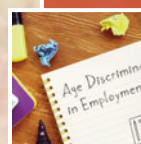


CLINICAL **cme**

## Epistaxis: Stemming the Bleeding *Should Be Only the Start*

### ALSO IN THIS ISSUE

- 19 Case Report**  
Overlook an Unusual Cause of Abscess at Your Patient's Peril
- 25 Pediatric Urgent Care**  
Could Heavy Menstrual Bleeding Be a Sign of Something Severe in an Adolescent?
- Original Research**
- 31 Practice Makes Perfect—So Where**  
Would *Failing* to Practice for Emergencies Leave You?
- 35 Lacking Supplies but Not Persistence: An Alternative Route to**  
Diagnosing COVID-19



**Health Law and Compliance**  
**'Joking' About an Employee's Age Won't Seem so Funny When You Wind Up in Court**

**cme**

Just in time for Flu season...

TRACKING

# Our Rapid A-B-C Test is Here!



With flu season converging with COVID-19, the need to **TEST** and **TRACK** multiple respiratory infectious diseases **quickly, easily, accurately** and with the **fewest resources** will be greater than ever.

Sofia® 2 Flu + SARS Antigen FIA can be deployed practically anywhere, making testing and tracking, for Influenza **A**, Influenza **B** and **COVID-19** at your point of care, as easy as **A-B-C**.

## Flu A+B plus SARS-CoV-2

### RAPID MULTIPLEX TESTING and TRACKING

**3-in-1: 3 RESULTS • 1 TEST • 15 MINUTES**

- 3-in-1 Multiplex test:**  
Flu A, Flu B and SARS-CoV-2 Antigen in **1 test**  
(one nasal or nasopharyngeal swab sample)
- Accurate, objective**  
and **automated**  
results in **15 minutes**
- Flexible, dual mode testing** for **high throughput** in a variety of testing environments
- Automated tracking, data capture** and **government reporting**
- Exclusive disease mapping** with **Virena®**



Sofia<sup>2</sup>  
Flu+SARS Antigen FIA



To find out how you can make our **Rapid A-B-C Test** part of your POCT landscape, contact your Quidel Account Manager at **800.874.1517**.

[quidel.com](https://www.quidel.com)





# An Ominous Trend For Urgent Care

■ JOHN KOEHLER MD, ABPM(OM)

To My Colleagues:

I am writing to alert you to an ominous and pernicious trend in our industry that we must collectively address or we will face marginalization or even extinction in the years ahead. This may sound alarmist, but please hear me out.

I opened my first clinic in 1987 when “urgent care” was barely a recognized term. I was there when the Urgent Care Association (at that time known as the Urgent Care Association of America) was formed by a small group of my dear friends who had a vision to create a place where we could share ideas and help each other be successful. And that has continued to this day. For this I am truly grateful and hold you and this industry dear to my heart.

This is why I am particularly motivated to call out this disastrous trend I’ve seen emerging over recent years.

Alan Ayers, president of Experity Networks and JUCM’s own senior editor, practice management, has called the phenomenon “acuity degradation.” I use the term “glorified triage.” In the eyes of both patients and payers alike, we are increasingly being viewed as “triage centers.” Carriers have actually used that term while negotiating with at least three groups I know of in the last week alone, all while proposing to keep reimbursements flat. In fact, one large carrier in Florida decided to simply stop contracting with urgent cares altogether, favoring other (cheaper) methods of “triage.” (I suspect telephonic nurse triage.)

This is not good.

What happened? Simply put, we refer too many patients out from our UC centers. We do not “do” enough within our four walls for our patients.

The most glaring example is injury care. We excessively refer

injuries to orthopedics (or other specialties) instead of treating them ourselves. As a result, orthopedic urgent cares have surged in popularity. A local UC group recently informed me that a large orthopedics group has actually followed their last three clinics by establishing an orthopedic-specific UC a few doors down and subsequently directly asked them for referrals! In the Chicago area, for example, there are at least 47 orthopedic UCs; each of them also advertises worker’s comp care.

We are filling surgeons’ schedules with minor fractures, sprains, tendinitis, injections, etc. (ie, non-surgical cases).

How difficult is it to put a boot on a nondisplaced metatarsal fracture or provide a subacromial injection? Even cases of “suspected fractures” are being referred. Why not order an outpatient CT and make the diagnosis yourself? As a result, surgeons are hiring their own advanced practice providers to ease their burden of nonsurgical cases, and who will ultimately provide a very similar level of care that we had the opportunity to provide definitively.

Sadly, we earned this. If we do not act now, we may lose orthopedics completely. And with that goes considerable revenue (x-ray, durable medical equipment, procedures, E&M code, global fee).

Impossible? Think again. How many unnecessary referrals like this does it take to train your community not to come to your UC for injuries anymore? And it should not be lost on us that the orthopedics groups are simultaneously marketing their orthopedics UCs to any patient you refer to them.

This also applies to workers’ comp. Orthopedics UCs are selling themselves as “one-stop shops” for work comp injuries; they even go so far as to suggest that it’s a waste of time to see us first. And it is our high referral rate that is driving this. We are doing this to ourselves.

It is not just simple fractures. We refer basic eye injuries, long lacerations, minor head injuries, burns, fingertip injuries, etc.—in short, anything that makes us “uncomfortable” or “takes too long to treat.” As a result, we have carriers and communities wondering, *What exactly is it that you do treat?*



**John Koehler, MD, ABPM(OM)** was a founding board member of the Urgent Care Association of America (now known as the Urgent Care Association) and is editor-in-chief, OccDocOne. He can be contacted at [jkoehlermd@OccDocOne.com](mailto:jkoehlermd@OccDocOne.com).

## URGENT PERSPECTIVES

On the medical side, any emergency doc will tell you about the “dumps” from urgent care. To be fair, they have been saying that for a long time, but it is clearly getting worse. Our referral threshold keeps falling as we commoditize and narrow the range of services we provide. A large multispecialty group near Chicago even goes so far as to place signage at the bottom of their UC paperwork saying, “urgent care does not make the diagnosis...[the specialist does].”

Carriers know this because they have the data. They can see the codes and they can see where the patients are sent. Emboldened, they are using our own data against us. How can we blame them? The first volley in this struggle came with the introduction of the “case rate.” If we don’t act soon, we will be reduced to accepting a “triage rate” and then “no rate.” Already in Florida, a large insurance carrier has gone with “no rate” for UC visits.

What happened? Well, it goes back to provider training and experience. The less training and experience UC providers have, the more likely they are to be uncomfortable with managing relatively common conditions. And it is this clinical discomfort which understandably results in unacceptably high rates of referrals.

We can fix this, but it will require effort. UCA will be convening a working group to discuss this issue, make recommendations, and possibly create training programs.

Please consider these suggestions for ways to dampen this trend within your UC organization:

- Study your referral data by code
- Start a robust onboarding and mentorship program for any new grad APPs
- Start fracture care, dislocation reduction, injections, and DME training
- Focus a segment of regular chart reviews on referred cases
- Set referral standards for injuries/fractures
- Require clearance from senior providers prior to referral
- Create a system for senior providers availability for case consultation
- Provide clinical guidelines/occ med guidelines with easy access
- Incentivize providers financially for performing procedures (yes, this is legal)
- Use your data to show you do “real” urgent care
- Avoid signing any case-rate contracts

Our destiny is in our own hands. I want to wish you the very best as you consider how this may apply to your group. ■



## 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.



# Ticks don't know the meaning of "Social Distancing."

Sofia 2 Lyme FIA: **CLIA-waived**  
**Results in minutes**, at your **point-of-care**

With kids home and parents looking for things to do that include "social distancing," more families will take to the outdoors. The only thing, ticks don't play by the same rules, so Lyme disease could end up on the rise. **When patients aren't feeling well, anxiety levels could be especially high – and now more than ever they'll ask to be tested.** Sofia 2 Lyme FIA uses a finger-stick whole blood sample to provide accurate, objective and automated results in as few as 3 minutes, getting practitioner and anxious patient on a path to treatment much sooner.

- IgM and IgG differentiated results
- CLIA waived
- Point-of-care testing
- Less than 1 minute hands-on-time
- Accuracy comparable to laboratory testing methods



Sofia<sup>2</sup>  
Lyme FIA



For more information contact Quidel Inside Sales at **858.431.5814**  
Or go to our website at **Sofia2Lyme.com**

# There's a fine line between Pain Management and Addiction.

Relieve pain.

Monitor compliance.

Satisfy patients.



## Rapid, Automated Drug Screening at your Point-of-Care.

Providing adequate pain relief while monitoring compliance is critical for the well-being of your patients while conforming to safe pain management policies and guidelines.

The Triage TOX Drug Screen, 94600 provides an accurate and customizable result in about 15 minutes with the option to interface with your lab information system.



For more information contact Quidel Inside Sales at  
858.431.5814, or [insidesales@quidel.com](mailto:insidesales@quidel.com).

[quidel.com](http://quidel.com)





## CLINICAL

### 13 Epistaxis: A Clinical Review

“Just a bloody nose” could actually be much more, and cause for alarm. Or not. Getting to the mechanism and being alert for underlying potential causes will ensure you’re not missing something that should be identified and handled safely and efficiently in the urgent care center.

Lindsay Ballard, MD; Stephanie Fernandez, MD;  
and Joshua Kornegay, MD

## CASE REPORT

### 19 *Actinomyces neuii* as a Cause of Vulvar Abscess



Most abscesses found in the urgent care setting are caused by *Staphylococcus aureus* and *Streptococcus* sp. Rarely—such as in this case—gram-negative bacilli can be found in abscesses in the perineal area.

Tracey Q. Davidoff, MD, FCUCM

## HEALTH LAW & COMPLIANCE

### 21 Nuances of Age Discrimination



A multigenerational workforce can be an asset to the urgent care center—provided all ages feel equally welcome and respected. Awareness of language, policies, and recruitment practices that could be perceived as red flags for ageism will go a long way toward keeping you out of court.

Alan A. Ayers, MBA, MAcc

## PEDIATRIC URGENT CARE

### 25 Heavy Menstrual Bleeding: Important Considerations for Adolescent Patients in the Urgent Care Setting



“Normal” menstruation is highly variable from one woman to the next—or even from one month to the next, especially among adolescents. Differentiating potentially

dangerous causes from benign etiologies can be a tricky business.

Shikha Nigam, MD, MPH and  
Amy Pattishall, MD

## ORIGINAL RESEARCH

### 31 Using Simulations and Skills Stations to Enhance Emergency Preparedness in Pediatric Urgent Care



Academic training and CME are essential for cognitive learning, but they may not be enough to ensure fast action in a crisis. Skills can get stale when they’re not put to good use often enough. Is simulating emergency scenarios an effective way to keep your team sharp?

Ilanalee Cabrera, MSN, RN, CPNP;  
Wilma Santiago, BSN, RN, CPN; and  
Tiffany Christensen, Rachel Lucas, DO

### 35 Active COVID-19 Infection Is Indicated by WBC $\leq 7.0$ and PLT $\leq 200$ at Presentation



When you don’t have the supplies to do the job the way it “should be” done, you have to get creative—even at the outset of the COVID-19 pandemic, when testing kits were scarce in too many healthcare facilities.

Yijung Russell, MD; Casey Collier, MD;  
Steve Christos, DO; and Shu B. Chan MD, MS

## NEXT MONTH IN JUCM

The waning days of summer will have people grabbing at every opportunity to bask in the sun and cool off with a dip in the pool, lake, or ocean. Some will get in over their heads (both literally and figuratively) and experience a drowning event. Patients whose symptoms have resolved or almost resolved may be likely to visit to an urgent care centers over the emergency room. Are you prepared to determine who is safe to go home and who needs care? Read the September issue of JUCM and you will be.

## DEPARTMENTS

- 1 Urgent Perspectives
- 9 From the UCA CEO
- 10 Continuing Medical Education
- 39 Abstracts in Urgent Care
- 41 Insights in Images
- 49 Revenue Cycle Management Q&A
- 53 Developing Data

## CLASSIFIEDS

- 51 Career Opportunities

## 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, FAAEM, FACEP**

University of Chicago Medical Center  
Legacy/GoHealth Urgent Care,  
Vancouver, WA

## JUCM EDITOR EMERITUS

**Lee A. Resnick, MD, FAFAP**

Chief Medical and Operating 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 Experity Networks

**Jasmeet Singh Bhogal, MD**

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

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

Chief Medical Officer,  
MD Now Urgent Care  
Part-Time Instructor, Harvard Medical School

**Tracey Quail Davidoff, MD, FACP, FCUCM**

Attending Physician  
Advent Health Centra 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**

Principal, No Resistance Consulting Group  
Trustee, UCA Urgent Care Foundation

**Lou Ellen Horwitz, MA**

CEO, Urgent Care Association

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

Network Medical Director, 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

**Joseph Chow, MD**

President

**Shaun Ginter, MBA, FACHE**

Immediate Past President

**Armando Samaniego, MD, MBA**

President-Elect

**Mike Dalton, MBA, CPA**

Treasurer

**Thomas Tryon, MD, FCUCM**

Secretary

**Payman Arabzadeh, MD**

Director

**Tom Allen Charland**

Director

**Lori Japp, PA**

Director

**Max Lebow, MD, MPH**

Director

**Damaris Medina, Esq**

Director

**Jeanne Zucker**

Director

**Jasmeet Singh Bhogal, MD, MBA**

Ex-Officio

**Steve P. Sellars, MBA**

Ex-Officio

**Lou Ellen Horwitz, MA**

CEO

# JUCM®

## EDITOR-IN-CHIEF

**Joshua W. Russell, MD, MSc, FAAEM, 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 EDITOR, RESEARCH

**Andy Barnett, MD, FACEP, FAFAP**

## EDITOR, PEDIATRICS

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

## EDITOR, IMAGES

**Lindsey Fish, MD**

## CONTRIBUTING EDITOR

**Monte Sandler**

## SENIOR ART DIRECTOR

**Tom DePrenda**  
tdeprenda@jucm.com

## CLINICAL CONTENT MANAGER

**Yijung Russell, MD**



185 State Route 17, Mahwah, NJ 07430

## PUBLISHER AND ADVERTISING SALES

**Stuart Williams**  
swilliams@jucm.com • (201) 529-4004

## CLASSIFIED AND RECRUITMENT ADVERTISING

**Ethan Cash**  
ethan.cash@communitybrands.com • (860) 722-0438

## Mission Statement

*JUCM The Journal of Urgent Care Medicine* (ISSN 1938-0001) 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 & Allegations of Misconduct, Complaints, or Appeals

*JUCM*® expects authors, reviewers, and editors to uphold the highest ethical standards when conducting research, submitting papers, and throughout the peer-review process. *JUCM* supports the Committee on Publishing Ethics (COPE) and follows its recommendations on publication ethics and standards (please visit <http://publicationethics.org>). *JUCM* further draws upon the ethical guidelines set forth by the World Association of Medical Editors (WAME) on its website, [www.wame.org](http://www.wame.org). To report any allegations of editorial misconduct or complaints, or to appeal the decision regarding any article, email the Publisher, Stuart Williams, directly at [swilliams@jucm.com](mailto:swilliams@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 2021 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, 185 State Route 17, Mahwah, NJ 07430. Standard postage paid, permit no. 372, at Lancaster, PA, and at additional mailing offices. POSTMASTER: Send address changes to Braveheart Group LLC, 185 State Route 17, Mahwah, NJ 07430. Email: [address.change@jucm.com](mailto:address.change@jucm.com)





## JUCM CONTRIBUTORS

**B**loody noses are standard fare for parents of younger children. Usually the cause is obvious: a little overly rambunctious roughhousing, too much “probing” with a finger, an errant football.... With adults, and in children where there is no obvious mechanism, however, epistaxis can be cause for alarm.

Just how much alarm depends on many factors—which is the premise of this issue’s cover article, *Epistaxis: A Clinical Review* (page 13), by **Lindsay Ballard, MD; Stephanie Fernandez, MD; and Joshua Kornegay, MD**. Keeping the proper steps top-of-mind when patients present with blood emanating from the proboscis will be essential in distinguishing between a minor inconvenience and potentially serious illness.

Dr. Ballard is a Class of 2021 Resident at Oregon Health & Sciences University (OHSU). Dr. Fernandez is in her third year in the Mount Sinai Medical Center of Miami Emergency Medicine Residency program. Dr. Kornegay is associate professor in the OHSU Department of Emergency Medicine; associate residency program director for the OHSU Department of Emergency Medicine; simulation education director, OHSU Department of Emergency Medicine; and medical director, Center for the Advancement of Resuscitation Education (CARE), OHSU.

Bleeding also figures prominently in this month’s Pediatric Urgent Care article. In *Heavy Menstrual Bleeding: Important Considerations for Adolescent Patients in the Urgent Care Setting* (page 25), authors **Shikha Nigam, MD, MPH and Amy Pattishall, MD** note factors it would be downright dangerous to miss in young women, and how to differentiate them from benign etiologies. Dr. Nigam is assistant professor of pediatrics in the Division of Pediatric Emergency Medicine at Emory University School of Medicine and practices at Pediatric Urgent Care at Children’s Healthcare of Atlanta. Dr. Pattishall is associate professor of pediatrics in the Division of Pediatric Emergency Medicine at Emory University School of Medicine, and practices pediatric urgent care at Children’s Healthcare of Atlanta.

Urgent care providers who do not have a background in gynecology would also benefit from reading this month’s case report, *Actinomyces neuii* as a Cause of Vulvar Abscess, by **Tracey Q. Davidoff, MD, FCUCM**. Abscesses are common enough in urgent care, to be sure, but their location and the actual presenting complaint are important clues as to the causative organism. Dr. Davidoff is an attending physician at Advent Health Centra Care and a member of JUCM’s Editorial Board. Her article starts on page 19.

We’re pleased to present two original research articles to you this month. The first, *Using Simulations and Skills Stations to Enhance Emergency Preparedness in Pediatric Urgent Care* (page 31) confirms that ongoing training—in the form of simulated emergency scenarios, in this case—may be the best

way to keep your team operating at the top of their skill level. Authors **Ilanalee Cabrera, MSN, RN, CPNP; Wilma Santiago, BSN, RN, CPN; Tiffany Christensen; and Rachel Lucas, DO** are all affiliated with Children’s Wisconsin.

Our second research piece, *Active COVID-19 Infection Is Indicated by WBC 7.0 and PLT 200 at Presentation*, illustrates just how creative motivated healthcare professionals can be in the face of a crisis. Early on in the pandemic, testing supplies were scarce. So, colleagues at AMITA Presence Resurrection Medical Center, Chicago took it upon themselves to search for other ways to identify patients likely to have been infected. **Yijung Russell, MD; Casey Collier, MD; Steve Christos, DO; and Shu B. Chan MD, MS** report on the output starting on page 35.

Challenges of another sort present in today’s multigenerational urgent care workplace. Team members of every stripe are working later in life. As such, even the appearance of age discrimination is a constant threat to the harmony (and viability) of urgent care centers. In *Nuances of Age Discrimination* (page 21), **Alan A. Ayers, MBA, MAcc** explains the best ways to ensure your office is both a fair and diverse (not to mention litigation-free) workplace with regard to age. Mr. Ayers is president of Experity Networks and senior editor, practice management for JUCM.

As much as you want to avoid the need for a legal professional, you really do need to avail yourselves of the services of a credentialing pro. As Experity’s Vice President, Revenue Cycle Management **Monte Sandler** explains, the cost of trying to go without one may far outweigh the expense of engaging one. *Credentialing: Why Should I Hire a Professional?* begins on page 49.

This month in *Abstracts in Urgent Care* (page 39), we offer insights into new medical literature on efficient diagnosis of sexually transmitted infections, reducing the need to refer patients with suspected supraventricular tachycardia, the connection between dental pain and quality of life for children, use of ultrasound-guided blocks in renal pain, and the role of emotional intelligence as a leadership attribute in physicians. We appreciate the efforts of **Avijit Barai, MBBS, FACEM, FRNZCUC, MRCS, MSc (Critical Care), PgCertCPU** to highlight the most urgent care-relevant aspects of those papers. Dr. Barai is a locum consultant in Emergency Medicine and Urgent Care Australia and New Zealand.

And if you turned the pages too quickly and arrived here without reading the guest editorial by **John Koehler MD, ABPM(OM)**, we suggest turning back to page 1. An Ominous Trend for Urgent Care is the warning bell all urgent care professionals should heed—while there’s still time. Dr. Koehler

## JUCM CONTRIBUTORS

was a founding board member of the Urgent Care Association of America (now known as the Urgent Care Association) and is editor-in-chief, OccDocOne.

### Thanks to Our Peer Reviewers

In every issue of *JUCM*, there are select articles on which we ask members of our peer review panel to comment. It's one step we take in trying to ensure that all the content we publish is relevant, clearly communicated, and free of bias. For their contributions in reviewing content for the April, May, June, and July issues, we thank:

**Charlotte Albinson, MD**  
**Suzanne Alton, DNP, FNP-BC, RN**  
**Robert Blumm, MA, PA, DFAAPA**  
**Barbara Chambers**  
**Tracey Davidoff, MD, FCUCM**  
**Aldo Dumlao, MD**  
**Robert Dums, MD**  
**Rob Estridge, BA, BS, MPAS, PA-C**  
**Daniel Forsberg, PA-C, MPH, CPH, DFAAPA**

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

**Jessica Kovalchick, RPA-C**

**Tammy Mallow**

**David Pick, MD**

**John Reilly, DO**

**Lo Fu Tan, MD, MS, FCFP**

**Janet Williams, MD, FACEP**

If you'd like to help *JUCM* ensure we offer relevant, timely, and bias-free content in every issue, please consider volunteering to serve as a peer reviewer, too. Just send an email, including your CV, to [editor@jucm.com](mailto:editor@jucm.com). ■

*JUCM* invites readers to submit articles in support of our goal to provide practical, up-to-date clinical and practice-management information to our readers—U.S. urgent care clinicians and business professionals. Manuscripts submitted for publication in *JUCM* should report on original research or provide practical information dealing with clinical and practice management issues commonly encountered in the day-to-day practice of urgent care. For more information on submission guidelines, visit <https://jucm.scholasticahq.com/for-authors>.

# 6th Annual

URGENT CARE FOUNDATION PRESENTS

## Foundation Celebration & After Party

*LAISSEZ LES BONS TEMPS ROULER...*

Let the Good Times Roll!

Are you ready for a Celebration? Join us for the 6th Annual Foundation Celebration Awards Ceremony and “Laissez les bons Temps Rouler” at the Celebration After Party...the event that everyone will be talking about the next day! Tickets are on sale now for the Gala and After Party (\$400 individual tickets and \$4,000 for reserved tables).

[www.ucaoa.org/get-tickets](http://www.ucaoa.org/get-tickets)

# Focus

■ LOU ELLEN HORWITZ, MA

It seems like urgent care is no longer in the shadows of the “healthcare continuum.” This shift is the culmination of over a decade of work by many, many people, to whom all of us owe much. It’s also the outgrowth of how everyone reading this sentence responded to the COVID-19 pandemic.

Coming out of the shadows means coming into the light, but sometimes that light is glaring. Sometimes that light is searing through a magnifying glass. Sometimes those shadows start to look pretty attractive again. It’s so much cooler back under cover—but we never were a group to run away from a challenge, were we?

The challenge all of this light brings us is one of focus: for all of you to clarify who you are going to be, and for UCA and CUCM and UCF to clarify who we are going to be for you.

The question on most lips in our industry and profession is, *What is next for urgent care?* Though the pandemic, in many ways, gave us a chance to do what we do best, the issues we had before last March are here waiting for us as we emerge. Primarily they stem from definition and recognition of the specialty of urgent care medicine and payer policies—and all that trickles down from those two.

As I just stated, none of this is new but our understanding of the road we’ve traveled to get here and our ideas of where to go next are ever-more-sophisticated. There are many creative conversations happening right now about the future of urgent care, and we’ll continue those in October at the Convention. Our relationships with new stakeholders like major diagnostic and pharmaceutical companies, and top governmental agencies are giving us new inroads.

Being in the searing spotlight, and performing well in that spotlight, is starting to pay off.

Stepping into the light also invites criticism. It makes us a target, and is part of the price of fame (which we knew would come). Knowing that and managing that is where UCA, CUCM,

*“True self-knowledge...is the key to taking control of our own growth and development—vs having our fate determined by others.”*

and UCF have been working on our focus. While it is tempting to go chasing after every statement or article or mention of urgent care, we have to ensure that the catch is worth the chase. Put another way, we are very thoughtful about whether our actions are ego-based “feel good” behaviors (and let us say to you “Look, we responded!”) vs results-based *effective* behaviors that leads to an improved environment for urgent care.

We take our responsibility as stewards of your resources very carefully, so if you ever wonder “why didn’t UCA say anything about this,” it’s likely because we want to use our/your political and reputational capital in strategic ways and to do that we have to stay focused. We can’t respond to everything that happens—otherwise we’d get stuck forever being reactive instead of proactive. But I also want you to know that it is very, very hard, because we deeply want to respond every single time. I hope that you will agree that to accomplish the big things you are asking from us, to land the very big roles, sometimes we have to let the bit parts pass us by.

What’s exciting to me at this moment is that even the critics and bit parts are informing the strategy discussions—we are using them to learn and make our arguments stronger. We are using them to better connect efforts across partners like JUCM and Hippo Education. We are using them to challenge the assumptions and blind spots that have likely been holding us back. We are all standing bravely in the light, and now we have been brave enough to take a hard look at ourselves in that light.

Why is this so exciting? Because there is no stronger weapon than true self-knowledge. This deep level of understanding of who we are and what we are capable of is the key to taking control of our own growth and development—vs having our fate determined by others. It’s the key to what’s next, and it’s going to be quite a show.

Thanks, as always, for letting me and all of us at UCA be part of it. ■



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





# CONTINUING MEDICAL EDUCATION

**Release Date:** July 1, 2021

**Expiration Date:** June 30, 2022

## Target Audience

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

## Learning Objectives

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

## Accreditation Statement



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

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

## 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.*

## Disclosure Statement

The policy of the Urgent Care Association CME Program (UCA CME) 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. UCA CME 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.

Your credits will be recorded by the UCA CME Program and made a part of your cumulative transcript.

## 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.



# CONTINUING MEDICAL EDUCATION

JUCM CME subscribers can submit responses for CME credit at [www.jucm.com/cme/](http://www.jucm.com/cme/). 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.

## Epistaxis: A Clinical Review (page 13)

- 1. Of the roughly 60% of individuals who experience some type of nosebleed in their lifetime, what percentage seek medical care?**
  - a. 6% to 10%
  - b. 26% to 32%
  - c. 34%
  - d. Over 50%
- 2. The most common site of anterior bleeding is:**
  - a. Anterior nasal spine
  - b. Kiesselbach plexus
  - c. Nasal vestibule
  - d. The lateral nasal wall
- 3. Red flags for patients presenting with epistaxis include which of the following?**
  - a. Hypotension
  - b. Hypertension
  - c. Age  $\geq 65$  years
  - d. All of the above

## Actinomyces neuui as a Cause of Vulvar Abscess (page 19)

- 1. In patients with infection related to A neuui, the majority of tested isolates show susceptibility to:**
  - a. Ampicillin
  - b. Cefazolin
  - c. Imipenem
  - d. All of the above
- 2. In patients with infection related to A neuui, there is diminished susceptibility to:**
  - a. Cefuroxime and ceftriaxone
  - b. Cefuroxime and penicillin G
  - c. Aminoglycosides and fluoroquinolones
  - d. Penicillin G and ceftriaxone
- 3. A neuui represents:**
  - a. 8% of all Actinomyces isolates
  - b. 12% of all Actinomyces isolates
  - c. 17% of all Actinomyces isolates
  - d. 24% all Actinomyces isolates

## The Nuances of Age Discrimination (page 21)

- 1. At what point will workers age 55 years and older represent a quarter of the nation's workforce?**
  - a. By 2024
  - b. By 2029
  - c. By 2032
  - d. It's already happened
- 2. When constructing job descriptions, it would be best to avoid which of the following words in order to avoid raising red flags for "ageism" in the urgent care center?**
  - a. Dedicated
  - b. Energetic
  - c. Mature
  - d. Motivated
- 3. When is it acceptable to joke good naturedly about a team member's age?**
  - a. Once you've established a trusting relationship
  - b. When you're familiar with their sense of humor
  - c. When they're out of earshot
  - d. Never



**Traditional  
PCR diagnostics  
systems**



**Near-patient  
PCR diagnostics  
systems**

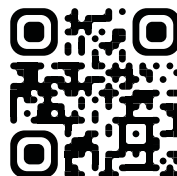


**The only  
Point of Care  
RT-PCR platform**

# Ready to test, right out of the box.

**Instrument-free PCR, results in under 30 minutes.**

Don't compromise on fast PCR results.  
The Visby Medical COVID-19 Point of Care Test  
can be easily deployed and run with minimal  
operator training, providing gold standard PCR  
results in under 30 minutes.



**Learn more**

This test has not been FDA cleared or approved. It is authorized by FDA under an EUA for use by authorized laboratories. It 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 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 authorization is terminated or revoked sooner.

PL-000059 Rev A

**visby** medical™

1-833-GoVisby (1-833-468-4729)

[sales@visbymedical.com](mailto:sales@visbymedical.com)

[www.visbymedical.com](http://www.visbymedical.com)



# Epistaxis: A Clinical Review

**Urgent message:** Epistaxis is a common chief complaint representing a wide spectrum of severity. Key features such as the vital signs, location of the bleeding, and patient history, as well as practice and facility with certain procedures, can assist significantly with patient outcomes and dispositions.

LINDSAY BALLARD, MD; STEPHANIE FERNANDEZ, MD; and JOSHUA KORNEGAY, MD

Citation: Ballard L, Fernandez S, Kornegay J. Epistaxis: a clinical review. *J Urgent Care Med.* 2021;15(10):13-18.

## Introduction

Epistaxis is a frequent chief complaint in both urgent care and emergency department settings. Approximately 60% of the population will experience some type of nose bleeding in their lives.<sup>1,2</sup> Of those, 6% to 10% will seek medical care and 6% may require hospitalization.<sup>3-5</sup> One estimate suggests that epistaxis is related to one in 200 ED visits. There is a bimodal distribution in younger (frequently <10 years of age) and older age groups (>50).<sup>1,2</sup> In the younger group, digital trauma and lack of humidity (ie, forced heating in the winter) are common causes. In those over the age of 50, deviated septum, anticoagulant use, nasal cannula use, neoplasm, and chemical irritants become more common.<sup>1</sup>

Anatomy plays a large role in management of epistaxis. The vascular system of the nose is extensive and comprised of multiple anastomoses, coming from the internal and external carotid arteries.

Epistaxis is broadly categorized into anterior and posterior, with anterior being much more common, accounting for 80% to 90% cases.<sup>4</sup> The Kiesselbach plexus (also called Little's area) is the most common site of anterior bleeding. It is made up from vessels of the anterior nasal septum, including anterior and posterior ethmoidal arteries, and the internal maxillary artery as well as the sphenopalatine and greater palatine arteries. Posterior bleeding is more likely attributed to the posterior



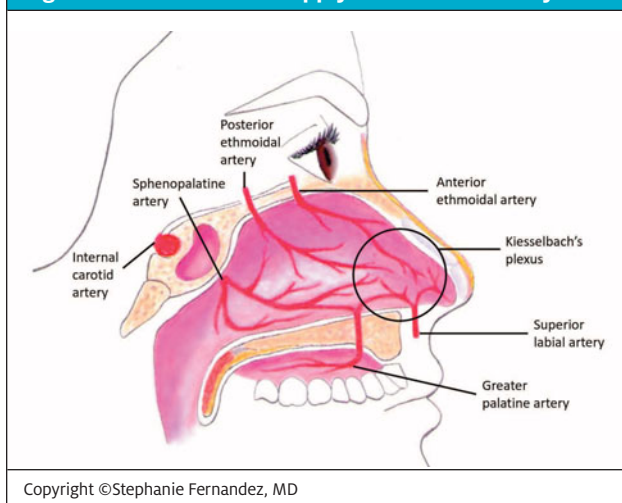
©AdobeStock.com

nasal septum and lateral nasal wall, which receives blood from the sphenopalatine artery and branches from the maxillary artery.<sup>2</sup>

In addition to anterior and posterior, epistaxis is further classified as primary or secondary.

Anterior bleeding is typically more amenable to hemostasis due to smaller vessel size and the ability to compress the vessels, as well as visualize them. Posterior epistaxis can be more difficult to identify given the posterior nature, prolonging management; there is also an increased risk of aspiration.

**Author affiliations:** Lindsay Ballard, MD, Oregon Health & Sciences University Emergency Medicine Residency. Stephanie Fernandez, MD, Mount Sinai Medical Center of Miami Emergency Medicine Residency. Joshua Kornegay, MD, Oregon Health & Sciences University.

**Figure 1. Arterial blood supply to the nasal cavity**

Primary epistaxis is spontaneous or related to environmental factors and accounts for the majority of cases.

Secondary epistaxis has an identifiable cause such as trauma and coagulopathy (inherited or pharmaceutical), among other etiologies. (See **Table 1**.) The number-one cause of epistaxis is digital trauma.<sup>4</sup>

Initial patient evaluation should consist of the ABCs (airway, breathing, circulation). Any evidence of instability, including vital-sign abnormalities, airway compromise or respiratory distress, altered mental status, or syncope requires immediate intervention prior to attending to hemostasis of the epistaxis. EMS should be contacted promptly, as these findings necessitate immediate transfer from the urgent care setting to an emergency department.

### Initial Treatment

Ideally, the provider will have full PPE, including a face shield as well as a head lamp, for hands-free assessment. After determination of the patient's stability, the provider can recommend a forward lean and sniffing position to reduce aspiration risk. The patient should initiate 10-20 minutes of uninterrupted firm compression to the anterior third of the nose (just below nasal bones). This is very difficult for many patients and, as such, can be performed with a device, such as a nasal clamp, or enlisting a caregiver to apply force. This is an appropriate time to obtain more information and gather supplies.

To obtain optimal view of the nares, it is recommended that the patient blow their nose to remove any clotted material, followed by immediate application

of a topical vasoconstrictor, such as oxymetazoline (commonly known as Afrin). Cotton balls can also be soaked in a vasoconstrictor solution for a more directed topical application. This can be uncomfortable for the patient; topical anesthetic such as lidocaine or LET solution can also be utilized in this setting.

Identification of the source helps direct management strategy and is key to definitive management. There are many useful tools for epistaxis management; see **Table 2** for a list of recommended items. If your urgent care center does not have a kit, consider making a kit for ease of use.

### Anterior Epistaxis

If anterior epistaxis is identified on exam, the clinician can proceed with management. Many times, topical vasoconstrictors along with direct compression may induce hemostasis alone. If not, cautery is often considered the next best step.

Cautery is typically performed with a cotton-tipped applicator with silver nitrate on the end. The swab should be applied directly to the identified area of bleeding or around the area and then more circumferentially toward the center. The required chemical reaction cannot occur in the setting of hemorrhage; as such, the field should be clear prior to this technique. A major risk factor of cautery in the anterior nasal septum is perforation of the nasal septum. Sparse cauterization is recommended, and there should never be cautery on bilateral areas of the septum.<sup>2</sup> Electrocautery should be reserved for otolaryngologists.<sup>1</sup>

The next step can be either tranexamic acid (TXA) or thrombogenic foams or anterior packing. TXA is an antifibrinolytic medication and is most commonly administered topically. A TXA-soaked gauze or pledget (500 mg/5 mL) is typically placed in the anterior nares and left in place for approximately 10 minutes. In a *Cochrane Review* of TXA (utilized orally, intravenously, or topically) for epistaxis as compared to a control (placebo, usual treatment, or usual care with another hemostatic agent) there was a lower rate of rebleeding at 10 days with the use of any kind of TXA vs the control groups. There was no reported significant difference in adverse events, although it is noted one of six trials did not report adverse events. The NNT was reported as 5 for any method of TXA use. Existing evidence suggests there is efficacy for TXA in treating epistaxis.<sup>7,8</sup> Thrombogenic foams, such as Surgicel or Gelfoam, can also be applied; these are absorbable and do not require removal.<sup>1</sup>

Anterior packing is generally considered the last step

Table 1. Etiologies of Epistaxis <sup>2</sup>			
Trauma	Iatrogenic	Vascular	Neoplastic
Digital	Anticoagulation	HHT	Juvenile angiofibroma
Facial	Antiplatelet agents	CHF	Nasopharyngeal cancer
Foreign body	NSAIDs	HTN	Squamous cell carcinoma
Septal perforation	Intranasal medications	DM	Paranasal sinus tumor
Barotrauma	Postsurgical	Granulomatous with polyangiitis	
Illicit drugs	Direct passage of tubes		
Metabolic	Autoimmune	Inflammatory	Congenital
Hepatic dysfunction	Hemophilia	Rhinosinusitis	Septal deviation
Renal failure	Leukemia	Nasal polyps	Septal spur
Uremia	Von Willebrand disease	Nasal diphtheria	
Alcohol			

Table 2. Equipment For Epistaxis Management <sup>2,6</sup>			
PPE (goggles, face mask, gown, gloves)	Nasal speculum	Lubricant, sterile or antibiotic impregnated	Posterior packing device of choice
Headlamp or light	Gauze, cotton balls	Surgicel or Gelfoam	Foley catheter
Nasal clamp	Silver nitrate sticks	Intranasal device of provider's choice*	
Topical vasoconstrictor	TXA	Suction catheter with suction tip, connected to working suction	
Tongue depressor	Anesthetic	Bayonet forceps	
*There are many types of intranasal packing devices. Please see paragraph on anterior packing.			

to anterior epistaxis. There are many brands and types of balloons and nasal tampons for anterior nasal packing.

Always consider the possibility of posterior bleeding if direct pressure, vasoconstrictors, cautery, and TXA have not achieved hemostasis. Also note a few contraindications to anterior packing: facial nasal bone fractures, basilar skull fracture, and hemodynamic instability.<sup>6</sup>

In general, anterior nasal packing functions by providing direct interior pressure to the nasal cavities presumed to have the bleeding vessel. As such, nasal packing is often uncomfortable to place and have in place. Commonly known brands include Merocel and the Rapid Rhino. Additionally, lubricated or antibiotic-soaked gauze is acceptable.

Every type of device has specific directions for usage, although it is generally recommended that they be soaked in petroleum jelly. Anterior nasal packing is left in place for 24–48 hours.<sup>2</sup> It is important to tape any drawstrings to the face securely to avoid aspiration. If

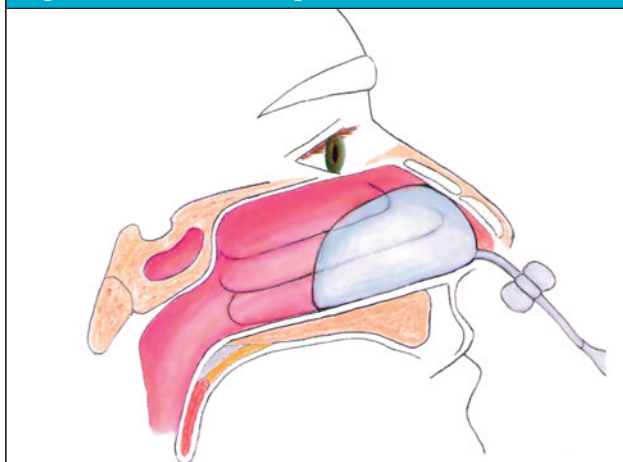
there are no preformed devices, ribbon gauze packing is an acceptable alternative.

There are potential complications to anterior nasal packing, including posterior dislocation (and possible subsequent aspiration), allergic reactions, necrosis of the nasal mucosa, discomfort, and infection such as staphylococcal toxic shock syndrome.

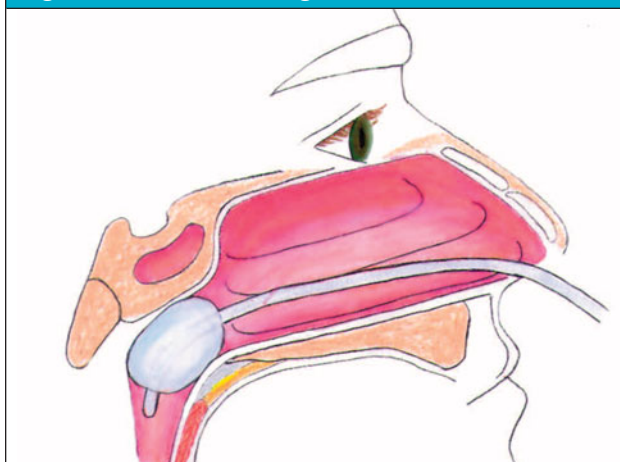
The Rapid Rhino balloon is a preformed balloon that is soaked in water and inserted along the floor of the nasal cavity parallel to the hard palate. Air is then injected with a 20 cc syringe into the balloon, slowly inflating the balloon until tamponade is appreciated. Inflation with water or saline is never recommended due to risk of aspiration with balloon rupture.<sup>1</sup> Rapid Rhinos are available in multiple sizes.

The Rhino Rocket is another nasal tampon device, and has an applicator. The sponge is coated with a water-soluble antibiotic ointment and inserted along the floor of the nasal passage, parallel to the hard palate.



**Figure 2. Anterior Packing**

Copyright ©Stephanie Fernandez, MD

**Figure 3. Posterior Packing**

Copyright ©Stephanie Fernandez, MD

It should expand within 30 seconds; otherwise, gentle irrigation with a small amount of normal saline can promote additional expansion of the dehydrated tampon. An American randomized controlled trial showed that the Rhino Rocket is easier to insert and less painful for the patient than the Rapid Rhino, but that they are both equally efficacious in achieving hemostasis.<sup>9</sup>

Many other preformed nasal sponges (such as Mero-cel, a desiccated polyvinyl acetate sponge that comes in multiple sizes) are also commercially available.

Impregnated ribbon gauze placement is a functional procedure if novel devices are not available, although this is more technically difficult.<sup>1</sup> Most manufacturers have both instructive pamphlets with their devices and video instructions online for additional information regarding appropriate placement.

No matter which device is utilized, reassessment is recommended after 10–20 minutes to ensure tamponade has been achieved and the patient is comfortable.

Antibiotic use is controversial in anterior packing. Data from the ENT literature suggest antibiotic use is helpful in postoperative patients to prevent of *Staphylococcus* infection and associated toxic shock syndrome with residual packing in place.<sup>10,11</sup> Antibiotics are often recommended if packing is going to be in place over 48 hours, with preferred classes being cephalosporins, amoxicillin-clavulanate, and trimethoprim sulfamethoxazole.<sup>4</sup> Antibiotics are routinely prescribed in posterior packing, however, as well as for patients with valvular heart disease or immunocompromise.<sup>2</sup>

Regarding ointments: It is recommended that the packing be lubricated as noted above. Additionally, if hemostasis is achieved without packing, it is prudent to pre-

scribe a topical lubricant for the patient for the following week to reduce the risk of re-bleeding. Additionally, nose blowing should be avoided for 7–10 days. (See **Figure 4** for a flow chart regarding anterior epistaxis.)

### Posterior Epistaxis

Posterior packing typically requires hospital admission with antibiotics. Patients in the urgent care setting identified to have posterior epistaxis should be transferred to an emergency department by EMS for definitive management. While waiting for EMS to arrive, direct pressure can be helpful and the patient should be placed in a position to prevent bleeding from obstructing the airway. Posterior bleeding is more common in adults and should be suspected if there is bilateral bleeding in the nares, significant bleeding visualized in the oropharynx, or if the bleeding cannot be visualized or stopped utilizing the above techniques.

Posterior packing is even more painful and uncomfortable than anterior packing. Proper attention to anesthesia should be given, which may include a nasal block, procedural sedation, or narcotics. Posterior packing is associated with a much higher complication rate including hypoxia, pressure necrosis, infection, and cardiac dysrhythmias. Therefore, posterior nasal packing should be viewed as a temporizing measure while transferring a patient to higher level of care or awaiting ENT expert consultation.<sup>1,11</sup>

Additional complications include bradycardia, hypotension, arrhythmia, infection, sepsis, death, aspiration, and nasal septal necrosis, among others. The patient will likely require admission to the hospital with ENT follow-up.

There are commercially available devices for posterior nasal packing, including Rhino Rocket, Epi-Max, and T3100 Epistaxis Catheter. Lastly, a Foley catheter can be used for balloon tamponade. The lubricated catheter is inserted into the nares, inflated with 5 mL to 10 mL of saline, and lodged into the posterior nasal choana. The balloon is then pulled to traction until properly seated and clamped in place. Anterior packing should then be placed into the ipsilateral side.

### Special Considerations

Anticoagulants can increase the risk of epistaxis and possibly risk of treatment failure.<sup>12</sup> Between 24% and 33% of patients requiring hospitalization for epistaxis are on anticoagulant or antiplatelet medications.<sup>4</sup> A retrospective German study showed that anticoagulant use is associated with recurrent bleeding but not more complicated or severe courses of bleeding.<sup>13</sup> This may become an area of focus for new approaches to epistaxis management and treatment as the usage of anticoagulants increases. Typically, no changes need to be made to anticoagulant therapy as long as hemostasis is achieved. Reversal or alteration of anticoagulation should be reserved for significant bleeding; however, this should be done in the ED.

Other medications can increase the risk of epistaxis; these include acetylsalicylic acid, NSAIDs, PDE 5 inhibitors, and alcohol.<sup>4</sup> Risk factors for admission include antiplatelet or anticoagulant medications, hypertension, diabetes, and posterior bleeding.<sup>14</sup>

Risk factors for re-bleeding include history of hypertension or heart disease, treatment with gauze packing, and bleeding anywhere other than the nasal septum.<sup>15</sup> A small Canadian study showed silver nitrate to have lower re-bleed recurrence odds than petroleum gauze packing and similar to Merocel.<sup>12</sup>

Hypertension at the time of epistaxis onset has been cited as a possible risk factor or precipitant of epistaxis. There is evidence to suggest correlation, but no strong evidence for causation at this time.<sup>16,17</sup>

While initial treatment may be the same for patients with known bleeding disorders, recent instrumentation or surgery, or HEENT, those with neoplasms may already have a special treatment plan (such as in hemophilia) or very directed follow-up with their surgeon, for example.

Some patients may require surgical intervention with ENT if hemostasis cannot be otherwise achieved in the outpatient setting. One retrospective Swiss study suggests that surgical intervention is superior to posterior packing when treating posterior epistaxis, with treatment failure rates of 3% vs 38%, respectively.<sup>18</sup>

*“Routine use of hemoglobin and hematocrit testing is not recommended, but should be considered if the patient has vital sign abnormalities, ongoing bleeding, history of anemia, or a bleeding diathesis, or if the suspicion for surgical intervention is high.”*

### Keys to Medical History and Physical Exam

Key components to the medical history include intensity of the bleeding, duration of the bleeding, prior history of epistaxis, trauma, personal or family history of bleeding diathesis, easy bruising, melena, hematochezia, hematemesis, anticoagulant use or antiplatelet medications, and intranasal drug use.<sup>3</sup>

OPQRST questions can help elucidate the underlying cause of the epistaxis, particularly in the setting of trauma. Physical exam findings include vital signs, assessing need for resuscitation, localization of the bleeding, and procedural maneuvers to stop bleeding. Additional physical exam findings outside of the HEENT exam, such as cardiovascular and pulmonary, as well as skin, are important components of determining the gravity of the bleeding. If the patient has experienced epistaxis in the past, it can be helpful to know what interventions have achieved hemostasis during previous encounters.

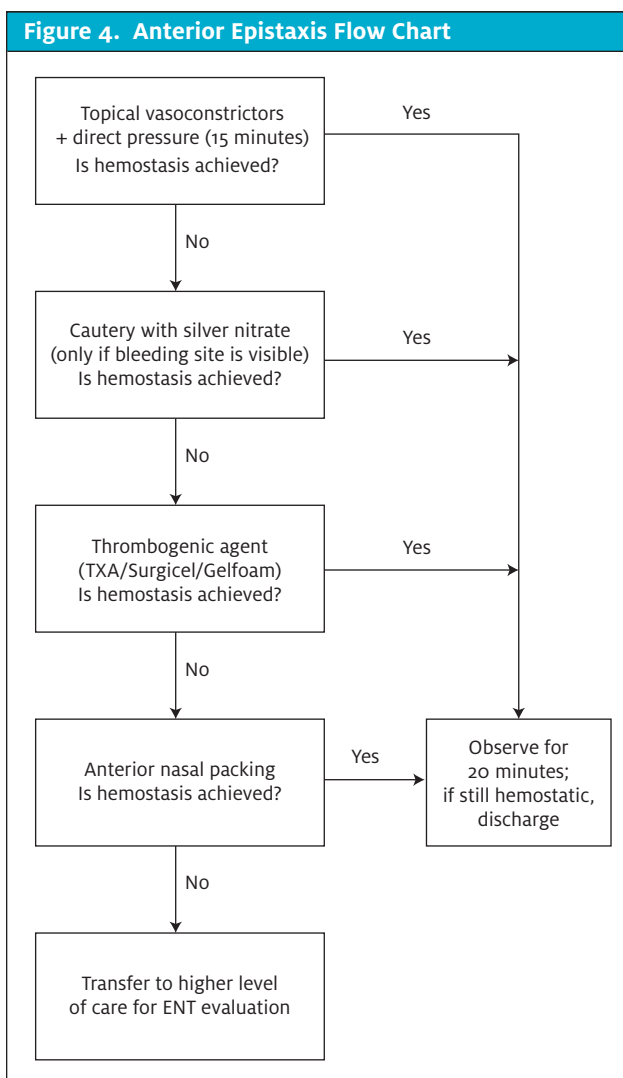
### Red Flags

Red flags include tachycardia, hypotension, hemoptysis, hematemesis, suspected airway compromise (such as tachypnea and hypoxemia), adventitious breath sounds like stridor, traumatic injury to the neck or chest; or history of bleeding diathesis, such as hemophilia, hereditary hemorrhagic telangiectasia, or von Willebrand disease. The otherwise healthy young child with an uncomplicated nosebleed presents a different case from an older woman on chronic warfarin therapy, for example.

All patients must be promptly risk-stratified and identified as having requirements for resuscitation and intervention vs having the ability to pinch off their own nose for 5 to 10 minutes.

### Diagnostics

In many cases of epistaxis, no laboratory testing or imaging is required. The clinician can consider PT/INR if



the patient is taking warfarin or has a known bleeding disorder. Routine use of hemoglobin and hematocrit testing is not recommended, but should be considered if the patient has vital sign abnormalities, ongoing bleeding, history of anemia, or a bleeding diathesis, or if the suspicion for surgical intervention is high. Additional testing such as renal and hepatic function can be obtained in the ED if there is suspicion of large volume blood loss or concomitant gastrointestinal bleed.<sup>1</sup>

### Medical Decision-Making Pearls

The MDM should accurately reflect the patient's vital signs, along with history of epistaxis, any predisposing factors or comorbidities, and the steps taken to remedy the bleeding. Follow-up instructions and return precautions should be documented clearly, with specific

*"If the patient is stable to be discharged home, they should be provided with strict return precautions and self-care instructions for achieving hemostasis."*

recommendations for the patient. Procedures should be documented appropriately.

### Disposition

Further treatment and appropriate follow-up will vary based on the presentation. Specifically in the urgent care setting, if the patient cannot be managed appropriately with initial measures such as direct pressure, vasoconstrictors, and possibly anterior nasal packing or cautery, they should be referred to the ED. Any vital-sign abnormalities such as tachycardia, hypotension, or fever should also warrant consideration for transfer. If the patient is stable to be discharged home, they should be provided with strict return precautions along with home self-care instructions for achieving hemostasis with direct pressure and utilizing the sniffing position for at least 10 minutes, in the event of a re-bleed. ■

### References

- McGinnis HD. Nose and sinuses. In: Tintinalli JE, Ma OJ, Yealy DM, et al, eds. *Tintinalli's Emergency Medicine: A Comprehensive Study Guide*. 9<sup>th</sup> ed. New York, NY: McGraw-Hill Education; 2020.
- Krulewitz NA, Fix ML. Epistaxis. *Emerg Med Clin North Am*. 2019;37(1):29-39.
- Tunkel DE, Anne S, Payne SC, et al. Clinical Practice Guideline: nosebleed (epistaxis). *Otolaryngol Head Neck Surg*. 2020;162(1\_suppl):S1-S38.
- Beck R, Sorge M, Schneider A, Dietz A. Current approaches to epistaxis treatment in primary and secondary care. *Dtsch Arztebl Int*. 2018;115(1-02):12-22.
- Pallin DJ, Chng Y-M, McKay MP, et al. Epidemiology of Epistaxis in u.s. emergency departments, 1992 to 2001. *Ann Emerg Med*. 2005;46(1):77-81.
- Kravchik L, Pester JM. Anterior Epistaxis nasal pack. StatPearls. Treasure Island (FL) 2020.
- Gottlieb M, Koifman A, Long B. Tranexamic acid for the treatment of epistaxis. *Acad Emerg Med*. 2019;26(11):1292-1293.
- Joseph J, Martinez Devesa P, et al. Tranexamic acid for patients with nasal haemorrhage (epistaxis). *Cochrane Database of Systematic Reviews*. 2018(12).
- Singer AJ, Blanda M, Cronin K, et al. Comparison of nasal tampons for the treatment of epistaxis in the emergency department: a randomized controlled trial. *Ann Emerg Med*. 2005;45(2):134-139.
- Cohn B. Are prophylactic antibiotics necessary for anterior nasal packing in epistaxis? *Ann Emerg Med*. 2015;65(1):109-111.
- Gilman S. Treatment of epistaxis. *ACEP Now*. 2009;28(26):4-6.
- Newton E, Lasso A, Petrich W, Kilty SJ. An outcomes analysis of anterior epistaxis management in the emergency department. *J Otolaryngol Head Neck Surg*. 2016;45(1):24.
- Buchberger AMS, Baumann A, Johnson F, et al. The role of oral anticoagulants in epistaxis. *Eur Arch Otorhinolaryngol*. 2018;275(8):2035-2043.
- Kallenbach M, Dittberner A, Boeger D, et al. Hospitalization for epistaxis: a population-based healthcare research study in Thuringia, Germany. *Eur Arch Otorhinolaryngol*. 2020; 277(6):1659-1666.
- Fuji S, Hirai M, Shigehara A, et al. Risk factors for re-bleeding after the treatment of epistaxis. *Nihon Jibiinkoka Gakkai Kaiho*. 2016;119(8):1117-1126.
- Kim C, Kim C, Chung JH, Shin JH. Is epistaxis associated with high blood pressure and hypertension? Propensity score matching study. *Am J Emerg Med*. 2020;38(7):1319-1321.
- Min HJ, Kang H, Choi GJ, Kim KS. Association between Hypertension and Epistaxis: Systematic Review and Meta-analysis. *Otolaryngol Head Neck Surg*. 2017;157(6):921-927.
- Soyka MB, Nikolaou G, Rufibach K, Holzmann D. On the effectiveness of treatment options in epistaxis: an analysis of 678 interventions. *Rhinology*. 2011;49(4):474-478.





# *Actinomyces neuui* as a Cause of Vulvar Abscess

**Urgent message:** While abscesses are seen commonly in the urgent care setting, location and presenting complaints can offer essential clues as to the causative organism—and inform timely diagnosis and treatment decisions.

TRACEY Q. DAVIDOFF, MD, FCUCM

## Introduction

Abscesses are common in urgent care and emergency medicine and are easily treated with drainage, and in some cases antibiotics. The majority of cases are caused by *Staphylococcus aureus* and *Streptococcus* sp. Rarely, gram-negative bacilli can be found in abscesses in the perineal area. More unusual organisms such as the *Actinomyces* species and other anaerobic infections may also occur. In this case, we identified a case of *Actinomyces neuui*, a relatively rare species.

## Case Presentation

A 34-year-old female presents to urgent care with a 4-day history of a painful lump on the lateral edge of the right vulva. She has had similar lumps in the past, but they have been much smaller, less painful, and resolved with warm compresses and “popping” them herself. The most recent occurred several months ago. She does not believe the symptoms are related to shaving. The pain is described as “sore” and is worse with touching and sitting. There are no fever, chills, swollen glands, or body aches. The patient has no history of MRSA infection. She has a history of genital herpes and takes valacyclovir, but has not had an outbreak in more than a year. She has no significant past medical history and takes no other medication.

Vital signs are as follows:

- Temperature 96.9° F temporal
- Heart rate 102 bpm
- Respiratory rate 14 per min



- Blood pressure 124/82

The physical exam is normal except for the genital exam.

On the right lateral mid portion of the labia majora, there is a 2.5 cm protruding, fluctuant abscess that is tender to touch. The discomfort is not out of proportion to the findings. There is minimal surrounding erythema. There are multiple areas of scarring over both sides of the labia that appear to be healed and much smaller abscesses that were self-drained by the patient. There is no enlargement of inguinal lymph nodes appreciated.

**Author affiliations:** Tracey Q. Davidoff, MD, FCUCM, Advent Health Centra Care; JUCM Editorial Board. The author has no relevant financial relationships with any commercial interests.

The abscess was incised and drained in the usual fashion. A culture was taken. Trimethoprim-sulfamethoxazole was started based on the history of previous infections and the amount of purulence. Self-care at home was to include sitz baths several times per day and dressing changes.

The patient returned in 48 hours for a recheck. The pain had improved and the drainage had slowed but not stopped. There was no surrounding cellulitis. She was to continue home care and antibiotics until the area healed.

Gram stain was positive for 3+ PMNs and 1+ gram-positive cocci and occasional gram-negative rods. Culture result indicated normal skin flora and 1+ *Actinomyces neuii*. Sensitivities were not completed. The patient was contacted and the TMP-SMX was changed to penicillin V. She was encouraged to follow up with her primary care doctor.

## Discussion

Although not all skin abscesses routinely require culture, vulvar abscesses should almost always be cultured for aerobic and anaerobic bacteria at the time of drainage.<sup>1</sup> MRSA, resistant gram-negative organisms, and other resistant organisms are increasing in frequency in genital infections. Bartholin glands, located in the labia minora at 4:00 and 8:00 with respect to the vaginal opening, may develop abscesses as a result of gonorrhea or chlamydial infections. Cultures for these entities should be obtained in addition to aerobic and anaerobic cultures when Bartholin's abscesses are drained.

*Actinomyces* species classically cause human actinomycosis, which is a granulomatous infectious disease that may result in orocervicofacial, thoracic, abdominopelvic, or CNS abscess formation with draining sinuses.<sup>2</sup>

True actinomycosis is a mostly chronic disease that is slowly progressing with suppurative and fibrosing inflammation. The hallmark of the disease is a discharge from sinus tracts containing sulfur granules.<sup>3</sup> Bacterium responsible for these chronic infections are facultative anaerobes, with *Actinomyces israelii* being the most commonly recognized.<sup>4,5</sup> *Actinomyces* sp. responsible for actinomycosis are generally gram-positive rods with branching filaments.

Advances in laboratory identification methods have led to additions to the genus *Actinomyces*. *A. neuii* was added in 1994. Unlike other *Actinomyces* sp., it is aerobic or aerotolerant, does not appear filamentous, and does not produce sulfur granules.<sup>1</sup> Relatively rare, *A. neuii* represents only 17% of all *Actinomyces* isolates.<sup>6</sup> This may be due par-

*“Although classic actinomycosis frequently occurs in patients who are immunocompromised, abscess formation from A. neuii has not been shown to be related to immunosuppression or other risk factors.”*

tially to its frequent misinterpretation as a skin contaminant<sup>5</sup> or dismissal as a commensal coryneform bacillus.<sup>7</sup> *A. neuii* does not cause typical actinomycosis.<sup>5</sup>

A literature review identifies fewer than 200 cases of recorded infections with *Actinomyces neuii*. Simple abscesses and infected atheromas appear to be the most common infections; endophthalmitis, bacteremia, foot ulcers, and endocarditis have also been described.<sup>8,9</sup> Rarely, cases of chorioamnionitis have been reported.<sup>6</sup> The mammary, axillary, and inguinal areas appear to be the most common sites for abscesses due to this organism.<sup>4,7</sup> Many cases are polymicrobial and may be mixed with normal skin flora.<sup>6</sup>

Although classic actinomycosis frequently occurs in patients who are immunocompromised, abscess formation from *A. neuii* has not been shown to be related to immunosuppression or other risk factors.<sup>5</sup>

The prognosis of infections related to *A. neuii* is very good. Local abscesses respond well to incision and drainage and antibiotics.<sup>4</sup> The majority of tested isolates show susceptibility to penicillin G, ampicillin, cefazolin, cefuroxime, ceftriaxone, and imipenem.<sup>6</sup> There is diminished susceptibility to aminoglycosides and fluoroquinolones,<sup>5</sup> which should be avoided. Beta-lactam antibiotics or cephalosporins are recommended.<sup>10</sup> ■

## References

1. Lazenby BG, Thurman AR, Soper DE. Vulvar abscess. Sharp HT, Sexton DJ, eds. UpToDate. Waltham, MA. Available at: [https://www.uptodate.com/contents/vulvar-abscess?search=vulvar%20abscess&source=search\\_result&selectedTitle=1~11&usage\\_type=default&display\\_rank=1#H15317701](https://www.uptodate.com/contents/vulvar-abscess?search=vulvar%20abscess&source=search_result&selectedTitle=1~11&usage_type=default&display_rank=1#H15317701). Accessed May 5, 2021.
2. Yang WT, Grant M. *Actinomyces neuii*: a case report of a rare cause of acute infective endocarditis and literature review. *BMC Infect Dis*. 2019;19:511.
3. Fazilli T. *Actinomyces* species (Actinomycoses). *Antimicrobe*. Available at: <http://antimicrobe.org/new/b73.asp>. Accessed May 9, 2020.
4. Smego RA, Foglia G. Actinomycosis. *Clin Inf Dis*. 1998;26(6):1255-1261.
5. Könönen E, Wade WG. Actinomycetes and related organisms in human infections. *Clin Microbiol Rev*. 2015;28(2):419-442.
6. Gómez-Garcés JL, Burillo A, et al. Soft tissue infections caused by *Actinomyces neuii*, a rare pathogen. *J Clin Microbiol*. 2010;48(4):1508-1509.
7. Zelyas N, Gee S, Nilsson B, et al. Infections caused by *Actinomyces neuii*: a case series and review of an unusual bacterium. *Can J Infect Dis Medical Microbiol*. Epub February 29, 2016. Available at: <http://dx.doi.org/10.1155/2016/6017605>. Accessed May 8, 2020.
8. von Graevenitz A. *Actinomyces neuii*: review of an unusual infectious agent. *Infection*. 2011;39(2):97-100.
9. Funke G, von Graevenitz A. Infections due to *Actinomyces neuii* (former “CDC coryneform group 1” bacteria). *Infection*. 1995;23(2):73-75.
10. Li L, Gautam A, Miller N. *Actinomyces neuii*, an uncommon bacterial isolate from a neck abscess. *Internal Med Rev*. 2017;3(6):1-5.



# The Nuances of Age Discrimination

**Urgent message:** As the United States learns to support an aging workforce, understanding the nuances of age discrimination can help urgent care practices to be fair and diverse workplaces that avoid potential legal pitfalls.

ALAN A. AYERS, MBA, MACC

*"Lori's been here since dinosaurs roamed the earth—she'll know where it's at."<sup>1</sup>*

That type of comment may land you and your urgent care in court. By 2024, workers who are age 55 and older will represent a quarter of the nation's workforce, with the fastest annual growth rates among those aged 65 and older.<sup>2</sup> That means the status of older workers, and how they are treated, will become more of a concern for urgent care owners and managers.

A 2019 study found that ageism creates a number of issues for employers, such as discrimination litigation, demotivated employees, and the lost opportunity costs associated with devaluing older workers.<sup>3</sup> The study showed that 67% of surveyed workers aged 40-65 plan to continue to work after they reach age 66.<sup>3</sup>

This article will look at age discrimination and how you can avoid claims in your business.

## What Is the ADEA and How Does It Apply to Employers?

The Age Discrimination in Employment Act of 1967 (ADEA) and of 1975<sup>4</sup> prohibit employers from discriminating against applicants and employees who are age 40 or older in aspects of their employment.

Under the ADEA, it's unlawful to discriminate against a person because of his or her age with respect to "any term, condition, or privilege of employment."<sup>5</sup> This includes hiring, firing, promotion, layoff, compensation, benefits, job assignments, and training.

Note that it's not illegal for an employer to favor an older worker over a younger one, even if both are age 40 or older.<sup>6</sup>

This federal law applies to any employer who has 20 or more employees. However, some states' laws make



age discrimination applicable to even smaller businesses or to all businesses within the state.<sup>7,8</sup>

Note that it's also unlawful to *retaliate* against a person for opposing employment practices that discriminate based on age or for pursuing an age discrimination charge, testifying, or participating in any manner in an investigation, proceeding, or litigation under the ADEA.<sup>7</sup>

An applicant or employee bringing an action under the ADEA has the burden of proof to show that his or her age was the "but-for reason" for the illegal discrimination.<sup>9</sup> A plaintiff may prove a violation by either direct or circumstantial evidence.<sup>9</sup> Direct evidence of employment discrimination is "evidence which, if believed, requires the conclusion that unlawful discrimination was at least a *motivating factor in the employer's actions*."<sup>10,11</sup>

---

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

Circumstantial evidence is proof that doesn't "on its face establish discriminatory animus, but does allow a fact finder to draw a reasonable inference that discrimination occurred."<sup>12,13</sup>

### What Do Urgent Care Providers Need to Know About Age Discrimination?

Age discrimination can easily arise in the urgent care setting.

For example, you hire a 42-year-old to replace a 35-year-old who resigned from an executive position. A year later, the urgent care eliminated the now 43-year-old's position as part of a larger downsizing because the work she was doing was unnecessary and redundant. However, younger individuals were later hired in the department in different positions at a lower pay grade than the eliminated employee. The 43-year-old woman files an EEOC claim alleging age discrimination against your company.

Or...a 62-year-old regional manager with a high school diploma but many years of experience in the position is terminated after 1 year for poor performance. The position is subsequently posted with no age qualifications. A highly qualified candidate—age 27 with an MBA—is hired to replace him. The man who was fired sues for wrongful termination in age discrimination.

These situations can arise easily, and the best way to handle them is to avoid them in the first place. That requires a concerted effort by management to create a work environment that is diverse and inclusive.

The next section will examine the ways that an urgent care operator can address and avoid age discrimination.

### How Can Urgent Care Centers Avoid Age Discrimination Claims?

The number of age-related discrimination charges filed with employers and the EEOC by employees who were age 65+ doubled from 1990 to 2017.<sup>14</sup> There were 18,376 cases in 2017.<sup>14</sup>

Most urgent cares don't have any age criteria for their positions. Many positions require some specific education or training, such as a doctor, physician assistant, medical assistant, or licensed practical nurse. Support staff, such as those at the registration desk, may need clerical training or computer skills. Thus, age should not play a role in any hiring decision. The qualifications for the specific position should be the main concern, along with clean licensure and relevant experience.

While some factors may favor certain age groups over others, the objective criteria should be the primary

focus. It shouldn't matter if you have a 60-year-old ER doctor or a 49-year-old nurse practitioner—the key is if they're qualified for the position in hiring and adequately perform once on board.

With that said, here are some tips to avoid age discrimination in your urgent care:

#### Keep a Diverse Workforce

Your hiring managers may have an implicit bias, a tendency to hire people who are similar to themselves without realizing it. Make certain that these individuals are trained to hire based on an applicant's qualifications for a particular job.<sup>15</sup> In addition, managers may look for a new person to "gel" and be a "good fit" with the existing staff. While we all want to work with "fun" people, this gets into subjective criteria which are harder to define—and *harder to defend*.

You don't know if a 60-year-old ER doctor or 49-year-old nurse practitioner won't like working with staff, so it shouldn't disqualify the candidate from fair consideration. If this occurs, it may be discrimination based on age. Hiring decisions should be based on facts (experience, certifications, degrees, etc.) rather than assumptions.

#### Review Your Job Descriptions

If you have a position at your urgent care requiring "soft skills," be aware of how you describe those skills. Words like "energetic," "spirited," or "tech-savvy" in a job description may raise red flags for a discriminatory practice. Of course, "young" is out of the question.

As an alternative, try words like "motivated" or "dedicated" that convey a candidate's passion and work ethic without the association with a requirement that they be young to do the job.

If you're having a hard time with the job description, it's a sign that you should abandon trying to determine what "type" of person would best fit the role and simply describe the role that needs to be filled.

#### Scrutinize Your Job Application Process

Determine the information you absolutely need to have on your job applications. For example, is there a reason you must know the year they graduated from high school or college? Older candidates can also see this as a red flag that age rather than qualifications is a determining factor in job seekers. This may negatively impact your reputation and deprive you of some great talent.

Ask more specific questions on your job applications and in interviews. For example, for an in-take position, you might ask if a candidate can use a particular soft-



ware program and what applications they used at their last position.<sup>15</sup>

Refrain from requesting unnecessary information. If an applicant or employee files an age discrimination claim, this can be used as evidence that your hiring manager and your practices place an emphasis on a candidate's age and that it influences their hiring decisions. Develop structured interview outlines for consistency. That way, every applicant will be asked the same questions.

### Eliminate Stereotypes

"You can't teach an old dog new tricks." Don't assume an employee can't keep up with new technology or new procedures because of his or her age.

In the same manner, know the retirement rules. People quickly get into trouble by assuming that because someone's older, they're ready for retirement. That's another stereotype. We're living longer, and today's workers today often stay in their jobs well after the Social Security retirement age. You generally can't force an employee to retire, and inquiring about their plans to retire is wrong.<sup>16</sup>

### Set an Example and Be Aware of Your Speech

You don't want to call that 60-year-old doctor or 49-year-old nurse practitioner "old." But in addition, you need to avoid making disparaging comments. A "playful" or "good-natured" comment can fuel your employees to do the same, creating an environment of age-based harassment.

In a recent employment discrimination lawsuit, one employee asked the plaintiff, "Back in the day, did you sell chariots?"<sup>17</sup> And at a small birthday celebration in that same case, another employee asked the 59-year-old plaintiff, "How old are you now, 70?"<sup>18</sup>

In another case, a manager described an older employee as having a "limited shelf life" and noted that she had reached her "expiration date."<sup>19</sup>

These comments could have the potential to make older employees feel discriminated against. You should foster an inclusive environment for all employees and avoid these types of comments.

### Takeaway

Don't tolerate discrimination of any kind at your urgent care.

Provide training on implicit bias, discrimination, and workplace harassment, and create a comprehensive age discrimination policy that includes an emphasis on skills and performance, as well as fair guidelines for eval-

*"Even if you're successful at trial, there will be cost in terms of productivity, expense, and reputation."*

uating job candidates.

Further, implement a zero-tolerance antidiscrimination and harassment policy at your urgent care and provide guidelines and expectations concerning inclusiveness. Treat all employees—regardless of age—in the same manner.<sup>20</sup>

It's critical to note that smaller businesses with between 10 and 99 employees have had the highest reported discrimination claim rates.<sup>21</sup> And even if an age discrimination plaintiff loses at trial, you and your company will have been impacted on numerous levels, including productivity, expense, and reputation. ■

### References

1. *Drews v Berrien Cty.* No. 20-1267, 2021 U.S. App. LEXIS 1155, at \*11 (6th Cir. Jan. 15, 2021).
2. Toossi M, Torpey E. Older workers: labor force trends and career options. U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections. (May 2017). Available at <https://www.bls.gov/careeroutlook/2017/article/older-workers.htm>. Accessed June 9, 2021.
3. Hiscox. 2019 *Hiscox Ageism in the Workplace Study*. 2019. Available at: <https://www.hiscox.com/documents/2019-Hiscox-Ageism-Workplace-Study.pdf>. Accessed June 9, 2021.
4. U.S. Department of Labor. Age discrimination act of 1975. 42 U.S.C. §§ 6101-6107. Available at: <https://www.dol.gov/agencies/oasam/regulatory/statutes/age-discrimination-act>. Accessed June 9, 2021.
5. The U.S. Equal Employment Opportunity Commission. Facts about age discrimination. (Modified on September 8, 2008). Retrieved at <https://www.eeoc.gov/fact-sheet/facts-about-age-discrimination>. Accessed June 9, 2021.
6. The U.S. Equal Employment Opportunity Commission. Age discrimination. Available at: <https://www.eeoc.gov/age-discrimination>. Accessed June 9, 2021.
7. California Department of Fair Employment and Housing. Employment discrimination. Available at: <https://www.dfeh.ca.gov/employment/#whoBody>.
8. NY CLS Exec § 292(5). 2019 N.Y. ALS 161, 2019 N.Y. Laws 161, 2019 N.Y. Ch. 161, 2019 N.Y. SB 6594. Available at: <https://dhr.ny.gov/law#employer>. Accessed June 9, 2021.
9. *Blizzard v Marion Tech. College*, 698 F.3d 275, 283 (6th Cir. 2012), quoting *Gross v FBL Fin. Servs. Inc.*, 557 U.S. 167, 177, 129 S. Ct. 2343, 174 L. Ed. 2d 119 (2009).
10. *Alberty v Columbus Twp.*, 730 F.App'x. 352, 356 (6th Cir. 2018).
11. *McAllister MC*. Extending the sex-plus discrimination doctrine to age discrimination claims involving multiple discriminatory motives. 60 Bost. Col. L. Rev. 469 (2019). Available at <https://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=3738&context=bclr>. Accessed June 9, 2021.
12. *Geiger v Tower Auto.*, 579 F.3d 614, 620 (6th Cir. 2009).
13. *McDonnell Douglas Corp. v Green*, 411 U.S. 792, 802, 93 S. Ct. 1817, 36 L. Ed. 2d 668 (1973).
14. U.S. Equal Employment Opportunity Commission. *Charge Statistics (Charges filed with EEOC) FY 1997 Through FY 2019*. Available at: <https://www.eeoc.gov/statistics/charge-statistics-charges-filed-eeoc-fy-1997-through-fy-2019>. Accessed June 9, 2021.
15. *Insperty*. 6 *Top Tips for Preventing Ageism in the Workplace*. Available at: <https://www.insperity.com/blog/preventing-age-discrimination/>. Accessed June 9, 2021.
16. Janove J. How to avoid ageism. *SHRM*. March 30, 2019. Available at: <https://www.shrm.org/hr-today/news/all-things-work/pages/how-to-avoid-ageism.aspx>. Accessed June 9, 2021.
17. *Van Oyen v Msh Chevrolet Cadillac*. No. 4:19-CV-2561-SNJ, 2020 U.S. Dist. LEXIS 75123, at \*2 (E.D. Mo. Apr. 29, 2020).
18. *Reed v Neopost USA, Inc.* 701 F.3d 434, 443 (5th Cir. 2012).
19. *Pelcha v MW Bancorp, Inc.* 984 F.3d 1199 (6th Cir. 2021).
20. Help Avoid Costly Age Discrimination Claims. *HR&P*. Available at: <https://hrp.net/articles/help-avoid-costly-age-discrimination-claims/>. Accessed June 9, 2021.
21. 2020 Report on Age Discrimination in the Workplace. *Senior Living*. (Updated June 24, 2020). Available at: <https://www.seniorliving.org/research/age-discrimination-annual-study/>. Accessed June 9, 2021.



LumiraDx™

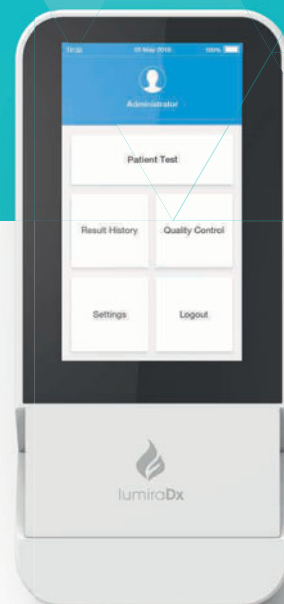
Fast. Accurate. Connected.



# LumiraDx SARS-CoV-2 Antigen Test

Verify infection quickly with a rapid microfluidic immunofluorescence assay that provides lab comparable results at point of care, with 97.6 % positive agreement to RT-PCR in 12 minutes.

Authorized for use in CLIA waived settings.



In the USA, the SARS-CoV-2 Antigen Test product has not been FDA cleared or approved but has been authorized by FDA under an EUA for use by authorized laboratories; use by laboratories certified under the CLIA, 42 U.S.C. §263a, that meet requirements to perform moderate, high or waived complexity tests. This product is authorized for use at the Point of Care (POC), i.e., in patient care settings operating under a CLIA Certificate of Waiver, Certificate of Compliance, or Certificate of Accreditation. This product has been authorized only for the detection of proteins from SARS-CoV-2, not for any other viruses or pathogens. In the USA, 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 the virus that causes 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 the authorization is revoked sooner. Copyright © 2021 LumiraDx UK LTD. All rights reserved worldwide. LumiraDx and Flame logo are protected trademarks of LumiraDx International LTD. Full details of these and other registrations of LumiraDx can be found at [lumiradx.com/IP](https://lumiradx.com/IP). All other trademarks are the property of their respective owners. Product not available in all countries and regions. Available in the USA under Emergency Use Authorization. S-COM-ART-01329 R1 Date of Rev: 2021/05

# Heavy Menstrual Bleeding: Important Considerations for Adolescent Patients in the Urgent Care Setting

**Urgent message:** Anovulatory cycles are the most common cause of heavy menstrual bleeding (HMB) in adolescent patients. Just as with adult patients in the urgent care setting, it is most important to identify unstable patients and those with life-threatening causes for HMB.

SHIKHA NIGAM, MD, MPH and AMY PATTISHALL, MD

## Case Presentation

A 14-year-old female presents with 6 weeks of menstrual bleeding. Her cycles are irregular but she generally has 4 to 6 weeks of bleeding, followed by 4 weeks before her next menstrual cycle. She has heavy flow and often has overflow despite simultaneous use of tampons and pads. She experiences occasional headaches, shortness of breath, and exhaustion, though continues to be active in sports. Menarche was at age 11 and has been irregular with the cycle most recently as described above.

Vital signs are as follows:

- HR 115
- BP 130/69
- RR 18
- SpO<sub>2</sub> 100% on room air, afebrile

She is well-appearing, alert, and in no acute distress. Her physical exam is notable for a 2/6 systolic ejection murmur, and pale conjunctiva, buccal mucosa, and palms. Abdomen is soft, nontender, and with no hepatosplenomegaly. GU exam showed copious blood from vaginal area, with stage 5 sexual maturity rating (SMR), no internal exam was performed. Her orthostatic vital signs were positive.



©AdobeStock.com

## Introduction

Abnormal uterine bleeding (AUB) is common in adolescent patients in the years after menarche. Heavy menstrual bleeding (HMB), a type of AUB, is defined as excessive menstrual blood loss interfering with the

---

**Author affiliations:** Shikha Nigam, MD, MPH, Division of Pediatric Emergency Medicine at Emory University School of Medicine; Children's Healthcare of Atlanta. Amy Pattishall, MD, Division of Pediatric Emergency Medicine at Emory University School of Medicine; Children's Healthcare of Atlanta.

Table 1. Differential Diagnosis for HMB in Adolescents		
Etiology	History and Exam Findings	Other Notes
<b>What's common</b>		
Anovulatory cycles	<ul style="list-style-type: none"> <li>• Absence of dysmenorrhea and other premenstrual symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• Most common cause of HMB in adolescents</li> <li>• Immaturity of the H-P-A axis</li> </ul>
<b>What not to miss</b>		
Ectopic pregnancy	<ul style="list-style-type: none"> <li>• Confidential sexual history should be obtained</li> </ul>	<ul style="list-style-type: none"> <li>• Pregnancy test should be obtained on all patients, regardless of sexual history</li> </ul>
Pelvic infections	<ul style="list-style-type: none"> <li>• History of sexual activity</li> <li>• Vaginal discharge</li> <li>• Lower abdominal/pelvic pain</li> </ul>	<ul style="list-style-type: none"> <li>• Test for chlamydia, gonorrhea, and other STIs</li> </ul>
<b>What to think about</b>		
Endocrine causes (PCOS, hypothyroidism)	<ul style="list-style-type: none"> <li>• Hirsutism, obesity</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnostic tests can be affected by hormonal treatment</li> </ul>
Bleeding disorder (thrombocytopenia, von Willebrand, etc.)	<ul style="list-style-type: none"> <li>• HMB present since menarche</li> <li>• Severe hemorrhage</li> <li>• History of bleeding issues</li> <li>• Pallor, petechiae, bruising</li> </ul>	<ul style="list-style-type: none"> <li>• HMB can be the first presentation of a bleeding disorder in females</li> <li>• Thrombocytopenia is the most common hematologic cause for HMB</li> </ul>
Contraception	<ul style="list-style-type: none"> <li>• History of contraception use or inconsistent oral contraception (OCP) use</li> </ul>	<ul style="list-style-type: none"> <li>• Intermenstrual bleeding with low-dose estrogen OCPs, progestin-only OCPs, injectable contraception, progestin implants</li> </ul>
Endometriosis	<ul style="list-style-type: none"> <li>• History of pelvic pain</li> </ul>	<ul style="list-style-type: none"> <li>• Referral to gynecologist may be warranted</li> </ul>

woman's physical, emotional, social, and material quality of life, and occurring alone or in combination with other symptoms.<sup>1</sup> More quantitatively, HMB is defined as experiencing menses for more than 7 days, using more than seven pads or tampons (normal strength) per day, or blood loss of >80 mL per cycle.<sup>1,2</sup>

Nearly 40% of adolescents experience HMB.<sup>3</sup> HMB can be draining and aggravating, and even life-threatening to patients, and presents a complex differential for providers (Table 1).

Just as with adult patients in the urgent care setting, it is most important to identify unstable patients and those with life-threatening causes for HMB. Specific considerations in evaluating adolescent patients with HMB will be discussed in this review.

### History and Physical Exam

When performing the history, pertinent questions will help determine the severity and etiology of the bleeding. Questions about age of menarche and regularity of cycles can help determine if cycles are anovulatory. A confidential sexual history should be obtained in adolescent patients, including any history of pregnancy,

sexually transmitted infections (STIs), and contraceptive use. Symptoms of anemia, including fatigue, pica, pallor, shortness of breath, or palpitations should be assessed.<sup>4</sup> A medication history can reveal use of hormonal or anticoagulation medications.

The following questions, based on a screening tool for bleeding disorders which was validated for women ages 18 to 50, can be helpful in adolescent patients.<sup>5</sup> This is especially important if a patient has heavy menstrual bleeding starting at menarche, when laboratory evaluation for bleeding disorder should be considered.

1. On average, does your period last 7 or more days?
2. Do you experience flooding or overflow bleeding through tampons or pads?
3. Do you need to change your pad/tampon more often than every 1-2 hours?
4. Do you have any history of anemia requiring treatment (blood transfusion, iron supplementation)?
5. Is there any family history of bleeding disorders?
6. Do you have any history of excessive bleeding with dental procedures, miscarriages, or birth?

The physical exam should first assess for severe anemia or hypovolemia. Vital signs may show tachycardia,



# Adapt

## How will you Adapt?

### It's a **New Era** for Urgent Care

Big results can only be achieved by letting go of outdated business processes and adapting with an operating system driven by patient demands and focused on urgent care.

#### **You determine the shape of things to come.**

Experity provides all the tools you need to:

- Streamline workflows
- Accelerate throughput
- Integrate processes
- Lower costs
- Increase claim and coding accuracy
- Optimize reimbursement opportunities
- Diversify revenue streams
- Engage patients
- Improve outcomes

**Adapt** with Experity.

Thrive in the new era.  
[experityhealth.com/get-started](https://experityhealth.com/get-started)



**EXPERITY®**

EMR/PM | Billing | Patient Engagement | Teleradiology | Consulting



# It's a New Era for Urgent

On-demand healthcare is evolving before your eyes. And there's no going back. To stay on top, your urgent care needs to do what it's always done—challenge the status quo and diversify, improve your revenue streams, and protect yourself from a business environment constantly in flux.

## You determine the shape of things to come

### **Adapt with a built-for-urgent care operating system**

Let go of outdated business processes and adapt with an operating system driven by patient demands.

### **Align with a trusted partner**

Work with a trusted urgent care partner, committed to evolution, innovation, and disruption.

### **Act to retain new patients**

Leverage the opportunity to build relationships with new patients you saw during 2020 through better engagement, diversified revenue streams, and targeted marketing.

### **Accelerate to drive the urgent care industry forward**

Urgent care is the future of on-demand healthcare.

Do you have the disruptive mindset, built-for-urgent care operating system, and trusted partner you need to step into the new era with confidence?

**Learn more at [experityhealth.com](https://www.experityhealth.com)**

ent Care



EXPERITY®

# How will you **Align?**

## It's a **New Era** for Urgent Care

Move into the new era with confidence. As a trusted partner to nearly 50% of all urgent care clinics in the U.S., Experity is committed to evolution, innovation, and disruption.

As your partner, we help you drive your business with:

- Disruptive, continuous innovation to help you evolve

- Actionable insight for better decision-making

- Revenue cycle management leadership to help you improve financial performance

- Client revenue-first pricing structure ties our success to your success

- Experienced urgent care consultants

- 20+ years leading the urgent care industry

**Align** with Experity.

EMR/PM | Billing | Patient Engagement | Teleradiology | Consulting

**EXPERITY®**

Thrive in the new era.

[experityhealth.com/get-started](https://experityhealth.com/get-started)





Table 2. Immediate Hormone Treatment Options for Adolescents with HMB		
Medication	Dosage	Other Considerations
Norethindrone acetate	10 mg PO	
Conjugated estrogen (eg, Premarin)	25 mg IV	If unable to tolerate PO, consider transfer for admission
Medroxyprogesterone	20 mg PO	If estrogen contraindicated

*“Specific treatment regimens vary depending on level of anemia and patient symptoms, but typically consist of high-dose estrogen (with or without progestin) to stop the bleeding, followed by a taper of a combination estrogen/progesterone.”*

hypotension, or tachypnea.<sup>4</sup> Orthostatic vital signs should be obtained; if positive, they may assist in a diagnosis of hypovolemia. Weight and BMI may also assist in identifying potential etiology. Skin exam may reveal pallor, bruising, a petechial rash, or decreased skin turgor.<sup>5</sup> Eyes may show conjunctival pallor. Cardiac exam should be done to assess for a murmur. The neck should be palpated to assess for thyroid size. The abdomen should be examined for distension, striae, any masses, tenderness, and hepatosplenomegaly.

On genitourinary exam, a speculum exam is often not needed, and should not be performed on vaginal patients. However, an external genitourinary exam is important to evaluate sexual maturity, extent of bleeding, signs of trauma, presence of external vaginal lesions, and vaginal discharge.<sup>1</sup> A bimanual exam should also be performed to evaluate for vaginal foreign bodies, pelvic mass, or PID.<sup>1</sup> Though pregnancy and ectopic pregnancy may be the cause of HMB, evaluating the SMR may give you clues to an immature hypothalamic pituitary ovarian axis.

### Work-Up

If the patient is stable and your facility is capable of performing them, a number of labs are useful in identifying etiology and treating the patient.

Pregnancy, though less common than in adults, should always be on the differential. A pregnancy test is critical to evaluate for complications of pregnancy such as miscarriage or ectopic pregnancy. A CBC is im-

portant to evaluate extent of anemia and for thrombocytopenia.

Other potentially useful labs include coagulation studies, fibrinogen, ferritin, and TIBC.<sup>1</sup> If transfusion is warranted, a type and screen would need to be obtained. Coagulation studies can help identify clotting disorders, platelet disorders, or liver dysfunction. While unlikely to impact initial treatment, thyroid and von Willebrand studies can identify possible etiologies of HMB.

Studies that may be useful in identifying an endocrine etiology (such as polycystic ovarian syndrome [PCOS], or immature hypothalamic-pituitary-ovarian axis) are FSH, LH, estrogen, prolactin, 17 hydroxyprogesterone, and testosterone.<sup>1</sup> Because these labs may be affected by treatment with hormonal contraceptives, it is helpful to obtain these labs early, though it should not delay treatment.

If warranted and available, ultrasound of the ovaries and uterus may support diagnosis of PCOS, show structural abnormalities, and assess the thickness of the endometrium.<sup>1</sup>

### Treatment

Patients who are hemodynamically unstable should receive rapid volume resuscitation and transfusion. These patients will likely require transfer to higher level of care for further evaluation and management. Treatment is aimed at stopping the bleeding and correcting anemia. Specific treatment regimens vary depending on level of anemia and patient symptoms, but typically consist of high-dose estrogen (with or without progestin) to stop the bleeding, followed by a taper of a combination estrogen/progesterone. In general, patients who have symptomatic anemia or an Hb less than 7 should be transferred for IV estrogen and transfusion.

Medications that can be used to stop bleeding in the urgent care setting are summarized in **Table 2**.

Many patients can be managed on an outpatient basis; examples of treatment options are presented in **Table 3**. If estrogen is contraindicated then medroxyprogesterone is preferred. Contraindications to estrogen therapy including a history of deep vein thrombosis or pulmonary embolism, lupus, Kawasaki disease, nephrotic syndrome, or cardiac conditions necessitating as-

Table 3. Examples of Outpatient Hormone Treatment Regimens for Adolescents with HMB		
Medication	Dosage	Other Considerations
Norgestrel 0.3 mg/ethinyl estradiol 0.03 mg	1 tab every 8 hours for 3 days, then 1 tab every 12 hours for 2 days, then 1 tab daily	If bleeding recurs, resume previous dose, skip placebo pills for 2 months
Norethindrone acetate	10 mg BID until 3 days after bleeding stops, then 10 mg daily	
Medroxyprogesterone	20 mg BID until 3 days after bleeding stops, then 20 mg daily	If estrogen contraindicated

*“Taking a confidential sexual history and obtaining a pregnancy test are essential in evaluating for pregnancy-related causes and STIs. It is also vital to identify patients who need transfusion or further work-up.”*

pirin or anticoagulation therapy.<sup>1</sup>

In addition to stopping the bleeding, it is important to support hematopoiesis. Iron supplementation with 65 mg elemental iron is beneficial, as iron stores may be depleted. A stool softener should be considered to alleviate the constipation side effect of iron supplementation. An antacid and antiemetic may help with GI side effects caused by estrogen therapy. Follow-up with a gynecologist or hematologist is important for long-term care.

### Resolution

The patient had microcytic anemia (Hb 4.6, MCV 54) and was transfused two units of PRBCs. Iron studies were indicative of iron deficiency and she was started on iron supplementation. There were no findings of PCOS, von Willebrand disease, or anatomic etiology for her HMB. Her HMB was determined to be due to an immature hormonal axis and anovulatory cycles. She was given IV estrogen. Bleeding was controlled while inpatient and she was discharged with oral hormonal control. She was lost to follow-up and presented less than 2 years later with similar complaints and required repeat transfusion.

### Conclusion

Heavy menstrual bleeding is a common issue among adolescents. It is important to assess patients for anemia and acute bleeding. While determining the etiology is

### Take-Home Points

- Anovulatory cycles are the most common cause of HMB in adolescent patients.
- A confidential sexual history and pregnancy test should be obtained in all patients with menstrual complaints.
- While an external exam should be performed, a speculum or internal vaginal exam is not always necessary, and a speculum exam should not be performed on virginal patients.
- Vital signs, symptoms of anemia, and hemoglobin level should be used to guide disposition and treatment regimen.

not the primary objective in the urgent care setting, it is important to understand the differential to identify potentially life-threatening causes and to obtain tests that can be altered by treatment. Anovulatory cycles are the most common cause of heavy menstrual bleeding in adolescents, but bleeding disorders and endocrine disorders such as PCOS are also important to consider. Taking a confidential sexual history and obtaining a pregnancy test are essential in evaluating for pregnancy-related causes and STIs. It is also vital to identify patients who need transfusion or further work-up that is outside the capability of the urgent care center. Treatment focuses primarily on arresting the menstrual bleeding to prevent anemia if it has not already occurred. The importance of follow-up should be stressed to the patient and family, as HMB is likely to recur if therapy is stopped without guidance. ■

### References

1. Haamid F, Sass AE, Dietrich JE. Heavy menstrual bleeding in adolescents. *J Pediatr Adolesc Gynecol.* 2017;30(3):335-340.
2. The American College of Obstetricians and Gynecologists Committee on Adolescent Health Care. Menstruation in girls and adolescents: using the menstrual cycle as a vital sign. Committee Opinion. Number 651; December 2015. Available at: <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2015/12/menstruation-in-girls-and-adolescents-using-the-menstrual-cycle-as-a-vital-sign>. Accessed June 7, 2021.
3. Graham R-A, Davis J A-M. The adolescent with menorrhagia: diagnostic approach to a suspected bleeding disorder. *Pediatr Rev.* 2018;39(12):588-600.
4. Janus J, Moerschel SK. Evaluation of anemia in children. *Am Fam Physician.* 2010; 81(12):1462-1471.
5. Philipp CS, Faiz A, Heit JA. Evaluation of a screening tool for bleeding disorders in a US multisite cohort of women with menorrhagia. *Am J Obstet Gynecol.* 2011;204(3):209.e1-7.



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](https://visualdx.com/jucm)

Made by health care professionals  
for health care professionals.

# How will you **Act**?

## It's a **New Era** for Urgent Care

During 2020, 50% of all urgent care visits were new patients. Leverage this unprecedented opportunity to connect with patients. Bring patients back into your clinics with better engagement, diversified revenue streams, and targeted marketing.

OccMed integrations that empower clinics to build business relationships

Primary care functionality to help manage longitudinal care

Telemedicine to help you manage visits and increase convenience for patients

Flexible engagement tools that simplify two-way communication and boost satisfaction

Actionable data to raise the level of service and manage your reputation

Impactful industry relations to increase awareness and strengthen the industry

**Act** with Experity.

Thrive in the new era.

[experityhealth.com/get-started](https://experityhealth.com/get-started)



EMR/PM | Billing | Patient Engagement | Teleradiology | Consulting



# Using Simulations and Skills Stations to Enhance Emergency Preparedness in Pediatric Urgent Care

**Urgent message:** Realistic—and recurring—simulation of emergency scenarios is essential to helping urgent care providers and support staff function as a team when real-life pediatric emergencies take place in the urgent care center.

ILANALEE CABRERA, MSN, RN, CPNP; WILMA SANTIAGO, BSN, RN, CPN; TIFFANY CHRISTENSEN; and RACHEL LUCAS, DO

Citation: Cabrera I, Santiago W, Christensen T, Lucas R. Using simulations and skills stations to enhance emergency preparedness in pediatric urgent care. *J Urgent Care Med.* 2021;15(10):31-33.

## Introduction

As more patients seek convenient after-hours acute care clinics, effective emergency response requires regularly scheduled, multidisciplinary emergency simulations. Similar to other urgent care clinics across the country, Children's Wisconsin Urgent Care clinics have encountered higher patient volumes and an increase in patient acuity in recent years. Our patient visits have increased steadily year to year, to the extent that visits in 2019 were almost double those of 2016 (**Figure 1**). Patients requiring an escalation in care within 4 hours of check-in to urgent care also increased steadily from 556 in 2016 to 1,037 in 2019 (**Figure 2**).

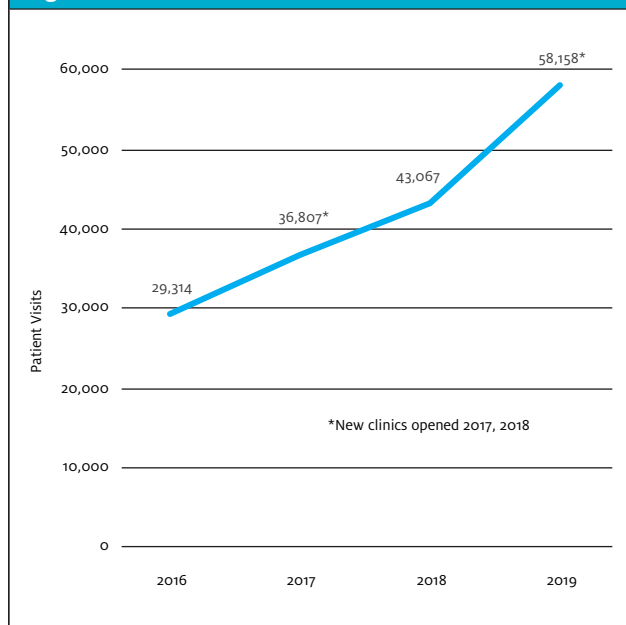
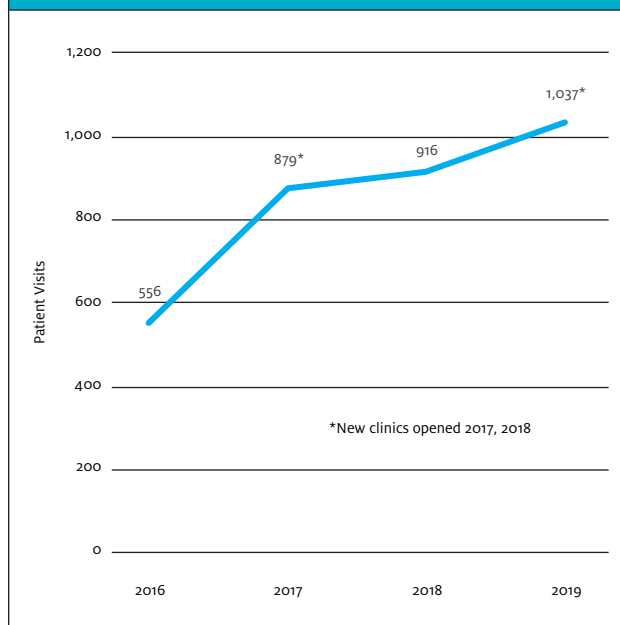
Research shows that emergency response skills deteriorate quickly after training.<sup>1,2</sup> Conversely, regularly and repeatedly practicing a skill may prevent rapid skill deterioration,<sup>1,3</sup> and more frequent training is superior to conventional training to ensure high-quality resuscitation skills.<sup>1-3</sup>

Therefore, our hypothesis is as follows: Using simu-



lated emergency scenarios in the simulation lab, participant assessment of feeling well-prepared or better will increase by 20% from presurvey to postsurvey for all urgent care staff. For in situ (in clinic) simulations, postsimulation surveys will reflect that 75% of participants feel more prepared after the simulation.

**Author affiliations:** Ilanalee C. Cabrera, MSN, RN, CPNP, Children's Wisconsin. Wilma J. Santiago, BSN, RN, CPN, Children's Wisconsin. Tiffany N. Christensen, Children's Wisconsin. Rachel C Lucas, DO, Children's Wisconsin.

**Figure 1. Patient Visits****Figure 2. Patient Visits Requiring an Escalation in Care within 4 Hours of Check-In**

## Methods

Prior to late 2017, our urgent care team practiced emergency response sporadically. Since that time, we have implemented regularly scheduled multidisciplinary emergency simulations and skills stations in our Simulation Lab and at our urgent care clinics.

While we have been doing regularly scheduled simulations since late 2017, data collection began in January 2019. Eighty-one unique staff members participated through 2019, with a total number of 141 participants, with “participants” including staff members who took part in more than one simulation. (The low number of participants reflected in the graphs reflects the recent start of data collection, as well as the purposeful limitation of participants per simulation.) To evaluate the effectiveness of the simulations, participants completed pre- and postsimulation Likert scale surveys.

Simulations were open to all urgent care staff including physicians, nurse practitioners, physician assistants, nurses, medical assistants, and front desk staff. Previous simulation scenarios have included asthma and hypoxia, severe bronchiolitis, anaphylaxis, closed head injury, seizures, hyperthermia, sepsis, diabetic ketoacidosis, and cardiac arrest of the child and adult. Both high- and low-fidelity manikins were used.

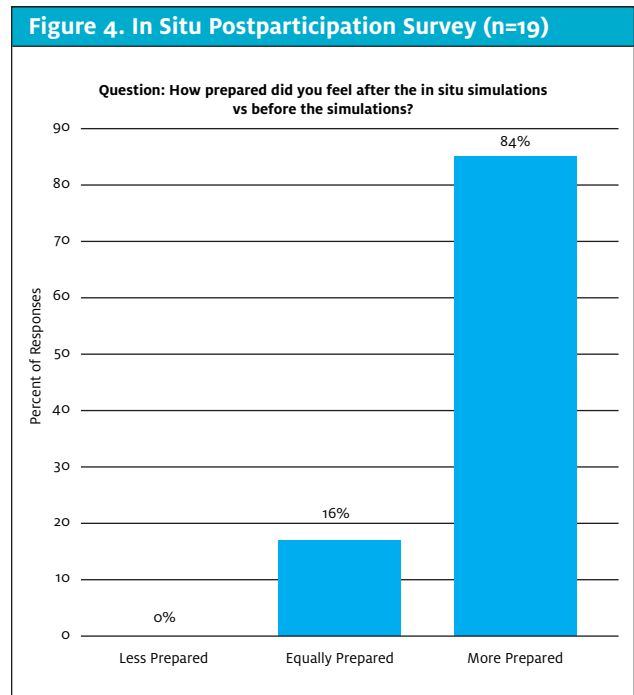
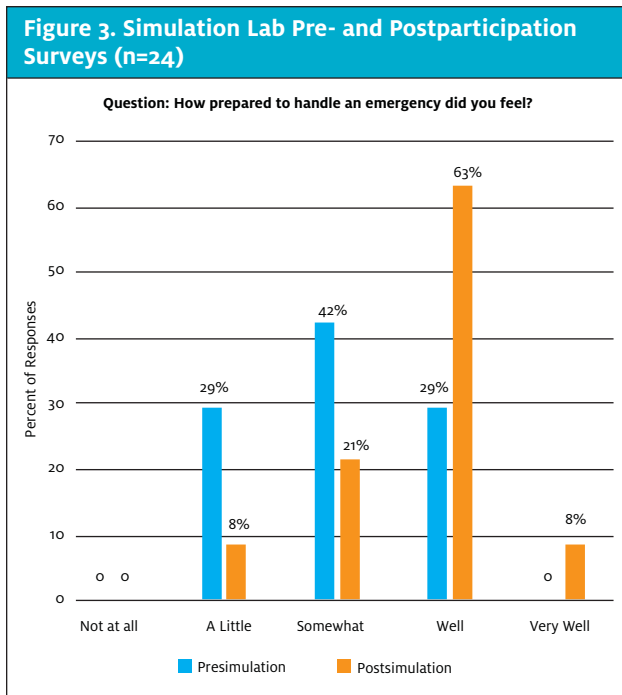
For simulations in the Simulation Lab, a pre- and postparticipation survey was completed by each participant in paper form. Preparticipation survey questions included whether the participant had attended an emer-

gency simulation “prior to today,” whether the participant had been involved in an actual emergency requiring resuscitation in a clinical setting, and how prepared the participant felt regarding handling emergencies in urgent care. Postsurvey questions asked how prepared the participant felt to handle emergencies in urgent care after participating in the simulation.

Due to the nature of the surprise for in situ simulations, we were unable to perform a presurvey; however, all participants are sent a postparticipation survey by email, asking whether they felt more prepared for an emergency after attending the simulation.

To complement the emergency scenarios, we also set up skills stations, which included c-collar application with and without helmet removal, weight estimation using a measuring tool, and bagging a patient with a tracheostomy tube. Skills stations were often not accessible for practice during our in situ simulations because of timing related to patient care.

In simulations held in the Simulation Lab, we performed a pre-brief to discuss the basic assumption that all staff are intelligent, capable, and trying their best. We agreed on the fiction contract, which acknowledged that the scenario is as real as possible but that learning depends on full participation. And, finally, preparatory information was provided. The debrief included re-examining the scenario for learning.



## Results

Our data indicate that almost universally, participants felt more prepared to handle an emergency after attending the simulation. Participants who felt “a little prepared” decreased from 29% to 8%; those who felt “somewhat prepared” decreased from 42% to 21%; those who felt “well prepared” increased from 29% to 63%; and those who felt “very well prepared” increased from 0% to 8% (Figure 3). Participant responses after the in situ simulations indicated 84% of participants felt more prepared after the simulation, while 16% felt the same level of preparedness (Figure 4).

## Conclusions

Because all staff play an important role in caring for the patient and family during an emergency, multidisciplinary simulations are essential to increase staff preparedness to provide high-quality care during such an event.

## Limitations

Survey data are self-reported and subjective. We were unable to assess improvement in preparedness from in situ simulations given no preparticipation survey. It is difficult to compare data between simulation dates, as scenarios may differ between simulations. Additionally, because data were drawn from a small sample size at a single center, results may not be generalizable.

## Next Steps

Future work could compare preparedness to years working in urgent care, total years of experience in healthcare, previous simulation attendance, and the participant role within urgent care. Interdepartmental simulations would be beneficial, especially in our clinics that share workspace. Rapid cycle deliberate practice vs traditional simulation would be interesting to study, as would retention of skills at regular intervals after training. ■

## References

1. Anderson GS, Gaetz M, Statz C, Bin K. CPR skill retention of first aid attendants within the workplace. *Prehosp Disaster Med.* 2012;27(4):312-318.
2. Anderson R, Sebaldt A, Lin Y, Cheng A. Optimal training frequency for acquisition and retention of high-quality CPR skills: a randomized trial. *Resuscitation.* 2019;135:153-161.
3. Lin Y, Cheng A, Grant VJ, et al. Improving CPR quality with distributed practice and real-time feedback in pediatric healthcare providers – a randomized controlled trial. *Resuscitation.* 2018;130:6-12.
4. Petersen TL, Rodgers A, Shuh A, Pearce J. Proceedings from Medical College of Wisconsin: Department of Pediatrics Lunch and Learn Faculty Development Lecture: *Faculty Development in Medical Simulation: Session 1: Stages of a Simulation: From Pre-Brief to Debrief.* Milwaukee, WI. 2019.

## Acknowledgements

The authors wish to thank Kathy Szopinski, BSN, RN, Amanda Kotowski, DNP, RN, CPNP-AC/PC, CLC, Lauren Ladwig, RN, Jaspreet Samra, MPH, CPHQ, Laurie Smrz, BSN, RN, AE-C, Danielle Smith, MSN, RN, CNL, Vaishali Singh, MD, Amy Romashko, MD, Heather Paradis, MD, and Tara Petersen, MD, MEd.

TEST. **TRACK.** TREAT. REPEAT.  
TEST. **TRACK.** TREAT. REPEAT.  
TEST. **TRACK.** TREAT. REPEAT.

Testing without **TRACKING** is not enough!

Bringing our lives back to "normal"  
begins with **TESTING** and **TRACKING**.

## TEST

**Flu + SARS Antigen FIA\***  
(Influenza A+B plus SARS-CoV-2)

**SARS Antigen FIA\*\***  
(SARS-CoV-2)

**Influenza A+B FIA**

**RSV FIA**

**Strep A+ FIA**

**Lyme FIA**



## TRACK

- Aggregated, de-identified patient results
- Data needed for reporting to government agencies
- Assay utilization
- QC and calibration data
- Prevalence mapping
- ...and much more

With Virena integrated into our flagship testing platforms, you can have key surveillance data from your infectious disease testing seamlessly and automatically pushed to the Virena cloud from where it is available to your organization and Public Health agencies.



**Virena**  
Connected Visibility.

**Sofia**



To learn how **Virena** integrates tracking into your testing,  
call your Quidel Account Manager at **800.874.1517**.

[quidel.com](https://quidel.com)

\*SOFIA® 2 Flu + SARS ANTIGEN FIA IS AVAILABLE FOR SALE IN THE USA UNDER EMERGENCY USE AUTHORIZATION FOR SOFIA 2  
\*\*SOFIA® SARS ANTIGEN FIA IS AVAILABLE FOR SALE IN THE USA UNDER EMERGENCY USE AUTHORIZATION FOR SOFIA 2 AND SOFIA





# Active COVID-19 Infection Is Indicated by $WBC \leq 7.0$ and $PLT \leq 200$ at Presentation

**Urgent message:** Testing supplies were scarce in urgent care centers (and even some emergency rooms) early in the pandemic. Ingenuity, creative thinking, and teamwork can help fill gaps in resources in the midst of a crisis.

YIJUNG RUSSELL, MD; CASEY COLLIER, MD; STEVE CHRISTOS, DO; and SHU B. CHAN MD, MS

Citation: Russell Y, Collier C, Christos S, Chan SB. Active COVID-19 infection is indicated by  $WBC \leq 7.0$  and  $PLT \leq 200$  at presentation. *J Urgent Care Med.* 2021;15(10):35-38.

## Introduction

The impact coronavirus disease of 2019 (COVID-19) has had on individuals, businesses, and governments is unprecedented in many ways. Though widespread and frequent screening is recommended for better containment,<sup>1</sup> limited availability of testing supplies was a reality for many emergency and urgent care providers, particularly in low-resource settings.

Cytopenia was associated with COVID-19 in early studies.<sup>2,3</sup> As complete blood count (CBC) is almost always known early in a visit, it could be a valuable tool.

This retrospective review of ED visits had the objective of characterizing the association between different cell counts and active COVID-19 infection. Specifically, we examined white blood cell (WBC) and platelet (PLT) counts at presentation. We hypothesized that patients who presented with COVID-19 would be more likely to have relative leukopenia and thrombocytopenia.

## Methods

Following IRB approval, data were abstracted by retrospective review of our electronic medical records from all ED visits at three community hospitals, all sites of a



©AdobeStock.com

single emergency medicine residency program, from March 15, 2020 to April 15, 2020.

Included were all adult patients (age >18) presenting to the ED who had RT-PCR testing for SARS-CoV-2 (Abbott Molecular, Des Plaines, IL, USA) sent from the ED and subsequently admitted to the hospital. Excluded were those with history of liver or hematopoietic system disease and patients with missing data in the encounter. Abstracted data included demographics, chief complaints, ED vital signs, WBC count, PLT count, and result of COVID-19 testing.

**Author affiliations:** Yijung Russell, MD; Casey Collier, MD; Steve Christos, DO; and Shu B. Chan MD, MS are affiliated with AMITA Presence Resurrection Medical Center Chicago. Dr. Russell is partnered with the editor-in-chief of JUCM; all procedures have been followed to ensure blinded review. The authors have no relevant financial relationships with any commercial interests.

**Table 1. Most Common Presenting Chief Complaints**

	n (%)	(+) COVID-19	(-) COVID-19	p-value*
Total	476 (100%)	241 (50.6%)	235 (49.4%)	
Fever/chills	179 (37.6%)	127 (52.7%)	52 (17.0%)	<0.001
SOB	178 (37.4%)	86 (35.7%)	92 (39.1%)	0.435
Cough	110 (23.1%)	79 (32.8%)	31 (13.2%)	<0.001
Weakness/fatigue	42 (8.8%)	30 (12.4%)	12 (5.1%)	0.005
Chest Pain/palpitations	37 (7.8%)	10 (4.1%)	27 (11.5%)	0.003
Altered mental status	29 (6.1%)	6 (2.5%)	23 (9.8%)	0.001
Abdominal/flank pain	21 (4.4%)	11 (4.6%)	10 (4.3%)	0.870
Nausea/emesis	21 (4.4%)	10 (4.1%)	11 (4.7%)	0.778
Diarrhea	12 (2.5%)	7 (2.9%)	5 (2.1%)	0.589
Myalgia	10 (2.1%)	7 (2.9%)	3 (1.3%)	0.216
URI/sore throat	9 (1.9%)	6 (2.5%)	3 (1.3%)	0.331
Dizziness	9 (1.9%)	6 (2.5%)	3 (1.3%)	0.331

**Table 2. Presenting WBC and PLT Counts**

	All	(+) COVID-19	(-) COVID-19	p-value
WBC $\times 10^9/L$ (SD)	9.3 (5.0)	7.3 (3.5)	11.3 (5.5)	<0.001
PLT $\times 10^9/L$ (SD)	238 (107)	213 (95)	263 (113)	<0.001

Initial WBC and PLT counts of the presenting patient population who tested positive (+) or negative (-) for COVID-19 (significance set at 0.025 with Bonferroni correction (0.05/2)).

With power set at 0.80 and significance set at 0.05, a sample size of 340 patients would detect a 15% difference among variables related to a positive SARS-CoV-2 test. Differences between positive and negative patients were tested using Student's t-test and Chi-square test as appropriate. Significance was set at  $p=0.05$  with Bonferroni correction when appropriate. Receiver operating characteristic (ROC) curve analysis was used to define optimum cutoff points for prediction of SARS-CoV-2 test results based on WBC and PLT counts. Sensitivity, specificity, positive, and negative likelihood ratios are reported with 95% confidence intervals. Selected variables were manually re-abstracted on 10% of random patients with a Kappa of 100%.

## Results

Four hundred ninety-four patients met the inclusion criteria with 43.1% of cases from Site 1, 25.8% from Site 2, and 31.1% from Site 3. Patients with history of liver or hematopoietic system disease were excluded ( $n=13$ ; cirrhosis ( $n=4$ ), thrombocytopenia ( $n=6$ ), multiple myeloma ( $n=2$ ), lymphoma ( $n=1$ )). Five patients with encounters with missing data were also excluded.

SARS-CoV-2 was detected in 241 of 476 patients

(50.6%). The most common chief complaints were shortness of breath (29.6%), fever/chills (27.5%), and cough (10.7%). Diarrhea was not common and there were no reported symptoms of dysgeusia or anosmia (Table 1). Patients with COVID-19 were significantly younger (65.7 vs 70.4 years of age;  $p=0.002$ ) and had higher incidence of fever/chills ( $p<0.001$ ). Finally, COVID-19 patients had significantly lower presenting WBC (7.3 vs 11.3;  $p<0.001$ ) and PLT counts (213 vs 263;  $p<0.001$ ) (Table 2).

ROC curve analysis of initial WBC and PLT counts were both significant ( $p<0.001$ ) with areas under the curve of 75% and 64.5%. Further analysis showed that with a presenting WBC count of  $\leq 7.0 \times 10^9/L$  or less, a patient was likely to be positive for COVID-19 with sensitivity of 0.620 and specificity of 0.766. In addition, with presenting WBC  $7.0 \times 10^9/L$ , the positive likelihood ratio of testing positive for COVID-19 was 2.70 ( $p<0.001$ , 95% CI: 2.10 to 3.52) and the negative likelihood ratio was 0.54 ( $p<0.001$ , 95% CI: 0.43 to 0.59) (Table 3).

Similarly, with a presenting platelet count of  $200 \times 10^9/L$  or less, a patient was likely to be positive for COVID-19 with sensitivity of 0.543 and specificity of 0.716, with a positive likelihood ratio of 1.82 ( $p<0.001$ , 95% CI: 1.00

Table 3. Positive and Negative Likelihood Ratios for COVID-19 Infection				
	n (%)	p-value*	+LR (95% CI)	-LR (95% CI)
WBC $\leq 7.0 \times 10^9/L$	276 (58%)	<0.001	2.70 (2.10 to 3.52)	0.54 (0.43 to 0.59)
PLT $\leq 200 \times 10^9/L$	278 (58.4%)	<0.001	1.82 (1.00 to 2.40)	0.92 (0.85 to 1.00)
WBC $\leq 7.0$ and PLT $\leq 200$	136 (28.6%)	<0.001	2.92 (2.06 to 4.23)	0.67 (0.61 to 0.76)
Positive (+LR) and negative (-LR) likelihood ratios for active COVID-19 infection given presenting WBC $\leq 7.0 \times 10^9/L$ or PLT $\leq 200 \times 10^9/L$ counts are shown, as well as the likelihood ratios for patients presenting with both WBC $\leq 7.0 \times 10^9/L$ and PLT $\leq 200 \times 10^9/L$ (*significance set at 0.017 with Bonferroni correction (0.05/3)).				

to 2.40) and negative likelihood ratio of 0.92 ( $p < 0.001$ , 95% CI: 0.85 to 1.00). When combined, WBC  $\leq 7.0 \times 10^9/L$  and platelet  $\leq 200 \times 10^9/L$  gave a sensitivity of 0.437 and specificity of 0.849 with positive likelihood ratio of 2.90 ( $p < 0.001$ , 95% CI: 2.06 to 4.23) and negative likelihood ratio of 0.67 ( $p < 0.001$ , 95% CI: 0.61 to 0.76).

### Discussion

We often have to make treatment and disposition decisions in real time, while waiting for a critical test. The strain of caring for critically ill patients can be augmented by limited resources as providers brace for additional surges. Any available data that could help decrease the cognitive burden of decision-making could be valuable as stress and burnout rose in response to

COVID-19.<sup>4,5</sup>

Many clinicians and researchers have documented an association of leukopenia and thrombocytopenia with COVID-19 diagnosis and, often, an increased severity of illness.

Leukopenia is driven by lymphopenia, decrease of the lymphocytes. Angiotensin-converting enzyme expression in myeloid precursors causes macrophages to be more pro-inflammatory. This can then worsen immune response of target cells and cause consumption of T cells, especially CD4 and CD8 T cells.<sup>6</sup> Thrombocytopenia in COVID-19 patients is thought to result from increased platelet consumption, low-grade disseminated intravascular coagulation, and in some cases a thrombotic microangiopathy. This is thought to be

we're getting  
the band  
BACK TOGETHER!

2021 Annual  
Convention  
New Orleans – October 9–13

[www.ucaoa.org](http://www.ucaoa.org)

**Table 4. Positive and Negative Likelihood Ratios for COVID-19 Infection with Traditional Cutoff Values**

	n (%)	p-value*	+LR (95% CI)	-LR (95% CI)
WBC $\leq 4.0 \times 10^9/L$	28 (5.9%)	0.023	2.44 (1.04 to 5.95)	0.94 (0.92 to 1.00)
PLT $\leq 150 \times 10^9/L$	80 (16.8%)	0.037	1.54 (1.00 to 2.27)	0.84 (0.84 to 1.00)
WBC $\leq 4.0$ and PLT $\leq 150$	18 (3.8%)	0.670	1.22 (0.45 to 3.34)	0.99 (0.96 to 1.03)

Positive (+LR) and negative (-LR) likelihood ratios for active COVID-19 infection using traditional cutoff values for leukopenia and thrombocytopenia of WBC  $\leq 4.0 \times 10^9/L$  and PLT  $\leq 150 \times 10^9/L$ , respectively, are shown, as well as the likelihood ratios for patients presenting with both WBC  $\leq 4.0 \times 10^9/L$  and PLT  $\leq 150 \times 10^9/L$  (\*significance set at 0.017 with Bonferroni correction (0.05/3)).

from endothelial damage releasing vWF multimers, activating platelets and increasing consumption.<sup>7</sup> Others suggest the additional possibility of direct platelet stimulation by the SARS-CoV-2 spike protein.<sup>8</sup>

Our observation of significantly lower WBC and PLT counts in active COVID-19 infection is in agreement with previous studies.<sup>9-14</sup> However, very few studies have shown the detailed association or, more important, the clinical implications. Our study suggests that the simple and rapidly available CBC, along with memorable cutoff points for presenting WBC and PLT counts, may provide the clinician with a useful tool for guiding clinical decision-making when tests are not easily available.

### Limitations

There are several limitations to our study. The data reflect the conditions at the time of the study in three EDs in a single urban community and we cannot assert that our results would apply to a wider population.

In addition, we only examined patients who were symptomatic enough to be admitted, so it is unclear whether or not discharged patients with COVID-19 or those who did not require admission would have the same characteristics. The PCR test used to detect SARS-CoV-2 RNA (Abbott Molecular, Des Plaines, IL, USA) received Emergency Use Authorization (EUA) for a PCR test to detect SARS-CoV-2 RNA in nasopharyngeal and oropharyngeal swabs from patients with suspected COVID-19. Due to the EUA, manufacturer sensitivity and specificity are not provided. However, independent testing showed sensitivity at 93% and specificity at 100%.<sup>15</sup>

Finally, the traditional laboratory cutoff values that define leukopenia and thrombocytopenia are WBC  $\leq 4.0 \times 10^9/L$  and PLT  $\leq 150 \times 10^9/L$ , respectively. Using those cutoff values gave likelihood ratios that trended in the same direction as our main results (Table 4). However, the sample sizes with traditional values were much smaller and resulted in less robust data, so we presented results primarily with cutoff values that were nontraditional but simple to remember, with stronger evidence.

Our study supports association between active COVID-

19 infection and presenting WBC and PLT counts that trend closer to the lower end of normal rather than actual leukopenia and thrombocytopenia as defined by traditional cutoffs. It is also important to note that the likelihood ratio should be used in the context of the pretest probability specific to the patient, which will vary widely.

### Conclusions

In this multicenter community study of ED patients admitted over 1 month with suspected COVID-19, both the initial WBC and PLT counts were significantly lower in patients with active COVID-19 infection. Our study shows that a symptomatic patient with presenting WBC and PLT counts  $\leq 7.0$  and 200, respectively, is almost three times more likely to be positive for active COVID-19 infection. ■

### References

- Mina MJ, Parker R, Larremore DB. Rethinking Covid-19 test sensitivity—a strategy for containment. *N Engl J Med*. 2020;383(22):e120.
- Huang I, Pranata R. Lymphopenia in severe coronavirus disease-2019 (COVID-19): systematic review and meta-analysis. *J Intensive Care*. 2020;8:36.
- Lippi G, Plebani M, Henry BM. Thrombocytopenia is associated with severe coronavirus disease 2019 (COVID-19) infections: a meta-analysis. *Clin Chim Acta*. 2020;506:145-148.
- Kannampallil TG, Goss CW, Evanoff BA, et al. Exposure to COVID-19 patients increases physician trainee stress and burnout. *PLoS One*. 2020;15(8):e0237301.
- Barello S, Palamenghi L, Graffigna G. Burnout and somatic symptoms among frontline healthcare professionals at the peak of the Italian COVID-19 pandemic. *Psychiatry Res*. 2020;290:113129.
- Liu X, Zhang R, He G. Hematological findings in coronavirus disease 2019: indications of progression of disease. *Ann Hematol*. 2020;99(7):1421-1428.
- Amgalan A, Othman M. Exploring possible mechanisms for COVID-19 induced thrombocytopenia: unanswered questions. *J Thromb Haemost*. 2020 Jun;18(6):1514-6.
- Zhang S, Liu Y, Wang X, et al. SARS-CoV-2 binds platelet ACE2 to enhance thrombosis in COVID-19. *J Hematol Oncol*. 2020;13(1):120.
- Rodríguez-Morales AJ, Cardona-Ospina JA, Gutiérrez-Ocampo E, et al. Latin American Network of Coronavirus Disease 2019-COVID-19 Research (LANCOVID-19). Clinical, laboratory and imaging features of COVID-19: a systematic review and meta-analysis. *Travel Med Infect Dis*. 2020;34:101623.
- da Silva SJR, Silva CTAD, Guarines KM, et al. Clinical and laboratory diagnosis of SARS-CoV-2, the virus causing COVID-19. *ACS Infect Dis*. 2020;6(9):2319-2336.
- Wang J, Jiang M, Chen X, Montaner LJ. Cytokine storm and leukocyte changes in mild versus severe SARS CoV 2 infection: review of 3939 COVID 19 patients in China and emerging pathogenesis and therapy concepts. *J Leukoc Biol*. 2020;108:17-41.
- Warkentin TE, Kaatz S. COVID-19 versus HIT hypercoagulability. *Thrombosis Research*. 2020;196:38-51.
- Bomhof G, Mutsaers PGNJ, Leebeek FWG, et al. COVID 19 associated immune thrombocytopenia. *Br J Haematol*. 2020;190:e61-e64.
- Wool GD, Miller JL. The Impact of COVID-19 disease on platelets and coagulation. *Pathobiology*. 2020;88(1):15-27.
- Degli-Angeli E, Dragavon J, Huang ML, et al. Validation and verification of the Abbott RealTime SARS-CoV-2 assay analytical and clinical performance. *J Clin Virol*. 2020;129:104474.





# ABSTRACTS IN URGENT CARE

- Faster Diagnosis of STIs
- Reduce ED Referrals for SVT
- Kids' Dental Pain and Quality of Life
- Ultrasound-Guided Blocks and Renal Pain
- EI as a Leadership Attribute in Physicians

■ AVIJIT BARAI, MBBS, FACEM, FRNZCUC, MRCS, MSC (CRITICAL CARE), PGCERTCPU

## Rapid Testing for Sexually Transmitted Infections

**Take-home point:** A point-of-care (POC) test for chlamydia and gonorrhoea proved useful for rapid diagnosis of STI in both men and women.

**Citation:** Van Der Pol B, Taylor SN, Mena L, et al. Evaluation of the performance of a point-of-care test for chlamydia and gonorrhoea. *JAMA Netw Open.* 2020;1;3(5):e204819.

**Relevance:** The incidence of gonorrhea and chlamydia continue to rise in the United States. Unfortunately, most current methods of testing require send-out tests which take days to result. Point-of-care tests offer promise for more rapid diagnosis and less need for inappropriate empiric antibiotic treatment.

**Study summary:** This prospective cross-sectional study was conducted in various sexually transmitted disease (STI), HIV, family planning, and gynecology clinics across nine geographical areas of the United States. The researchers performed convenience sampling of the patients and compared the existing commercially available assays with a new POC assay (Binx Health). Four vaginal swabs were taken from each of the women (n=1,523) and first-catch urine samples were taken from each of the men (n=922). The POC tests were found to be a quick and reliable method for early diagnosis of chlamydia and gonorrhea compared with conventional, currently available nucleic acid amplification tests (NAAT).

The sensitivity of the POC assay for chlamydia was 96.1% among women and 92.5% among the men. The sensitivity of POC for gonorrhea was 100% among women and 97.3% among the men, making this POC assay useful for excluding infection.

Similarly, the specificity of POC for chlamydia was 99.1% among women and 99.3% among the men. The specificity of POC for gonorrhea was 99.9% among women and 100% among men (in other words, demonstrating very low rates of false positives for either infection in either men or women). Interestingly, most of the tests (94.8%) were conducted by the non laboratory-trained personnel, making it a very useful and replicable tool for urgent care centers.

**Limitations:** The study was funded by the manufacturer of the assay. ■

## Noninvasive Management of Supraventricular Tachycardia (SVT)

**Take-home point:** The reverse vagal maneuver is an effective, no-risk method in the management of SVT.

**Citation:** Gaudart P, Cazes N, Simon K, et al. The reverse vagal manoeuvre: a new tool for treatment of supraventricular tachycardia? *American J Emerg Med.* 2020;41:66-69.

**Relevance:** SVT is a common dysrhythmia with a generally benign course. However, as adenosine and electrical cardioversion cannot be performed in urgent care, maneuvers to terminate SVT noninvasively are highly valuable in reducing ED referrals for this condition.

**Study summary:** This was a case series of 11 patients who presented to an acute care setting in France with palpitations. SVT was confirmed with ECG in each case. The patients were taught the reverse vagal maneuver at the time of presentation.

The reverse vagal maneuver involves sitting upright and exhaling without force. Patients were then instructed to pinch their nose and inhale against the resulting resistance for 10 seconds. Try it yourself. This produces a reverse vagal experience of significant negative intrathoracic pressure.

Ten out of 11 patients (91%) were successfully cardioverted to sinus rhythm with the reverse vagal maneuver. Although the



**Dr Avijit Barai MBBS, FACEM, FRNZCUC, MRCS, MSC (Critical Care), PgCertCPU** is Locum Consultant in Emergency Medicine and Urgent Care Australia and New Zealand.

study is of small sample size, the remarkable rate of conversion among these patients and little downside suggest this maneuver deserves further study.

**Limitations:** Small sample size.

## Dental Pain in Children and Adolescents

**Take-home point:** Dental pain has a significant impact on the quality of life for children and adolescents.

**Citation:** Barasuol JC, Santos PS, Moccelini BS, et al. Association between dental pain and oral health-related quality of life in children and adolescents: a systematic review and meta-analysis. *Community Dent Oral Epidemiol.* 2020;48(4):257-263.

**Relevance:** There is a variable level of impact of dental pain on the quality of life of the children and adolescents.

**Study summary:** This was a systematic review and meta-analysis of 16 studies. The authors performed a systematic review of the studies as per the PRISMA guidelines and specifically examined patients below 19 years of age. The studies reviewed showed that pediatric patients with dental pain were 3.64 times more likely to have a poorer oral health-related quality of life score (95% CI 2.8 to 4.72,  $p < 0.001$ ).

**Limitation:** The certainty of evidence in the meta-analysis was low. ■

## Ultrasound-Guided Blocks for Renal Colic

**Take-home point:** An ultrasound (US)-guided erector spinae plane (ESP) block improved pain control in renal colic and reduced opioid use.

**Citation:** Aydin ME, Tekin E, Ahiskalioglu EO, et al. Erector spinae plane block vs nonsteroidal anti-inflammatory drugs for severe renal colic pain: a pilot clinical feasibility study. *Int J Clin Pract.* 2021;75(3):e13789.

**Relevance:** Control of pain associated with renal colic is a common clinical challenge. Prior studies have suggested that multimodal analgesia is most effective in treating this condition. The use of ultrasound-guided erector spinae nerve block offers yet another analgesic strategy, which may be opioid-sparing, in the treatment of renal colic.

**Study summary:** This was a randomized controlled pilot clinical study evaluating the efficacy of the ESP block for the management of renal colic pain among 40 patients presenting to a single-center emergency department in Turkey. The patients were randomized into an NSAID group and an ESP group, who received

*“The most effective leaders have at least one competency from each of the four domains of EI.”*

ultrasound-guided bupivacaine 0.25% 30 mL at the level of T8 transverse process. A visual analogue scale (VAS) was used for the measurement of pain score at 5, 15, 30, 45, and 60 minutes after the administration of analgesia. Those whose pain score was  $>40$ , were given IV fentanyl. Those whose pain could not be controlled to a VAS  $<40$  were admitted to urology. The authors found that the VAS pain score was significantly lower in the ESP group than in the NSAID group ( $p < 0.001$ ). The use of rescue opioids was significantly lower in the ESP group compared with the NSAID group ( $p < 0.001$ ). There were no significant clinical complications from the ESP or NSAID administration among participants.

The utility of ESP as an adjunct in the management of pain associated with ureterolithiasis will increase as US machines and procedural proficiency become more ubiquitous in urgent care settings.

**Limitations:** Turkish study with limited generalizability to current U.S. practice and small sample size. ■

## Emotional Intelligence and Leadership

**Take-home point:** Emotional intelligence among clinicians plays a significant role in the quality of healthcare.

**Citation:** Stoller JK. Leadership essentials for the chest physician: emotional intelligence. *Chest.* Epub ahead of print September 18, 2020. Available at: [https://journal.chestnet.org/article/S0012-3692\(20\)34516-5/fulltext](https://journal.chestnet.org/article/S0012-3692(20)34516-5/fulltext). Accessed June 10, 2021.

**Relevance:** Emotional intelligence (EI) has become increasingly appreciated as an impactful leadership trait across sectors. Current evidence strongly suggests that EI can be learned and taught.

**Study summary:** This editorial-style review from the journal *Chest* discusses the role that emotional intelligence (EI) plays in healthcare. EI is defined as “the capacity to understand your own and others’ emotions and to motivate and develop yourself and others in service of improved work performance and enhanced organizational effectiveness.”

EI consists of four separate domains: self-awareness, self-management, social awareness, and relationship management. Each of these four sectors has different competencies. Research on the impact of EI on leadership has revealed that the most effective leaders have at least one competency from each of these four sectors. ■



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).

## Neck Pain in a 17-Year-Old



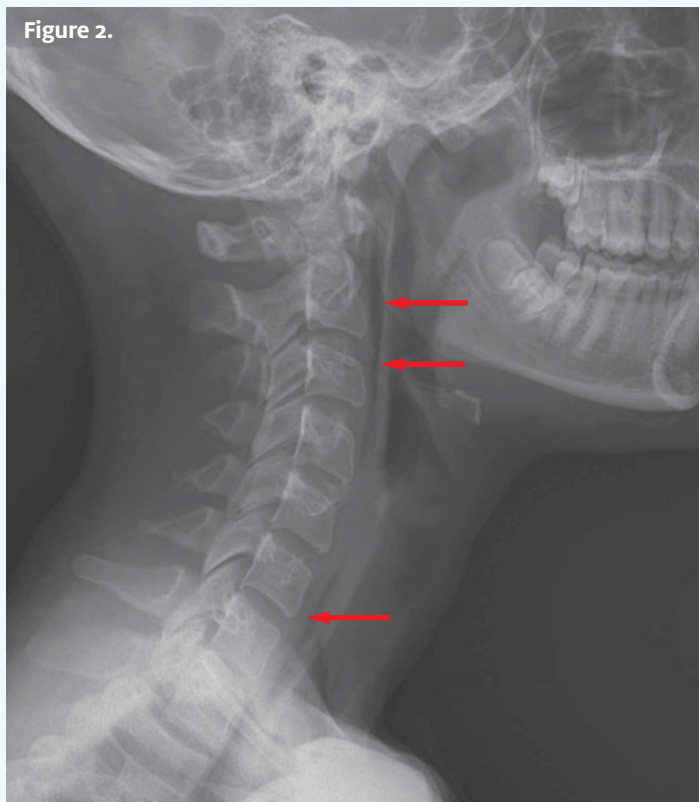
### Case

The patient is a 17-year-old female who presents with neck pain a day after attending a rock concert. She denies cigarette smoking, vaping, use of illicit substances, or physical trauma.

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

## THE RESOLUTION

Figure 2.

**Differential Diagnosis**

- Complication of asthma
- Mediastinitis
- Retropharyngeal air
- Tracheoesophageal fistula

**Diagnosis**

This patient has retropharyngeal air, which is seen as a linear collection of gas paralleling the spine just posterior to the airway. Typical causes include surgery, trauma, retropharyngeal abscess, bronchial asthma, pneumomediastinum, physical exertion, forced swallowing, or any behavior producing instant positive pressure in the upper airway.

**Learnings/What to Look for**

- Clinical symptoms vary depending on the involved confined space—from mild sore throat to acute airway obstruction
- Retropharyngeal air *can* be a complication of asthma
- In the absence of physical trauma, cough-inducing illness or environmental exposures, probe for participation in recent shouting, screaming or extreme use of the larynx

**Pearls for Urgent Care Management**

- If mild, this condition is self-limiting and requires only supportive care
- If severe, this condition can lead to airway compromise necessitating invasive supportive airway maneuvers

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





## An 8-Year-Old Boy with Scaly Papules on the Knees and Elbows



### Case

During a regular check-up, a mother remarks that her 8-year-old son had developed clusters of follicular, scaly papules bilaterally on his knees and elbows “over the past few weeks.” They didn’t seem to bother him, but because her son is prone to allergies the mother wondered if changes in household substances like soap or laundry detergent could be responsible.

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

## THE RESOLUTION

**Differential Diagnosis**

- Keratosis pilaris
- Pityriasis rubra pilaris
- Lichen spinulosus
- Atopic dermatitis

**Diagnosis**

This patient was diagnosed with lichen spinulosus, a rare and benign cutaneous disorder characterized by sudden onset of localized circumscribed plaques comprised of follicular hyperkeratotic papules. It most frequently occurs in children and adolescents; however, young adults can also be affected.

**Learnings/What to Look for**

- Etiology and pathogenesis are not known, although atopic, infectious, and genetic factors have been proposed as causes
- Patients often have a history of atopy

- Although usually localized to certain sites of predilection, a more severe generalized variant of lichen spinulosus also exists. It occurs in association with nodulocystic acne and pityriasis rubra pilaris as part of type VI (HIV-associated) pityriasis rubra pilaris
- Rare associations include Crohn's disease, Hodgkin's disease, seborrheic dermatitis, syphilis, id reactions to fungal infections, and heavy metal ingestions
  - Note that these associations are 1) not causal relationships and 2) may be the consequence of ascertainment bias

**Pearls for Urgent Care Management**

- Lichen spinulosus has a variable course. Most cases tend to resolve spontaneously at puberty, although persistent cases have also been described
- While no treatment is required, effective therapeutic options include topical keratolytic agents and topical retinoids

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



# A 70-Year-Old Female with Nonradiating Chest Pain

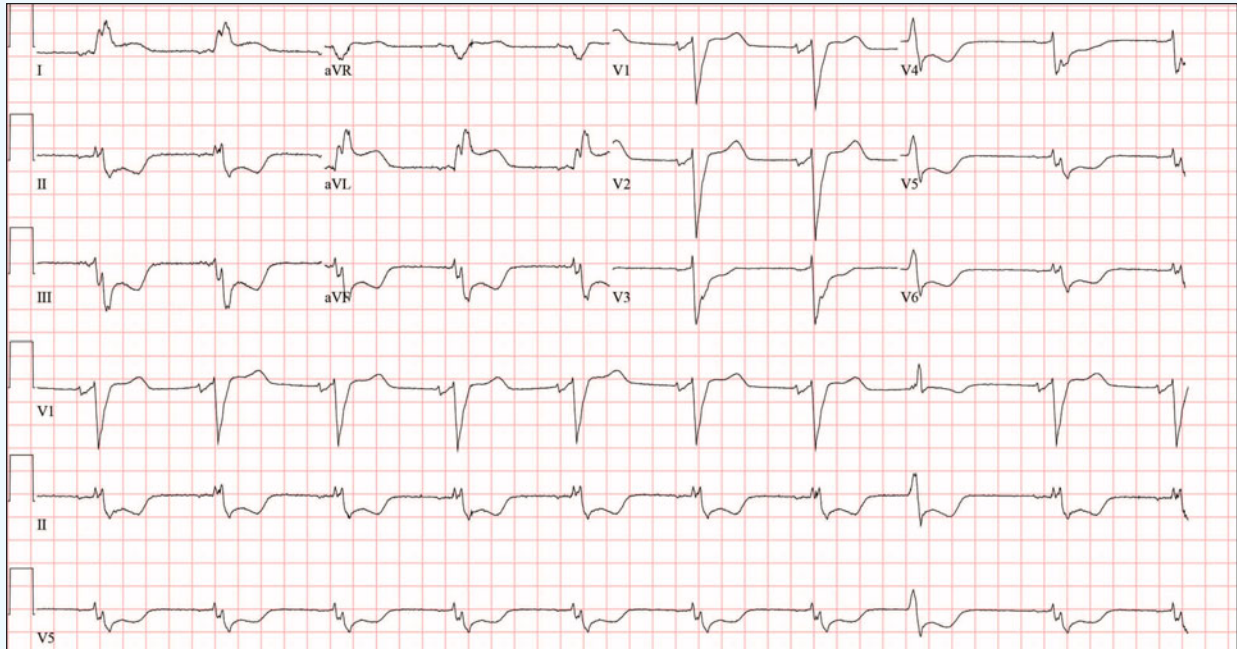


Figure 1.

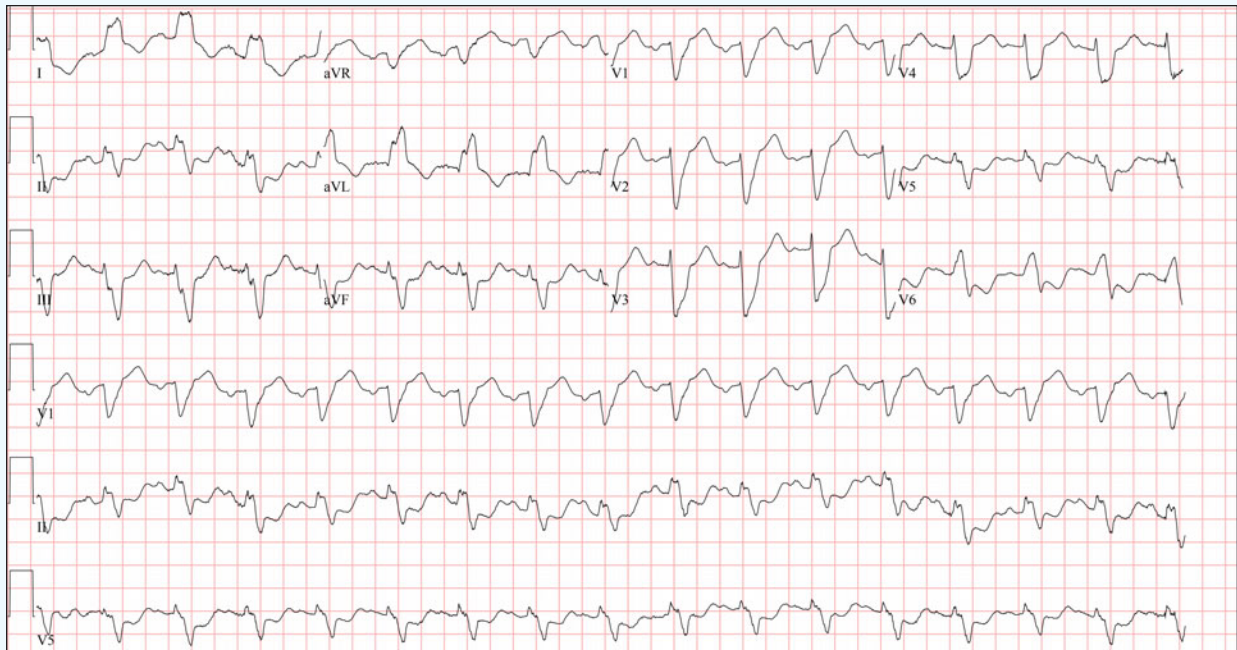
A 70-year-old female with history of coronary artery disease presents to urgent care with nonradiating chest pain of 2 days' duration. She has a known history of left bundle branch block.

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

(Case presented by Benjamin Cooper, MD, McGovern Medical School, Department of Emergency Medicine, The University of Texas Health Science Center at Houston.)



## THE RESOLUTION



**Figure 2.** Baseline ECG demonstrating left bundle branch block as indicated by: QRS  $>120$  ms, dominant S wave in V1, broad monophasic or notched R wave in lateral leads (I, aVL, V5, V6), left axis deviation.<sup>1-3</sup>

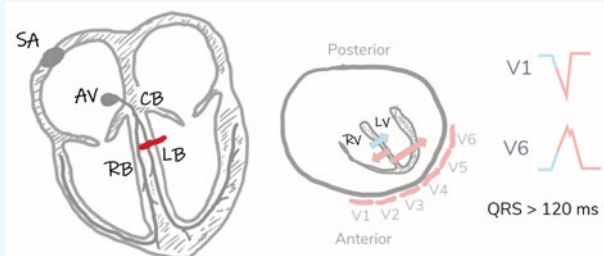
## Differential Diagnosis

- Normal left bundle branch block
- Acute myocardial infarction with left bundle branch block
- Left ventricular hypertrophy
- Hyperkalemia

## Diagnosis

This patient was diagnosed with left bundle branch block. The ECG reveals a wide QRS complex ( $>120$  ms) with a dominant S wave in V1 and notched R wave in the lateral leads I, aVL, and V6, indicating the presence of a left bundle branch block. There is concordant ST-elevation in I and aVL—meaning in the same direction as the QRS complex. The patient's baseline ECG is seen in **Figure 2**.

A left bundle branch block occurs when the left bundle no longer conducts, and the signal must pass to the left ventricle via myocyte-to-myocyte conduction. This pattern of conduction is slower than via the specialized conduction system, and results in a wide QRS complex ( $>120$  ms). Conduction disturbances, like bundle branch blocks, result from structural abnormalities of the His-Purkinje system caused by necrosis, fibrosis, calcification, infiltrative disease, electrolyte disturbances, or impaired vascular supply.<sup>3</sup> When conduction is impaired to both left ventricular terminals (the left anterior and posterior fascicles), the result is a left bundle branch block (**Figure 3**).



**Figure 3.** Depiction of depolarization in left bundle branch block. The septum first depolarizes from right to left (blue arrow) followed by near simultaneous depolarization of the right and left ventricles (pink arrows). The resultant vector leads to a negative deflection in V1 and a positive deflection in V6. SA, sinoatrial node; AV, atrioventricular node; RB, right bundle; LB, left bundle; CB, common bundle; RV, right ventricle; LV, left ventricle; red dash represents a block of the left bundle.

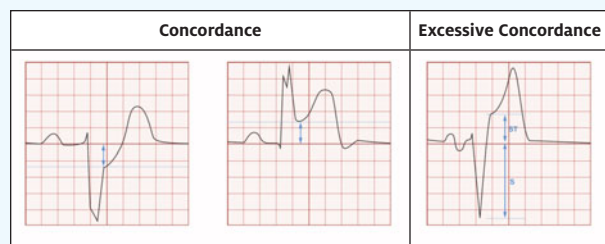
Normally, a left bundle branch block demonstrates characteristic discordant changes; ST segments tend to deflect in the opposite (ie, discordant) direction from the QRS complex (as demonstrated on the baseline ECG, **Figure 2**).

For instance, in leads with primarily down-going QRS complexes (ie, V1, V2, V3), slight ST-elevation is expected; and in leads with primarily up-going QRS complexes (ie, I, aVL, V5, V6), slight ST-depression is expected (along with repolarization abnormalities).

For decades, it was believed that the presence of a left bundle branch block obscured findings of acute myocardial infarction



## THE RESOLUTION



**Figure 4.** Demonstration of Sgarbossa criteria. For modified Sgarbossa criteria, the ST/S ratio should be greater than 0.25 for excessive discordance.

on the surface ECG. However, in 1996, Elena Sgarbossa identified electrocardiographic findings that suggested acute myocardial infarction in the presence of left bundle branch block, the so-called “Sgarbossa criteria.”<sup>4</sup> The original Sgarbossa criteria heavily relied on the phenomenon of concordance—ST-segment deflection in the same direction as the QRS complex—as a powerful predictor of myocardial infarction, and is an indication for emergent reperfusion.<sup>5</sup>

In 2015, the original Sgarbossa criteria were modified to the following (as illustrated in **Figure 4**):<sup>6</sup>

1. Concordant ST-elevation of  $\geq 1$  mm
2. Concordant ST-depression of  $\geq 1$  mm in V<sub>1</sub>, V<sub>2</sub>, or V<sub>3</sub>, or
3. Excessively discordant ST-elevation defined as the ST/S ratio  $>0.25$

If any single modified Sgarbossa criterion is met, acute myocardial infarction is diagnosed and the emergent reperfusion pathway should be activated.<sup>6</sup> The term *intraventricular conduction delay* describes any disturbance that delays conduction through the ventricles (eg, bundle branch blocks, hyperkalemia, sodium-channel blockade, left ventricular hypertrophy, etc.). It is termed “nonspecific” when bundle branch criteria are not met, which is not the case here. Hyperkalemia can cause all manner of conduction disturbances, but other features to suggest hyperkalemia are absent (eg, peaked T waves, flattened or absent P wave, or PR prolongation). While left ventricular hypertrophy can cause QRS widening, discordant ST changes, and repolarization abnormalities (although all to a lesser extent than left bundle branch block), these changes are better explained by the presence of a left bundle branch block in this case.

Back to the case: This patient was taken to the catheterization lab for emergent percutaneous coronary intervention to the left anterior descending and left circumflex arteries.

### Learnings/What to Look for

- The criteria for left bundle branch block are: QRS  $>120$  ms, dominant S wave in V<sub>1</sub>, broad monophasic or notched R wave in lateral leads (I, aVL, V<sub>5</sub>, V<sub>6</sub>), +/- left axis deviation
- Sgarbossa criteria describe ST changes that suggest acute myocardial infarction in the presence of left bundle branch block
- Concordance—ST-segment deflection in the same direction as the QRS complex—is a powerful predictor of myocardial infarction and is an indication for emergent reperfusion
- Excessive discordance describes ST-segment elevation with ST/S ratio greater than 0.25 (Figure 4) and should also be considered an indication for emergent reperfusion

### Pearls for Initial Management

- All patients with left bundle branch block and symptoms concerning for acute coronary syndrome should be transferred to a percutaneous coronary intervention-capable facility
- Patients meeting modified Sgarbossa criteria should be immediately transferred via emergency medical services for emergent reperfusion. If capable, activate emergent reperfusion pathways

### References

1. Kusumoto FM, Schoenfeld MH, Barrett C, et al. 2018 ACC/AHA/HRS Guideline on the Evaluation and Management of Patients With Bradycardia and Cardiac Conduction Delay: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2019;140(8):e382-e482.
2. Da Costa D, Brady WJ, Edhouse J. Bradycardias and atrioventricular conduction block. *Br Med J*. 2002;324:535-538.
3. Surawicz B, Childers R, Deal BJ, Gettes LS. AHA/ACCF/HRS Recommendations for the Standardization and Interpretation of the Electrocardiogram. Part III: Intraventricular Conduction Disturbances A Scientific Statement From the American Heart Association Electrocardiography and Arrhythmias Committee, Council on Clinical Cardiology; the American College of Cardiology Foundation; and the Heart Rhythm Society. *J Am Coll Cardiol*. 2009;53(11):992-1002.
4. Sgarbossa EB, Investigators G-1. Electrocardiographic diagnosis of evolving acute myocardial infarction in the presence of left bundle-branch block. *N Engl J Med*. 1996;334(8):481-487.
5. Ibanez B, James S, Agewall S, et al. 2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation. *Eur Heart J*. 2018;39(2):119-177.
6. Meyers HP, Limkakeng AT, Jaffa EJ, et al. Validation of the modified Sgarbossa criteria for acute coronary occlusion in the setting of left bundle branch block: A retrospective case-control study. *Am Heart J*. 2015;170(6):1255-1264.

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

ECG STAMPEDE



# The Most Comprehensive Urgent Care Education Tools Available

## One New Learning Site, 6 Proven Products

Educational Resources for Clinicians,  
Nurses and Medical Assistants

**UrgentCareCME.com**



## »» FOR CLINICIANS



Accredited by Case Western Reserve:

- ✓ **Core Content in Urgent Care Medicine**  
Comprehensive, end-to-end program focuses on most common patient presentations to urgent care  
*62 Hours of CME in 7 Modules*
- ✓ **New Topics in Urgent Care Medicine**  
15 Hour-long presentations explore timely and relevant new areas that present to urgent care  
*15 Hours of CME*
- ✓ **X-Ray Cases in Urgent Care Medicine**  
33 Case Reports exploring common presentations  
*33 Hours of CME*
- ✓ **Clinical X-Ray Fundamentals for the Urgent Care Provider**  
*1 Fundamental of X-Ray Overview and 24 Case Reports provide 25 Hours of CME*  
Additional 15 case reports will be released every 6 months for an additional fee



Accredited by UCA:

- ✓ **Journal-Based CME from JUCM, The Journal of Urgent Care Medicine**  
*3 CME hours per issue, up to 33 CME hours per year*

## »» FOR NURSES AND MEDICAL ASSISTANTS



Accredited by IMNE:

- ✓ **Core Content in Urgent Care Nursing**  
*21.75 Hours of CEUs in 7 Modules. 12 demonstration videos*

We offer immediate access with purchase on our website.  
Group pricing is available, which includes administrator access to the portal.

[www.UrgentCareCME.com](http://www.UrgentCareCME.com) | Institute of Urgent Care Medicine | 844-814-9135



# Credentialing: Why Should I Hire a Professional?

■ MONTE SANDLER

In the words of Red Adair, “If you think it’s expensive to hire a professional to do the job, wait until you hire an amateur.” Credentialing dictates how you bill. Do I bill as a group? Should I credential my nonphysician practitioners (NPP)? Which place of service (POS) should I bill with based on my contract? These are all important questions. Did you know that in April of this year, an urgent care chain reached a \$22.5 million settlement with the U.S. Attorney’s office under the False Claims Act for submitting claims under the incorrect provider?

Professionals know the “rules” to keep your practice compliant and out of trouble. Here are a couple of the challenges that contracting/credentialing professionals face.

### Can I Access This Network?

A credentialing expert can guide you on which payers you should contract with in your market and which contract is best for you.

A realization often shocking to both new and experienced urgent care groups is that of narrow or closed networks (meaning a major payer may not be accepting new providers into their network, or a health system has an exclusive agreement with payers). Clearly, this can be a deal breaker, depending on the payer.

For groups just entering a market it is imperative to do your homework or “due diligence” by early research with payers—ideally before committing to a lease and other costly infrastructure. This research should include the basic question of “Are you accepting new urgent care providers in your network in City, State?”

Some payers, like BCBS of Florida, publish this information on their website, but others may say you have to submit a formal inquiry or complete an application. The disconnect here is that

*“A credentialing expert with extensive experience working on behalf of many providers can navigate difficult questions for your practice.”*

the application process includes providing a tax ID, group NPI, physical address, and many other pieces of information you would not have if you were simply making an initial inquiry.

Anthem Blue Cross and Blue Shield of Virginia is one of the many payers that have implemented necessary requirements to comply with Virginia legislative House Bill (HB) 822, allowing new provider applicants under credentialing review for participation in provider networks to see members and retroactively receive payments if the provider is ultimately credentialed. Most payers adopting this policy are allowing providers with an existing executed contract to submit applications for new providers under this new policy. For providers entering into a new contract, the effective date will be determined based on the latter of the contract execution date or the completed credentialing application receipt date. For Anthem Blue Cross and Blue Shield and their affiliate HealthKeepers, Inc. in Virginia, this went into effect July 1, 2020.

Similarly, Washington state passed HB 2335. Health carriers there must process completed applications within 90 days of receipt. Effective June 1, 2020, the average response time may not exceed 60 days per RCW 48.43.755

There are a handful of other states with similar bills, and experts must stay current and modify credentialing processes accordingly.



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

### Does This New Rule Apply to Me?

Often, guidance from payers’ websites announcing new requirements can be confusing and you might need to make a change quickly. This is often the case with the payer policies regarding

NPPs. These articles often don't state what product or contract type it applies to and can be as confusing to the payer as it is to the provider.

Take BCBS of Georgia for example. Some provider representatives are requiring practices to sign an amendment stipulating that they submit credentialing for NPPs. However, not all urgent cares in Georgia are receiving this amendment and not all provider representatives are requiring practices to sign it. This amendment requires NPPs to be credentialed and to begin billing all claims under their individual National Provider Identifier (NPI), meaning that the practices that sign this amendment are agreeing to a 15% discount in reimbursement.

Practices in Georgia began to submit NPP credentialing applications and found that if they had not signed the amendment described above, the NPP credentialing applications came back denied. Instead, they have been instructed to submit a Provider Maintenance Form for NPPs.

This brings up many questions. Are these amendments coming to all providers, and what will be the impact on providers that have yet to receive or sign these contract amendments? Does this apply to all products and contract types that BCBS offers? Will Anthem BCBS audit and request recoupment of payments? Is billing utilizing the SA modifier, which identifies the provider as an NPP, currently appropriate for all Georgia practices

*"It is essential that whoever a clinic hires for contracting/credentialing has a good understanding of all of the requirements and the potential risks a clinic runs by not being current with what is happening in the industry."*

billing claims to Anthem BCBS? Will the Anthem BCBS of Georgia provider representatives begin to require all practices to sign these amendments? Are practices responsible to request these amendments in order to be in compliance?

A credentialing expert can navigate these questions for your practice because of their extensive experience working on behalf of many providers with lots of payers from which to draw knowledge and get to the correct answer.

There are a lot of moving pieces. One thing that is essential, however, is to ensure that whoever a clinic hires for contracting/credentialing has a good understanding of all of the requirements and the potential risks a clinic runs by not being current with what is happening in the industry. ■

# UC+BG URGENT CARE Buyer's Guide™

If you like the hardcopy edition of the JUCM Urgent Care Buyer's Guide, you will love the online edition on the JUCM website. Every word, every photo, every ad and listing that appears on the hardcopy edition of the Buyer's Guide is in the online edition. Plus the online edition of the Buyer's Guide is interactive.

- Click on any web address and you will be taken directly to that website.
- Click on any email address to connect directly with an expert at the vendor.
- Click on any entry in the Company Index at the back of the guide and jump right to that company's ad or listing within the guide.
- The online edition of the Urgent Care Buyer's Guide is convenient to use and always accessible.





## MARKET PLACE

### PRACTICE FOR SALE

#### URGENT CARE CLINIC FOR SALE

Clinic located in eastern Washington state. A wonderful place to explore the beautiful Pacific Northwest. Close to local hospitals and a medical school.

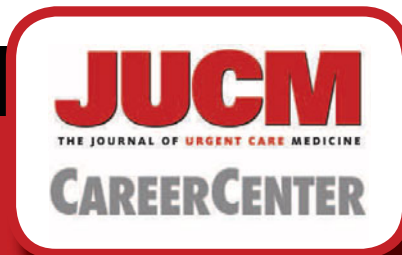
Excellent place to raise a family, in highly rated school districts. Clinical infrastructure already set up for buyer to build a general practice while running the urgent care.

Gross revenues near 1.5M.  
Terms negotiable.

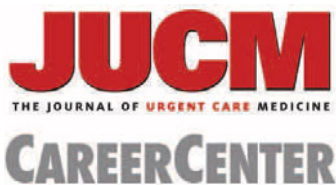
Email [dmbiebers@aol.com](mailto:dmbiebers@aol.com) or  
call (509)990-4638 with any  
inquiries

## Advertise Your Urgent Care Opportunity With Us

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



**(860) 772-0438**  
**[Ethan.Cash@communitybrands.com](mailto:Ethan.Cash@communitybrands.com)**



**FIND THE RIGHT JOB**  
**[JOB.JUCM.COM](http://JOB.JUCM.COM)**

### Medical Equipment DEALS!

[www.medicaldevicedepot.com](http://www.medicaldevicedepot.com)

**Tools for Increased Reimbursement & Office Efficiency at Discount Prices**

#### EKGs with Interpretation



Bionet CardioCare 2000: \$1,255.00  
Schiller AT-2 Plus: \$2,626.00\*  
\*add Spirometry: \$649.00  
Burdick ELI 280: \$4,088.00  
Welch Allyn CP150 w/ Interp:  
\$3,465.00

#### ADView 2 Vital Signs Monitor



The ADView 2 is still the only truly modular diagnostic station that grows with your needs. Start with blood pressure and choose temperature or pulse oximetry options at the time of purchase.

**Starting at \$676.00**

#### EMR-Compatible PC-Based Diagnostics



Cardio Resting EKG \$1,895.00  
Cardio Holter \$2,995.00  
Cardio Stress \$2,995.00

#### Screener Audiometer



**Only \$878.00**

#### EMR-Compatible Spirometry



PC Based and Direct-to-Printer  
Astra 300 USB\*  
\$898.00  
\*Touch Screen Display

#### Lifeline AED



**Only \$1,245.00**

**Gold Standard AED**

#### Pharmacy/Vaccine Refrigerators & Freezers (Meets CDC and VFC guidelines)



##### Refrigerators:

8 cu ft Refrigerator w/ Solid Door (ARS8PV): **\$1,284.00**  
15 cu ft Refrigerator w/ Solid Door (ARS15PV): **\$1,907.00**

##### Freezers

23 cu ft Stainless Steel Freezer (AFS23ML): **\$2,804.00**  
LSR 2 cu ft -86°C Ultra-Low Temperature Chest Freezer (LSRC85-2): **\$5,459.00**

#### Integrated Diagnostic System (Oto/Ophth heads are Included)



Coaxial Ophth, Fiber Optic Oto Specula Dispenser, Aneroid BP, Wall Transformer and Wall Board  
**without Thermometer: \$979.00**  
**with Thermometer: \$1,416.00**

**\*Lifetime Warranty on LED Bulbs**

Coaxial Ophth, Fiber Optic Oto and Wall Transformer  
**without Specula Dispenser: \$825.00**  
**with Specula Dispenser: \$866.00**

#### Family Practice Exam Table



A durable, reliable, patient-friendly exam table for any office. Many base and upholstery color combinations

**Only \$816.00**

**Medical Device Depot Inc.**



**Our Price \$299.00**

#### CLIA Waived COVID-19 Test

##### CareStart SARS-CoV-2 Rapid Antigen Test (20 Tests)

As an intended point-of-care (POC) designated test with a 10 min processing time, CareStart COVID-19 Antigen Test allows effective screening of COVID-19 infection on a large scale. Rapid results within 10 minutes. Identify acute infection with 88.4% sensitivity and 100% specificity. FDA & EUA approved!



**Reimbursement: National Average \$800**

#### Boost Your Revenue!

##### Neuro-Cognitive Testing for Primary Care Physicians

Analyzes (EEG) brain processing speed (Evoked Potentials), heart health (EKG) mental health (Neuropsychology); Each test is processed into a fully-finished, clinically actionable report that uncovers symptoms associated with dementia, anxiety, depression, PTSD, TBI and more

**CALL TODAY to ORDER: 877-646-3300**

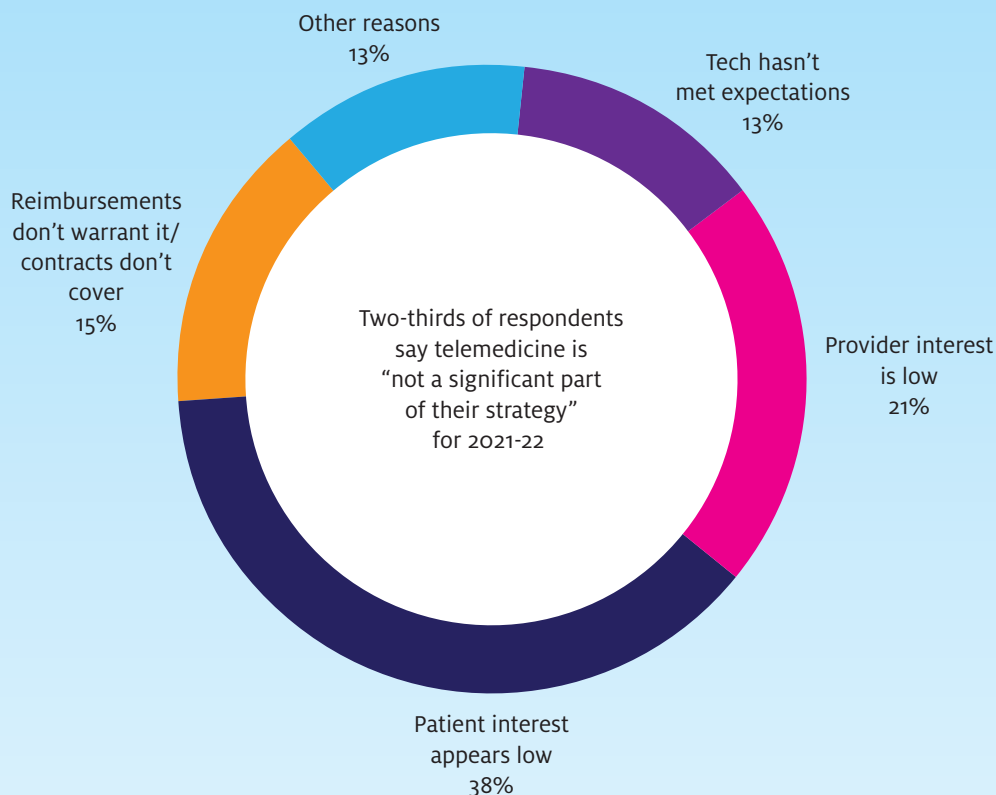


# Telemedicine Still Struggles to Catch on in Urgent Care

Some urgent care insiders view telemedicine as a natural fit for our industry—an opportunity to give patients even more convenient access to competent healthcare providers, thereby increasing engagement and resulting in more care for more patients. Others just don't see how it would be applicable, or fear that remote visits could result in overprescribing (especially for antibiotics and pain medications).

Judging from data just released through the Urgent Care Association's 2021 *Summer Benchmarking Report*, widespread acceptance of telemedicine may still be years off. The doubters still outnumber the proponents by a two-to-one margin; only 33.3% of respondents said telemedicine will "play a significant part" of their strategy in 2021-22, while 66.6% said it will not. Their reasons, as detailed in the graph below, are worth noting. ■

### WHY IS TELEMEDICINE STILL FAILING TO GAIN TRACTION IN URGENT CARE?



Data source: Urgent Care Association 2021 *Summer Benchmarking Report*. For more information on the content and availability of the report, visit <https://www.ucaoa.org/Resources/Industry/Benchmarking-Summer-2021>



Don't miss this  
data-packed issue!

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

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

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

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

Download the data:  
[experityhealth.com/urgent-care-reimbursement-trends](https://experityhealth.com/urgent-care-reimbursement-trends)

**EXPERITY®**