulting from a type IV hypersensitivity reaction in sensitized individuals to the oleoresin urushiol. Urushiol is found in most parts of the plants from this genus, which is a member of the Anacardiaceae family.

### Learnings/What to Look for

- The *Toxicodendron* genus is pervasive throughout the continental United States, southern Canada, and Mexico and is mostly found below 5,000 feet of altitude. It can also be found in Asia, Africa, Australia, and New Zealand
- Up to 75% of the North American population is sensitized, and the condition has no predilection based on age, sex, race/ethnicity, or skin type

- Occupational and recreational exposures are prevalent
- Rash begins to appear within 1-2 days after exposure in previously sensitized individuals; in the newly sensitized, it may be delayed 2-3 weeks
- Occult contact may occur from contaminated clothing, gear, or vegetation, even after months have elapsed

### Pearls for Urgent Care Management

- After exposure, remove and wash contaminated clothing and wash the entire body with soap
- Over-the-counter treatments include soothing measures such as oatmeal baths, symptomatic relief measures such as calamine lotion, and oral antihistamines to help with itching
- Glucocorticoid therapies such as topical clobetasol or oral prednisone may be effective for severe or persistent cases

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



# A 67-Year-Old Male with Chest Pain, Dyspnea, and a History of Lung Cancer

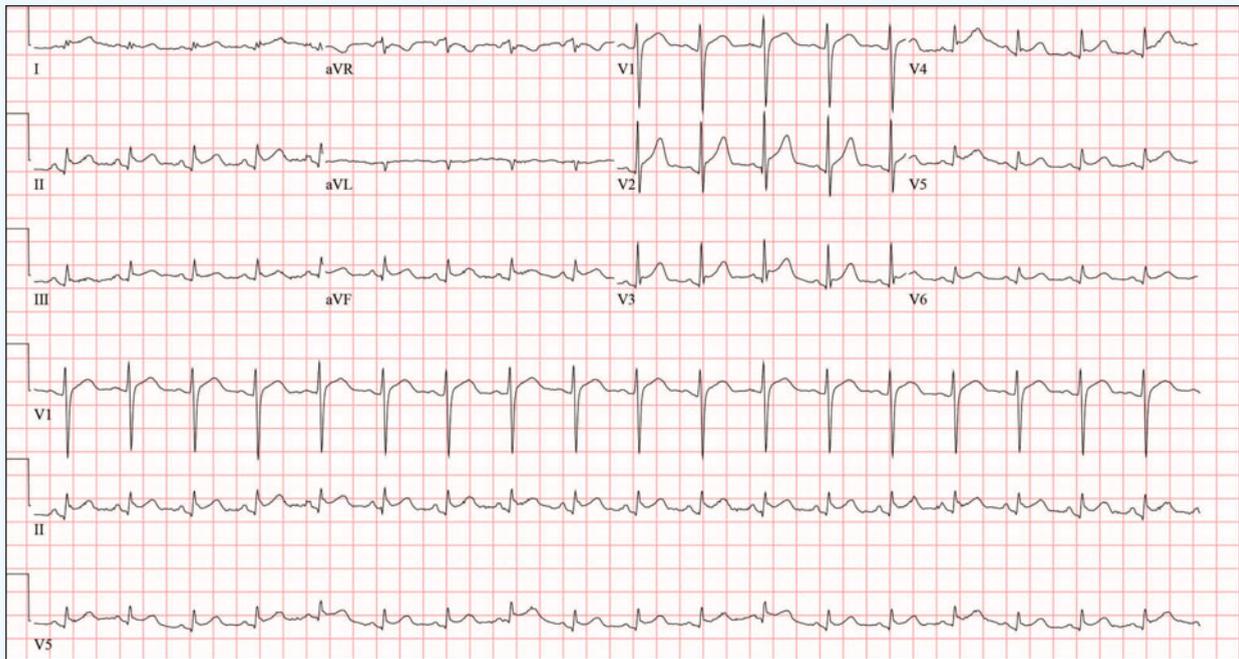


Figure 1. Initial ECG

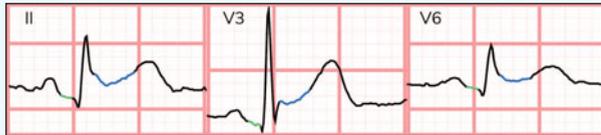
A 67-year-old male presents to urgent care complaining of pleuritic chest pain and dyspnea. He has a history of lung cancer, but denies known cardiac history.

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

(Case presented by Benjamin Cooper, MD, MEd, FACEP, Department of Emergency Medicine, McGovern Medical School at UTHealth Houston.)

### Differential Diagnosis

- Early repolarization
- Hyperkalemia
- Acute pericarditis
- ST-elevation myocardial infarction
- Brugada syndrome



**Figure 2.** Blown-up images of PQRST complexes in leads II, V3, and V6. PR-segment depressions are in green and concave up ST-segment elevations are in blue.

### Diagnosis

This patient was diagnosed with acute pericarditis. The ECG reveals sinus tachycardia with a rate of 108 beats per minute. There is diffuse, concave up ST-segment elevation without reciprocal changes and diffuse PR-segment depression (**Figure 2**).

Acute pericarditis is inflammation of the pericardium, extending to the epicardium. Common causes include drugs (eg, hydralazine, penicillin), infections (eg, bacterial, viral, or fungal), malignancy, rheumatologic conditions (eg, lupus, rheumatoid arthritis, etc.), sequelae of myocardial infarction (eg, Dressler syndrome), uremia, and idiopathic.<sup>1</sup> It is diagnosed by meeting two of four criteria (**Table 1**).

**Table 1. Diagnostic Criteria for Acute Pericarditis\*<sup>2</sup>**

1. Typical symptoms (pleuritic, sharp chest pain relieved when leaning forward)
2. New pericardial effusion
3. Presence of a friction rub
4. Typical ECG findings

\*Diagnosis requires meeting two of four criteria.  
Broad notched or slurred R wave in leads I, aVL, V5, and V6

Differentiating pericarditis from ST-elevation myocardial infarction (STEMI) can be challenging, but the majority of cases can be accurately diagnosed with careful attention to several electrocardiographic features.

Features that suggest pericarditis over STEMI include any of the following: diffuse concave up ST-elevations without reciprocal changes, PR depression, PR elevation in aVR, ST-elevation in lead II greater than lead III, and Spodick's sign (downsloping of the TP segment).<sup>3</sup>

The test characteristics of any single electrocardiographic feature are insufficient to rule in/out pericarditis;

the feature with the highest odds ratio for predicting STEMI (over pericarditis) is reciprocal ST-depressions.

Acute pericarditis tends to follow a natural progression of electrocardiographic findings.

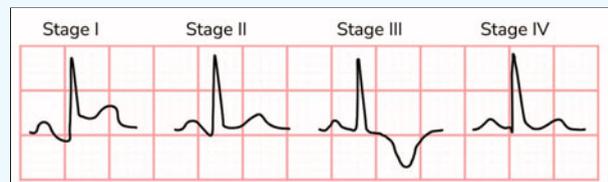
The first 2 weeks are characterized by the aforementioned findings.

Over several weeks, the ST-elevation resolves, and the T waves flatten. Next, the T waves invert.

Finally, over several weeks, the ECG returns to the patient's baseline (**Figure 3**).<sup>4</sup>

Treatment includes nonsteroidal anti-inflammatory medications tapered over 3-4 weeks and colchicine for 3 months.

It's also reasonable to prescribe a proton pump inhibitor to counteract the gastrointestinal side effects. Corticosteroids are reserved for patients with contraindications to initial therapy, but are not preferred as they are associated



**Figure 3.** Morphologic features of the various stages of pericarditis.

with increased recurrence.<sup>2</sup>

Early repolarization can cause similar electrocardiographic features, but this patient's presenting symptoms make acute pericarditis the most likely diagnosis.

Hyperkalemia can cause several electrocardiographic changes, but diffuse concave up ST-elevation like those seen in acute pericarditis has not been described.

Brugada syndrome is a sodium channelopathy that causes characteristic ST-segment elevation in leads V1 and V2.

Additional examples may be found in the ECG Stampede glossary ([www.ecgstampede.com/glossary](http://www.ecgstampede.com/glossary)).

### Learnings/What to Look for

- Electrocardiographic features that suggest acute pericarditis include diffuse concave up ST-elevations without reciprocal changes, PR depression, ST-elevation in lead II greater than lead III, and Spodick's sign (downsloping of the TP segment)
- The presence of reciprocal changes or ST-elevation greater in lead III than lead II is highly suggestive of STEMI

### Pearls for Urgent Care Management

- Patients with a clear diagnosis of acute pericarditis

with a benign etiology and reliable follow-up can be initiated on nonsteroidal anti-inflammatory medications with or without colchicine

- If the diagnosis is in question, the etiology is unclear, or the patient lacks reliable follow-up, transfer to an emergency department

#### References

1. Mattu A, Tabas J, Brady W. *Electrocardiography in Emergency, Acute, and Critical Care*. 2nd ed. The American College of Emergency Physicians; 2019.
2. LeWinter MM. Acute pericarditis. *N Engl J Med*. 2017;371(25):349-359.
3. Witting MD, Hu KM, Westreich AA, et al. Evaluation of Spodick's sign and other electrocardiographic findings as indicators of STEMI and pericarditis. *J Emerg Med*. 2020;58(4):562-569.
4. Spodick DH. Diagnostic electrocardiographic sequences in acute pericarditis. Significance of PR segment and PR vector changes. *Circulation*. 1973;48(3):575-580.

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

ECG STAMPEDE

#### Do You Have Images That Could Offer Valuable Insights to Your Colleagues?

If you have stellar images related to unusual (or just especially interesting) cases that might help your fellow urgent care providers gain insights into providing the best care possible for their patients, consider submitting them for publication in *JUCM*. You can start by describing the case—ultimate diagnosis, patient characteristics, and disposition of the case—and offering us a preview of those images in an email to [editor@jucm.com](mailto:editor@jucm.com). We'll provide guidance on the next steps.



VisualDx is your trusted second opinion.

#### Features include:

- ✓ Fast access to insights from the best specialists
- ✓ Handle complex cases directly
- ✓ Engage patients with our handouts

**20% OFF**  
for JUCM readers  
[visualdx.com/jucm](http://visualdx.com/jucm)



# Modifier 25: What You Need to Know

■ PHYLLIS DOBBERSTEIN, CPC, CPMA, CPCO, CEMC, CCC

**M**odifier 25 is used to indicate that a significant, separately identifiable evaluation and management (E/M) service was required on the day of a minor surgical procedure. The procedure performed must have a global period of 0 or 10 days. An example of this is a laceration repair.

Modifier 25 is overused in the industry and has been under scrutiny from payers for decades. Now private payers are implementing policies to monitor the use of modifier 25, or in some instances, reduce payment when it is used.

Starting in 2023, Horizon is paying for problem E/M services (ie, 99202-99215) with a 25 modifier at 50% of their allowable if a minor surgical procedure is reported on the same date. UnitedHealthcare is also considering this approach.

Cigna attempted to implement a policy which would require medical records to be required at the time of claim submission when practices bill a minor surgical procedure with an established E/M code (99212-99215). Fortunately, Cigna has since delayed implementation due to industry backlash over the administrative burden this would cause.

So, what is an appropriate use of modifier 25? To understand that, you first need to understand why modifier 25 is needed.

Every procedure has a degree of evaluation built into its allowable. Pricing includes preoperative, intraoperative, and postoperative work. Billing an E/M separately from the procedure would mean that a practice is getting paid for the same service twice, also known as “double dipping.”

There are times, however, when the medical decision-making to diagnose a patient and then order a procedure is beyond the routine level of evaluation included in the pre- and postoperative work. In these instances, the E/M is identified as a separate payable service by appending modifier 25.

Per the American Medical Association, pre- and postoperative services typically associated with a procedure



include the following and cannot be reported with a separate E/M services code:

- Review of patient’s relevant past medical history
- Assessment of the problem area to be treated by surgical or other service
- Formulation and explanation of the clinical diagnosis
- Review and explanation of the procedure to the patient, family, or caregiver
- Discussion of alternative treatments or diagnostic options
- Obtaining informed consent
- Providing postoperative care instructions
- Discussion of any further treatment and follow-up after the procedure

Documentation to use modifier 25 should show the amount of work performed is more than the level of effort normally performed with the procedure.

Examples:

- *Appropriate use:* A patient presents with severe pain in the right knee. The evaluation determines the patient has arthritis and the decision is made to perform a large joint injection. This procedure has a 0-day global period, which means any E/M performed on that same date is



**Phyllis Dobberstein CPC, CPMA, CPCO, CEMC, CCC** is RCM Compliance Manager for Experity.

included in the injection procedure. Modifier 25 should be appended to the E/M since the procedure was unplanned. The medical decision-making involved with diagnosing the patient and selecting the management option of a large joint injection is “significant and separate” from the preoperative work for the procedure.

- **Inappropriate use:** The same patient cannot get the injection on that date. They plan to come back the next day for a planned injection. There is no change in their condition. The decision to perform an injection was already made the day before. A separate E/M on the date of the injection, and thus modifier 25, should not be reported with this planned procedure.
- **Appropriate use:** The same patient returns for a second planned injection. However, their condition has worsened, and this requires additional evaluation to determine if an injection should be done. The patient’s treatment plan is altered by adding a prescription. Modifier 25 should be appended to the E/M because the circumstances of their treatment has changed.

Since urgent cares are usually seeing patients for new conditions, a separate E/M code with modifier 25 is usually

*“Since urgent cares are usually seeing patients for new conditions, a separate E/M code with modifier 25 is usually correct coding.”*

correct coding.

There are a number of myths surrounding the use of the 25 modifier. The most common are:

- **My diagnosis for the E/M cannot be the same as the procedure.** Incorrect. Different diagnoses are not required to report a separate E/M with modifier 25.
- **Modifier 25 is needed whenever there is more than one code on the claim.** Incorrect. As discussed previously, only minor surgical procedures include payment for pre- and postoperative work. Diagnostic testing should be paid separately from the E/M services. Per correct coding, modifier 25 is not required.

For more information, the AMA has published a handout, Reporting CPT Modifier 25; it’s accessible at <https://www.ama-assn.org/system/files/reporting-CPT-modifier-25.pdf> ■

Join us as the California Urgent Care Association (CalUCA) hosts the 2023 Western Regional Urgent Care Conference, September 16-18, 2023 in beautiful Monterey.



Western Regional  
Urgent Care Conference



Register Now

PRACTICE FOR SALE

**Unique Opportunity to Own/Operate 3 urgent care clinics strategically located in the beautiful Southwest.**

One clinic is located in Rio Rancho, Albuquerque's most rapidly growing neighborhood to the north; a second is in Santa Fe, the City Different and home to wealthy second home-owners and a tourist-driven economy; the third is integrated into the prestigious Angel Fire Resort, with its well-established winter skiing and summer mountain biking facilities. All 3 clinics have been operational and profitable for 15-25 years and are fully staffed and turn-key. The business owners are retiring and would like to turn the operation over to someone who shares their vision of providing quality care with compassion and efficiency.

This offering would be ideal for an experienced physician to work shifts in one or all 3 locations and also be the medical director, or for a physician who desires to be the medical director for all 3 and staff with the current providers.

Contact William Kotsch [wkotsch@gmail.com](mailto:wkotsch@gmail.com) for more information.

## Advertise Your Urgent Care Opportunity

Get your urgent care job opportunity in front of the most qualified candidates in the industry.



**(860) 579-1175**

**[rachel.barda@communitybrands.com](mailto:rachel.barda@communitybrands.com)**



**FIND THE RIGHT JOB  
JOB.JUCM.COM**



# There's No Casual Approach to Improving Antibiotic Stewardship—but When You Make the Effort, It Works

Improving antibiotic stewardship was an industry-wide mandate even before a 2018 study indicated that urgent care appeared to be more likely than other settings to over-prescribe for common infections. While the methodologies could be questioned, especially in their take on the nature of urgent care visits, the point was well taken. Since then, urgent care as a whole has sought to improve providers' prescribing habits more aggressively than ever.

The initial awareness campaigns did a great job of raising the profile of the issue, but actually seeing results has taken more time—and, more to the point, *focus*. Really making an effort to get urgent care providers to take note requires a concentrated effort. Emerging data suggest that it may not take much more than that to change the curve.

A study published by *JAMA Network Open* is an excellent, and very timely, example.<sup>1</sup> Researchers found, at baseline, that 48% of 493,724 urgent care encounters with patients who had a respiratory condition resulted in an antibiotic

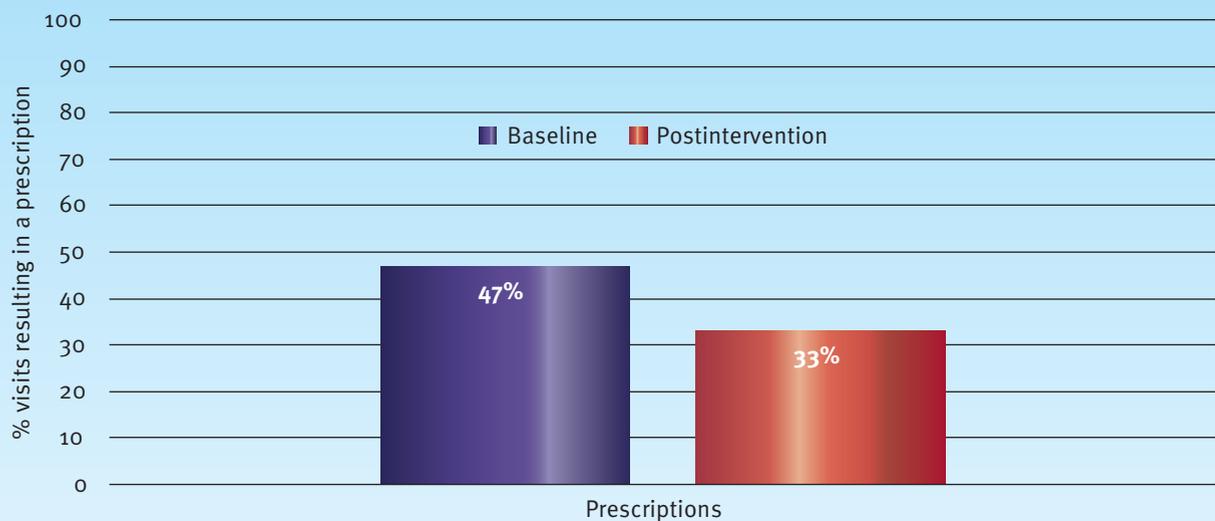
prescription. As the figure below illustrates, over the following year, interventions (provider and patient education; electronic health record tools; a transparent clinician benchmarking dashboard; and media) succeeded in lowering that figure to 33%. Perhaps most impressive is how quickly prescribing behavior was changed: Prescription rates fell 22% early on and continued to fall 5% per month throughout the 1-year intervention period.

As the authors wrote: “This study’s findings suggest that a multifaceted antibiotic stewardship initiative was associated with reduced antibiotic prescribing for UC respiratory conditions, and that such initiatives in large UC networks may decrease inappropriate antibiotic prescribing.” ■

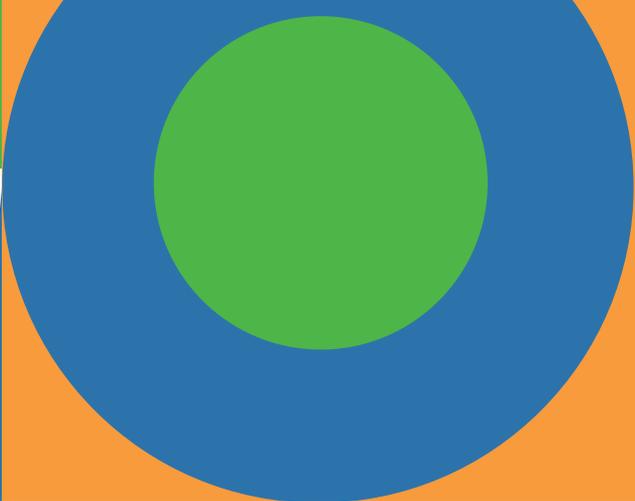
#### Reference

Stenehjem E, Wallin A, Willis P, et al. Implementation of an antibiotic stewardship initiative in a large urgent care network. *JAMA Netw Open*. 2023;6(5):22313011.

### THE EFFECT OF INTERVENTIONS ON ANTIBIOTIC PRESCRIBING IN A LARGE URGENT CARE NETWORK



Data source: *JAMA Netw Open*. 2023;6(5):e2313011.



**URGENT CARE**  
**connect**  
AN EXPERITY EVENT

# WE'LL SEE YOU NEXT YEAR IN AUSTIN, TX

**SAVE THE DATE | FEB 13-14, 2024**



[LEARN MORE](#)

