



#### MEDICAL DISINFORMATION

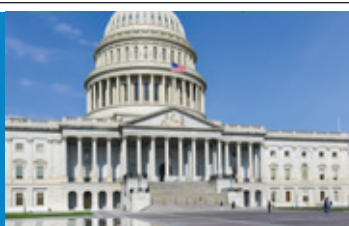
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The Official Voice of Emergency Medicine

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## YOU WROTE WHAT IN THE MEDICAL RECORD?

Patients will soon have access to clinical notes—are you ready?

by NICHOLAS GENES, MD, PHD; AND INDIRA GOWDA, MD

Patient records have been around for millennia. Evidence from antiquity shows that medical records initially functioned as a means to convey treatment plans.<sup>1</sup> It wasn't until the early 20th century that record keeping became a standard hospital medicine practice. In just the past 20 years, clinical notes transitioned from paper to pixel. Despite these advances, the creation and interpretation of medical notes have remained in the domain of clinicians (and coders), with few persevering patients and family members willing to make the arduous journey to

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The Cures Act will give patients free and easy access to our documentation—and this could be a good thing

by KENNETH ALAN TOTZ, DO, JD, FACEP

The Office of the National Coordinator for Health Information Technology (ONC), a staff division of the U.S. Department of Health and Human Services (HHS), is the lead agency charged with formulating the federal government's health information technology (IT) strategy and coordinating federal health IT policies, standards, programs, and investments. In December 2016, the 21st Century Cures Act was signed and set to be implemented by the ONC on Nov. 1, 2020.

The primary purposes of the Cures Act are to expand interoperability among electronic health records, health care workers, and payers while expanding the access and transparency of health information to patients. The COVID-19 pandemic pushed the Novem-

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# NEWS FROM THE COLLEGE

## UPDATES AND ALERTS FROM ACEP

### EM Physician Appointed to COVID-19 Health Equity Task Force

Joneigh Khaldun, MD, MPH, was recently named a member of the Biden-Harris Administration COVID-19 Health Equity Task Force. As chief medical executive for the state of Michigan and the chief deputy director for health in the Michigan Department of Health and Human Services, Dr. Khaldun has been the lead strategist for Michigan's COVID-19 response. She practices emergency medicine part-time at Henry Ford Hospital in Detroit.

### New Podcast Focuses on Innovative Ideas

Are you a podcast fan? ACEP just added a new podcast, EMergence, that will focus on innovation in the emergency department. Startup advisor Mark Mescher talks to emergency physicians about new technology, innovative workflows, and fresh thinking to hit your emergency department. The first few episodes interview the creators of the companies who won the ACEP20 IncubateED Startup Pitch Contest.

EMergence is the newest addition to ACEP's podcast family, which already includes a host of great options if you like to consume your content on the go:

- **ACEP Frontline**, with new episodes posted every Monday, features in-depth conversations on the hottest topics in emergency medicine with host Ryan Stanton, MD, FACEP.
- ACEP's publications—*ACEP Now*, *Annals of Emergency Medicine*, *JACEP Open*, and *Critical Decisions in EM*—each have monthly podcasts highlighting content from their latest issues.

All podcasts are available for listening on iTunes, Google Podcasts, and Soundcloud. Get direct links at [www.acep.org/podcasts](http://www.acep.org/podcasts).

### Virtual Pediatric Conference, Plus a New Resource

ACEP's 2021 Advanced Pediatric Emergency Medicine Assembly is coming to a computer screen near you April 19–21. This must-attend event provides the education you need to turn the most challenging pediatric emergencies into the most rewarding ones. Learn more at [www.acep.org/PEM](http://www.acep.org/PEM).

ACEP is a proud partner in the federal project called the Emergency Medical Services for Children Innovation and Improvement Center, which just launched Pediatric Education and Advocacy Kits (PEAK). The kits house best-practice educational resources to empower pediatric emergency care clinicians, patients, families, advocates, and Emergency Medical Services for Children stakeholders to deliver the highest quality of care and support to all children. Find the kits at <http://emscimprovement.center/education-and-resources/peak>.

### Member Benefit Offers Finance, Legal, and Wellness Assistance

Are you aware of ACEP's Wellness & Assistance Program in partnership with Mines & Associates? Members receive up to three free wellness coaching or counseling sessions (remote/virtual options available) and can opt into additional legal or financial help for \$15 per year.

- **Counseling sessions** can cover every-

day issues including stress, anxiety, depression, family issues, drug and alcohol abuse, relationships, death and grief, and more. When you call in for a referral, the clinical staff will assess your situation, discuss plans for resolving your issues, advise you of available resources, and refer you to a local counselor.

- **Wellness coaching sessions** are 30-minute calls during which National Board of Medical Examiners—certified wellness coaches can help set specific wellness goals and plan for progress checks along the way to help you reach your objectives. Areas of focus can include weight loss, nutrition, healthy habits, stress, caffeine reduction, injury recovery, relationships, sleep, smoking cessation, and more.
- **Legal and financial services**, available for \$15 per year, include unlimited 30-minute in-person consultations for each individual legal matter, unlimited 30-minute telephone consultations per financial matter, and a 25 percent discount on select legal and financial services, all with Mines network legal and financial professionals. ACEP's Member Wellness & Assistance Program is strictly confidential and is provided as part of your ACEP membership, so there is no charge to utilize these services.

### COVID-19 Data Visualizations

ACEP continues to expand its COVID-19 resource library. A recent addition is "COVID-19 in U.S. Emergency Departments—Data Visualizations," with data across three categories—total visits, COVID-like illness visits, and influenza-like illness visits—that can be sorted by region and time frame. The data are available at both national and Health and Human Services (HHS) regional resolutions and across several timescales (eg, 7-day, 30-day, 90-day). Data are obtained from the U.S. Centers for Disease Control and Prevention through the National Syndromic Surveillance Program and will be updated on a weekly basis. View the resource at [www.acep.org/coviddata](http://www.acep.org/coviddata).

### Nominations Due this Month for ACEP Board, Council

The ACEP Nominating Committee is accepting individual and component body recommendations for Board of Directors, Council Speaker, and Council Vice Speaker candidates. Nominations are due March 22, and qualifications and application details are available at [www.acep.org/board-nominations](http://www.acep.org/board-nominations). Elections for the Board of Directors and Council officers will be held Oct. 24, 2021, during the ACEP Council meeting.

### Virtual Grand Rounds Continue

ACEP's monthly Virtual Grand Rounds, one of our most popular new education resources during the pandemic, has more topics coming up:

- **March 24, 2021**—Injury Prevention
- **April 28, 2021**—Communication: Difficult Conversations
- **May 19, 2021**—ENT Emergencies

Past sessions are available for viewing, including COVID-19, Wellness, Airway, Ultrasound, Pediatrics, Neurology, Cardiology, Social Determinants of Health, and Obstetric Emergencies. Learn more or sign up at [www.acep.org/virtualgrandrounds](http://www.acep.org/virtualgrandrounds). ➕

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## MEMBERS IN THE NEWS

### Dr. Marie-Carmelle Elie Named Professor and Chair of the University of Alabama at Birmingham Department of Emergency Medicine

In January, Marie-Carmelle Elie, MD, became the first Black woman to be named professor and chair of an academic emergency medicine department at a major American medical school. She will assume her new position at the University of Alabama at Birmingham in June.



Dr. Elie received her MD at the State University of New York in Brooklyn and completed her emergency medicine residency at Mount Sinai Medical Center in New York and a critical care/trauma fellowship at the R. Adam Cowley Shock Trauma Center at the University of Maryland.

Currently, Dr. Elie is associate professor in the division of critical care, department of emergency medicine and the division of palliative care, department of medicine at the University of Florida College of Medicine in Gainesville.

Source: University of Alabama

### Two ACEP Members Named Medical Directors of the National Association of Emergency Medical Technicians (NAEMT)

In January, NAEMT named Douglas F. Kupas, MD, EMT-P, FAEMS, FACEP, medical director, and Jeffrey L. Jarvis, MD, MS, EMT-P, FACEP, FAEMS, associate medical director.

Dr. Kupas (top photo) is medical director for Geisinger EMS and director of mobile integrated health care for Geisinger Health System in Danville, Pennsylvania; Professor of Emergency Medicine at Temple University in Philadelphia; and EMS Medical Director for the state of Pennsylvania. He earned his MD from Jefferson Medical College of Thomas Jefferson University in Philadelphia and completed his emergency medicine residency at Geisinger Medical Center.



Dr. Jarvis (bottom photo) is an emergency physician at Baylor Scott & White Health in Round Rock; EMS medical director for the

Williamson County EMS system; and medical director for Marble Falls Area EMS, all in Texas. He received his MD from the University of Texas Medical Branch and completed his residency at the Texas A&M College of Medicine/Scott & White Hospital.

Source: NAEMT

### ED Resuscitation Room Named After Dr. Steve Karas

Tri-City Medical Center in Oceanside, California, has recognized the contributions of emergency physician Stephen Karas, Jr., MD, FACEP, by naming a resuscitation room in his honor. Dr. Karas has worked in the Tri-City emergency department for 45 years, saving lives and mentoring young physicians.



Dr. Karas received his MD from Johns Hopkins University School of Medicine in Baltimore and completed his emergency medicine residency at the Los Angeles County and University of Southern California Medical Center before starting his career at Tri-City.

In 2017, Dr. Karas received ACEP's Tenure Award for the longest active career in the same emergency department.

Source: San Diego Union-Tribune

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## Be the Next ACEP Now Medical EIC

ACEP Now is looking for our next Medical Editor in Chief to drive editorial strategy and keep the publication current with developments and trends in emergency medicine.

We are looking for a collaborative leader who will leverage the strengths of the editorial board members and regular contributors. The ideal candidate will have connections in the emergency medicine community and be familiar with ACEP programs, events, and products, as well as the ability to adhere to deadlines and excellent verbal, written, and medical editing skills.

Applications are being accepted through March 30. Visit [www.acepnow.com/article/applications-invited-for-acep-now-medical-editor-in-chief/](http://www.acepnow.com/article/applications-invited-for-acep-now-medical-editor-in-chief/) for details and application instructions.

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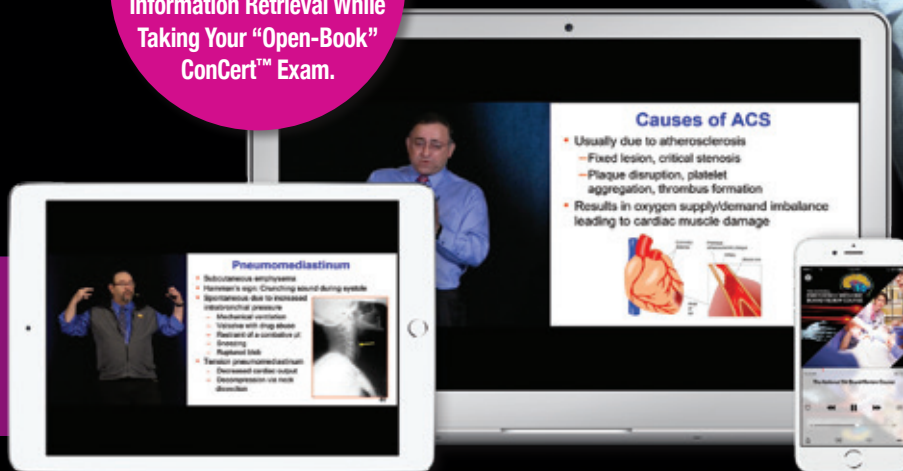
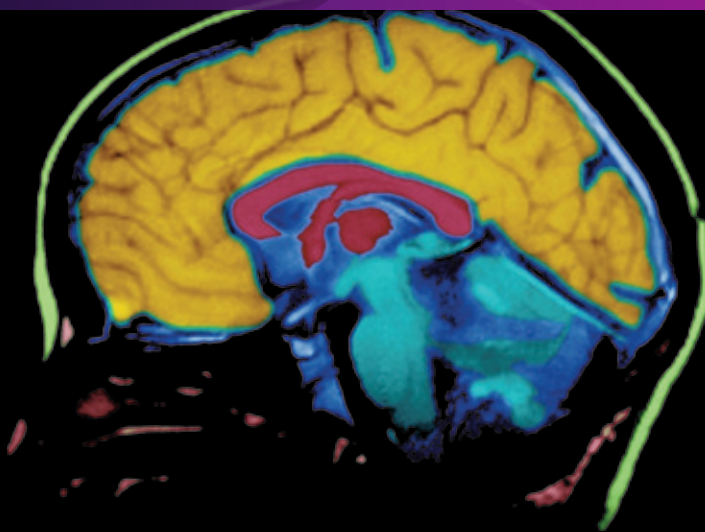
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# 25%

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FIREARM DEATHS  
IN 2020 VS. 2019

# 42%

INCREASE IN  
HOMICIDES IN  
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SUMMER 2019

Compiled by Leah Salzano and  
Megan Ranney, MD, MPH, for AFFIRM  
Research. Visit [ACEPNow.com](https://www.acepnow.com) for  
the sources of these statistics.

# THIS IS OUR LANE NOW

## WEAPONS FOR THE WAR ON MEDICAL DISINFORMATION

by ERIK J. BLUTINGER, MD, MSC

“Total burnout,” said one colleague of mine while stepping out of a patient’s room, moments after being lectured on “COVID being a complete hoax.” Meanwhile next door, an elderly patient was gasping for air on a BiPAP machine with no family in sight to say goodbye.

We are seeing it play out everywhere: medical disinformation and its rapid spread, like wildfire, across the political landscape. Social media is propagating inaccuracies as our patients easily drown in the sea of disinformation. “Is this true?” is common from friends and family encountering COVID-19 content online.

The stakes are high. A recent study found a correlation between the magnitude of individual fears for COVID-19 and the likelihood of spreading false or misleading information, accepting unverified information, and believing untrue existential statements.<sup>1</sup> The United States Centers for Disease Control and Prevention has published reports illustrating the magnitude of medical myths and misinformation. Worse health outcomes have been associated with lies pertaining to COVID-19.

We’ve been here before. Disadvantaged populations have historically suffered far worse than others during previous outbreaks. During the early 2000s, AIDS denialism offset early recognition of HIV being the etiology of AIDS in South Africa, which directly contributed to 330,000 preventable deaths, according to one recent study.<sup>2</sup> Mistrust can also lead to denialism, as seen by HIV-related “conspiracy beliefs” that include theories of purposeful U.S. federal government action to disseminate HIV as a form of genocide against people of color (among other harmful theories).<sup>4</sup>

Today, we should all be working hard to connect with populations who are especially vulnerable to COVID-19 and medical misinformation. We must simultaneously fight vaccine hesitancy and extinguish the flames of hoaxes, anti-mask myths, and other conspiracy theories that have run rampant over the past year. Thankfully, we have several weapons available to us, ranging from useful resources to new strategies.

### Our Tools

There are quick, simple, and effective ways of verifying information online. For example, the nonpartisan RAND Corporation offers numerous tools on its website ([www.rand.org/](https://www.rand.org/)

research/projects/truth-decay/fighting-disinformation/search.html). RAND’s website offers a YouTube data viewer ([www.rand.org/research/projects/truth-decay/fighting-disinformation/search/items/youtube-data-viewer---citizen-evidence-lab.html](https://www.rand.org/research/projects/truth-decay/fighting-disinformation/search/items/youtube-data-viewer---citizen-evidence-lab.html)) that verifies the authenticity of video content, Internet browser extensions that detect manipulation (“Did Dr. Fauci really say that?”), and mobile apps. Some of its other tools can be used as fact checkers for social media. One offering is the Bot Sentinel (<https://botsentinel.com/>), a free platform that identifies troll bots and untrustworthy accounts on Twitter by using a manual process for classifying some accounts as “problematic” and others as “normal.”

Social media can be a solution, not just a problem. Properly used, online platforms can be a powerful way to reach people—they are easy, innovative, and ubiquitous but rife with potholes and medical disinformation.<sup>6</sup> With the proper tools, we can verify content for accuracy that aligns with our medical expertise. Perhaps the best way that emergency physicians can fight medical misinformation on social media is to flood the major hubs, be it Facebook, Twitter, Instagram, or TikTok, with reliable, factual, evidence-based information. To that end, many medical organizations have made headway by leveraging social media, and even some superstars in emergency medicine can make a difference.<sup>7,8</sup>

And it’s not just about the public. We can also help educate our colleagues who may not have the bandwidth to keep up with the latest research. Unfortunately, we’ve got work to do if we are going to avoid reports like one appearing in January stating that “around 30 percent of eligible medical workers” have refused the vaccine in New York.<sup>9</sup>

### Connections Lead to Education

How else can we reach our patients? Using well-crafted messaging to connect with our patients. In the emergency department, we can present information in a clear and compelling manner, even using graphics or illustrations rather than text for educational purposes, the way that many people use such modalities online or in traditional lectures. The format of the presentation matters. Studies have shown that graphics can actually reduce misperceptions for issues as complicated as global warming.<sup>5</sup> We might reach a few more “visual learners”

by taking this approach.

Finally, remember that you don’t have to reinvent the wheel. There’s lots of great content out there waiting to be used. For instance, an online Field Guide to COVID-19 ([www.acep.org/corona/covid-19-field-guide](https://www.acep.org/corona/covid-19-field-guide)) was crafted at the onset of the pandemic, collecting information pearls from the online EngagED platform. The “wisdom of crowds” is not perfect, but the more participation there is from front-line emergency physicians, the better the circulating information is apt to be.

Traditional science has come under attack, and it’s up to us to respond. As we weather a dark winter, there is light at the end of the tunnel, but it depends on our ability as a specialty to fight against medical disinformation. It’s as big a part of our job as any other. +

### References

1. Salvi C, Iannello P, Cancer A, et al. Going viral: how fear, socio-cognitive polarization and problem-solving influence fake news detection and proliferation during COVID-19 pandemic. *Front Commun.* 2021;5:127.
2. Tools that fight disinformation online. RAND Corporation website. Available at: <https://www.rand.org/research/projects/truth-decay/fighting-disinformation/search.html>. Accessed Feb. 10, 2021.
3. Jaiswal J, LoSchiavo C, Perlman DC. Disinformation, misinformation and inequality-driven mistrust in the time of COVID-19: lessons unlearned from AIDS denialism. *AIDS Behav.* 2020;24(10):2776-2780.
4. Bogart LM, Wagner G, Galvan FH, et al. Conspiracy beliefs about HIV are related to antiretroviral treatment nonadherence among African American men with HIV. *J Acquir Immune Defic Syndr.* 2010;53(5):648-655.
5. Nyhan B, Reifler J. The role of information deficits and identity threat in the prevalence of misperceptions. *J Elect Public Opin Parties.* 2019;29(2):222-244.
6. Monostra M. Health care professionals battle misinformation “infodemic” on internet, social media. Heallo website. Available at: <https://www.heallo.com/news/endocrinology/20201030/health-care-professionals-battle-misinformation-infodemic-on-internet-social-media>. Accessed Feb. 10, 2021.
7. Merchant RM, South EC, Lurie N. Public health messaging in an era of social media. *JAMA.* 2021;325(3):223-224.
8. Henderson E. Social media appeals from COVID-19 frontliners have more impact on general audience. News Medical website. Available at: <https://www.news-medical.net/news/20201211/Social-media-appeals-from-COVID-19-frontliners-have-more-impact-on-general-audience.aspx>. Accessed Feb. 25, 2021.
9. Hick N, Hogan B, Fenton R, et al. ‘Around 30%’ of eligible NY medical workers refusing COVID-19 vaccine: official. New York Post website. Available at: <https://nypost.com/2021/01/05/around-30-of-ny-medical-workers-refusing-covid-19-vaccine-official>. Accessed Feb. 10, 2021.



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# FACEPs IN THE CROWD

More than 12,000 ACEP members have achieved Fellow status with the College and use the FACEP designation with pride! Here, we highlight ACEP Fellows who have fascinating hobbies and passions outside the emergency department.

## Alan Molk, MD, FACEP

For Alan Molk, MD, FACEP, an emergency physician in Phoenix, it was a personal tragedy that prompted him to become an author. He was in the midst of his mother's battle with Alzheimer's, witnessing the importance of compassionate end-of-life care. His cousin, Dr. Robert Shapiro, experienced a devastating personal loss around the same time, and the two connected over shared "awakenings about the importance of dignified end-of-life care." They decided to write a book that would help both laypeople and clinicians navigate these challenges. *Saving Lives, Saving Dignity: A Unique End of Life Perspective from Two Emergency Physicians* was reissued as a second edition in early 2021 and is an Amazon best seller. "It all came from the heart," Dr. Molk said. "I'm very passionate about this important topic that so many sweep under the rug."



## Svetlana Zakharchenko, DO, FACEP

Svetlana Zakharchenko, DO, FACEP, director of emergency ultrasound at Hackensack University Medical Center in New Jersey, has always been athletic, but it was one of her residents who inspired her to try powerlifting. "I felt the itch to belong to this club of strong and cool people," she said. "I tried a squat for the first time, and it felt like we belonged together." What began as a new hobby quickly grew into a desire to enter a sports competition for the first time in her life. Soon after, Dr. Zakharchenko earned second place at the New Jersey USA Powerlifting Championship. While she enjoys the physical challenge of powerlifting, it's the mental strength required to succeed that really made her fall in love with the sport. "There is true fear before you load the heavy weight on your shoulders. ... It's all meditative and requires 100 percent concentration to execute," she said.



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# ACEP4U: Celebrating Legislative Progress

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Every other Wednesday at 1 p.m. CT, ACEP's advocacy team does a live, interactive update on current issues. Register for upcoming Capital [30] Minutes webinars at [www.acep.org/capital30minutes](http://www.acep.org/capital30minutes).

by JORDAN GRANTHAM

Every year, ACEP's Public Affairs team takes a deep look at legislative issues affecting emergency physicians to evaluate progress made on key priorities. After analyzing what was accomplished over the preceding year, it takes a detailed look at the new congressional landscape. For example, the 117th Congress marks a shift to a slim Democratic majority in the U.S. Senate after years of Republican majority under the Trump administration. The team takes those factors into account when planning its advocacy strategy. ACEP's annual legislative and regulatory priorities are reviewed by ACEP's Federal Government Affairs Committee and then presented for approval to the ACEP Board of Directors during its annual January meeting.

As 2020 demonstrated, strategic planning cannot account for all contingencies, and no one anticipated the unexpected pivot to the COVID-19 pandemic response that occurred in early 2020. Though COVID-19 dominated much of ACEP's advocacy efforts, the year closed out with a frenzy of year-end legislation that addressed other important issues, including surprise billing, pain management, Medicare reimbursement, and more.

Let's take a look at what was accomplished during the 116th Congress and what ACEP plans to focus its advocacy efforts on in the years ahead.

## Key Accomplishments During the 116th Congress

When emergency physicians found themselves at the front lines of the pandemic, ACEP's advocacy work shifted to focus on the critical federal resources needed to address a multitude of concerns around personal protective equipment (PPE), testing, physician mental health, vaccinations, and other vital issues. Included in COVID-19 legislation that passed in 2020 were provisions that:

- Ensured full coverage by insurers of testing for and diagnosis of COVID-19
- Provided the Centers for Medicare & Medicaid Services with the flexibility to allow for payment of emergency services via telehealth
- Suspended Medicare sequestration
- Created a \$100 billion Provider Relief Fund for which physician groups were eligible
- Provided additional federal liability protections for volunteer health care professionals during the COVID-19 emergency response
- Provided \$22.4 billion for state testing, tracing, and COVID-19 mitigation programs
- Provided \$20 billion for the Biomedical Advanced Research and Development Authority to procure vaccines and therapeutics; provided nearly \$9 billion to the Centers for Disease Control and Prevention and states for vac-

cine distribution; provided \$3.25 billion for reinforcement of Strategic National Stockpile; and authorized a national campaign to increase awareness and knowledge of vaccine safety and effectiveness

- Provided \$4.25 billion for Substance Abuse and Mental Health Services Administration mental health and substance use disorder programs

## Surprise Billing

ACEP has been working for years on behalf of emergency physicians and their patients to ensure that Congress enacts a fair and transparent solution to the issue of surprise medical billing (SMB). SMB legislation rose to the surface again at the end of 2020 and was an important provision in the year-end legislative package. Details included:

- Equalizing in-network and out-of-network deductibles for emergency care
- Requiring deductibles to be printed on insurance cards
- Authorizing a Government Accountability Office study on network adequacy
- Requiring a 30-day response from insurers to claims
- Establishing an independent dispute resolution (IDR) (ie, arbitration) process with:
  - » No minimum dollar threshold
  - » All factors presented to arbiter considered with equal weight
  - » Consideration of charges and public payer reimbursements prohibited
  - » 90-day cooling-off period following IDR determination
- Providing provisions to improve transparency and support state all-payer claims databases

## Medicare Reimbursement

Did you ride the Medicare reimbursement roller coaster with us in 2020? The numbers went up and down quite a bit. Finally, with the passage of a major omnibus bill at the close of the year, emergency medicine was spared from drastic reimbursement cuts. In fact, many emergency physicians may see an increase in Medicare reimbursement in 2021.

- Based on an additional \$3 billion for the Medicare Physician Fee Schedule (a 3.75 percent increase) and a three-year moratorium on the implementation of a new add-on code for complex office visits (G2211), emergency physicians will see, at worst, a small reduction in Medicare reimbursements and (depending on the services they deliver) may see an overall increase. Prior to year-end legislation negotiations, emergency physicians were facing a scheduled 6 percent cut to Medicare reimbursements.
  - » Medicare sequestration suspension was extended for an additional three months (to March 31, 2021), preventing the 2 percent cut in Medicare reimbursements.

(Medicare sequester cuts were part of a 2011 deal known as the Budget Control Act that has reduced Medicare reimbursements to health care workers by 2 percent across the board since 2013.)

## Pain Management, Rural Hospitals, and More

The 2020 year-end legislative packages also addressed several important issues within emergency medicine:

- Enacted the Easy MAT for Opioid Addiction Act (HR 2281/HR 8900/PL 116-215), which allows practitioners in the emergency department to dispense up to a three-day supply of "narcotic drugs" to an individual at one time for purposes of relieving acute withdrawal symptoms
- Passed the REACH Act, which permits community and rural hospitals to voluntarily convert to a newly created rural emergency hospital designation that focuses on providing ED services and observation care with appropriate transfer protocols to tertiary facilities with reimbursement at 105 percent of Hospital Outpatient Prospective Payment System rates
- Added 1,000 new physician graduate medical education slots starting in 2023

## Looking Ahead: Key Issues Continue into 117th Congress

Many ongoing legislative issues will continue to be a priority for ACEP with this new Congress, including:

- Pushing for more COVID-19 relief, including more resources for vaccine manufacturing and distribution; supply chain stabilization and improvements; sufficient PPE supplies and improved testing, tracing, isolation, and treatment; and ensuring better preparedness for future pandemics
- Advocating for the Dr. Lorna Breen Health Care Provider Protection Act, prioritizing mental health services for physicians and other health care workers
- Advocating for adequate Medicare reimbursement (temporary sequestration ends March 31)
- Lobbying to eliminate the DEA X-waiver to treat patients with opioid use disorder
- Improving measures to decrease workplace violence in the emergency department
- Expanding emergency medicine telehealth opportunities

As you can see from the list above, ACEP advocacy work continues, and there is always a need for more grassroots assistance. If you'd like to be further plugged in to ACEP's advocacy efforts, we encourage you to join the ACEP 911 Legislative Grassroots Network at [www.acep.org/911grassrootsadvocacy](http://www.acep.org/911grassrootsadvocacy). ➕

MS. GRANTHAM is ACEP's communications manager.



# What to Expect from the 117th Congress

## THE POLICY AND POLITICS OF 2021

by L. ANTHONY CIRILLO, MD, FACEP

The political events of the last few months, including the attack on the U.S. Capitol on Jan. 6, 2021, were unprecedented and disturbing. Partisanship has divided the nation, perhaps more so than at any time since the Civil War. The partisan chasm between Americans has been widened by politicians who placate and campaign to those on the extremes of the far left and far right in order to stay in office, fearing a challenge from someone “more red or blue.” Fanning the flames of divisiveness between Americans are the media outlets, including television, radio, print, and social media, that have chosen to sensationally chase ratings and advertising revenue at the expense of the truth. Lost in the cacophony of fervent extremism are the moderates of the country, who have truly become the silent majority.

Upon this volatile foundation of American democracy, the 117th Congress was sworn in on Jan. 3, and Joe Biden was inaugurated as the 46th President of the United States on Jan. 20. The Democrats now hold a Washington “trifecta” with a narrow majority in the U.S. House (221 Democrats, 211 Republicans, and three current vacancies), a Senate split evenly but under Democratic control, and a new administration led by President Biden.

We should all agree that policy rather than politics, should drive our actions in the coming term. For now, as we peer ahead into the next two years, there are two important concepts that are likely to define how and what the 117th Congress accomplishes.

### In the Senate, Ties Go To...

With the election of Democrats in the two special Senate elections in Georgia in early January, the composition of the U.S. Senate in the 117th Congress was finalized and is now tied at 50-50. Technically, it's 50 Republicans, 48 Democrats, and two Independents (Bernie Sanders from Vermont and Angus King from Maine). However, Independents get to choose which party they officially caucus with, and both Sen. Sanders and Sen. King chose the Democrats. Although the Senate is split 50-50, the Democrats technically hold control because the Vice President, as presiding officer of the Senate, is entitled to vote to break a tie. As the majority party, Democrats will chair all committees and set the agenda for committee business. However, all committees in the current Senate are composed of equal numbers of Democrats and Republicans, so passing bills out of committee will be impossible if all Senators vote solely along party lines.

In addition to the split in members complicating how the Senate conducts business, the Senate rules also allow for the unique power of a senator to filibuster. A filibuster (derived from a Dutch word for “pirate”) is the right of a single senator or group of senators to talk continuously (yes, even around the clock) to prevent a bill from being voted on. Even the potential threat of a filibuster can stop a bill from getting to the Senate floor. The process of ending a filibuster, termed “invoking cloture,” requires 60 votes to pass, which will be incredibly difficult given the composition of the Senate. Taking into account all of the political dynamics in the Senate, it will be challenging for major policy to be accomplished—except there is a way around the filibuster, via a special process called reconciliation...

### “Reconciliation” Is the Wrong Word

Passage of a reconciliation bill stands as an important exception to the U.S. Senate rules around bill passage, as reconciliation bills only require a simple majority for passage and are *not* subject to filibuster. There are special rules for



reconciliation bills, so not everything can be done through the reconciliation process. First, reconciliation bills must contain only provisions that are tied to the passage of a budget bill, and each provision of the bill must have a direct effect on the federal budget. In addition to being directly tied to the budget, provisions may not add to the federal deficit beyond the bill's budgetary period unless financial offsets are included. Any senator can raise a challenge if they believe a provision in the bill does not meet the requirements to be included in the reconciliation bill. Challenges are decided by the nonpartisan Senate parliamentarian, who recently ruled that the inclusion of a provision to raise the minimum wage to \$15 per hour was not allowable.

The reality is that “reconciliation” in Washington has nothing to do with members of Congress agreeing to put aside their differences and work collaboratively. Ironically, moving the current COVID-19 relief package as a “reconciliation bill” as the first major piece of legislation in the 117th Congress has only deepened the divide between the Democrats and Republicans. Regardless of the irony of the name, reconciliation bills taken up by the 117th Congress can, and likely will, contain major policy and budgetary provisions that will affect the practice of emergency medicine. The current Democratic trifecta in Washington, D.C. has uniquely set the stage for the use of reconciliation bills to make major changes in health care policy in the country.

The currently proposed \$1.9 trillion COVID-19 package progressing through Congress is being moved under the reconciliation process. The bill contains many provisions that would directly and indirectly affect emergency medicine, including:

- Funding for vaccine distribution

- Expansion of subsidies under the Affordable Care Act for health insurance
- Expansion of health insurance for the unemployed through COBRA insurance subsidies
- Direct aid to state and local governments, which would reduce budgetary pressures on states that operate under balanced budget requirements and could help protect Medicaid reimbursement

Although the bill is being considered under reconciliation rules, it has not served to create any bipartisan compromise between Republicans and Democrats that was demonstrated with previous COVID-19 relief bills.

As important as this COVID-19 relief package could end up being for emergency medicine by increasing the number of insured Americans, it may pale in comparison to the next reconciliation package anticipated for later this year. The next reconciliation bill, which would need to be tied to the next budget bill, could potentially include provisions establishing some form of federal “public option” for health care insurance for people currently not eligible for Medicare. Given the fragile financial economics of emergency medicine practice, any major paradigm shifts in the payer mix of our patients created by legislation could have significant impacts on the specialty. 📌



**DR. CIRILLO** serves on the ACEP Board of Directors. He still actively practices emergency medicine and serves as the director of government affairs for US Acute Care Solutions.



# KNOW YOUR KNEES

## Identify and treat patellar dislocation versus knee dislocation

by CHRISTIAN CASTEEL; AND JOHN KIEL, DO, MPH

### The Case

A 15-year-old boy presents to the emergency department with acute left knee pain. While playing football, he was tackled with his left knee planted and experienced a sudden pain. He was unable to ambulate after the injury. On exam, he is in severe discomfort and tachycardic and has an obvious deformity of his left knee.

### Discussion

Patellar dislocations and knee dislocations, though often mistakenly used interchangeably, are different clinical entities with distinct mechanisms and presentations.

Patellar dislocation occurs when there is disarticulation of the patella bone from the patellofemoral joint. It usually occurs from low-to-moderate trauma sustained during sports or other physical activity. Risk factors for patellar dislocation include structural variants of the patella or femoral trochlea, ligamentous laxity, trauma, and connective tissue disorders. Patellar dislocations represent 3 percent of knee injuries, with a high recurrence rate ranging from 15 to 44 percent for first-time dislocations and 50 percent with a previous history of two or more dislocations.<sup>1,2</sup> The risk of patellar dislocation injury is highest in females ages 10 to 17 years old, with an incidence of 29 per 100,000.<sup>2</sup> The mechanism in the vast majority of patellar dislocations is noncontact involving knee flexion, a valgus force with external rotation. Patients with patellar instability can struggle to return to sports and develop functional limitations, arthritis, and chronic pain.<sup>1,2</sup>

Knee dislocation is a dislocation of the tibia with respect to the femur and is seen in high-energy traumas including motor vehicle accidents, falls from heights, industrial injuries, and sports injuries, as well as spontaneously in the morbidly obese during ambulation.<sup>3</sup> Knee dislocations involve disruption of major knee-stabilizing ligaments (medial collateral ligament, posterior cruciate ligament, anterior cruciate ligament, lateral collateral ligament, and posterolateral corner). Meniscal tears are seen in about 50 percent of cases, and fractures are seen in about one-third of cases.<sup>4,5</sup> Knee dislocations are substantially less common than patellar dislocations, with slightly higher incidence in males and a mean patient age of 35.<sup>6</sup> Anterior knee dislocations are more common and account for 40 percent of all knee dislocations.<sup>7</sup> We will discuss key differences between these injuries, their complications, and respective ED management.

### Anatomy and Biomechanics

The patella acts as a lever arm connecting the quadriceps muscles via the quadriceps tendon to the tibia via the patellar tendon. Collectively, this unit is responsible for knee extension and is often referred to as the “extensor mechanism.” The patellofemoral joint refers to the articulation of the patella within the trochlear groove of the femur. Patellar instability can be derived from any anatomical change in the patellofemoral joint. The vastus medialis

Figure 1: Anatomy of the patellofemoral joint.

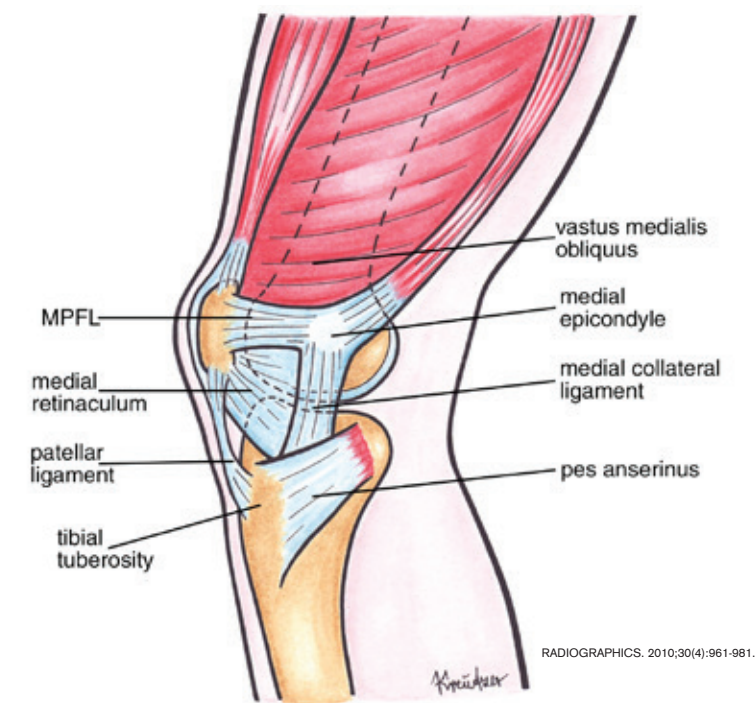


Figure 3: Visible lateral deviation of the patella.



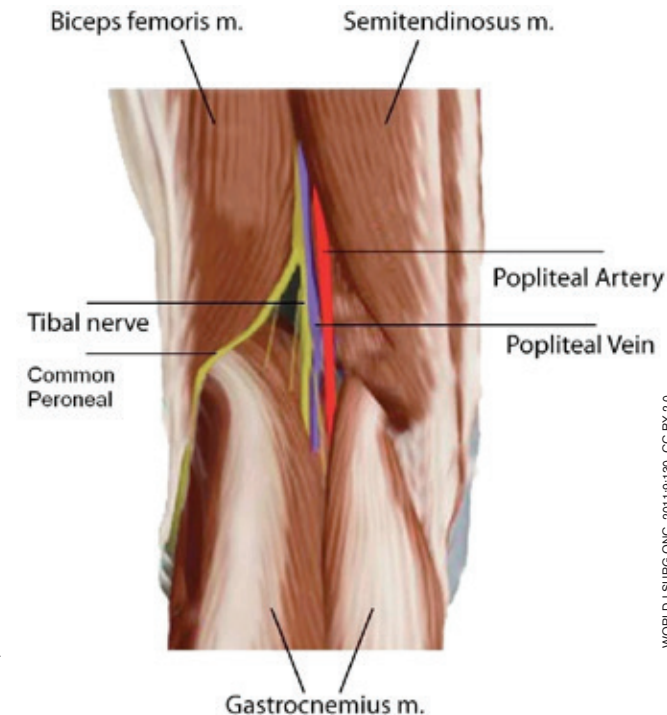
obliquus muscle and medial patellofemoral ligament (MPFL) are responsible for much of the medial stability of the patellofemoral joint by counteracting the natural lateral glide of the patella (see Figure 1).<sup>8</sup>

Knee dislocations are associated with more dangerous complications because injuries involving this structural complex can be associated with vascular and/or nerve injury. The primary stabilizer ligaments of the posterolateral corner are the popliteus tendon, fibular collateral ligament, and popliteofibular ligament. Both the long and short head of the biceps femoris muscle act as secondary stabilizers here.<sup>9</sup> Running through the popliteal fossa at the level of the tibiofemoral junction are the popliteal artery and vein, tibial nerve, and common fibular (peroneal) nerve (see Figure 2).

### Pathophysiology

In 93 percent of patellar dislocations, the

Figure 2: Anatomy of the left popliteal fossa.



cases requiring amputation. The amputation rate in patients with popliteal ischemia for greater than eight hours is 86 percent, thus early intervention is crucial if this diagnosis is suspected.<sup>12,13</sup> Peroneal nerve injury is another potential complication. Nerve injury is seen in 25 to 33 percent of knee dislocations and is more commonly seen in sports-related injuries.<sup>14</sup> It is worth noting that knee dislocations, with or without spontaneous reduction, may present with other significant traumatic and life-threatening pathology.

### Clinical Features and Physical Exam

In the majority of patellar dislocation cases, the patient will have subluxed or dislocated with spontaneous reduction prior to arrival to the emergency department. Thus, it is critical to clarify the mechanism of injury and symptoms prior to arrival. Only 20 percent of patellar dislocations require reduction in the emergency department.<sup>10</sup> In patients whose dislocations do not resolve spontaneously, most will be evident with visible lateral deviation of the patella (see Figure 3).

Most patients present in obvious discomfort, often with the knee held in slight flexion. A joint effusion may be present. Distally, the patient should be neurovascularly intact as the popliteal bundle is posterior to the femorotibial joint and unaffected by this injury. It is important to confirm the quadriceps and patellar tendons are intact by assessing active and passive leg raise against gravity and/or with point-of-care ultrasound. Clinical exam findings that suggest a subluxation or spontaneous dislocation reduction prior to arrival include tenderness of the medial femoral condyle (attachment site of the MPFL) or lateral femoral condyle (where the patella likely collided with the lateral femur during the event).

Knee dislocations can be clinically obvious with a significant mechanism and gross deformity. However, many knee dislocations spontaneously reduce, and about 50 percent appear normal with no obvious deformity on initial presentation.<sup>15</sup> Given that this injury often involves high-energy mechanisms, it is important to evaluate for other injuries. If

mechanism involved is a flexion and valgus movement of the knee without direct contact. Noncontact mechanisms often involve a twisting injury with the foot externally rotated and the knee extended, while traumatic causes typically involve a direct blow to the knee. There are also a number of predisposing factors that increase risk of patella dislocation in individuals. One such risk factor is trochlear dysplasia, where the trochlear groove is flat or convex as a result of gradual filling of the trochlear floor.<sup>10</sup> Another predisposing factor to patellar dislocation is a high-riding patella (patella alta). When the patellar tendon is too long, the patella bone sits superior to the trochlear fossa.<sup>11</sup>

Knee dislocation usually requires higher-energy mechanisms. However, a low-energy dislocation mechanism has been documented in patients with morbid obesity. Popliteal artery injury is reported in 18 to 64 percent of knee dislocations, with 12 percent of these



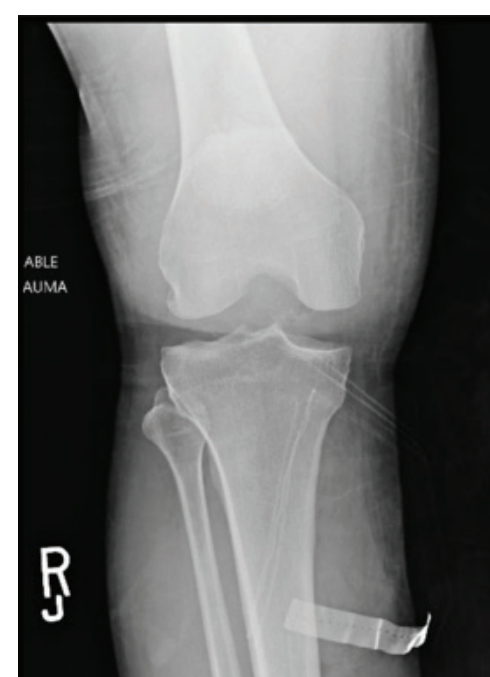
**Figure 4: X-ray of avulsion fractures/loose bodies in patellar dislocation.**



**Figure 5: X-ray of dislocated femorotibial joint in a knee dislocation.**



**Figure 6: X-ray showing widened joint space.**



PHOTOS: JOHN KIEL

a patient presents with acute trauma to the knee, it is important to evaluate for more subtle signs such as joint effusion, swelling, and ecchymosis. In an acute knee dislocation, there may be a dimple sign or buttonholing of the medial femoral condyle through the capsule. Structural examination of the major knee ligaments should be performed, including anterior and posterior drawer test and varus and valgus stress test, at minimum. All lower-extremity pulses should be assessed and documented when there is concern for knee dislocation due to possible injury to the popliteal artery, which is the

most feared complication. Early recognition and intervention for this vascular injury is associated with decreased likelihood of complications. Vascular injury resulting from knee dislocation can present as a pulseless lower extremity. Conversely, the presence of peripheral pulses in the lower extremity alone does not exclude a vascular injury, so serial vascular exams must be performed.<sup>15</sup> Other signs of vascular injury can include pallor, cold limb, ecchymosis, and paresthesia. If vascular injury is suspected or confirmed, vascular surgery should be consulted immediately. Even if this injury spontaneously reduces before

presentation to the emergency department, the risk of vascular injury remains. To assess for nerve injury, a motor and sensory exam should be performed and documented. With peroneal nerve injury, weakness of ankle dorsiflexion, or “foot drop,” is most common. There may also be numbness or paresthesia along the lateral leg and dorsum of the foot.<sup>16</sup>

#### Imaging

Standard radiographs are indicated for both patellar and knee dislocations. In the case of patellar dislocation, pre-reduction radiographs may not be required at the discretion of

the physician and based on confidence in diagnosis. Standard post-reduction radiographs of the knee should be obtained for both entities. For patellar dislocation, imaging is typically normal but may demonstrate avulsion fractures or loose bodies (see Figure 4).

Point-of-care ultrasound can also rapidly evaluate the patellofemoral joint and extensor mechanism. Radiographs of a knee dislocation may show a clearly dislocated femorotibial joint (see Figure 5), which correlates to the physical exam.

**CONTINUED** on page 12

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In cases where spontaneous reduction occurred prior to arrival, radiographs can be normal. Other findings may show widened joint space (see Figure 6), fracture, or hemarthrosis.

Consideration of vascular imaging is critical for all known or suspected knee dislocations. If there is evidence of an ischemic limb post-reduction, vascular surgery should be consulted for immediate transfer to the operating room. If the limb is well perfused but with an absent or asymmetrical pulse, CT angiography to assess for vascular injury is indicated. If the limb is well perfused and pulse is present, an Ankle Brachial Index (ABI) should be assessed. If the ABI is <0.9, CT angiography is indicated. If the ABI is ≥0.9, the patient should be admitted for 24-hour observation with serial vascular exams.<sup>17</sup>

Pre-reduction imaging of a knee dislocation is indicated in patients with good bilateral pulses to assess for concomitant fracture. If there is evidence of fracture, CT is recommended to further evaluate for preoperative planning.<sup>18</sup>

Rarely, this injury can occur in a patient following a total knee arthroplasty (TKA) (see Figure 7). This is most commonly seen in TKAs that retain the posterior cruciate ligament. Prevalence of this complication is low, at 0.15 to 0.5 percent.<sup>19</sup> Reduction should occur in the operating room under general anesthesia, and in most cases, a complete surgical revision or an intercondylar constrained design is indicated.

Reduction and Disposition

In patients with patellar dislocation where spontaneous reduction has not occurred, the patella should be manually reduced. The analgesic approach is at the discretion of the physician; however, the reduction is often quick and easy to perform if the patient is willing, not requiring significant analgesia or procedural sedation. However, if it is anticipated that the patient’s level of pain or anxiety will make the reduction more difficult, a small amount of analgesia may be used.<sup>20</sup> Simple reassurance, calming of the patient, and education on the reduction process are important. Here’s how to reduce a lateral patellar dislocation:<sup>20</sup>

- Position the patient supine, in the seated position with hips

Figure 7: X-ray showing knee dislocation in a patient with a total knee arthroplasty.



- in slight flexion (to prevent patellar tendon contraction).
- Use one hand to maintain support near the ankle.
- While applying medial pressure to the lateral patella, passively extend the knee slowly.
- The physician should note a click as the patella slides back into the femoral groove.
- Confirm with post-reduction anteroposterior and lateral radiographic views.

Post-reduction, the patient should be placed in a knee immobilizer to take away the flexion and extension mechanism of the knee. They should be non-weight-bearing (using crutches). All physical activity and sporting events are prohibited until cleared by orthopedics at follow-up. Most uncomplicated first-time dislocations can be managed nonoperatively with physical therapy and a slow return to play. Recurrent or complicated dislocations involving osteochondral injuries or instability can require elective surgical intervention.

Reduction of a knee dislocation should be attempted with procedural sedation in consultation with orthopedic surgery if

possible. The first attempt should involve simple longitudinal traction. If this is unsuccessful, the next step is to attempt to reverse the direction of the deforming force:<sup>18</sup>

- In an anterior knee dislocation, push the tibia posterior while simultaneously lifting the distal femur.
- In a posterior knee dislocation, lift the tibia anteriorly while simultaneously placing pressure over the femur.
- If these reduction techniques are unsuccessful, operative management under anesthesia is indicated.

Post-reduction, radiographs should be obtained immediately to confirm a successful reduction, and the patient should be placed in a splint at 20 degrees of flexion. The splint should be constructed such that posterior subluxation of the tibia is prevented while also minimizing vascular traction. The splint should be windowed to allow for repeat vascular exams of the foot.<sup>18</sup>

Summary

Understanding the differences between patellar and knee dislocations is imperative for recognizing and preventing potentially catastrophic complications (see Table 1). Patellar dislocation is an injury that occurs most commonly in young and active individuals. The majority of patellar dislocations will reduce spontaneously prior to ED arrival. Knee dislocation is an injury that can present similarly and should be in the considered differential diagnosis based on mechanism, examination, and clinical gestalt. This injury usually involves high-energy mechanisms. About 50 percent of cases will reduce spontaneously prior to ED arrival, thus a thorough knee examination is critical; careful neurovascular evaluation of the lower-extremity status must be performed. If there is evidence of vascular injury, the patient requires emergent revascularization with vascular surgery, as ischemia time is correlated with risk of amputation.

In the emergency department, reduction of patellar dislocations is generally straightforward. Post-reduction radiographs should be obtained and the patient placed in a knee immobilizer. This injury does not require orthopedic consul-

Table 1: Comparison of Patellar Dislocation and Knee Dislocation

	PATELLAR DISLOCATION	KNEE DISLOCATION
Mechanism	Noncontact twisting injury (flexion with external rotation) or direct blow (often sports-related) Anatomical risk factors	High-energy mechanisms (eg, trauma, motor vehicle accidents, sports) Morbid obesity
Physical Exam	Majority spontaneously reduce Painful laterally displaced patella Neurovascularly intact	50% spontaneously reduce Painful anterior, posterior, or lateral disarticulation of femur and tibia Structural examination of knee Assess neurovascular status
Complications	Recurrent dislocations Patellofemoral pain or arthritis Osteochondral defect	Arthrofibrosis (most common) Popliteal artery injury Amputation Peroneal nerve injury Chronic pain or persistent knee instability
Imaging	Pre-reduction radiographs: if fracture suspected Post-reduction radiographs: always	Pre-reduction radiographs to assess for concomitant fracture Post-reduction radiographs Well perfused with absent/asymmetric pulse: CT angiography Well perfused with normal pulse: Ankle Brachial Index (ABI)
Reduction	Pre-reduction analgesia or sedation not typically required Apply medial pressure to the lateral patella, passively extend the knee slowly	Requires procedural sedation Attempt simple longitudinal traction first If fails, reverse direction of the dislocation If both fail, move to operating room for reduction under anesthesia Post-reduction neurovascular assessment
Management	If subluxated, reduce and obtain post-reduction radiograph If reduced prior to emergency department, confirm extensor mechanism intact (have patient extend leg or evaluate via ultrasound) Place in knee immobilizer	Reduce under procedural sedation Post-reduction ABI or CT angiography based on pulse status If evidence of vascular injury or hard signs of ischemia, move to operating room and obtain vascular surgery consult immediately (do not delay for imaging) If no emergent vascular injury, place in splint at 20 degrees flexion, admit for 24-hour observation with serial exams
Consultation	Does not require orthopedic consultation in the emergency department	Requires orthopedic consult and often vascular/trauma services
Disposition	Discharge home and counsel on complications, return-to-play goals Outpatient orthopedic follow-up in 1–2 weeks	Admit for serial examinations based on consult discretion



tation in the emergency department; however, patients should follow up with orthopedic surgery as an outpatient within one to two weeks. Return to play should be individualized toward the athlete and the activity, but main treatment goals prior to return to play are lower-limb stabilization, strengthening of the quadriceps and gluteus medius muscles, and avoidance of specific high-risk movements. Knee dislocation reduction in the emergency department typically requires simple longitudinal traction with pre- and post-reduction radiographs and neurovascular exam. Post-reduction testing typically involves an ABI and often a CT angiogram. All patients with knee dislocations require orthopedic consultation in the emergency department and often vascular/trauma services as well. The affected extremity should be splinted at 20 degrees, and the patient should be admitted for 24-hour observation with serial vascular exams. In follow-up, the patient may require staged reconstruction or repair of the injured ligaments and other soft tissue structures.

### Case Resolution

The patient's deformity was consistent with a laterally dislocated patella. The limb was well perfused, with no neurovascular insult. The injury was successfully reduced in the emergency department after administration of IV fentanyl. A knee immobilizer and crutches were provided. Outpatient follow-up with orthopedic surgery and physical therapy was arranged. +

### References

1. Fithian DC, Paxton EW, Stone ML, et al. Epidemiology and natural history of acute patellar dislocation. *Am J Sports Med.* 2004;32(5):1114-1121.
2. Hawkins RJ, Bell RH, Anisette G. Acute patellar dislocations. The natural history. *Am J Sports Med.* 1986;14(2):117-120.

CONTINUED on page 14

## TOXICOLOGY Q&A



PHOTO: JASON HACK (OLEANDER PHOTOGRAPHY)

## An Enigma, Wrapped in a Question, Within a Puzzle?

**Question:** Looking for the next challenge, I recently moved to North Carolina. House and family settled, I took a walk around my new neighborhood to get familiar with our surroundings. About 500 feet from my front door, I happened to glance down and recognize an old enemy snuggled at the base of a neighbor's tree. Pale, gilled, and frilled, it sat there trying hard to blend into the leaf litter. Was this a brooding potential assassin waiting for a more-curious-than-careful hungry victim?

TURN TO page 15 TO FIND OUT.



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3. Green NE, Allen BL. Vascular injuries associated with dislocation of the knee. *J Bone Joint Surg Am.* 1977;59(2):236-239.

4. Marin EL, Bifulco SS, Fast A. Obesity. A risk factor for knee dislocation. *Am J Phys Med Rehabil.* 1990;69(3):132-134.

5. Yu JS, Goodwin D, Salonen D, et al. Complete dislocation of the knee: spectrum of associated soft-tissue injuries depicted by MR imaging. *AJR Am J Roentgenol.* 1995;164(1):135-139.

6. Ménétrey J, Putman S, Gard S. Return to sport after patellar dislocation or following surgery for patellofemoral instability. *Knee Surg Sports Traumatol Arthrosc.* 2014;22(10):2320-2326.

7. Arom GA, Yeranorian MG, Petrigliano FA, et al. The changing demographics of knee dislocation: a retrospective database review. *Clin Orthop Relat Res.* 2014;472(9):2609-2614.

8. Smirk C, Morris H. The anatomy and reconstruction of the medial patellofemoral ligament. *Knee.* 2003;10(3):221-227.

9. Richter M, Bosch U, Wippermann B, et al. Comparison of surgical repair or reconstruction of the cruciate ligaments versus nonsurgical treatment in patients with traumatic knee dislocation. *Am J Sports Med.* 2002;30(5):718-727.

10. Duthon VB. Acute traumatic patellar dislocation. *Orthop Traumatol Surg Res.* 2015;101(1 Suppl):S59-67.

11. Diederichs G, Issever AS, Scheffler S. MR imaging of patellar instability: injury patterns and assessment of risk factors. *Radiographics.* 2010;30(4):961-981.

12. LaPrade RF, Ly TV, Wentorf FA, et al. The posterolateral attachments of the knee: a qualitative and quantitative morphologic analysis of the fibular collateral ligament, popliteus tendon, popliteofibular ligament, and lateral gastrocnemius tendon. *Am J Sports Med.* 2003;31(6):854-860.

13. Medina O, Arom GA, Yeranorian MG, et al. Vascular and nerve injury after knee dislocation: a systematic review. *Clin Orthop Relat Res.* 2014;472(9):2621-2629.

14. Green NE, Allen BL. Vascular injuries associated with dislocation of the knee. *J Bone Joint Surg Am.* 1977;59(2):236-239.

15. Meyers MH, Harvey Jr JP. Traumatic dislocation of the knee joint. A study of eighteen cases. *J Bone Joint Surg Am.* 1971;53(1):16-29.

16. Ng JWG, Myint Y, Ali FM. Management of multiligament knee injuries. *EFORT Open Rev.* 2020;5(3):145-155.

17. Kiel J. Knee dislocation. WikiSM website. Available at: [https://wikism.org/Knee\\_Dislocation](https://wikism.org/Knee_Dislocation). Accessed Feb. 26, 2021.

18. Lezak B, Massel D. Peroneal nerve injury. StatPearls website. Available at: <https://www.statpearls.com/articlelibrary/viewarticle/27038/>. Accessed Feb. 26, 2021.

19. Boyce RH, Singh K, Obremskey WT. Acute management of traumatic knee dislocations for the generalist. *J Am Acad Orthop Surg.* 2015;23(12):761-768.

20. Wolfe S, Varacallo M, Thomas J, et al. Patellar instability. StatPearls website. Available at: <http://www.statpearls.com/kb/viewarticle/26724>. Accessed Feb. 26, 2021.

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# Toxicology Q&A Answer

QUESTION ON PAGE 13

There are more than 1,000 kinds of *Amanita* mushrooms. Some cause significant toxicity or death. Others lack injurious chemicals. Many *Amanita* mushrooms look alike—their appearances are often similar, with white to greenish caps, white bulbous bases, rings around the mid-stalk, and white or pale gills that are free. Poisonous *Amanita* mushrooms can resemble other mushrooms that are benign and delicious and found in other parts of the world. How does the forager stay safe?

## Toxicity

The primary poison of the *Amanita phalloides* is  $\alpha$ -amanitin. This poison is also found in other mushrooms (*Galerina* and *Lepiota* sp.). The toxin is *not* inactivated by cooking. Throwing one into a stew doesn't make it better. It just poisons the whole pot.

About half a cap is enough to kill an adult. Historically though, the most common victims are children who taste interesting-looking plants, bold amateur mushroom hunters who “know this one is fine,” or immigrants who confuse these toxic mushrooms with edible species from their countries of origin.

## Presentation and Mechanism

After ingesting *Amanita phalloides*, symptoms may start to occur around six hours later though sometimes can take up to a day, confounding the cause-and-effect link between a mushroom meal and the impending toxidrome.

After this latent period, the poisoning manifests with abdominal cramps, vomiting, and diarrhea.

The  $\alpha$ -amanitin toxin inhibits RNA polymerase, which halts transcription of mRNA. In the liver—the first solid organ ingested toxins typically injure—hepatocytes stop synthesizing key proteins, which leads to cellular death and centrilobular hepatic necrosis.



AMANITA PHALLOIDES

## Treatment

Hospital admission, laboratory monitoring of liver function, and coagulation studies are recommended for all suspected *Amanita phalloides* ingestions.

Initial management of a suspected *Amanita phalloides* ingestion is supportive and symptomatic with surveillance for hypoglycemia. Gastrointestinal detoxification is typically accomplished through activated charcoal, but gastric lavage may be considered if patients present promptly after an ingestion. Aggressive fluid hydration and electrolyte replacement for substantial gastrointestinal losses are also recommended.

Amatoxin is filtered through the kidney glomeruli with high

urine concentrations, so maintaining a high urine output is thought to be beneficial.

Many therapies have been suggested and met with variable therapeutic results. Published reports describe the use of milk thistle extract silibinin by IV or orally, high-dose penicillin G, and N-acetylcysteine due to its free-radical-scavenging properties and limited side effects. Vitamin C and cimetidine have been used but have limited clinical data to support their routine use.

Extracorporeal extraction can remove amatoxin but is limited due to low serum concentrations. Liver transplants are a last resort in cases of irreversible hepatotoxicity and impending death.

## How Do You Solve This Puzzle Safely?

Follow DNEWM (Do Not Eat Wild Mushrooms).

Go mushroom hunting to take pictures only (no tasting!)—then make it a game to see if you can identify what you found. There are great resources online.

Make friends with an expert mycologist who's not easily annoyed.

Find a good online reference. Here are two options for all things *Amanita* to get you started:

- [www.amanitaceae.org](http://www.amanitaceae.org)
- [www.amanitaceaejournal.org](http://www.amanitaceaejournal.org)

Back to my story: I sent these photographs to a new friend and expert consultant mycologist. His best guess (using my pictures and description) was that it probably belonged to “*Amanita lavendula* group” and was therefore nontoxic. “However,” he added, “I wouldn't eat it anyway, just to be safe.”

Great advice! ➕



**DR. HACK** is chief of the division of medical toxicology and vice chair for research at East Carolina University in Greenville, North Carolina.





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the medical records department for a stack of printouts or a CD-ROM. That’s all about to change.

History of Patient Access to Medical Records

Giving patients easy access to their medical records is a relatively new concept. In 1996, the Health Insurance Portability and Accountability Act (HIPAA) mandated access and the ability to amend one’s medical record. In 2009, the Obama administration signed the Health Information Technology for Economic and Clinical Health Act (HITECH) into law, which accelerated the adoption of electronic health records (EHRs). Hospitals and clinics could earn financial incentives if they demonstrated “meaningful use” of those EHRs—including measures of patient access through an online portal.

Today, more than 50 million U.S. patients have logged into their EHR portals and have the opportunity to view some aspects of their medical records—past and upcoming appointments, medical history and medication lists, and test results.

But viewing clinical notes through the patient portal hasn’t been broadly possible—until now. Specifically, in April 2021, provisions against “information blocking” in the 21st Century Cures Act (signed in 2016 with broad bipartisan support) will take effect. For the first time, patients will have easy digital access to the inner workings of the emergency physician’s mind.

Why is this happening? The genesis of this part of the Cures Act, and subsequent rulemaking from the Office of the National Coordinator for Health Information Technology, goes back to groundbreaking research in ambulatory clinics that started more than a decade ago.

The OpenNotes group ([www.opennotes.org](http://www.opennotes.org)) showed that giving patients digital access to visit notes was associated with improved health care literacy, adherence to therapy, better doctor-patient communication, and higher patient satisfaction scores.<sup>2</sup> Primary care physicians’ initial concerns about increased time charting, or responding to patient requests for editing documentation, didn’t pan out—both in the literature and online EHR forums.<sup>3,4</sup> Surprisingly, in contrast to many initial studies that showed high patient participation in viewing their notes, deployment of OpenNotes across many health care specialties has found rates as low as 10 to 20 percent.<sup>4,5</sup> It’s clear, however, that the patients, families, and caregivers of those who do have access really appreciate it. However, despite these advantages for patients, health care systems generally report a 10 to 20 percent read rate for notes.

What About the Emergency Department?

What’s true for primary care and ambulatory settings, though, may not extend to emergency department and inpatient settings. Emergency physicians have no ongoing relationships with their patients (except for a few frequent utilizers). The evidence of benefit for digital note sharing in inpatient settings is far more limited and nonexistent for emergency departments.

Still, there’s evidence that ED patients do not have adequate opportunity to ask questions of their clinicians. Only a small fraction of physicians report taking the time

to confirm a patient’s understanding of discharge instructions.<sup>6</sup> It’s reasonable to expect that easy access to ED notes could improve a patient’s understanding of their doctor’s concerns and decision making and even facilitate outpatient follow-up.

But those benefits are only realized if the shared ED notes are intelligible to the patients. We often write notes with an audience of fellow physicians, billing companies, or lawyers in mind. Abbreviations abound, as does extraneous information from elsewhere in the EHR designed to show coders how thorough we’ve been. While note bloat isn’t going away anytime soon, it behooves us to carve out a part of our documentation that clearly explains key findings and medical decision making. Just as important, now is an opportunity to reflect on the subtle ways in which documented descriptions of our patients could be interpreted as hurtful or even offensive, even though that is not our intent. (See sidebar for some tips to limit patient misinterpretation of your notes.)

With this in mind, the new rules acknowledge some notes should not be shared. Specifically, “information blocking” is permissible and the sharing options in the EHR can be unselected in the following cases:

**Safety concerns:** Release of information may cause real harm to the patient, such as with intimate partner violence or notes regarding mental health and substance use.

**Privacy concerns:** Examples include the release of information on minors when parents have proxy access to the portal.

HIPAA violations have carried heavy fines from the outset. It’s not clear what will happen if a patient complains to the Department of Health and Human Services of information blocking (ie, that they could not access their chart digitally in a timely fashion). In the past, hospitals have been fined under this rule for failing to provide paper records.<sup>7</sup> It will be important to stay up-to-date with your individual hospital’s policy as these regulations will be revised on a state and hospital level.

What to Expect

How will this impact ED practice? There will probably be a period this spring during which we quickly adjust our style of writing notes. How much of an adjustment will depend on your current habits and the fraction of patients who are likely to access the portal or make edit requests. Primary care physicians were motivated to edit their notes to address patient requests; ED and inpatient health care workers don’t have an ongoing relationship with most patients and may not agree with requests nor see the upside in complying. What this means for liability or patient satisfaction is an open question.

The Future of Note Sharing

Beyond digitally sharing notes, there are other milestones related to 21st Century Cures coming up. In 2022, EHRs will make application programming interfaces (APIs) available to patients to facilitate selected data sharing with third parties. We anticipate that services will pop up to “translate” notes and interpret data for patients; APIs will also enable patients to integrate their data with an emergency department’s EHR.

Beyond that, trials are under way for OurNotes ([www.opennotes.org/ournotes](http://www.opennotes.org/ournotes)), a system that encourages patients to formally contribute to their medical records. This would allow patients to generate part or all of the history, which is then reviewed by the physician before being accepted as part of the medical record. As with many things in health information technology, the details of the implementation will determine whether this is a helpful time-saver or a step toward bloated, inaccurate notes.

For now, we anticipate that ED patients with portal access will understand more from their visit, helping patients, families, and downstream clinicians understand what occurred during an emergency department visit, the relevant medical decision making, and after-care expectations. Hopefully the trade-off of writing clearer notes and fielding some more edit requests will prove easy enough to make it worthwhile for the patient’s benefit +

References

1. Gillum RF. From papyrus to the electronic tablet: a brief history of the clinical medical record with lessons for the digital age. *Am J Med.* 2013;126(10):853-857.

2. Delbanco T, Walker J, Bell SK, et al. Inviting patients to read their doctors’ notes: a quasi-experimental study and a look ahead. *Ann Intern Med.* 2012;157(7):461-470.

3. de Lusignan S, Mold F, Sheikh A, et al. Patients’ online access to their electronic health records and linked online services: a systematic interpretative review. *BMJ Open.* 2014;4(9):e006021.

4. Epic UserWeb Search: “Open Notes.” Available at: <https://userweb.epic.com/Thread/84714/Use-of-Open-Notes>. Accessed Jan. 26, 2021.

5. Lin SC, Lyles CR, Sarkar U, et al. Are patients electronically accessing their medical records? Evidence from national hospital data. *Health Aff (Millwood).* 2019;38(11):1850-1857.

6. Vashi A, Rhodes KV. “Sign right here and you’re good to go”: a content analysis of audiotaped emergency department discharge instructions. *Ann Emerg Med.* 2011;57(4):315-322.e1.

7. First information blocking fine leveled at Florida hospital. Healthcare Business Tech website. Available at: <https://www.healthcarebusinessstech.com/information-blocking-fine>. Accessed Feb. 11, 2021.



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Tips to Limit Patient Misinterpretation

Patients react poorly to terms like “morbidly obese,” “complains of,” and “bounceback.” Alternatives like “BMI >40,” “presents with,” and “revisit” are less likely to prompt complaints or edit requests. Stylistic writing tics taught in medical school such as “patient endorses” or “patient admits to” might confuse patients or worse. Terms such as “sickler” for sickle cell anemia patients and even “vasculopath” for patients with coronary or peripheral artery disease can easily be interpreted as dismissive or reductive and should specifically be avoided.

If a patient says something remarkable, use quotations to describe it rather than a glib summary.

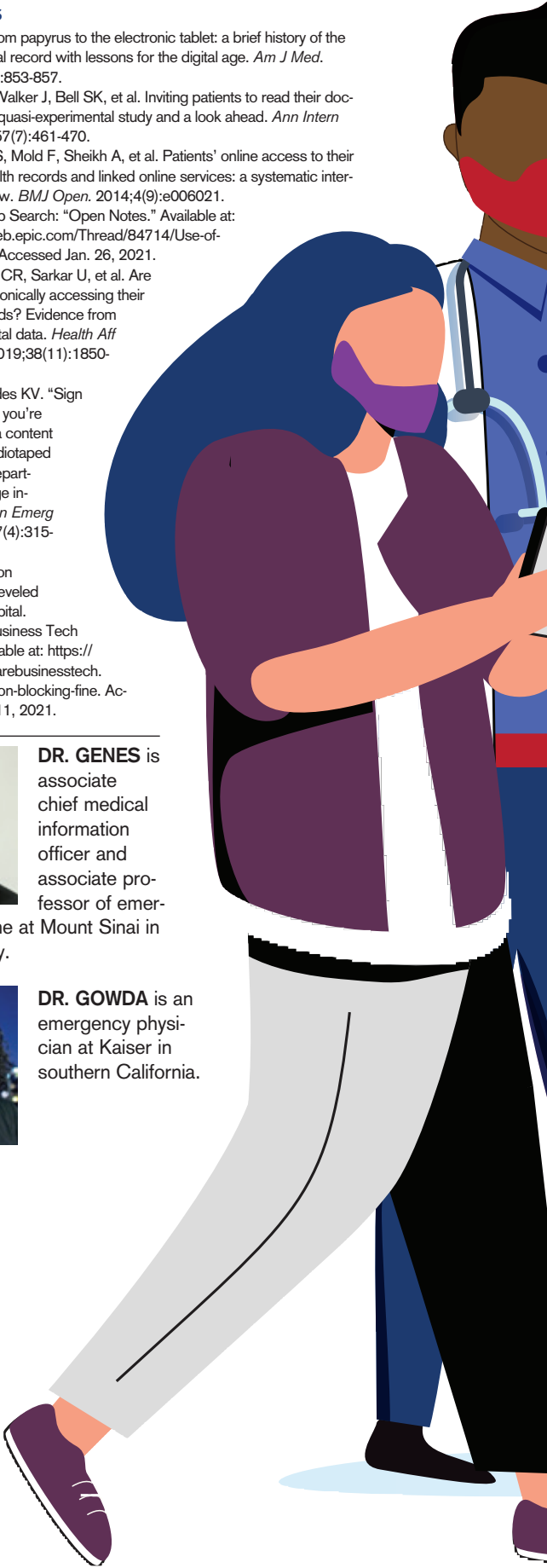
Limit usage of contact information in the chart that the patient

should not directly have access to, such as consultant’s phone numbers.

Be careful with your macros and dot-phrases—it looks careless when atrial fibrillation patients read that their cardiovascular examination found a “regular rate and rhythm” or amputees read about “well-perfused extremities bilaterally.”

On the bright side, dot-phrases can help you spell out confusing abbreviations or explain arcane terms.

The sharing options in the EHR should be unselected if there are safety or privacy concerns (eg, if the notes have sensitive material that the patient doesn’t want seen by a domestic partner or parent). +





## CURES ACT | CONTINUED FROM PAGE 1

ber implementation date back until April 5, 2021, meaning that preparation by all physicians should be under way for several key aspects of the new law.

The aspect of the law that most affects emergency physicians relates to documentation. Because the law makes free and easy access to what we write readily available in many instances, we should expect more scrutiny of what we document (or don't document) in our medical records. In fact, the Cures Act deters "information blocking" by all proprietors of health information by imposing a \$1 million fine for each instance in

which patients are unreasonably restricted from their health information. With the forthcoming ease of access to medical and billing records, ED physicians should be prepared to justify their ordering patterns and plan on defending their medical record entries more often, even in cases that had acceptable outcomes.

At press time, my office has already received more than 200 requests to review the reasonableness of emergency medicine bills along with the medical necessity of diagnostic testing. I expect the number of requests to increase for two reasons.

First, more patients will have greater access to their medical records than ever; some will simply be curious. Second, as patients are increasingly financially responsible for their medical bills because of high-deductible medical plans, patients may start to audit their visits in an attempt to determine what they're paying for.

Unfortunately, I see some recurring self-inflicted documentation wounds incurred by emergency physicians in the course of their work. As such, to ensure the contents of your medical records do not incite one of your patients to pursue legal action (or even a complaint to the hospital), keep these suggestions in mind as you document.

1. The medical record is *not* the place to air grievances against another physician or the patient. Hostile comments are notorious stimuli for malpractice litigation and defamation suits against the author of the comments. Further, if you *do* have disparaging comments to document about a patient, ensure there is ample objective support for the entries. For example, if a patient appears to be malingering or inappropriately drug-seeking, document your query of your state's prescription monitoring service or the patient's other similar visits to your hospital system with comparable complaints. Plaintiffs' attorneys and state medical boards are much less likely to pursue such complaints when the physician's actions are clearly, coherently, and justifiably documented.
2. All diagnostic testing should be supported by subjective and objective documentation. Remember, we are the gatekeepers of diagnostic tests that expose patients to pain, radiation, and costs. For example, a patient complaining of neck pain following a motor vehicle crash should not receive any imaging if the physical exam of the neck is documented as normal and a relevant clinical decision tool, such as the NEXUS criteria, is applicable. When subjective complaints are not supported by objective physical exam findings, there can be no justification for cervical spine imaging. Patients get upset when they are charged \$3,000 for computed tomography of the cervical spine that was never clinically warranted. Just as important as the decision is documenting the rationale(s) for not testing. For example, for the patient described above, the emergency physician should write, "Has no positive NEXUS criteria to support C-spine imaging."
3. There is a strong likelihood many resources will be in short supply during the COVID-19 pandemic. As such, there is much discussion in risk management literature about a crisis standard of care. Remember, this theoretically elevated and protective standard can only shield you if you clearly and transparently document why you are performing (or not performing) something that would ordinarily be indicated during normal times. If no ventilator is available, state that in the record. Also consider noting failed attempts at sharing ventilators or transfers to other facilities due to overwhelming patient volumes caused by the pandemic. Years from now when a legal claim is initiated, many may not recall or understand the overwhelming circumstances in which many emergency physicians practiced during this period. Medical documentation will be the only record of what occurred and why.

Take a few minutes to ensure clear and coherent documentation. Doing so can avoid years of stress arising from claims hinging on ambiguous or inadequate documentation. While this has always been true, the Cures Act makes it all the more relevant.

*Note: No information within this report should be construed as medical or legal advice. Independent medical and/or legal advice should be sought based on each individual's particular circumstances. +*

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# Drinking to Death

## Frequency of alcohol-related ED visits and mortality

by KEN MILNE, MD

### The Case

A 53-year-old male known to have a substance use disorder presents to the emergency department. EMS reports finding an empty bottle of vodka at the scene, the patient had a decreased level of consciousness, and alcohol intoxication is suspected. This is the patient's third visit to the emergency department in a week with a similar presentation. He is observed for six hours while his mental status improves and is discharged after demonstrating clinical sobriety and that he can ambulate safely.

### Clinical Question

What is the association between visits to the emergency department for alcohol-related issues and one-year all-cause mortality?

### Background

Alcohol consumption is known to be a major contributor to morbidity and mortality.<sup>1</sup> It is estimated that around 3 million deaths globally can be ascribed to the consumption of alcohol, representing 5 percent of all deaths.<sup>2</sup> In the United States, close to 100,000 people per year die from alcohol-related causes.<sup>3</sup> This makes alcohol-related illnesses the third leading preventable cause of death. The single greatest risk factor for ill health worldwide among people ages 15 to 49 years, according to the 2016 Global Burden of Disease Study, is alcohol.<sup>4</sup>

Alcohol-related ED visits have increased more than the overall rate of ED visits in the United States.<sup>5</sup> This trend of increasing alcohol-related ED visits has been reported in Canada, England, and Australia.<sup>6-8</sup>

**Reference:** Hulme J, Sheikh H, Xie E, et al. Mortality among patients with frequent emergency department use for alcohol-related reasons in Ontario: a population-based cohort study. *CMAJ*. 2020;192(47):E1522-E1531.

**Population:** Adults ages 16 to 105 years who made two or more ED visits for alcohol-related reasons in a year.

**Excluded:** Data inconsistencies, not Ontario residents, age <16 or >105, or death at discharge.

**Exposure:** Patients with ED visits for alcohol-related mental and behavioral disorders, using the Canadian ICD-10 (ICD-10-CA) code of F10.

**Comparison:** Comparisons were made between groups of frequent ED users for alcohol-related reasons. Frequent use was categorized into either two visits per year, three or four visits per year, or more than four visits per year.

### Outcome:

**Primary Outcome:** One-year mortality, adjusted for age, sex, income, rural residence, and presence of comorbidities.

**Secondary Outcomes:** Mental and behavioral disorders, diseases of the circulatory

**Table 1: Patients with Multiple Alcohol-Related ED Visits**

Number of Visits	Patients	Deaths	Mortality	Adjusted Mortality (95% CI)
2	17,020	799	4.7%	4.8% (4.4–5.2)
3–4	5,704	336	5.9%	5.4% (4.7–6.2)
>4	3,089	271	8.8%	8.4% (7.1–10)
Overall	25,813	1,406	5.4%	5.4% (5.0–5.7)

system, diseases of the digestive system, and external causes of morbidity and mortality (eg, accidents, including accidental poisoning, accidental injuries, injuries, intentional self-harm, and assault) with frequency greater than 5 percent. Cause of death using alcohol-attributable ICD-10-CA codes as well as ICD-10-CA codes for death by suicide.

### Authors' Conclusions

"We observed a high mortality rate among relatively young, mostly urban, lower-income people with frequent emergency department visits for alcohol-related reasons. These visits are opportunities for intervention in a high-risk population to reduce a substantial mortality burden."

### Key Results

The cohort included 25,813 unique patients who had more than one ED visit related to alcohol during the previous 12 months (see Table 1). The median age was 45 years, two-thirds were male, 88 percent lived in urban areas, 59 percent arrived by EMS, and 13 percent were admitted to hospital on their index visit.

One in 20 people presenting to the emergency department with two or more alcohol-related visits within 12 months dies within one year. Death due to an external cause (eg, suicide or accidents) was most common.

### Evidence-Based Medicine Commentary

**1) Observational Study:** Multiple visits to the emergency department for alcohol-related issues may be a surrogate marker for other factors causing or contributing to the increase observed in all-cause mortality. Despite the authors' adjusting for age, sex, income, rural residence, and presence of comorbidities, there could be other unmeasured confounders responsible for the results.

**2) ICD-10-CA Codes:** Validation of the use of ICD-10-CA code F10 to ascertain alcohol use disorders among patients presenting to the emergency department has not been published.

This lack of validation does not mean that it is invalid to use this method of identifying cases, but we should use extra caution when interpreting the results.

**3) Effective Intervention:** In the article's introduction, it is stated that a screening and brief intervention for alcohol-related problems in the emergency department is a promising approach for reducing problematic alcohol consumption.<sup>9</sup> However, there were no references in the discussion of any high-quality evidence that any interventions prevent the need for hospital use or all-cause mortality.

**4) Access to Care:** Even if there were an effective treatment for alcohol use disorder that prevented mortality, access to care can be a challenge. Just over 10 percent of the cohort came from rural areas, where access to health care services is often limited.

**5) Comparison:** Other chronic conditions lead to frequent emergency department use, such as type 2 diabetes, chronic obstructive pulmonary disease, and congestive heart failure. This study did not compare these one-year mortality rates to those of patients with alcohol-related evaluation and treatment.

### Bottom Line

A higher frequency of ED visits for alcohol-related issues is associated with an increase in all-cause one-year mortality.

### Case Resolution

You offer the patient information on a local low-barrier (no referral, no cost) substance use disorder clinic. He takes the information and says he will consider visiting the clinic for help. You also offer

him the anti-craving medication naltrexone starting at 50 mg orally daily for one week since he has no contraindications (eg, opioid use in the last 10 days).<sup>10</sup> He takes the prescription and says he will consider this option.

*Thank you to Dr. Hasan Sheikh, an emergency and addictions physician in Toronto and a lecturer at the University of Toronto, for his help with this review.*

**Remember to be skeptical of anything you learn, even if you heard it on the Skeptics' Guide to Emergency Medicine. ☺**

### References

- Rehm J, Mathers C, Popova S, et al. Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *Lancet*. 2009;373(9682):2223-2233.
- Poznyak V, Rekke D. Global status report on alcohol and health 2018. Geneva: World Health Organization; 2018.
- Alcohol and public health: alcohol-related disease impact (ARDI). Annual average for United States 2011-2015 alcohol-attributable deaths due to excessive alcohol use, all ages. Centers for Disease Control and Prevention website. Available at: [https://nccd.cdc.gov/DPH\\_ARDI/Default/](https://nccd.cdc.gov/DPH_ARDI/Default/). Accessed Feb. 8, 2021.
- GBD 2016 Risk Factors Collaborators. Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet*. 2017;390(10100):1345-1422.
- Mullins PM, Mazer-Amirshahi M, Pines JM. Alcohol-related visits to US emergency departments, 2001-2011. *Alcohol Alcohol*. 2017;52(1):119-125.
- Myran DT, Hsu AT, Smith G, et al. Rates of emergency department visits attributable to alcohol use in Ontario from 2003 to 2016: a retrospective population-level study. *CMAJ*. 2019;191(29):E804-E810.
- Green MA, Strong M, Conway L, et al. Trends in alcohol-related admissions to hospital by age, sex and socioeconomic deprivation in England, 2002/03 to 2013/14. *BMC Public Health*. 2017;17(1):412.
- O'Donnell M, Sims S, Maclean MJ, et al. Trends in alcohol-related injury admissions in adolescents in Western Australia and England: population-based cohort study. *BMJ Open*. 2017;7(5):e014913.
- D'Onofrio G, Degutis LC. Preventive care in the emergency department: screening and brief intervention for alcohol problems in the emergency department: a systematic review. *Acad Emerg Med*. 2002;9(6):627-638.
- Rösner S, Hackl-Herrwerth A, Leucht S, et al. Opioid antagonists for alcohol dependence. *Cochrane Database Syst Rev*. 2010;(12):CD001867.







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# Just a Cough?

## Lack of communication let a cancer grow

by ERIC FUNK, MD

This medical malpractice case covers a theme commonly seen in lawsuits against emergency physicians. It highlights the importance of carefully reviewing test results and communicating clearly with patients and other doctors.

### The Case

A 63-year-old man presented with a cough. His vital signs showed a heart rate of 123 bpm, blood pressure of 129/94, respiratory rate of 15/min., and oxygen saturation of 96 percent on ambient air. His past medical history was remarkable for chronic obstructive pulmonary disease (COPD) and a history of smoking. He was seen by a triage nurse, who noted chest congestion for one week as well as fever and chills.

The physician saw the patient and documented similar complaints. He also noted that the patient had body aches and “burning pain” with coughing. The review of systems noted the *absence* of fever and chills, conflicting with the triage documentation. The physical examination was relevant for diminished breath sounds, unlabored breathing, and the ability to carry on normal conversation.

A chest radiograph was ordered, and the patient was treated with DuoNeb (albuterol sulfate and ipratropium bromide). The chest radiograph interpretation is shown in Figure 1.

The physician documented an assessment of the cough, upper respiratory infection, and COPD. On reassessment, the patient was described as feeling “OK after visit.” The physician documented that the “chest X-ray shows some residual of COPD with no acute changes.”

The patient was advised to push fluids, use an inhaler, stop dairy, and follow up with his primary care physician (PCP) about the possibility of obtaining a nebulizer for home use.

The patient did not have any documented health care visits for the next three years.

Three years later, he presented to a new PCP to establish care due to the fact that he had been feeling short of breath and fatigued. Labs and a chest radiograph were ordered. The chest radiograph showed a significantly larger lung mass, and he was promptly referred for a CT scan and consultation with a pulmonologist. The CT scan results are shown in Figure 2.

The patient was seen by pulmonology and ultimately had his case presented at the hospital’s tumor review board. He was deemed not to be a surgical candidate but underwent extensive chemotherapy and radiation treatment.

The medical record available in the court case ends with consultations from palliative care specialists. His medical outcome is uncertain, although a search of newspaper records did not turn up an obituary under the patient’s name.

### The Lawsuit

Two years after being diagnosed with lung cancer (and five years since the initial emergency department visit), the patient contacted a medical malpractice law firm. A lawsuit was filed against the hospital where the patient was originally seen. The complaint alleged that improper follow-up on the lung mass occurred, allowing it to progress to an inoperable tumor.

In an unusual twist, the physician who originally saw the patient had died prior to the discovery of the lung cancer.

After the lawsuit was filed, the defense filed a motion for summary judgment based on the statute of limitations. The state in which this happened has a three-year limit from the time a negligent act occurs. If the negligence is not discovered within three years, the plaintiff has an additional year to file the lawsuit.

In this instance, the lawsuit was filed two years after the negligence was discovered, therefore falling outside the stat-

Figure 1: Chest Radiograph Interpretation

“There is a new lobulated 19 x 15 mm right upper lung nodular density. Lungs are otherwise clear except for unchanged scarring at the left costophrenic angle. No effusions. Heart size and mediastinal contours appear unchanged. No new bony abnormalities.

Figure 2: CT Scan Result

#### Impression:

Large right apical mass of anterior lateral wall of the right apex measures 9.2 x 5.5 x 4.8 cm with 3.1 mm and 2 mm enhancing satellite nodules likely represent metastasis. Nodular pleural thickening in right lower lobe posteriorly as noted suggests metastasis.

Figure 3: Excerpt from the Judge’s Opinion

The undersigned is saddened by Plaintiffs’ situation. Dr. [REDACTED]’s legal status as an independent contractor, and not an employee of [REDACTED], however, has not been shown to be relevant to whether fraud or intentional concealment took place. Plaintiffs’ claims against these Defendants are barred by the statute of limitations. No equitable tolling provisions apply. Defendants’ motion to summarily dismiss this case (Dkt. 10) should be granted.

#### III. ORDER

Therefore, it is hereby **ORDERED** that:

- Defendants’ Motion for Summary Judgment based on the Statute of Limitations (Dkt.10) **IS GRANTED**; and
- This case **IS DISMISSED**.

ute of limitations. The plaintiffs attempted to argue that they should be given additional time because the physician was an independent contractor and not directly employed by the hospital. The judge dismissed the case. The end of his opinion is shown in Figure 3.

This case highlights the medicolegal risk associated with incidental findings. This is a common reason for malpractice lawsuits against emergency and urgent care physicians. We are often focused solely on emergency or acute disease processes and can overlook other issues.

In this case, it seems that the error was simply a failure to identify an incidental finding that needed follow-up. In other malpractice cases, incidental findings are often appropriately identified but there is a failure of adequate communication to the patient or their primary care doctor.

### The Lesson

As with all errors in medicine, there are opportunities to improve our individual performances as physicians and opportunities to improve the system in which we work. Direct communication with patients at the bedside is important for incidental findings, including a discussion of the possible consequences if the identified issue is not addressed in the appropriate time frame. Discharge papers that include comments

## SEE THE RECORDS

Visit [www.medmalreviewer.com/case-8-cough](http://www.medmalreviewer.com/case-8-cough) to review the full medical records or send Dr. Funk an email with your thoughts on the case at [admin@medmalreviewer.com](mailto:admin@medmalreviewer.com).

about the finding and the recommended follow-up are also helpful. When possible, sending a message to the patient’s PCP can help facilitate the necessary next steps.

There are also measures that health care systems can take in building more robust systems that empower both physicians and patients. Having standard prewritten discharge instructions about incidental findings can be helpful. Institutions that have an ED follow-up nurse or other clinician can help ensure patients do not lose contact with the health system, especially after ED visits that occur in the middle of the night, weekends, or holidays, when communication is often fragmented. Finally, technology-based solutions such as automated image processing and text recognition can identify findings that may have eluded initial screening. +





**DR. CHARY** is chief resident at a Harvard-affiliated emergency medicine residency in Boston.



## Thinking Beyond “Women in Medicine”

Women are not a monolith, and striving for equity requires a nuanced approach

by ANITA CHARY, MD, PHD

*Editors’ Note: In this article, the word “female” is used as an adjective and “women” as a noun by convention but without the intention of conflating sex and gender. The author and editors recognize that these words, as colloquially used, do not accurately reflect distinctions between gender and sex or depict how individuals identify their gender.*

**W**hen you think about “women in medicine,” whose faces do you see? Whose voices are represented? Who sits at the leadership table? As I near the end of residency training, I want to reflect critically on the importance of appreciating the diversity within women in medicine rather than viewing the group as homogeneous, with individuals having approximately the same goals and needs.

### Researching Discrimination

In 2019, an article was published in a major emergency medicine journal entitled, “Does Physician Gender Have a Significant Impact on First-Pass Success Rate of Emergency Endotracheal Intubation?” There was, unsurprisingly, no significant difference between the first-pass success rates of female and male physicians.

The manuscript sparked shock, anger, and surprise within my community of female emergency physicians. We immediately questioned the premise of the article and felt offended that the research group was even asking the question. And we were not alone: Med Twitter blew up with vitriol, and there were enough complaints that the paper was retracted soon after publication. However, in hindsight, the paper reflected something that many of us in

the United States had not thought to consider: Though we have a long way to go here, there are parts of the world where barriers to achieving gender parity in medicine are far greater. A study that might initially strike us as offensive may have actually been a necessary one to counter negative stereotypes about women’s professional abilities.

The study in question was conducted in South Korea, where female physicians are in the minority. The research group had intended to “confirm that there is no physician gender effect on the first pass success rate,” as the corresponding author tweeted, which could have potentially helped establish female physicians as equally effective proceduralists in a predominantly male field. Only after my initial negative reaction to the manuscript, and after it was retracted, did I consider the local cultural context of clinical practice in the study site. It contrasts with my own—I work at a renowned academic hospital where our leading airway expert is a female physician and where our faculty and residents generally expect that male and female physicians perform equally.

In qualitative and ethnographic research—my areas as a medical anthropologist—we have a principle called “reflexivity,” the deliberate examination of how one’s own identity and values influence the research process. Standard qualitative results reporting guidelines include an expectation that manuscripts address reflexivity. The first author of the retracted paper was a female medical student. The corresponding author wrote about raising daughters and believing in women’s potential in what amounted to an apology letter for upsetting the international community of physicians. Would a statement in the manuscript about reflexivity have helped frame the study? Did the journal’s reviewers consider how the study might be received internationally and accordingly advise

the authors? Was there an opportunity for the editors to contextualize the paper rather than retract it?

Context matters. Women’s experiences practicing medicine vary all over the world. Despite the inequalities in daily interactions, promotion, and pay that female physicians continue to face in the United States, we do have advantages compared to female physicians in many other countries.

We are making progress, but women in medicine are not a monolith, either in the United States or elsewhere. If we fail to see that, we’ll be hindered in our efforts to advance women’s medical careers and professional opportunities. This example made me think about challenges closer to home.

### Professional Introductions

Despite introducing ourselves as “Dr. [last name]” and wearing white coats with “DOCTOR” badges affixed, patients often assume female physicians are nurses, technicians, and, for people of color, transport or custodial staff. We advocate for proper professional recognition not because we devalue these other important jobs but because role confusion leads to poor patient care and because we want to combat societal stereotypes that women are not doctors.

Throughout training, several of my female co-residents and I noticed our supervising male senior residents and attendings introducing themselves to our patients by their first name. While not poorly intentioned, it made it more awkward for us to introduce ourselves as “Dr. [last name],” as we preferred. In response, a group of us led residency-wide conversations to encourage all residents and attendings to introduce themselves as “Dr. [last name].” We hoped this would make it easier for female physicians to introduce themselves as such and ensure that their roles in patient care are understood. We thought we were doing some-

thing to improve the professional experience of female physicians across the board. But we had not thought about all the possible impacts this could have on our colleagues.

One of our female co-residents courageously spoke up, saying that she did not like to be introduced by her last name. Patients could easily recognize her last name as Hispanic, and she feared they would assume that they were receiving inferior care or single her out in some way, such as interrogating her about her training or asking for a different physician.

It was an important realization. Good intentions are necessary but not sufficient. Doing what we think is good for women in medicine may not serve all female physicians. My co-resident’s comments led our group to a discussion about privilege—the advantages or immunities enjoyed by a powerful group, often without that group’s awareness—to the disadvantage of other groups.

For many, it can be less comfortable to talk about privilege in terms of race and ethnicity than in terms of gender. Patients less frequently question physicians with Euro-American last names. Even accents can lead patients to ask physicians about their ethnicity, nationality, or training. When patients do so with Euro-American physicians, it is often couched as part of a pleasant conversation, in contrast to a common succession of questions faced by minority physicians: “What kind of a last name is that?” “Is that an American name?” “Where are you from?” “Where did you go to medical school?” And what’s implied: “Are you really qualified to be my doctor?”

The middle road approach our residency came to was asking individuals to consider their own privilege—or lack thereof—in deciding how to introduce themselves. It was not simple. It took time. But it was worth doing to encourage inclusion.

**CONTINUED** on page 22



PEARLS FROM THE  
MEDICAL LITERATURE

**DR. RADECKI** is an emergency physician and informatician with Christchurch Hospital in Christchurch, New Zealand. He is the *Annals of Emergency Medicine* Podcast co-host and Journal Club editor, and can be found on Twitter at @emlitofnote.

# Insights from PECARN

The Pediatric Emergency Care Applied Research Network advances research for our littlest patients

by RYAN PATRICK RADECKI, MD, MS

Thanks to the tireless work of countless staff and volunteers, the Pediatric Emergency Care Applied Research Network (PECARN) is approaching almost two decades of operation. I will admit to a biased fondness for the project, as I participated as one small cog in the nascent operation many



years ago while a research assistant at The Children's Hospital of Philadelphia. Now, PECARN can only be described as an unqualified success, using its re-

sources to enroll sample sizes large enough to capture rare events, informing our care of everything from traumatic brain injury to diabetic ketoacidosis. Because of the continued investment of time and energy by its stewards, PECARN continues to conduct and publish high-quality research. Here's a rundown on the network's findings in the last year.

## Fever

During 2020, the PECARN output featured several pieces of data exploring the management of febrile infants. The first of these is data regarding the time to culture positivity in infants with possible serious bacterial infections.<sup>1</sup> The duration of hospitalization and antibiotic administration is predicated on the possibility that a pathogen will be isolated, and these hospital stays routinely exceed 24 hours. In this cohort, which included 303 positive blood cultures and 88 positive cerebrospinal fluid (CSF) cultures, the median times to positivity for true-positive blood and CSF cultures were 16.6 and 14.0 hours, respectively. Four-fifths of blood and CSF cultures were positive by 24 hours, leading the authors to suggest this time frame as reasonable for clinical reassessment. A well infant, with a normal blood culture and normal CSF findings, is likely a candidate for discharge depending on the greater clinical context.

Another article looked at the role of chest radiographs in the evaluation of febrile infants.<sup>2</sup> In this retrospective cohort, radiography was performed in approximately one-third of subjects. Within this group, only about 6 percent had suspected or definite pneumonia. Drilling down even further, viral pathogens alone were isolated in half of those. There were, unfortunately, no clear predictors of true-positive findings or those differentiating viral from bacterial pneumonias. At the least, chest radiographs need not be considered an essential evaluation of fever without a source but rather left to best clinical judgment.

## Decision Tools

The PECARN group's work in pneumonia is not limited to young infants but also includes older children.<sup>3</sup> Looking retrospectively at 1,128 children with suspected pneumonia,

the authors collected clinical features in an attempt to predict which children would develop moderate or severe disease. In this fairly ill cohort in which almost 40 percent required hospitalization, the authors derived a clinical instrument calibrated to predict the probability of severe disease in any child being evaluated for pneumonia. The most predictive features identified ought not be terribly surprising: elevated respiratory rate, increased work of breathing, impaired oxygenation, and abnormalities on chest radiography. The tool generated from these data will not replace clinician judgment, but if externally validated and evaluated as a component of decision support, using this checklist could identify the important subset of children who are at the greatest risk for deterioration.

A few years ago, the PECARN group derived a prediction instrument in an attempt to rule out neonatal sepsis and reduce unnecessary downstream evaluations.<sup>4</sup> This instrument, derived utilizing the same recursive partitioning as the PECARN traumatic brain injury tool, was able to achieve sensitivity of 97.7 percent using urinalysis, absolute neutrophil count, and procalcitonin. In 2020, at least one group tested this rule in their population.<sup>5</sup> Retrospectively applied to a research cohort containing 256 serious bacterial infections from their hospital in Bilbao, Spain, the PECARN instrument would have missed 26, including five with bacterial meningitis. Their reported sensitivity, based on their population, would ultimately be 89.8 percent. While the original 97.7 percent sensitivity puts it into discussion as clinically applicable, these data certainly cast doubt upon its use.

## Machine Learning

All may not be lost, however. The high-quality prospective data collected by PECARN lends itself to reanalysis by what is rapidly becoming the new standard: machine learning (ML). In

a subsequent analysis, informaticians applied three different ML techniques to the data from febrile infants: random forest, support vector machines, and neural networks.<sup>7</sup> In their comparison, the authors found the random forest model to be best, able to produce a sensitivity of 98.6 percent while improving the specificity to 74.9 percent, exceeding the 30 to 60 percent specificity range of the original and other models. These models await further external validation.

These data were not the only PECARN set to get the ML treatment this past year. Data from the PECARN's blunt abdominal injury data set were evaluated using similar methods, producing advancements over the original analysis.<sup>7</sup> Dueling analyses looking at the PECARN traumatic brain injury data found mixed results. An optimal classification tree showed potential improvements over the initial PECARN instrument in terms of specificity, while a second analysis of multiple ML methods came up mostly empty.<sup>8,9</sup> Regardless of whether a bedside tool is ultimately created from these reanalyses, these alternate approaches to rich existing data add new insight and utility where previous efforts may have failed to show a path forward.

## Equity

Lastly, and on an entirely different topic, PECARN has also been focusing on equitable care of children with acute injuries. A new publication looks at variability in opioid prescribing for children with long-bone fractures.<sup>10</sup> Overall, 15 percent of 5,916 children seen in the emergency department for long-bone fractures were discharged with a prescription for opioid analgesia, with oxycodone the most frequently prescribed. Within the limitations of a retrospective analysis, independent factors associated with lower administration of opioid analgesia included non-white ethnicity and government health

insurance. The appropriateness of opioid prescribing notwithstanding, there should be minimal variability across the socioeconomic spectrum, and variation should be driven by clinical features alone.

We are fortunate that the dedicated professionals of the PECARN group continue to advance emergency care for children and look forward to what new data they may bring to light in 2021.

*The opinions expressed here are solely those of Dr. Radecki and do not necessarily reflect those of his employer or academic affiliates.* ➔

## References

1. Alpern ER, Kuppermann N, Blumberg S, et al. Time to positive blood and cerebrospinal fluid cultures in febrile infants ≤60 days of age. *Hosp Pediatr*. 2020;10:719-727.
2. Florin TA, Ramilo O, Hoyle Jr JD, et al. Radiographic pneumonia in febrile infants 60 days and younger [published online ahead of print July 18, 2020]. *Pediatr Emerg Care*. doi:10.1097/PEC.0000000000002187.
3. Florin TA, Ambroggio L, Lorenz D, et al. Development and internal validation of a prediction model to risk stratify children with suspected community-acquired pneumonia [published online ahead of print Nov. 7, 2020]. *Clin Infect Dis*. doi:10.1093/cid/ciaa1690.
4. Kuppermann N, Dayan PS, Levine DA, et al. A clinical prediction rule to identify febrile infants 60 days and younger at low risk for serious bacterial infections. *JAMA Pediatr*. 2019;173(4):342-351.
5. Velasco R, Gomez B, Benito J, et al. Accuracy of PECARN rule for predicting serious bacterial infection in infants with fever without a source. *Arch Dis Child*. 2021;106(2):143-148.
6. Ramgopal S, Horvat CM, Yanamala N, et al. Machine learning to predict serious bacterial infections in young febrile infants. *Pediatrics*. 2020;146(3):e20194096.
7. Pennell C, Polet C, Arthur LG, et al. Risk assessment for intra-abdominal injury following blunt trauma in children: derivation and validation of a machine learning model. *J Trauma Acute Care Surg*. 2020;89(1):153-159.
8. Bertsimas D, Dunn J, Steele DW, et al. Comparison of machine learning optimal classification trees with the pediatric emergency care applied research network head trauma decision rules. *JAMA Pediatr*. 2019;173(7):648-656.
9. Rowe C, Wiesendanger K, Polet C, et al. Derivation and validation of a simplified clinical prediction rule for identifying children at increased risk for clinically important traumatic brain injuries following minor blunt head trauma. *J Pediatr*. 2020;3:100026.
10. Drendel AL, Brousseau DC, Casper TC, et al. Opioid prescription patterns at emergency department discharge for children with fractures. *Pain Med*. 2020;21:1947-1954.



# RESIDENCY SPOTLIGHT

## ALBANY MEDICAL CENTER EMERGENCY MEDICINE RESIDENCY

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@amc\_emergency\_residents

### Location:

Albany, New York

### Year founded:

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### Number of residents:

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### Program length:

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We are the only designated level I trauma center in the north-eastern New York region and the busiest level I trauma center in New York state. We see both blunt and penetrating injuries

as a consequence of where we're located: high-speed motor vehicle collisions in the city of Albany, agricultural injuries from surrounding rural areas, and injuries related to summer and winter sports from the recreational sites.

### Why is your city a great place to live?

The Capital District offers an incomparably low cost of living, easy commuting, and robust public and private school systems.

### What do residents do for fun?

We run and bike the trails along the Hudson and Mohawk rivers. There are countless lakes, including the gorgeous Lake George, for fishing, swimming, kayaking, and boating. The nearby Adirondack and Berkshire mountains are stunning.

Our favorite activities are exploring the breathtaking scenery while hiking, skiing, and snowboarding. Montreal, Boston, and New York City are 2.5 hours away by car or public transport, making for easily accessible weekend getaways.

### Recent publications:

- Chang AK, Bijur PE, Esses D, et al. Effect of a single dose of oral opioid and nonopioid analgesics on acute extremity pain in the emergency department: a randomized clinical trial. *JAMA*. 2017;318(17):1661-1667.
- Lord S, Brodell J, Lenhardt H, et al. Implementation of a prehospital patella dislocation reduction protocol. *Prehosp Emerg Care*. 2020;24(6):800-803.

—Rachel Le, MD, chief resident



Residents enjoying Wellness Day, an annual event when residents do a fun activity in place of conference.

## EQUITY EQUATION | CONTINUED FROM PAGE 20

### Work-Life Balance

Our diversity as women in medicine goes beyond race, ethnicity, and nationality. Throughout medical school, graduate school, and residency, various groups for women in medicine have sponsored lectures, panels, and workshops about work-life balance. This is almost always a euphemism for parenting and task-sharing with your husband. These events often feature a successful straight white female physician, perhaps with a stay-at-home husband. Just as frequent are the panels that inevitably devolve into a discussion about daycare versus nannies.

Meanwhile, some of my female colleagues have had difficulty conceiving and, after multiple rounds of in vitro fertilization, decided not to have children. My LGBTQIA+ colleagues are encountering a different set of challenges and expectations, ones not usually covered in what are frequently heteronormative events. Some of my colleagues stopped going to women's group meetings because work-life balance sessions just didn't apply to their circumstances often enough to be helpful.

Conversations about finding peace in relationships and parenting are undeniably important, particularly given the stigma surrounding these topics for female physicians. It is imperative, however, that we not equate "women in medicine" with "work-life balance" or with a particular set of assumptions about family life. Perhaps within events about balancing career with family and relationships, we could be more inclusive of stories of divorce and joint custody arrangements. We could talk about adoption, surrogacy, egg

freezing, and gay and transgender physician parenting. We must also ensure that women in medicine events encompass a broad range of issues faced by female physicians. I am grateful that my residency's women's initiative features workshops on résumé building, contract negotiations, and responding to workplace microaggressions.

### Know Your Own Shoes

The space of "women in medicine," as it is currently configured, is not the most comfortable for those who may have another primary identity—as a racial/ethnic minority or LGBTQIA+ individual, for example. Social movements offer plentiful lessons that approaching women as a homogeneous group with needs based purely on gender caters to the needs of some while disregarding the needs of others.

We often hear the phrase, "Put yourself in someone else's shoes." But it's also important to know your own shoes. What is the lens through which you see the world? What privileges do you have? What are your unique needs as a woman in medicine? After answering these questions, it can become easier to consider how other women experience medicine and how to tailor support for their professional development. There is a distinction between invitation and inclusion. The former is easy; the latter requires deep self-reflection and can lead to powerful change.

"The Equity Equation" is curated by Dara Kass, MD, and Jenice Baker, MD, FACEP. +

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