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THE FINISH LINE

EM residents to the rescue. Marathon man down!

by JOE BETCHER, MD

I remember the conversation between Al Majkrzak, MD, and myself as we entered mile nine of the Detroit Half Marathon, a lighthearted argument over our college football loyalties. People screamed and cheered from the sidewalks as we curved through the streets of Detroit. In the midst of this discussion, my co-chief resident and I looked toward the edge of the race at a small gathering of people, where someone was clearly in distress.

We came upon a middle-aged gentleman who was down, pale, and unconscious. No pulses to be found. We signaled for someone to call emergency medical services (EMS) and started compressions right there on the road with runners whizzing by left and right. With some additional help, we continued to do round after round of compressions but continually lost pulses after each check. With no meds or supplies and nothing to monitor but a pulse and his mental status, we were a little outside of our usual comfort zone. By the fourth or fifth round of CPR, the patient started to awaken. "It's either a ventricular rhythm or asystole," noted Dr. Majkrzak given the man's loss of pulses after each round.

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ACEP Stands Up to Insurer Billing Practices

ACEP to sue federal government to protect payment for emergency services, access to care

In a bold, unprecedented move, ACEP plans to sue the federal government to contest a regulation that impedes emergency physicians from receiving reasonable payment for out-of-network services.

At issue is a regulation from the Centers for Medicare & Medicaid Services (CMS) for out-of-network emergency physician payment, which outlines the "greatest of three" options. As written, this rule opens the door for insurers to use black box methods to determine physician payment without providing any means to verify the data.

"It's clear from the recent CMS ruling that, despite our best efforts, the insurance companies have more influence in terms of federal regulation than physicians do," said ACEP President Jay Kaplan, MD, FACEP. "The term 'health insurance company' is an oxymoron—they exist just to make profits for the shareholders, not for the health care of our patients."

CONTINUED *on page 4*

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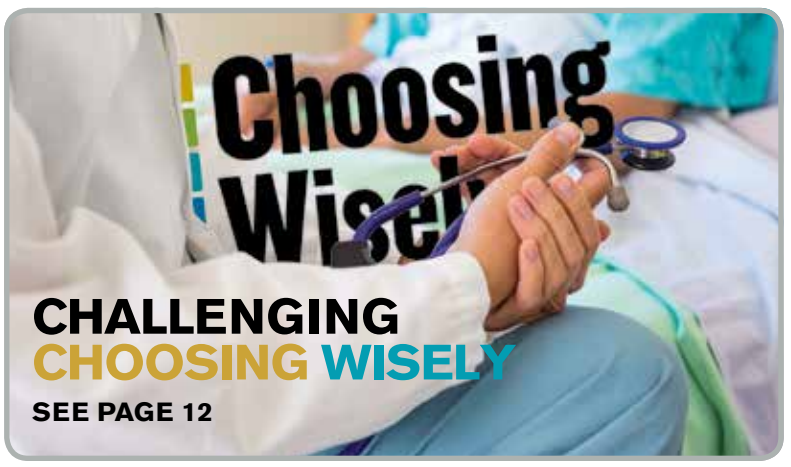

CHALLENGING CHOOSING WISELY
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NEWS FROM THE COLLEGE

UPDATES AND ALERTS FROM ACEP

ACEP Named as One of Nation's Top 50 Best Nonprofits to Work For

Out of the hundreds of thousands of nonprofit organizations nationwide, ACEP was named one of the 50 Best Nonprofit Companies to Work For (2016) by The NonProfit Times.

The sixth annual report, released in April, ranked ACEP at number 49.

The ranking reflects each nonprofit's strengths and opportunities, which were determined by a thorough assessment of all the organizations. This multipart process was designed to gather detailed data about each participating nonprofit via a questionnaire, confidential employee surveys, and sources outside the organization.

"This is a tremendous honor and a testament to the work environment we have created at ACEP," said Dean Wilkerson, ACEP's executive director. "It is also a strong reflection of the volunteer leadership and their ability to foster an atmosphere that promotes and attracts quality staff who are engaged, enthusiastic, and find strong quality of life at ACEP."

The report's data focused on eight core areas:

- Leadership and planning
- Corporate culture and communications
- Role satisfaction
- Work environment
- Relationship with supervisor
- Training, development, and resources
- Pay and benefits
- Overall engagement

Nonprofits on the list scored on average 90 percent on the survey compared with 76 percent by all nonprofits that did not make the list. The biggest disparities were found within the categories of leadership and planning (90 percent for nonprofits on the list compared to 71 percent for those not on the list) and corporate culture and communications (88 percent versus 71 percent).

"Being named one of the top 50 nonprofits to work for is something we are proud of," Mr. Wilkerson said. "This can be a great recruiting tool for us to continue to find the best and brightest to support our members' practice needs and goals as they continue to provide the highest quality care for their patients."

Observation Services Toolkit Now Available

Find resources on how to start emergency department observation services, billing and reimbursement information, and quality improvement tools in a new Observation Services Toolkit developed by members of the ACEP Observation Medicine Section and the Medicine Practice Committee.

The toolkit also includes several resources for starting an ED observation service, recommendations and policies, as well as sample guidelines and order sets.

Visit **www.acep.org/ObservationServicesToolkit** to access this members-only toolkit.

Board Candidates Announced

At its meeting in April, the ACEP Board of Directors was advised by ACEP Council Speaker **James M. Cusick, MD, FACEP,** of the slate of candidates created by the Council Nominating Committee for four available seats on the Board.

The Board of Directors provides day-to-day management and direction to ACEP and serves as its policy-making body. Board members are elected by the ACEP Council and serve three-year terms, with a limit of two consecutive terms. The President-elect also will be chosen by the Council and ultimately serve as ACEP President beginning in October 2017.

For the October 2016 election in Las Vegas, there are two incumbents and five new candidates on the Board of Directors ballot:

- **James Augustine, MD, FACEP** (Ohio, incumbent)
- **J.T. Finnell, MD, FACEP** (Indiana)
- **Kevin Klauer, DO, EJD, FACEP** (Ohio)
- **Debra Perina, MD, FACEP** (Virginia, incumbent)
- **Gillian Schmitz, MD, FACEP** (Government Services Chapter)
- **Matthew Watson, MD, FACEP** (Georgia)
- **James Williams, DO, FACEP** (Texas)

For the President-elect position, four current Board members announced their candidacy:

- **Hans House, MD, FACEP**
- **Paul Kivela, MD, FACEP**
- **Robert O'Connor, MD, FACEP**
- **John Rogers, MD, FACEP**

A Lengthy Fight

Since 2010, ACEP has had numerous meetings with federal officials, sent formal comments, and drafted guidance to voice the concerns of its almost 35,000 members that the "greatest of three" rule cannot be enforced and has the potential to be manipulated by insurers without a transparent database of usual, customary, and reasonable charges.

Receiving little to no concern for this issue from the CMS leadership, the ACEP Board of Directors decided at its April 2016 Board meeting to move forward with a lawsuit urging the courts to rescind this rule.

"Not only is it not fair, we believe it's a violation of the law," Dr. Kaplan said. "We want our members to know we are fighting for them and our patients.

"We did our best to be included in the decision making, but it is clear that the insurance companies had an open ear with the regulators, and the regulators had a deaf ear to us," he added.

In March 2010, shortly after the Patient Protection and Affordable Care Act (PPACA) was passed, CMS released an interim final rule addressing a number of provisions in the law—including patient protections, preexisting conditions, and out-of-network (OON) payment to emergency physicians.

ACEP and others, including the American Medical Association (AMA) and the American Hospital Association (AHA), sent formal comments criticizing the provision on OON payment for being unworkable, but because of tight start-up deadlines in the new law, CMS did not respond.

The issue for physicians and hospitals is the payment of the greatest of three options, described by CMS as: 1) the median in-network negotiated amount; 2) the amount the plan uses for OON services based on usual, customary, and reasonable charges; or 3) the amount paid by Medicare.

"Allowing insurance companies to use opaque payment methodologies for out-of-network services not only lowers reimbursement for emergency services but transfers massive amounts of financial liability to patients," said Jeff Bettinger, MD, FACEP, a member of the ACEP/Emergency Department Practice Management Association (EDPMA) Joint Task Force on reimbursement issues and Chair of the Work Group on out-of-network/balance billing issues.

"Currently, fee-for-service billing underwrites the vast majority of the practice of emergency medicine," Dr. Bettinger said. "Allowing insurance companies to pervert the language of the ACA to lower payments removes the foundation for fair compensation of emergency physicians for services that they perform."

ACEP leaders and staff had meetings with five successive directors of CMS's Center for Consumer Information and Insurance Oversight (CCIIO). At each meeting and in every correspondence, it was pointed out that, without guidance to insurers to use a transparent database where local charges could be verified, the regulation is unenforceable.

"It is a reminder of when the then attorney general of New York, Andrew Cuomo, took on UnitedHealthcare's subsidiary Ingenix for manipulating charge data to underpay physicians and the company was fined $300 million," said Barbara Tomar, ACEP's federal affairs director. "Those funds were used to set up an open, nonprofit database for charge data, FAIR Health," she added. "Unfortunately, the interim final rule basically re-creates the same environment for insurers to use black box methods to determine physician payment."

In 2014, ACEP prevailed on the CCIIO leadership, which hired a contractor to review emergency medicine concerns about significant payment reductions. Meanwhile, CCIIO leadership changed for a fifth time, and when the report was finally provided in July 2015, the results were disappointing. Instead of a quantitative analysis of claims data, the study produced a weak qualitative report with equivocal findings. Current CCIIO Director Kevin Counihan downplayed the report but agreed to continue to look into the concerns, asking for more data and more time. Then, in September 2015, ACEP representatives were told that his office would not intervene after all.

The final rule, released in November 2015, caught the emergency medicine community by surprise.

"It feels like the 10 meetings that ACEP had with CMS to address the deficiencies with these interim regulations never happened, and that the numerous letters from ACEP, the AMA, state medical societies, EDPMA, the AHA, and others were never given the slightest bit of credence," ACEP wrote in a letter to CMS dated December 2015.

Additionally, CMS noted that it will "consider ways to prevent providers from balance billing" despite the PPACA being very clear that balance billing is a permitted practice.

The December 2015 letter to CMS cautioned, "By adding language promoting a prohibition against balance billing for these claims in the face of a set of benefit standards that effectively permit plans to pay whatever benefits they choose, you have exceeded the authority provided by Congress in the PPACA, which recognized the right of out-of-network providers to receive the reasonable value of their services through, if necessary, balance billing."

The letter, which has yet to garner a response from CMS, was the last straw prior to ACEP's decision to take the matter to federal court.

"It feels like the 10 meetings that ACEP had with CMS to address the deficiencies with these interim regulations never happened, and that the numerous letters from ACEP, the AMA, state medical societies, EDPMA, the AHA, and others were never given the slightest bit of credence," ACEP wrote in a letter to CMS dated December 2015.

"In light of the EMTALA obligation to provide emergency care regardless of payment, these Final Regulations, by allowing plans to unilaterally determine the reasonable value of these services, encourage an unconstitutional taking of physician and hospital services," the letter stated. "In the plainest language we can use: these proposed Final Regulations pander to the profit motives of health plans, and they are biased and ill advised. In the strongest terms possible, we recommend that you reconsider this language in the Final Regulations, published or not, before you do irreparable damage to the emergency care safety net on which more than 130 million citizens a year, and health plans, for that matter, rely."

CMS Rule Affecting Care

Dr. Kaplan said the CMS rule also affects emergency physicians' ability to access other specialists as it fosters the creation of narrow networks of medical providers, making it more likely that patients will seek care out of network and receive additional bills from medical providers.

In a poll set to be released by ACEP in May, emergency physicians overwhelmingly said health insurance companies are misleading patients by offering "affordable" premiums for policies that actually cover very little.

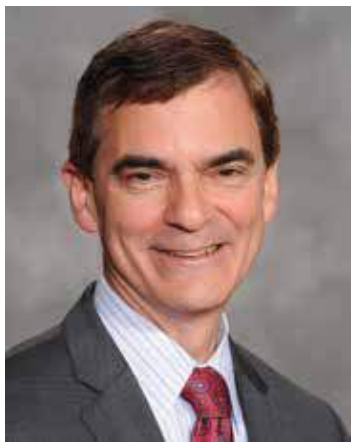
Eight in 10 emergency physicians said they are seeing patients with health insurance who have sacrificed or delayed medical care because of high out-of-pocket costs, co-insurance, or high deductibles. This is more than a 10 percent increase over six months ago when emergency physicians were asked the same question. (See page 5 for more poll results.)

ACEP is currently finalizing the legal complaint against the federal government. After the complaint is filed in federal court, possibly as early as May, the process could take several months. Funding for the legal complaint and early stages of this litigation has been underwritten by the Emergency Medicine Action Fund.

"ACEP will never be able to match the enormous war chest that insurance companies have devoted to their efforts to lower reimbursement for emergency services and increase their profits," Dr. Bettinger said. "But ACEP will never back down from our efforts to protect the specialty of emergency medicine and protect the safety net of medical care that Americans have come to depend on. "

INSURED BUT NOT COVERED

8 in 10 emergency physicians say patients sacrifice care because of out-of-pocket costs



"Insurance companies must be transparent about how they calculate payments and provide fair coverage for their beneficiaries and pay reasonable charges rather than setting arbitrary rates that don't even cover the costs of care. They are exploiting federal law [EMTALA] to reduce coverage for emergency care, knowing emergency departments have a federal mandate to care for all patients regardless of their ability to pay."

—Jay Kaplan, MD, FACEP

WASHINGTON, D.C.—Nine in 10 emergency physicians responding to a new poll said that health insurance companies are misleading patients by offering "affordable" premiums for policies that actually cover very little. Nearly all (96 percent) said that emergency patients do not understand what their policies cover for emergency care.

"Each day, emergency physicians are seeing patients who have paid significant co-pays, up to $400 or more, for emergency care," said Jay Kaplan, MD, FACEP, President of ACEP. "For many people, this is too much of a financial burden and will deter them from seeking emergency care. Patients should not be punished financially for having emergencies or discouraged from seeking medical attention when they are sick or injured. No plan is affordable if it abandons you when you need it most."

According to the poll, which was conducted in the United States by Marketing General Incorporated on behalf of ACEP, eight in 10 emergency physicians are seeing patients with health insurance who have sacrificed or delayed medical care because of high out-of-pocket costs, co-insurance, or high deductibles. This is more than a 10 percent increase over six months ago when emergency physicians were asked the same question.

In addition, Dr. Kaplan said that health insurance companies are creating narrow networks of medical providers to save money, making it more likely that patients will be out of network. They have created a situation where patients are receiving additional bills from medical providers.

"Insurance companies must be transparent about how they calculate payments and provide fair coverage for their beneficiaries and pay reasonable charges rather than setting arbitrary rates that don't even cover the costs of care," said Dr. Kaplan. "They are exploiting federal law [EMTALA] to reduce coverage for emergency care, knowing emergency departments have a federal mandate to care for all patients regardless of their ability to pay. Because of this, when plan reimbursements do not cover the cost of providing services, physicians must choose between billing patients for the difference or going unpaid for their services. The vast majority of emergency physicians and their groups prefer to be 'in network.'"

According to the poll of 1,924 emergency physicians conducted in April 2016:

- 87 percent believe insurance companies should pay the in-network rate if an emergency patient has no access to an in-network facility or physician.
- Nearly two-thirds (61 percent) said most health insurance companies provide less-than-adequate coverage for emergency care visits to their beneficiaries.
- More than 60 percent of emergency physicians have had difficulty in the past year finding in-network specialists to care for patients, with a quarter of them saying it happens daily.
- 91 percent of emergency physicians said a new rule by the Centers for Medicare & Medicaid Services (CMS) exempting health insurance companies from meeting minimum standards—to ensure adequate networks—would make finding specialists and follow-up care for patients more difficult.
- Of the 934 emergency physicians who were knowledgeable about reimbursement issues, more than 78 percent said that insurance companies have reduced the amount they reimburse for emergency care.
- 79 percent of the emergency physicians who were familiar with the FAIR Health database said it is the best mechanism available to ensure transparency and to make sure insurance companies don't miscalculate payments.

Dr. Kaplan said health insurance companies have a long history of not paying for emergency care and of actively discouraging their customers from seeking it. For example, UnitedHealthcare was sued successfully by New York state for fraudulently calculating and significantly underpaying doctors for out-of-network medical services. They used the Ingenix database, which forced patients to overpay up to 30 percent for out-of-network physicians. The company—which at the time was led by the current acting head of CMS, Andy Slavitt—paid the largest settlement to New York state and the American Medical Association. Part of that settlement created the FAIR Health database.

"Just because you have health insurance doesn't mean you have access to medical care," said Dr. Kaplan. "State and federal policy makers need to ensure that health insurance plans provide adequate rosters of physicians and fair payment for emergency services. We encourage all patients to investigate what their health insurance policy covers and demand fair and reasonable coverage for emergency care."

The Out-of-Network and Balance Billing Debate

An update from the Joint Task Force of ACEP and EDPMA

BY WILLIAM JAQUIS, MD, FACEP, AND ED GAINES, JD, CCP

"A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty."

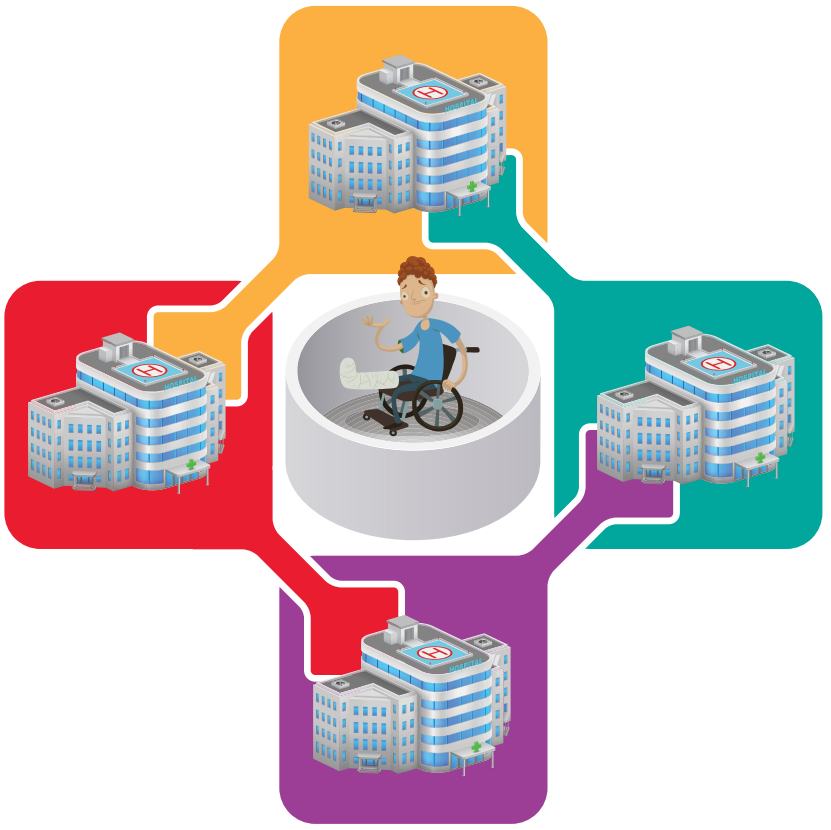
—Sir Winston Churchill

One of the hottest health care topics of the last several years has been the seismic shift in financial responsibility from the health insurance companies (health plans) to the patients due to many factors, including the Patient Protection and Affordable Care Act. Consumers are more cognizant of their health care costs than ever before. The issues associated with so-called "surprise bills" have also been a popular subject in the national and local media and with consumer groups like the Consumers Union.

While several states that have addressed surprise bills have been careful to exclude those of emergency physicians (recognizing that the ED is different because of the EMTALA mandate and nature of care), the issues of patients being surprised with out-of-network (OON) bills when they are treated at an in-network emergency department have placed emergency physicians squarely in the debate.

With several states—Florida, Georgia, Hawaii, Louisiana, Maryland, New Mexico, New Hampshire, Ohio, Pennsylvania, Rhode Island, Tennessee, and Washington—either considering actual legislation, forming study commissions, and/or actively discussing placing limits on or eliminating OON balance billing, ACEP's President at the time, Michael Gerardi, MD, FACEP, requested the formation of the Joint Task Force (JTF) with the Emergency Department Practice Management Association (EDPMA). The JTF first met in person at ACEP15 and has continued under the current ACEP President, Jay Kaplan, MD, FACEP—and the timing could not have been more critical.

In October 2015, EDPMA's board of directors created a new professional position, state government relations director, to assist members and to coordinate with EDPMA's State Regulatory and Insurance Committee and the ACEP state chapters on these issues.



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ACEP/EDPMA JTF Strategies White Paper

In conjunction with the ACEP Reimbursement Committee Work Group 2 (which has jurisdiction regarding health plan payment disputes and issues), a white paper was prepared on OON and balance billing. Both the ACEP Board and EDPMA executive committee have officially adopted the strategies white paper. The purpose is "to assist and inform ACEP, ACEP state chapters, and EDPMA leadership regarding OON reimbursement challenges and threats, and to assist state leaders who may propose or may need to respond to proposed balance billing/OON benefit legislation in 2016 and beyond."

Essential Recommendations From the White Paper

As leaders of this initiative, we believed that our mission on behalf of the College members, stakeholders, and EDPMA members was to describe legislative efforts in the past, highlighting issues of concern and areas of success. Several recommendations were made. First, any law restricting OON balance billing should contain a "minimum benefit standard" (MBS). Connecticut's law requires an MBS of the 80th percentile of charges "... *as reported in a benchmarking data base maintained by a nonprofit organization specified by the Insurance Commissioner*" (emphasis in the original). Connecticut's law will be effective June 1, 2016, and should serve as an important reference point. Second, the strategies white paper recommended the FAIR Health (FH) charges database as the reference for "usual and customary charges." FH now contains more than 19 billion charges from more 60 contributors, which include health plans, Blue Cross Blue Shield plans, third-party administrators, and self-insured plans. (Note: the FH charges database is recommended and not the "relative value" database as it is not supported by the number and breadth of charges as the charges database.)

Alternative Dispute Resolution

Should there be an alternative dispute resolution (ADR) process? One of the most difficult political issues in the OON debate is how to remove the patient from a potential dispute between the emergency physicians and the health plans over the rate determined by the plans—again made more difficult when the patient is treated at an in-network hospital and by OON emergency physicians. The Connecticut MBS has the beauty of being simply stated and administered, and since it provides the minimum standard, there is no reason for an ADR process. In exchange for the MBS, emergency physicians give up any balance billing. If, as in the recently enacted New York or expected Florida legislation, the health plans determine the "reasonable reimbursement" (even if according to objective criteria), then ADR may be needed. Key highlights and recommendations for ADR (if it is unavoidable) are enumerated in the strategies white paper document.

Conclusion

We would like to end this discussion with a call to arms to the emergency medicine specialty—we need more than our fairly small number of volunteers and professional staff to continue this David versus Goliath battle with the health plans with their unlimited resources, public relations machines, and great leverage over the current presidential administration. The newly created federal Center for Consumer Information and Insurance Oversight (CCIIO) actually threatened, in a final rule in November 2015, to ban OON specifically for emergency physicians by federal rule—despite more than five years of direct dialogue with CCIIO and good-faith efforts to reach reasonable solutions. (See "ACEP Stands Up to Insurer Billing Practices" on page 1 for more on ACEP's dialogue with CCIIO.) While this immediate federal threat perhaps has diminished as our advocacy efforts may have positive impacts, the state-level threats at more than a dozen states have not subsided. Frankly, we need your time and your treasure to continue this fight, recognizing that both ACEP and EDPMA and their members have stepped up in significant and important ways. Emergency physicians and their stakeholders don't complain or play the victim—they step up and figure out what to do. That's who we are. Now join us in that great effort.

DR. JAQUIS is the ACEP Board liaison to the Reimbursement Committee and JTF.
DR. GAINES is chair of JTF and an EDPMA co-founder and executive committee member.

ACEP President Reaches Beyond EM Community to Get Out Message on Balance Billing

Balance billing is becoming an increasingly common topic for health care reform conversations. High-deductible health plans and narrow provider networks are exacerbating balance billing issues—and increasing balance billing complaints from patients. However, balance billing creates a unique set of challenges for emergency physicians, who are required by EMTALA to treat all patients regardless of their ability to pay and whose patients are not always able to ensure a provider is in network before seeking emergency care.

In response to the article "20 Things to Know About Balance Billing" in *Becker's Hospital Review*, ACEP President Jay A. Kaplan, MD, FACEP, contacted Becker's to provided additional insights into the balance billing issue. A few of his key points were:

1. Patients feel as though they receive surprise bills (the balance not paid by insurance), but Dr. Kaplan believes what should be surprising is their lack of coverage.
2. Insurers are driving providers out of network with the low reimbursement. The insurance company then passes out-of-network rates on to their insured customers.
3. A recent ACEP poll noted that seven out of 10 emergency physicians had seen patients who had delayed seeking care due to out-of-pocket expenses.

Visit **www.beckershospitalreview.com** to read the full list of "20 Things to Know About Balance Billing," as well as Dr. Kaplan's "5 More Thoughts on Balance Billing."

ACEP ON THE HILL

The Path to Reelection

Rep. Raul Ruiz seeks another term in the U.S. House

BY L. ANTHONY CIRILLO, MD, FACEP

U.S. Rep. Raul Ruiz, MD, grew up in the community of Coachella, California, where both of his parents were farmworkers.

Dr. Ruiz achieved his lifelong dream of becoming a physician through public education. After graduating magna cum laude from the University of California, Los Angeles, he went on to Harvard University, where he earned his MD as well as an MPH from the John F. Kennedy School of Government and a second MPH from the T.H. Chan School of Public Health, becoming the first Latino to earn three graduate degrees from Harvard University. He completed his residency in emergency medicine at the University of Pittsburgh and a fellowship in international emergency medicine at Brigham and Women's Hospital in Boston.

Dr. Ruiz returned home after completing his medical training and began working as an emergency physician at Eisenhower Medical Center in Rancho Mirage, California. He started a premedical mentorship program for young aspiring doctors, which has grown to include more than 100 local students. The program became part of the University of California, Riverside, School of Medicine, where Dr. Ruiz served as a senior associate dean.

In 2010, Dr. Ruiz flew to Haiti immediately following the earthquake and served as the medical director for the J/P Haitian Relief Organization. The U.S. Army's 82nd Airborne Division awarded him the Commander's Award for Public Service for his work.

In 2012, Dr. Ruiz beat some very long odds and defeated a 14-year incumbent to win the California District 36 U.S. House seat.

Dr. Ruiz is married and lives with his wife, Monica, and their twin girls, Skye and Sage, in Palm Desert, California.

ACEP Now *caught up with Dr. Ruiz to talk about his work in the U.S. House and about his thoughts on the experience so far.*

LAC: What is the biggest difference between running for the U.S. House as an incumbent rather than as an "outside" challenger?

RR: The first big difference is that people actually answer my calls now! The most important difference really is that I now have a record of advocacy for my constituents. My record in Congress shows that I really kept my word when I promised that I would come back to the Coachella Valley and work every day on behalf of my constituents and the American people. The reason I ran for Congress in the first place was to make a difference in the lives of people that I represent and serve. Every day in Washington, I never forget about how we approach problems in

CONTINUED *on page 8*

What is NEMPAC?

NEMPAC is a critical tool to help ACEP promote our legislative goals and express the concerns of emergency medicine to members of Congress. It is the financial vehicle through which ACEP members can support the election or reelection of federal candidates who share their commitment to emergency medicine. NEMPAC pools smaller donations from individual ACEP members, donating them in one larger and more impressive contribution on behalf of the entire profession.

Under federal law, associations may establish and administer separate segregated funds known as political action committees (PACs) to pool the voluntary contributions of their members. PACs are a legal, transparent, federally monitored means of contributing to candidates. Today, there are more than 4,000 federally registered PACs in the United States.

Why is NEMPAC important to ACEP and to its members?

A NEMPAC's growth in size and presence in Washington, D.C., is increasingly important as Congress continues to address many issues facing emergency medicine such as Medicare and Medicaid reimbursement; medical liability reform; implementation and/or revisions to the Affordable Care Act; and funding for graduate medical education, trauma care, and EM research, just to name a few. Elected officials are frequently asked to make decisions between competing interests. We must be prepared to support legislators and candidates who understand and advocate for emergency medicine issues.

How does NEMPAC spend the money it receives from contributors?

A All personal contributions received from ACEP members to NEMPAC are considered "hard dollars." NEMPAC uses these hard dollars only for the purpose of making political contributions to US Senate and House candidates, national parties, and other PACs sponsored by federal legislators. NEMPAC does not donate to presidential candidates or to candidates for state or local office.

How does NEMPAC pay for administrative expenses?

A NEMPAC uses a combination of ACEP general operating funds and corporate contributions donated to NEMPAC known as "soft dollars."

Who decides which candidates receive NEMPAC donations?

A NEMPAC donors do. The NEMPAC Board of Trustees, composed of ACEP members, approves a candidate budget for each election cycle. Evaluation criteria are based on the candidate's or member's support of ACEP's legislative priorities. Other factors considered include the member's committee assignment, leadership position, and difficulty of the election campaign. We also rely on the input of ACEP state chapter leadership, individual 911 Network members, and NEMPAC supporters when evaluating open-seat and challenger races.

How can I personally contribute to NEMPAC?

A An ACEP member has several contribution options: 1) Write a personal check; 2) contribute by Visa, MasterCard, or American Express; 3) contribute online at www.acep.org/nempac; or 4) sign up for an installment plan on a monthly, quarterly, or semi-annual basis on a contribution form or online.

Can a group practice make a contribution to NEMPAC?

A There are many options for ACEP members within a group practice and the group collectively to donate to NEMPAC, including payroll deduction. A description of the options is available on the NEMPAC website and by contacting Jeanne Slade, NEMPAC director, at 800-320-0610.

Where can I find additional information about NEMPAC?

A *Visit* ***www.acep.org/nempac*** *or contact Jeanne Slade, NEMPAC director, at jslade@acep.org or 202-728-0610.*

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the ED, focusing on using objective data to diagnose the problem and then applying the right treatment to fix a problem. As a member of Congress, I try to bring that approach every day to understanding and fixing the problems that face our country. To me, that's the biggest difference between an EM doc like me and some career politicians who just want to get elected again.

LAC: What are the key legislative issues that you are focusing on this session?

RR: My primary work this session has been on veterans' health care access through the House Committee on Veterans' Affairs. I believe we can transform the culture of the VA medical center system so that we put the veterans' health and their health care outcomes at the center of the VA system. I also have continued the fight to protect Medicare, as we have to ensure that the Medicare system remains viable for our next generation of senior citizens. Lastly, I have been working to ensure that women have access to reproductive care and that physicians who provide that care are protected from any law that would interfere with the physician-patient relationship.

LAC: What do you see as potential solutions to the hyper-partisanship that exists within Congress?

RR: First, there has to be a change in how Congress behaves. We have to push for a culture of civility and statesmanship and reduce the level of childish "gotcha" rhetoric. My approach in working to do "the right thing" is to look for the common ground as I work with other members of the House on both sides of the aisle. I may disagree with someone on 80 percent of the issues that come before us in Congress, but I choose to focus on the 20 percent that I do agree with someone on and work with them on those issues. A great example of this is my work with Rep. Joe Heck on legislation that would help educational institutions that serve Hispanic populations foster and increase the number of students choosing the premed track. This program would not only help individual students but would strengthen the diversity of our health care workforce. The added bonus is that each of the graduates from these programs becomes a role model and mentor for future students to look up to and emulate.

LAC: What are you most and least proud of in your political career?

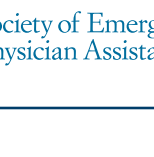
RR: I would have to say that I am most proud of my work in serving on the Veterans' Affairs Committee and my service to our veterans and their families. One of the very real programs that makes me very proud is the creation of a "Veterans University" in my district. This project is a collaboration of public and private companies and agencies that work together to make sure that veterans and their families have access to all the benefits that they have earned. This program is a first of its kind and didn't require any federal funds to make happen. It's a great example of just taking care of each other right at home. I truly believe that, as a leader, you don't have to wait for Congress to act or for Congress to get its act together. As far as my least proud moment, I would have to say that it was being associated with an organization (Congress) that shut itself down when we had an obligation to continue to do the work of the people of this country.

LAC: How can emergency physicians find out more about your campaign and the issues you are working on in Congress?

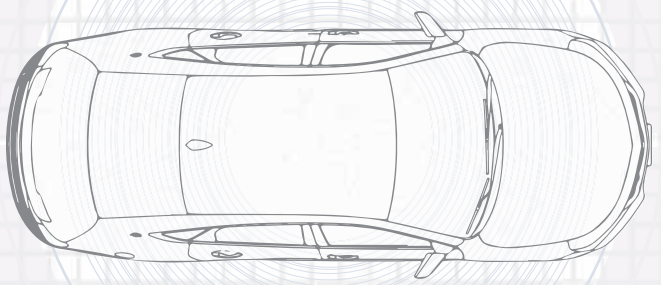
RR: To reach out to my campaign, go to www.drraulruiz.com or call 760-360-2495. To follow my work in Congress and learn more about the issues, check out my Facebook page, **www.facebook.com/CongressmanRaulRuizMD,** or go to my official website, **www.ruiz.house.gov.**

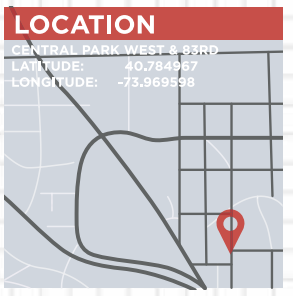
One of the very real programs that makes me very proud is the creation of a "Veterans University" in my district. This project is a collaboration of public and private companies and agencies that work together to make sure that veterans and their families have access to all the benefits that they have earned.

—U.S. Rep. Raul Ruiz, MD



DR. CIRILLO is director of health policy and legislative advocacy for US Acute Care Solutions/EMP in Canton, Ohio.





CRASH DATA

- DELTA V/CHANGE IN VELOCITY:	45 MPH/72 KPH
- DIRECTION OF IMPACT:	SIDE
- MULTIPLE IMPACTS:	YES
- ROLLOVER STATUS:	NO
- AIR BAGS:	FRONT DEPLOYED
- INJURY SEVERITY PREDICTION:	HIGH

> “ISP tells us the likelihood of severe injury.”
>
> — Stewart Wang, M.D., Ph.D., *Director, University of Michigan International Center for Automotive Medicine*

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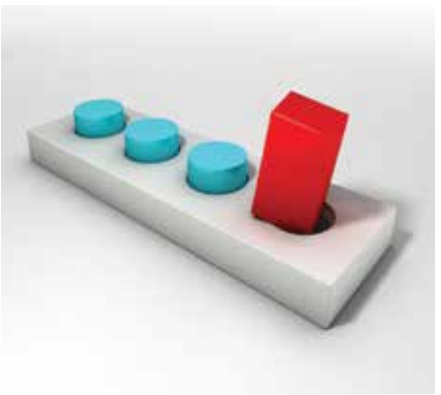
The 2016 NRMP

Emergency medicine remains one of the most popular specialties

BY HANS HOUSE, MD, FACEP

On March 18, 2016, medical students across the country learned of their future ACGME residency from the National Resident Matching Program (NRMP). For 1,894 of them, that residency is emergency medicine (see Table 1; one slot was listed as "offered" in error, so only 1,894 EM slots were available in 2016). However, many others may have been disappointed with their results because EM filled every single one of its slots. (There were 2,476 applicants for those EM slots.) In addition, 302 of the 307 osteopathic EM slots were filled via the American Osteopathic Association match on February 8, 2016. This is the second time that EM has filled all of its slots in the NRMP match, with the last time being 2012. Back then, there were 1,668 slots offered in EM. So despite an increase of 227 slots in four years, EM was still



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able to fill all of them without going through the Supplemental Offer and Acceptance Program (SOAP), which has replaced the "scramble" that previously existed for those who did not match and for programs with unfilled slots.

This is great news for EM residency programs, which are landing the best and brightest medical students—the future of the specialty is ensured by this enriched talent pool—but this is bad news for current medical students who have an interest in EM. It is getting tougher every year to match in EM. In 2015, the average USMLE Step 1 score of a student who matched to EM was 230, up from 219 in 2006.

EM does not have residency slots available for all those students who wish to pursue our specialty. Funding for new graduate medical education (GME) slots in general has become very scarce. The federal government has no interest in spending money for new slots. A few local and state governments have provided funds, especially focusing on specific needs in their state. Interestingly, most of the new growth in residency slots has come from private investment. Health systems, large contract management groups, and individual hospitals have determined that their best chance of recruiting physicians for employment is to create and fund their own residencies. This does slowly grow the supply side of residency training, but it also moderates the GME funding crises and makes government action less likely. With the recent strong growth in the number of medical schools and medical school class size, the demand side of the residency training equation is getting larger annually, with medical students caught in the middle and perhaps waiting in a long line of qualified, newly minted physicians awaiting an opportunity to train.

DR. HOUSE is a professor in the department of emergency medicine at The University of Iowa in Iowa City.

Table 1. PGY-1 Residency Positions Offered and Number Filled, 2012–2016

SPECIALTY	2016 OFFERED	2016 FILLED	2015 OFFERED	2015 FILLED	2014 OFFERED	2014 FILLED	2013 OFFERED	2013 FILLED	2012 OFFERED	2012 FILLED
Anesthesiology	1,127	1,072	1,094	1,066	1,049	1,024	1,000	967	919	897
Child Neurology	116	109	104	95	92	80	91	84	75	70
Dermatology	21	21	22	22	20	20	23	23	23	23
Emergency Medicine	1,895	1,894	1,821	1,813	1,786	1,772	1,743	1,740	1,668	1,668
Emergency Medicine—Family Medicine	4	4	4	4	4	4	4	4	4	4
Family Medicine	3,238	3,083	3,195	3,039	3,109	2,977	3,037	2,914	2,740	2,591
Family Medicine—Preventive Medicine	6	6	5	5	5	5	6	5	6	4
Internal Medicine (Categorical)	7,024	6,938	6,770	6,698	6,524	6,465	6,277	6,242	5,277	5,226
Medicine—Anesthesiology	5	5	6	6	7	5	0	0	0	0
Medicine—Dermatology	6	6	6	6	6	6	8	8	9	8
Medicine—Emergency Medicine	29	27	28	27	28	28	27	27	26	22
Medicine—Family Medicine	2	2	2	2	4	4	4	4	4	4
Medicine—Medical Genetics	1	0	4	4	3	0	2	1	1	1
Medicine—Neurology	0	0	1	0	1	1	2	1	2	2
Medicine—Pediatrics	386	384	380	379	374	362	366	363	362	344
Medicine—Preliminary (PGY-1 Only)	1,918	1,818	1,928	1,805	1,905	1,825	1,883	1,809	1,861	1,738
Medicine—Preventive Medicine	7	6	7	7	7	7	7	7	5	4
Medicine—Primary	328	325	341	339	335	333	335	331	311	300
Medicine—Psychiatry	23	23	21	21	18	16	17	16	20	18
Interventional Radiology (Integrated)	3	3	0	0	0	0	0	0	0	0
Medical Genetics	0	0	0	0	0	0	1	0	0	0
Neurodevelopmental Disabilities	2	2	1	1	0	0	1	1	1	0
Neurological Surgery	216	214	210	208	206	206	204	203	196	194
Neurology	443	440	404	396	380	373	339	331	291	289
Nuclear Medicine	0	0	0	0	0	0	1	0	0	0
Obstetrics-Gynecology	1,265	1,257	1,255	1,255	1,242	1,234	1,237	1,234	1,222	1,213
OB/GYN—Preliminary (PGY-1 Only)	22	11	21	14	22	13	22	14	18	10
Orthopedic Surgery	717	717	703	703	695	693	692	691	682	682
Otolaryngology	304	302	299	298	295	295	292	290	285	283
Pathology	579	549	605	568	597	546	583	562	521	466
Pediatrics (Categorical)	2,689	2,675	2,668	2,654	2,640	2,627	2,616	2,606	2,475	2,443
Pediatrics—Anesthesiology	8	7	9	9	8	7	8	7	7	7
Pediatrics—Emergency Medicine	7	7	9	9	9	9	7	7	7	7
Pediatrics—Medical Genetics	14	14	15	15	10	7	9	6	7	6
Pediatrics—P M & R	4	4	1	1	3	3	3	3	2	2
Pediatrics—Preliminary (PGY-1 Only)	43	37	36	30	40	30	44	37	55	48
Pediatrics—Primary	79	79	74	74	75	75	83	83	67	64
Peds/Psych/Child Psych	20	20	19	19	19	18	19	19	18	17
Physical Medicine & Rehab	112	110	107	107	96	96	87	87	86	86
Plastic Surgery (Integrated)	152	151	148	144	130	130	116	115	101	97
Preventive Medicine	1	1	0	0	0	0	0	0	4	2
Psychiatry (Categorical)	1,384	1,373	1,353	1,339	1,322	1,291	1,297	1,282	1,117	1,080
Psychiatry—Family Medicine	10	10	10	10	10	10	11	11	10	8
Psychiatry—Neurology	3	3	3	2	4	4	2	2	2	1
Radiation Oncology	15	15	17	15	18	18	18	18	15	15
Radiology—Diagnostic	151	141	133	120	137	121	147	135	135	124
Surgery (Categorical)	1,241	1,239	1,224	1,222	1,205	1,198	1,180	1,176	1,146	1,143
Surgery—Preliminary (PGY-1 Only)	1,308	843	1,296	821	1,286	837	1,278	819	1,221	737
Thoracic Surgery	38	37	35	35	33	33	26	26	20	20
Transitional (PGY-1 Only)	838	796	842	790	868	833	937	908	941	915
Vascular Surgery	56	56	57	55	51	46	46	45	41	41
TOTALS	**27,860**	**26,836**	**27,293**	**26,252**	**26,678**	**25,687**	**26,138**	**25,264**	**24,006**	**22,924**

Source: National Resident Matching Program, Results and Data: 2016 Main Residency Match®. National Resident Matching Program, Washington, DC. 2016.

EMF RESEARCH REDUCING PULMONARY COMPLICATIONS IN SEPSIS

Study explores lactate monitoring as a means to reduce pulmonary complications

BY MATTHEW R. DETTMER, MD

Editor's Note: *This is the first installment of an ongoing series highlighting researchers sponsored by the Emergency Medicine Foundation (EMF) and illustrating the impact EMF-funded research is having on emergency medicine.*

STUDY TITLE: Sepsis-associated pulmonary complications in emergency department patients monitored with serial lactate: an observational cohort study[1]

AUTHORS: Matthew R. Dettmer, MD, Nicholas M. Mohr, MD, MS, and Brian M. Fuller, MD, MSCI

RESEARCHER INFORMATION: Dr. Dettmer completed residency training in emergency medicine at the Washington University School of Medicine/Barnes-Jewish Hospital residency program in St. Louis. He is presently in his final year of fellowship in critical care medicine at Cooper University Hospital in Camden, New Jersey. He identified early sepsis resuscitation as an area of interest given its high mortality rate and high prevalence in the emergency department and performed the present study to identify the real-world implications of serial lactate monitoring of patients with severe sepsis and septic shock. He hopes to continue this research interest as he continues his career as an attending physician who divides his clinical time between the ED and the intensive care unit.

Dr. Mohr is an attending physician in the departments of emergency medicine and anesthesia at the Roy J. and Lucille A. Carver College of Medicine at the University of Iowa in Iowa City. He contributed to acute respiratory distress syndrome (ARDS) adjudication and writing of the final manuscript.

Dr. Fuller is an attending physician in the departments of emergency medicine and anesthesiology at the Washington University School of Medicine in St. Louis. He served as research mentor and, with Dr. Dettmer, conceived study design, performed data analysis and interpretation, performed ARDS adjudication, and contributed to writing of the final manuscript.

STUDY BACKGROUND: Severe sepsis and septic shock are disease states commonly encountered in the ED. Prior studies have demonstrated the importance of quantitative resuscitation in the early resuscitation of these critically ill patients. Patients with severe sepsis and septic shock are at high risk for a number of complications, including development of ARDS. There are limited data on early interventions for the prevention of ARDS (including interventions initiated in the ED). The goal of the study was to examine the association between serial lactate monitoring and the incidence of ARDS within five days of hospital admission.

STUDY DESIGN: We performed a retrospective cohort study of patients presenting to the ED with severe sepsis and septic shock with an initial lactate value greater than 4 mmol/L. Patients were dichotomized based on the use of serial lactate monitoring as part of their resuscitation. A total of 243 enrolled patients were assigned to either serial lactate monitoring (SL, n=132) or no serial lactate monitoring (NL, n=111). The primary outcome of interest was a composite of two major pulmonary complications: 1) development of ARDS and 2) new respiratory failure after hospital admission. Patients developing ARDS were also analyzed separately, and an *a priori* subgroup of patients receiving mechanical ventilation while in the ED was evaluated for progression to ARDS.

Patients with severe sepsis and septic shock are at high risk for a number of complications, including development of ARDS. There are limited data on early interventions for the prevention of ARDS (including interventions initiated in the ED).

RESULTS: Twenty-eight patients (21 percent) in the SL group and 37 patients (33 percent) in the NL group developed the primary outcome (P=0.03). Multivariate analysis demonstrated an association between the NL group and the development of major pulmonary complications (adjusted odds ratio, 2.1; 95% CI, 1.15–3.78). Mechanical ventilation in the ED was independently associated with ARDS (adjusted odds ratio, 3.5; 95% CI, 1.8–7.0). In the subgroup of patients mechanically ventilated in the ED (n=97), those who subsequently developed ARDS received higher tidal volumes when compared to patients who did not develop ARDS (8.7 mL/kg predicted body weight [interquartile range 7.6–9.5] versus 7.6 [interquartile range 6.8–9.0]; P<0.01).

PROJECTED IMPACT: Our data extend the work on ED-based quantitative resuscitation by showing that important pulmonary complications can be prevented by interventions performed in the ED. The projected impact of this and related studies is twofold. First, our work supports the idea that monitoring serial lactates as a method to quantify the effectiveness of early resuscitation is a valuable practice and associated with improved outcomes. The second area of impact is related to ventilator management in the ED. We demonstrated improved outcomes for ED patients who were managed with lung-protective strategies. We hope that this will encourage providers to be conscientious about early ventilator management. While these data are drawn from retrospective studies, we acknowledge their limitations and hope that future work in prospective trials will support these early findings.

Reference

1. Dettmer MR, Mohr NM, Fuller BM. Sepsis-associated pulmonary complications in emergency department patients monitored with serial lactate: an observational cohort study. *J Crit Care.* 2015;30(6):1163-1168.

DR. DETTMER is a critical care medicine fellow at Cooper University Hospital in Camden, New Jersey.

CHALLENGING CHOOSING WISELY

Continuing the discussion on implementing *Choosing Wisely* at the bedside

BY KEVIN KLAUER, DO, EJD, FACEP

Editor's Note: *We received many responses to February's article, "Time to Walk the Walk:* Choosing Wisely *and knowledge translation" by Dr. Klauer. Here are a few of the comments from the emergency medicine community.*

I ENJOYED READING YOUR ARTICLE AND AGREE! For me, the challenge remains how do we not give a patient what he/she wants (regardless of need!) and still obtain 5/5 on our patient satisfaction scores?

Patients expect antibiotics for everything and new exciting scans and tests, even if the onset of the symptoms is exactly five minutes longer than their door-to-provider time. We expect them to pay a ridiculous copay in credit card or cash at the time they are seen. (My employer's plan has a $250 copay for every ED visit.) Then we "refuse" to give them what they want, and we expect them to be happy for it and give us positive reviews? I have worked in several large EM groups and have heard numerous clinicians state they have dramatically increased their patient satisfaction scores by 1) ordering every scan patients wants and 2) giving patients any prescription they want regardless of indication, medical necessity, or need.

For many years, providers were able to tell patients, "This is not in your best interest and can even be detrimental to your health," "Studies have shown …" when discussing tests, treatments, scans, and prescriptions. "No, ma'am, your child does not need a CT scan of his head after being shot in the head with a Nerf gun from across the room. His risk of cancer from the scan far outweighs any potential benefit." You can explain and produce research until the cows come home, but Mom is in the ED to get a CT scan, and sending her home without it leads to an unsatisfied patient experience, resulting in patient complaints and poor satisfaction scores, and directly effects both your income and the income of your employing institution.

My family went out to eat last night. If the server had refused to serve the food I ordered because I am expanding at the waistline and hundreds of studies and years of research had shown this particular dish to be detrimental to my health, I likely would have refused to pay the bill, skipped the tip, and posted something unflattering on a website reviewing that establishment. Let's be honest: Most patients are not in the ED to hear about what is best for them or what a study shows. Patients are in the ED to get what they want. And if they don't, they will be unsatisfied with their visit, period. If IV vancomycin "cured my sniffles in 30 seconds flat last time I was here," then they expect IV vancomycin at every visit for those complaints.

Until this issue is resolved, providers will read articles like this, nod their heads in agreement, and then sadly ignore these recommendations in favor of income and employment security.

—Joel

IN ORDER TO IMPLEMENT THESE RECOMMENDATIONS, every physician or health care provider must feel assured that he/she isn't missing a red flag or overlooking a finding that would indeed indicate the utilization of one of these tests. However, in order to achieve this degree of assurance, one must perform a good history and physical examination. That doesn't happen nowadays.

The "history" consists of a few perfunctory questions asked from a computer template that often has little association with the top two or three conditions in the patient's differential diagnosis. It is typically acquired without the physician ever looking at the patient and without giving the patient an opportunity to interject a comment.

The physical exam—if done at all—consists of a "stethoscope tap," in which the diaphragm of the scope is placed on the right and left upper chest for less than one second in each location, and the "belly pat," in which one hand is placed on the patient's abdomen—usually with the patient fully clothed, without even indenting the contour of the abdomen. In fact, you can find more and more physicians who pride themselves on not doing a physical examination, claiming that a physical exam is a dinosaur and no longer pertinent in a digital, technologically advanced world. I recently attended a symposium in which a number of speakers actually mocked physicians who still do physical exams.

Thus, the only way left nowadays for many physicians to feel assured that they are not missing a red flag is to order an abundance of unnecessary tests that would have been obviated by a decent history and physical examination.

—Jerry W. Jones, MD, FACEP
Mequon, Wisconsin

THE PATIENTS WHO COME TO THE ER WANT TESTS, not a dissertation on why they are not necessary. This is the mindset. Every survey has shown that more tests, even negative, generate better evaluations and ensure your job.

—Freda Lozanoff, DO, FACEP
Furlong, Pennsylvania

YOU GUYS JUST DON'T GET IT. *CHOOSING WISELY* is a euphemism for saying, "help decrease the cost of medical care and be liable for any of your mistakes." Without tort reform that gives me complete protection if I follow *Choosing Wisely* and safe harbor guidelines, I do not intend to modify my practice in any way. I'll say it again, I will not participate in any program that increases my medical liability. When legislation is passed that says I cannot be sued if I follow *Choosing Wisely* or safe harbor guidelines, I will be happy to modify my practice.

—William Fisher, MD
Seabrook, Texas

WITHOUT TORT REFORM, *CHOOSING WISELY* ARE just empty words. Nobody is rewarded for ordering less. Start from the beginning. If *Choosing Wisely* was accompanied by incentives that didn't conflict with the rewards of the current system, perhaps it would be more successful.

—Alise

PERHAPS, I DIDN'T "CHOOSE wisely" when I chose to write an article about the *Choosing Wisely* campaign. After climbing out from underneath the pile and dusting myself off, I'm ready to address the great comments we received on this topic.

Important conversation is exactly what we need for the specialty to formulate a consolidated and unified voice on any given issue, including *Choosing Wisely*. ACEP made the decision to join this campaign for a variety of good reasons. However, participation is a long way from fully understanding the implications of such a program at the bedside. The ACEP leadership will rely on its members to help fully inform their perspectives on the experiences and concerns of emergency physicians with respect to *Choosing Wisely*.

Joel, thank you for the support. Although I think vancomycin is a pretty big gun for the common cold, I get your point. Patients often have unrealistic expectations that find their roots in assumption and mere coincidence as opposed to cause and effect; nonetheless, such expectations persist. Compounded with the pressure of performing to experience-of-care metrics, this somewhat creates the perfect storm. However, this is only true if you believe two things: 1) patient expectations cannot be changed, and 2) patients value the "test" over sound medical advice. Personally, I don't believe either of these to be true. Although this perspective may not have much of an audience, it may be worth sharing. Changing preconceived notions about what care should be provided is all about education, and once effectively educated to the lack of utility of what they want, including any negative consequences, most reasonable patients will opt for appropriate care.

I take exception not with you but with the premise that ordering more tests, prescribing antibiotics, and—let's add one more myth—prescribing more opioids result in better scores. Joel, you're in good company. Freda also raised this important and common concern. I respect it but simply have a difference of opinion.

Dowd et al reported that increased utilization did not correlate with improved scores, while Froehlich and Welch noted that in patients who expected diagnostic testing, "provider humanism" was the sole significant predictor of patient satisfaction.[1,2] Regarding prescribing unnecessary antibiotics, Mangione-Smith et al found that good communication influenced parental satisfaction regardless of whether antibiotics were prescribed or even expected.[3] Finally, Schwartz concluded, "However, in the multivariable analysis, receipt of analgesic medications or opioid analgesics was not associated with overall scores."[4] I expect some will challenge the quality of this evidence refuting that satisfaction is linked to tests, antibiotics, and opioids, but to them I ask, is there higher-quality evidence proving the hypothesis that they are linked?

In my opinion, two of the emergency physician's greatest tools are bedside education and communication. When you know why they want a test, perhaps you can change expectations. Just telling people they don't need a test isn't education; it's a demoralizing smackdown. Your question reminds me of a patient I saw a couple of years ago who had been experiencing a cough for a week. He was adamant about getting a chest X-ray. After explaining the lack of utility of a chest X-ray, he wasn't the least bit dissuaded. I asked, "What concerns you about your cough? Why do you want an X-ray?" He replied, "My father had a cough, and when they finally did a chest X-ray, they diagnosed him with lung cancer." This wasn't about the test; it was about an uneducated fear of lung cancer.

Despite attempts to educate them, some patients may not change their minds. However, even if you acquiesce to some of those demands, you still have reduced unnecessary testing for so many more. *Choosing Wisely* provides us with a tool. It is not only an evidence-based educational tool but an authority that supports your advice and to divert the heat toward.

In my opinion, two of the emergency physician's greatest tools are bedside education and communication. When you know why they want a test, perhaps you can change expectations. Just telling people they don't need a test isn't education; it's a demoralizing smackdown.

Jerry, very interesting perspective, and I completely agree. The advances in and availability of medical technology have fallen victim to the law of unintended consequences. With overreliance on diagnostic technology, the art of physical examination has begun to erode.[5,6] Testing used to confirm the concerns developed through a thorough history and physical examination, but now, all too often, it's the other way around; the physical examination takes a back seat to the diagnostics. The "right" tests complement a good history and physical examination, but more tests will never be a substitute for the art of bedside diagnosis.

Bill and Alise, I sense your frustration and suspect you speak for a great many who are simply sick and tired of well-intentioned bureaucrats who have developed a financial conscience, demanding fiscal responsibility and stewardship while asking physicians to do much, much more with far, far less. Your comments strike the most important points with laser-like precision. "Help decrease the cost of medical care and be liable for any of your mistakes."

"Without tort reform, *Choosing Wisely* are just empty words. Nobody is rewarded for ordering less."

No argument from me. If we are asked by government agencies to reduce cost at the expense of diagnostic accuracy, we should expect professional liability protection or indemnification for doing so. However, I see *Choosing Wisely* differently. First, this is not a mandate from a federal or state agency. This initiative was generated from the medical community. Second, the goal, as defined by the American Board of Internal Medicine Foundation, isn't specifically to reduce cost. According to the foundation's website, "[*Choosing Wisely*] calls upon leading medical specialty societies and other organizations to identify tests or procedures commonly used in their field whose necessity should be questioned and discussed with patients."

I'm not a champion for the *Choosing Wisely* campaign, but I do see value in its premise and the tools provided to guide us in meaningful discussions with our patients to avoid the use of low- to no-yield tests and procedures. I see more good than harm and even feel that incorporating these tools with shared decision making can be used to our advantage. Fewer tests equate to earlier dispositions and operational decompression of our EDs. Over-testing doesn't improve diagnostic accuracy but increases cost and patient risk without added value. *Choosing Wisely* offers evidence-based recommendations, developed by emergency physicians for emergency physicians, which may serve as a basis for medical malpractice defense in the event that a bad outcome occurs from their adoption.

ILLUSTRATION/PAUL JUESTRICH; PHOTOS SHUTTERSTOCK.COM

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C-130 medevac plane takes off with a patient in need of emergency care.

FUN, FRIENDS, AND FLEXIBLE HOURS

EVERYONE ON THE ICE MUST WEAR MANY HATS

BY KENNETH V. ISERSON, MD, MBA, FACEP, FAAEM

If diversity is the spice of life—and EM practice—then medical practice here at McMurdo Station is pretty zesty. The last flights for the summer staff have left, dropping our population from a high of about 1,200 to, at most, 200 (plus 11 to 17 Kiwis at nearby Scott Base). The medical staff has also pared down from summer's eight clinicians to only myself and a physician assistant. While there may be some dull moments, there are enough high points to enliven things or at least to provide a memorable experience.

SETTLING IN

Our hospital, a Navy-built facility dating back roughly 50 years, is filled with nooks and crannies, cupboards, and cabinets stocked with all sorts of modern and antiquated medical equipment. I must be able to quickly locate what we need in any situation. I also began to learn the intricacies of our crash carts (we have two), monitor-defibrillators (several), ventilators (several), lab equipment and POC tests, and ultrasound machines (two—one brand-new).

However, my initial task was to get a grasp of the complex paperwork that accompanies any patient interaction: completing the online log, typing the chart and sending it to two different locations, and completing work-injury reports when necessary. More paperwork and computer manipulations accompany radiologic procedures (we're also rad techs), dental procedures (I'm now the dentist), lab procedures (we're the medical technologists), and filling prescriptions (we're the pharmacists, with a large formulary). Finally, if we need to send someone off The Ice for medical reasons, there's another set of paperwork and a long protocol of many phone calls. All that brings me to my first patient.

FIRST EMERGENCY

Arriving early at the clinic on my third day on The Ice, I was met by a young man being helped into the facility. Slightly bent over, he was obviously having abdominal pain. A quick exam showed that he had all the classic symptoms of appendicitis. We had already begun the recommended heavy-duty antibiotics and provided some analgesia when our flight surgeon, Steve Guyton, who would be going home shortly to his civilian EM position, arrived. While I called our medical chief in Galveston, Texas, Steve called the flight line and arranged for the LC-130, which was scheduled to leave The Ice in one hour, to wait for our patient's arrival. In what may be record time, 90 minutes after arriving at our small hospital, the patient was on his way to Christchurch, New Zealand, where he had a successful appendectomy.

THE "MCMURDO CRUD"

While Antarctica offers expansive landscapes and intense drama, for one week, my mind was focused only on breathing through my nose and trying not to cough all night. This counts as a memorable, but not lively, experience. I had, as we say down here, the "McMurdo Crud." Given that our small population lives, eats, and works together, nearly everyone has the joy of experiencing the Crud, hopefully only once per season. Thankfully, we don't have massive influenza outbreaks since everyone is required to have a flu shot before deploying to the station. We will have some personnel rotations this winter, potentially exposing us to new flu strains, so we'll be updating everyone's flu shot in June with New Zealand's annual formulation, which is the same as that used in the United States.

LAB WORK

In the days before federal Clinical Laboratory Improvement Amendments (CLIA) regulations, I routinely did simple tests in our ED physician laboratory. During my Arctic sojourn for a research fleet, I employed additional simple lab tests. Here at McMurdo, however, we have CLIA-approved machines to run complete blood counts (CBCs), multiple blood chemistries, troponins, etc. The challenge is to keep unexpired tests and quality-control materials on hand since we're at the end of a *very* long supply chain. Of course, I still do the urines the old-fashioned way, with a dipstick and microscope. Luckily, our newest CBC machine does its own centrifuging since people forget that failing to secure capillary tubes before spinning them destroys the machine.

DRIVING

Everyone here has more than one job, with your secondary position designed to assist the whole base. I volunteered to drive one of our 12-person vans to shuttle people around. This required learning the special driving rules for the station (go very, very slowly and cede the road to everyone else), learning how to check maintenance, learning the complex method of gassing the vehicle (multiple codes and key insertions), as well as proving that I could drive on ice and snow; it's no different than driving on ice and snow anywhere else. After I became an official driver, I was allowed to shuttle McMurdo residents to one of the popular "American Nights" at New Zealand's nearby Scott Base, where both their bar and store, with very nice souvenirs, are open for business.

My next stint as a driver was totally unexpected: I was needed to drive an ambulatory medevac patient to the airfield. The outgoing summer physician and our US Air Force flight medic were his attendants. We got into the van and began our trip to the "skier" airfield, where the LC-130s use skis to land and

CONTINUED *on page 21*

PHOTOS: KENNETH V. ISERSON

Thank You

Albany Medical Center Emergency Physicians | All Childrens Emergency Center Physicians | APEX Emergency Group | Asheboro Emergency Physicians PA | Athens-Clarke Emergency Specialist | Augusta Emergency Physicians | BerbeeWalsh Department of Emergency Medicine | BlueWater Emergency Partners | Cabarrus Emergency Medical Associates, P.A. | Carson Tahoe Emergency Physicians | Cascade Emergency Associates | Cascade Emergency Physicians Incorporated | Catawba Valley Emergency Physicians- Wake Forest | Central Coast Emergency Physicians | Centre Emergency Medical Associates | Certified Emergency Medical Specialists | Childrens Hospital at Oklahoma University Medical Center Section of Pediatric Emergency Medicine | Cohen Children's Medical Center Pediatric Emergency Physicians | Comprehensive Emergency Solutions, SC | Concord Emergency Medical Associates | Covenant Health Care | District Medical Group | Doctors Emergency Services Delaware | East Carolina University | Eastside Emergency Physicians | Elkhart Emergency Physicians, Inc. | EM Medical PC | Emergency Associates of Yakima | Emergency Care Consultants PC | Emergency Care Specialist Incorporated | Emergency Medical Associates PLLC | Emergency Medical Associates SW Washington Medical Center | Emergency Medical Professionals , PA | Emergency Medical Specialists Colorado Springs | Emergency Medical Specialists PC | Emergency Medicine Associates LTD | Emergency Medicine Associates PA PC | Emergency Medicine Associates Philippines Company | Emergency Medicine of Idaho | Emergency Medicine Specialists of Orange County | Emergency Physicians & Consultants | Emergency Physicians of Central Florida LLP | Emergency Physicians of Indianapolis | Emergency Physicians of Tidewater | Emergency Professional Services PC | Emergency Service Associates | Emergency Services Incorporated | Emergent Medical Associates | EmergiNet | Emerson Emergency Physicians LLC | Emory Department of Emergency Medicine | Emory Healthcare Johns 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University Hospital at Syosset | Northwest Acute Care Specialists | Northwestern Medicine Physicians Group | Orion Emergency Services | Pacific Emergency Providers APC | Pediatric Emergency Medicine | Peninsula Emergency Physicians, Inc | Physician Services of Kansas University | Preston MD & McMillin MD PC | Professional Emergency Physicians Incorporated | Puget Sound Physicians | Questcare Medical Services | Rapid City Emergency Services PA | Rutgers Robert Wood Johnson Medical School Physicians | San Fran Emergency Medical Associates | Sandhills Emergency Physicians | Sanford Emergency Department | Scottsdale Emergency Associates | Seattle Emergency Physicians Services | Sheikh Khalifa Medical Faculty | Southwest Florida Emergency Physicians | St Joseph Hospital Bangor Maine | St Michaels Hospital | Steward Emergency Medicine Group | Sturdy Memorial Emergency Physicians | Tacoma Emergency Care Physicians | Tampa Bay Emergency Physicians | Tufts Medical Center EP, LLC | UAB Emergency Medical | UF Department of Emergency Medicine Group | UMass Memorial Emergency Medicine | Unity Emergency Physicians PA | University Health Associates | University Hospital Emergency Physicians of Manhasset | University of Alabama Department of Emergency Medicine South Alabama Physicians | University of Florida Jacksonville | University of Louisville Physicians | University of Mississippi Medical Center Physicians | University of Virginia Physicians Group | University Puerto Rico | UW Valley Medical Center Emergency Physicians | Wake Emergency Physicians PA | Washington University - Missouri | Wenatchee Emergency Physicians PC | Westfield Emergency Physicians | Winter Haven Hospital

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as of April 2016

Benign Fever or Serious Bacterial Infection?

Clinical policy for evaluating well-appearing infants and children younger than 2 years with fever

BY SHARON E. MACE, MD, FACEP, FAAP

In the May 2016 issue of *Annals of Emergency Medicine*, ACEP published a clinical policy focusing on fever in young children and infants.[1] This is a revision of a 2003 clinical policy related to pediatric fever.

The 2016 clinical policy can also be found on ACEP's website, **www.acep.org**, and has been submitted for abstraction on the National Guideline Clearinghouse website, **www.guidelines.gov**.

This clinical policy takes an evidence-based approach to answering four questions frequently encountered when making decisions associated with pediatric fever in the emergency department. Recommendations (Level A, B, or C) for patient management are provided based on the strength of evidence using the Clinical Policies Committee's well-established methodology:

- ***Level A recommendations*** represent patient management principles that reflect a high degree of clinical certainty.
- ***Level B recommendations*** represent patient management principles that reflect moderate clinical certainty.
- ***Level C recommendations*** represent other patient management strategies based on Class III studies or, in the absence of any adequate published literature, based on consensus of the members of the Clinical Policies Committee.

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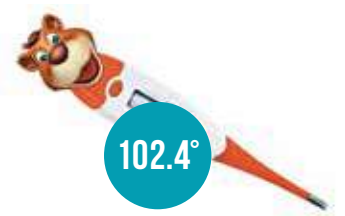
During development, this clinical policy was reviewed and comments were received from emergency physicians; members of the American Academy of Pediatrics, American Academy of Family Physicians, and ACEP's Pediatric Emergency Medicine Committee; and those health care providers responding to the notice of the open comment period. All responses were used to further refine and enhance this policy. However, responses did not imply endorsement of this clinical policy.

This revision of the clinical policy for well-appearing infants and children 2 months to 2 years of age (29 days to 90 days for meningitis) presenting with fever was prompted by advances in diagnostic technology, the changing epidemiology, and incidences of the various infections comprising a serious bacterial infection, along with input from ACEP members, which led to four critical questions.

CRITICAL QUESTIONS AND RECOMMENDATIONS



QUESTION 1. For well-appearing immunocompetent infants and children aged 2 months to 2 years presenting with fever (≥38.0°C [100.4°F]), are there clinical predictors that identify patients at risk for urinary tract infection?

Patient Management Recommendations

Level A recommendations: None specified.

Level B recommendations: None specified.

Level C recommendations: Infants and children at increased risk for urinary tract infection include females younger than 12 months, uncircumcised males, nonblack race, fever duration greater than 24 hours, higher fever (≥39°C), negative test result for respiratory pathogens, and no obvious source of infection. Although the presence of a viral infection decreases the risk, no clinical feature has been shown to effectively exclude urinary tract infection. Physicians should consider urinalysis and urine culture testing to identify urinary tract infection in well-appearing infants and children aged 2 months to 2 years with a fever ≥38°C (100.4°F), especially among those at higher risk for urinary tract infection.

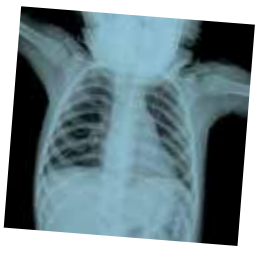
QUESTION 2. For well-appearing febrile infants and children aged 2 months to 2 years undergoing urine testing, which laboratory testing method(s) should be used to diagnose urinary tract infection?

Patient Management Recommendations

Level A recommendations: None specified.

Level B recommendations: Physicians can use a positive test result for any one of the following to make a preliminary diagnosis of urinary tract infection in febrile patients aged 2 months to 2 years: urine leukocyte esterase, nitrites, leukocyte count, or Gram's stain.

Level C recommendations: (***1***) Physicians should obtain a urine culture when starting antibiotics for the preliminary diagnosis of urinary tract infection in febrile patients aged 2 months to 2 years. (***2***) In febrile infants and children aged 2 months to 2 years with a negative dipstick urinalysis result in whom urinary tract infection is still suspected, obtain a urine culture.



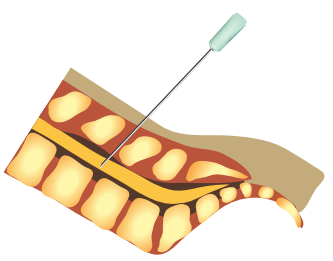
QUESTION 3. For well-appearing immunocompetent infants and children aged 2 months to 2 years presenting with fever (≥38.0°C [100.4°F]), are there clinical predictors that identify patients at risk for pneumonia for whom a chest radiograph should be obtained?

Patient Management Recommendations

Level A recommendations: None specified.

Level B recommendations: In well-appearing immunocompetent infants and children aged 2 months to 2 years presenting with fever (≥38°C [100.4°F]) and no obvious source of infection, physicians should consider obtaining a chest radiograph for those with cough, hypoxia, rales, high fever (≥39°C), fever duration greater than 48 hours, or tachycardia and tachypnea out of proportion to fever.

Level C recommendations: In well-appearing immunocompetent infants and children aged 2 months to 2 years presenting with fever (≥38°C [100.4°F]) and wheezing or a high likelihood of bronchiolitis, physicians should not order a chest radiograph.



QUESTION 4. For well-appearing immunocompetent full-term infants aged 1 month to 3 months (29 days to 90 days) presenting with fever (≥38.0°C [100.4°F]), are there predictors that identify patients at risk for meningitis from whom cerebrospinal fluid should be obtained?

Patient Management Recommendations

Level A recommendations: None specified.

Level B recommendations: None specified.

Level C recommendations: (***1***) Although

CONTINUED *on page 17*

THE FINISH LINE

CONTINUED FROM PAGE 1

After approximately 10 minutes but what felt like an eternity, EMS arrived. Sure enough, the pads strapped across his chest showed ventricular fibrillation. I'm fairly used to yelling "clear" and pressing the shock button in front of a large crowd in a resuscitation bay, but doing it on the road with a thousand onlookers was a bit of a surreal experience.

After the shock was delivered, we saw a resulting sinus rhythm on the monitor, with the large ST elevations that were to blame for the patient's situation. Lights and sirens blaring, EMS promptly took him to the local emergency department. We looked around at each other after the dust had settled. There was no note to sign, no attending to discuss the case with, no ICU to call for admission. It all felt very familiar yet very foreign at the same time.

I learned two things from this experience. The first should almost go without saying, but CPR really works. Although seemingly obvious, experiencing the success of CPR firsthand in someone who has recently collapsed is something to behold. We watched as the patient's perfusion improved after each round of CPR. By the end, he was stating between each compression, "You're ... hurting ... me ... ouch ... ouch ... my ... chest ... that ... hurts," but would continue to go unresponsive with each pulse check. He would follow simple commands to squeeze our fingers with compressions even while in ventricular fibrillation. If dozens of rounds of what feels like futile CPR in the resuscitation bay have jaded me, then this experience certainly re-demonstrated the importance of high-quality CPR.

The second thing I took away was the surprising response from the crowd and my colleagues. Following completion of the race and once people found out about our story, we were proclaimed heroes! Heroes? I know for a fact that I performed CPR three times earlier that week in my own emergency department, certainly with no such proclamation. We only did at that race what any nurse, paramedic, or doctor would have in our situation. I know this to be true because we turned away dozens of people who offered to help and were only adding to the chaos. We already had our impromptu team of two emergency medicine residents, a surgical resident from a local Detroit residency, and an emergency department nurse at the patient's side. With all the negativity that we might read in the newspaper or see on television today, there was an overabundance of people wanting to offer help when a random stranger was in distress.

I've never felt so much adrenaline to finish a race as I did that day. The final four miles seemed to fly by. And our patient? He made a full recovery and returned to work full-time only 10 days later. As for my co-chief and I, the Ann Arbor Half Marathon is only a few short months away, so training (and a brief basic life support/advanced cardiac life support review) starts soon.

We only did at that race what any nurse, paramedic, or doctor would have in our situation. I know this to be true because we turned away dozens of people who offered to help and were only adding to the chaos. We already had our impromptu team of two emergency medicine residents, a surgical resident from a local Detroit residency, and an emergency department nurse at the patient's side.

Dr. Betcher (left) and Dr. Majkrzak after completing the Detroit Half Marathon.

JOE BETCHER

DR. BETCHER is a PGY-4 chief resident in the department of emergency medicine at the University of Michigan in Ann Arbor.

BENIGN FEVER OR SERIOUS BACTERIAL INFECTION?

CONTINUED FROM PAGE 16

there are no predictors that adequately identify full-term well-appearing febrile infants aged 29 to 90 days from whom cerebrospinal fluid should be obtained, the performance of a lumbar puncture may still be considered. (***2***) In the full-term well-appearing febrile infant aged 29 to 90 days diagnosed with a viral illness, deferment of lumbar puncture is a reasonable option given the lower risk for meningitis. When lumbar puncture is deferred in the full-term well-appearing febrile infant aged 29 to 90 days, antibiotics should be withheld unless another bacterial source is identified. Admission, close follow-up with the primary care provider, or a return visit for a recheck in the ED is needed (consensus recommendation).

Fever is the most common presenting complaint of infants and children presenting to an emergency department. Fever accounts for 15 percent of all ED visits for pediatric patients younger than 15 years of age. Very young patients, particularly those younger than 3 months of age, have a somewhat immature immune system, which makes them more susceptible to infections. Most infants and children with a fever will have a benign, self-limited infection. However, a few of these febrile infants and children may have a serious, even life-threatening infection. The toxic or ill-appearing infant or child usually does not pose a diagnostic dilemma. However, not all infants and young children with a serious, life-threatening infection will appear ill or toxic. The dilemma for the health care provider is to differentiate the well-appearing febrile infant or child with a serious bacterial infection from the febrile infant or child with a benign, usually viral infection.

In the years following the introduction of the pneumococcal vaccine and the *Haemophilus* influenza type b vaccines, there have been changes in the predominant bacterial pathogens and in the incidences of the various types of serious bacterial infections. The incidences of occult bacteremia, pneumococcal meningitis, and pneumococcal pneumonia have declined, while *Escherichia coli* has become the predominant bacterial pathogen and the leading cause of bacteremia, urinary tract infections, and bacterial meningitis in young infants. The most common serious bacterial infection is now urinary tract infection in febrile infants younger than 24 months of age, with a prevalence of 5 percent to 7 percent and higher in certain high-risk groups (eg, up to 20 percent in uncircumcised male infants). Various diagnostic technologies, including rapid antigen testing for viruses and bacteria, have been produced.

Fever accounts for 15 percent of all ED visits for pediatric patients younger than 15 years of age. Very young patients, particularly those younger than 3 months of age, have a somewhat immature immune system, which makes them more susceptible to infections.

Multiple clinical decision rules have been proposed and various biological markers suggested for use in the identification of serious bacterial infection, including the white blood cell count, absolute neutrophil count, band count, C-reactive protein, interleukins, and procalcitonin. However, at present, there is no widespread acceptance of any one clinical decision rule or screening test,

Future research should focus on the changing epidemiology of serious bacterial infections, the use of diagnostic technologies, and the utility of specific biomarkers and clinical algorithms in the differentiation of infants and children with benign febrile illness from febrile infants and children with a serious bacterial infection.

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DR. CANTOR is professor of emergency medicine and pediatrics, director of the pediatric emergency department, and medical director of the Central New York Poison Control Center at Upstate Medical University in Syracuse, New York.

When to Use Fluoroquinolones

Risks and benefits—what's the evidence?

by LANDON JONES, MD, AND RICHARD M. CANTOR, MD, FAAP, FACEP

The best questions often stem from the inquisitive learner. As educators, we love—and are always humbled—by those moments when we get to say, "I don't know." For some of these questions, some may already know the answers. For others, some may never have thought to ask the question. For all, questions, comments, concerns, and critiques are encouraged. Welcome to the Kids Corner.

Question #1: What's the deal with fluoroquinolones and bones/tendons in children?

Fluoroquinolones were spin-offs of antimalarial drugs and were approved for use in children in the 1960s. According to reviews by Burkhardt et al and Patel et al, quinolone-induced arthropathy changes have been seen in nearly all laboratory animals studied, particularly in weight-bearing joints and only in juvenile animals.[1,2] There are a number of case reports referenced by these authors that demonstrate that these joint changes can occur in children and adolescents. In these cases, joint complaints resolved with drug cessation. Also, the majority of these cases were cystic fibrosis patients who had received prolonged courses of fluoroquinolones.

In regard to pediatric findings, a study by Hampel et al retrospectively looked at 1,795 patients younger than 17 years of age and reported adverse events.[3] The incidence of adverse events was 10.9 percent. While most adverse events were nausea, vomiting, and diarrhea, only 1.5 percent of the total population developed arthralgia. The median duration of ciprofloxacin treatment was 23 days. While this study was sponsored by Bayer—the maker of Cipro—these rates do appear to be consistent with other studies.[2]

There are also prospective studies on this topic. A multicenter observational study by Chalumeau et al looked at potential adverse events between fluoroquinolone-exposed and control subjects (n=276 exposed; n=249 control).[4] Patients were younger than 19 years of age, and the incidence of musculoskeletal adverse events was low (3.8 percent) but still higher than the incidence previously reported in adults (0.01 percent to 0.2 percent). All the bone/joint adverse events were transient. Another prospective study by Noel et al was a nonblinded, multicenter, randomized study of 2,523 children that looked at the association of levofloxacin with four different joint/bone complaints: tendinopathy, arthritis, arthralgia, and gait abnormality.[5] Joint/bone complaints in weight-bearing joints were present in 2.9 percent of levofloxacin-exposed patients versus 1.6 percent of control patients. There were no abnormalities on computed tomography and magnetic resonance imaging scans of patients evaluated for these bone/joint complaints. All symptoms resolved with cessation of the drug.

In certain clinical scenarios, the use of a fluoroquinolone in a child may be necessary and appropriate, and the practitioner shouldn't live in terror of destroying a child's hopes of playing professional sports.

Summary

Studies suggest a small—but statistically significant—increase in arthropathy/arthritis in children who take fluoroquinolones. It is predominately in weight-bearing joints but also transient. In certain clinical scenarios, the use of a fluoroquinolone in a child may be necessary and appropriate, and the practitioner shouldn't live in terror of destroying a child's hopes of playing professional sports.

Question #2: Is clindamycin a good option for outpatient treatment of chondritis/perichondritis of the ear in children?

This is a two-part question: 1) Does clindamycin penetrate the appropriate tissue (cartilage) adequately to potentially treat the disease? 2) Does it treat the appropriate bacteria?

Clindamycin does appropriately concentrate in bone, joints, and cartilage. Most studies demonstrating appropriate tissue penetration are animal studies. For example, an animal study by Eismont et al demonstrated adequate clindamycin concentrations in the nucleus pulposus of spinal intervertebral discs of rabbits.[6]

The most important question, though, is, does it treat the appropriate bacteria? The simple answer is no. There are a number of case reports on outbreaks of auricular chondritis/perichondritis that have occurred.[7–9] The majority of these cases have occurred in children and adolescents and have commonly involved *Pseudomonas aeruginosa*.[10] A number of cases have required hospitalization with intravenous antibiotics. A common cause has been cartilaginous ear piercings at the mall. The bottom line is that practitioners need to cover for *P. aeruginosa*. What are our oral antibiotic options? Fluoroquinolones are a potential option, and these are discussed above.

As a side note, the culprit in most of these ear-piercing reports was contaminated cleaning solution used before the piercing was placed.

Summary

Clindamycin is not the appropriate antibiotic for outpatient treatment of chondritis/perichondritis of the ear. It does appropriately concentrate in cartilage but does not cover *P. aeruginosa*, the primary bacteria causing infection in cartilage of the ear. You need to give an oral antibiotic that covers *Pseudomonas*. That antibiotic is probably an oral fluoroquinolone.

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DOGMA FEELS RIGHT UNTIL YOU STEP IN IT

SKEPTICS' GUIDE TO EMERGENCY MEDICINE

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Modified Valsalva Maneuver

A better way to manage supraventricular tachycardia

by KEN MILNE, MD

CASE: A 19-year-old male arrives at the ED complaining of palpitations. He is known to have supraventricular tachycardia (SVT) and has been in before for the same condition. He is hemodynamically stable, and the electrocardiogram (ECG) shows SVT. Adenosine has worked before, but he asks if there is anything else because it makes him feel awful.

CLINICAL QUESTION: Is a modified Valsalva maneuver superior to the standard Valsalva maneuver in converting stable patients presenting to the emergency department with SVT to a sinus rhythm?

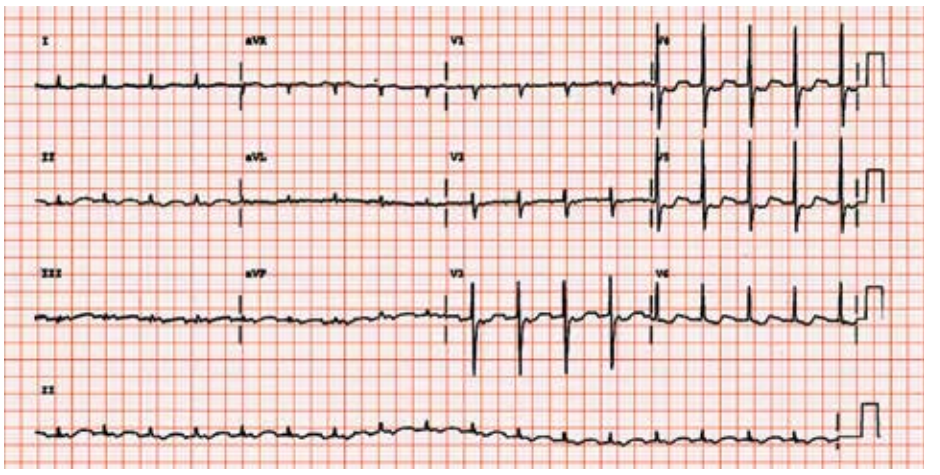
BACKGROUND: SVT is a common dysrhythmia seen in patients presenting to the emergency department. There are different ways of restoring patients back to a sinus rhythm (electrical, pharmacologic, and non-pharmacologic). Synchronized cardioversion is usually the treatment of choice in the hemodynamically unstable patient.

A variety of drugs (such as adenosine, calcium channel blockers, and beta blockers) has been used to correct SVT in the hemodynamically stable patient. Adenosine is the drug many people find unpleasant.

The Valsalva maneuver is a noninvasive way to convert patients from SVT to sinus rhythm. It increases the myocardial refractory period by increasing intrathoracic pressure, thus stimulating baroreceptors in the aortic arch and carotid bodies, increasing vagal tone. A systematic review shows this method only works in about one in five patients.[1]

RELEVANT ARTICLE: Appelboam A, Reuben A, Mann C, et al. Postural modification to the standard Valsalva manoeuvre for emergency treatment of supraventricular tachycardias (REVERT): a randomised controlled trial. *Lancet*. 2015;386:1747-1753.

- **Population:** Adult patients presenting to the emergency department with stable SVT (many exclusions were listed in the paper).
- **Intervention:** A modified Valsalva maneuver.
  - —Patients strained for 15 seconds by forced expiration. Immediately after the strain, patients were laid flat, and their legs were elevated by a staff member to 45 degrees for 15 seconds. Patients were then returned to a semi-recumbent position for 45 seconds.
- **Comparison:** The standard Valsalva maneuver.
  - —Patients strained for 15 seconds by forced expiration. Patients remained semi-recumbent at 45 degrees.
- **Outcome:**
  - —**Primary:** Return to sinus rhythm at one minute.
  - —**Secondary:** Use of adenosine, use of any anti-dysrhythmic, discharge home, length of stay in the ED, and adverse events.



SOURCE: EKG WORLD ENCYCLOPEDIA HTTP://CME.MED.MCGILL.CA/PHP/INDEX.PHP. COURTESY OF MICHAEL ROSENGARTEN BENG, MD.MCGILL

The rhythm is supraventricular tachycardia with block. The atrial rate is about 200/min and there is 2:1 block. There is also ST depression in leads V3 to V6 suggestive of ischemia. The patient was having a non-q myocardial infarction.

AUTHORS' CONCLUSIONS: "In patients with supraventricular tachycardia, a modified Valsalva manoeuvre with leg elevation and supine positioning at the end of the strain should be considered as a routine first treatment, and can be taught to patients."

KEY RESULTS: There were 428 adult patients included in the study. The mean age was in the mid-50s, approximately 60 percent were female, and about half had a history of SVT.

The modified Valsalva maneuver resulted in an increased frequency of conversion out of SVT to sinus rhythm compared to the standard Valsalva maneuver. The adjusted odds ratio = 3.7 (95 percent CI, 3.3–5.8; $P<0.0001$). Number needed to treat (NNT) = 4 (95 percent CI, 3–7).

Primary Outcome: Return to sinus rhythm at one minute:

Modified 43 percent versus standard 17 percent, NNT = 4

The modified Valsalva maneuver resulted in an increased frequency of conversion out of SVT to sinus rhythm compared to the standard Valsalva maneuver.

There was less use of adenosine and anti-dysrhythmic drugs. There was no difference in length of stay in the ED, discharge home, or adverse events.

EBM COMMENTARY:

- This pragmatic study was very well done and addressed a common condition presenting to the ED. The postural modification of the standard Valsalva maneuver represents an inexpensive, well-tolerated treatment option with a NNT of 4.
- Blinding was a potential limitation in this study. The authors tried hard to minimize this type of bias. It was not possible to blind the providers to the treatment group. However, the patients were not aware of which treatment was the modified technique. The independent cardiologist who retrospectively assessed the ECGs was blinded to group allocation. If there were disagreements about ECG interpretation between the unblinded treating physician and the blinded cardiologist, an independent electrophysiologist, also blinded, arbitrated.

BOTTOM LINE: To REVERT your next stable patient with SVT to a sinus rhythm, consider a postural modification of the standard Valsalva maneuver.

CASE RESOLUTION: You use the modified Valsalva maneuver and successfully convert him to a sinus rhythm.

Thank you to Dr. Robert Edmonds, a third-year emergency medicine resident at the University of Missouri at Kansas City, for his help on this review.

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

Reference

1. Smith GD, Dyson K, Taylor D, et al. Effectiveness of the Valsalva manoeuvre for reversion of supraventricular tachycardia. *Cochrane Database Syst Rev.* 2013 Mar 28;3:CD009502.

RESOURCES FOR FURTHER READING

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DR. FAUST is a senior emergency-medicine resident at Mount Sinai Hospital in New York. He tweets about #FOAMed and classical music @jeremyfaust.

DR. WESTAFER is chief resident at the Baystate Medical Center at Tufts University in Springfield, Massachusetts. Follow her @LWestafer.

A Few Tips to Get Off Our Chest

Learn the best place to decompress a tension pneumothorax and the meaning of pacemaker codes

We find that one of the most intimidating things about implantable cardiac devices is figuring out what each one does, so we spent some time decoding the alphabet soup of pacemaker function letter codes.

by JEREMY SAMUEL FAUST, MD, MS, MA AND LAUREN WESTAFER, DO, MPH

Your patient has a tension pneumothorax after being stabbed. Or maybe it's a chronic obstructive pulmonary disease patient with a bleb. Honestly, who cares because the breath sounds are unequal and the patient is desaturating. Heck, if this is a board exam, the patient might even have distended neck veins. Even the off-service rotating intern can diagnose this one. But it takes an emergency medicine provider to know what to do and when to do it. You ask for an angiocatheter because you know that a needle decompression is happening and it's happening now. You're not scared. In fact, deep down, you're actually kind of psyched because this is exactly the moment you've been trained for. You get that needle, and you get ready to put it exactly where you've been taught to put it since you were a mere pup in medical school. Needle decompression of a tension pneumothorax? Second intercostal space at the midclavicular line. You break skin, and you push that sucker in as far as you can. You await that satisfying swish of air. Then, all of a sudden ... nothing happens. Your hero moment has been ruined, and quite frankly, you look like an idiot. Oh, and your patient is not doing so well.

It turns out that this was a predictable failure. Why? Because the dogma that the best anatomical location for a needle compression for a tension pneumothorax is in the second intercostal space at the midclavicular line (2nd ICS MCL) is probably bunk. FOAM resources have been onto this for a while, so we covered some of this on a recent episode of FOAMcast (foamcast.org/2016/03/19/episode-36-pneumothorax/).

Back in 2012, Inaba et al published "Radiologic Evaluation of Alternative Sites for Needle Decompression of Tension Pneumothorax," in which computed tomography imaging suggested that, owing to anatomy alone, choosing the 2nd ICS MCL for needle decompression would be expected to fail 42.5 percent of the time. By comparison, they found that an alternative site, the fifth intercostal space at the anterior axillary line (5th ICS AAL), would only be expected to fail 16.7 percent of the time. The reason makes sense. At the 2nd ICS MCL, the chest wall is simply too thick for standard decompression needles. Clinicians also tend to misjudge exactly where the MCL is, but that's another story.

Shortly after this article came out in the *Archives of Surgery*, Andy Neill wrote a blog post on EmergencyMedicineIreland.com. But when HEFT EMcast, a podcast from the Heart of England Foundation Trust's Emergency Department in the United Kingdom, revisited this topic, it reminded us that the 5th ICS AAL as the preferred location for needle decompression just hasn't caught on, so we went through it on FOAMcast. We then discussed a topic that doesn't get a lot of love in the FOAM world: empyema. Our favorite pearl: in causes of empyema secondary to trauma, the most common bacteria are gram-negative bacilli. Who knew? Well, Tintinalli's and Rosen's actually (which we sometimes lovingly refer to as "Rosenalli" on our show).

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Secrets of Pacemakers Revealed

Speaking of the upper chest, we spent some time on another recent episode of FOAMcast discussing a post on Dr. Smith's ECG blog (hqmeded-ecg.blogspot.com) by emergency medicine electrocardiogram guru Stephen W. Smith, MD, professor of emergency medicine at the University of Minnesota in Minneapolis. Dr. Smith has published a couple of case reports showing instances of the use of Sgarbossa criteria in patients with biventricular pacemakers. This is not exactly common practice so far. In fact, almost half of respondents to a recent Medscape poll stated that "one cannot diagnose an infarction from ventricularly paced complexes." However, Dr. Smith thinks otherwise. While there have not been any large studies to validate his contention, Dr. Smith bases his opinion on "many, many" cases. We used the opportunity to review the modified Sgarbossa criteria and to discuss some finer points of pacemakers and defibrillators.

We find that one of the most intimidating things about implantable cardiac devices is figuring out what each one does, so we spent some time decoding the alphabet soup of pacemaker function letter codes (which can be found on the pacemaker/defibrillator cards that patients carry in their wallets). Every pacemaker has a five-letter code associated with it. Since 2002, the United States and the United Kingdom have used the same letter code for all pacemakers in order to keep things as simple as possible. (We guess the US and the UK have a special relationship after all!) The first three letters are the most commonly referred to letters. The first position tells you which chamber gets paced. The second letter indicates which chamber the pacemaker uses for sensing cardiac activity. The third letter is the "mode of response." This one indicates how the pacemaker responds to the information it senses. The most common first three letters are VVI (that's ventricular pacing, ventricle sensing, and inhibition of electric pacing) and DDD (dual chamber pacing, dual chamber sensing, and dual functionality for both the inhibition and the triggering of a pacemaker). While the fourth letter is a little boring (programming settings), the fifth letter in the code is probably our favorite: anti-tachyarrhythmia function.

Many pacers have no anti-tachyarrhythmia functions (denoted as a 0). Some pacemakers pace in response to tachyarrhythmias (P). Other pacers can deliver a shock in response to tachyarrhythmias (S). Finally, a pacemaker can have a dual anti-tachyarrhythmia; that's both shock and pace (D). That's what we call an "everything but the kitchen sink" pacemaker.

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We also have a couple of free Rosh Review questions with every episode. You can also download the show on iTunes. Our next episode will look at urine toxicology screens and go over some of the most common false positives caused by prescription medications.

As if you needed another reason not to order a u-tox!

FUN, FRIENDS, AND FLEXIBLE HOURS | CONT FROM PG 14

take off. Because our patient was a New Zealander and we were passing by Scott Base, we followed tradition and stopped at the base so that his many compatriots, including a bagpiper, could wish him farewell. The whole experience was awesome. It's not every day that I have the chance to drive onto an active airfield and up to an airplane getting ready for takeoff.

LIFE AS A DENTIST

I was deep in administrative duties when my first real dental patient walked in. The middle-aged man explained that he'd long had problems with a molar (#14, for those into dentistry). His dentist had previously considered extracting it but thought that it would be too difficult, so she elected to clean out the large carie and fill it. For two days, the tooth had been causing him excruciating pain that prevented him from sleeping. After taking a dental history (heat caused pain, he didn't feel cold, and the pain came without any provocation) and performing a dental exam with a mirror, probe, "tooth sleuth," and Endo Ice, I took dental films. Luckily, our dental film system is now digital. I don't have to go through the laborious process of trying to develop films inside a small box as our prior dentists had to do.

WE ASSUMED THAT ONCE HE GOT BACK TO CIVILIZATION, HIS DENTIST COULD DETERMINE IF A ROOT CANAL WAS POSSIBLE OR IF HE WOULD NEED AN EXTRACTION. WHEN TOLD OF THESE OPTIONS, THE PATIENT UNEXPECTEDLY CHOSE IMMEDIATE EXTRACTION. HE'D HAD ENOUGH PROBLEMS WITH THAT TOOTH, AND HE JUST WANTED IT GONE.

Left: The pharmacy at McMurdo Station.

Below: An ambulance delivers a patient to a medevac plane.

PHOTOS: KENNETH V. ISERSON

Following our dental protocol, I then sent the films and a short description to our consulting dentist, who had taught me some dentistry before he finished his annual six-week stint at the station. I then called him to discuss various options to buy time until the patient left the station three weeks later: analgesics and antibiotics coupled with mechanically adjusting the bite by using "articulation paper" to mark the high spots and then grinding them down. We assumed that once he got back to civilization, his dentist could determine if a root canal was possible or if he would need an extraction. When told of these options, the patient unexpectedly chose immediate extraction. He'd had enough problems with that tooth, and he just wanted it gone.

While I've extracted teeth in resource-poor settings, this was the first time that I would do it using professional instruments and with the expectation that the level of care would be the same quality as from a real dentist. No worries, as our Kiwi neighbors say. I turned on the power, air, and vacuum for our dental instruments, then positioned the dental chair and rooted through the mass of tools to find the special high-pressure lidocaine syringe for effective apical tooth infiltration, periosteal elevators, and the correct dental forceps. (I chose the latter almost correctly, using a 53R designed for the right side rather than the 53L that is normally used on the left.) With my physician assistant as my dental assistant, I cut the periodontal ligaments and gently rocked the tooth, similar to removing a post from a muddy hole. After about eight minutes, it came out—intact. Everyone, especially the patient, was very pleased with the result.

Playing the odds, I assume that my next dental case will be either replacing a crown (cap) or placing a filling. I can't wait! But that's medicine on The Ice.

DR. ISERSON is professor emeritus of emergency medicine at The University of Arizona in Tucson.

CODING WIZARD

NAVIGATE THE CPT MAZE, OPTIMIZING YOUR REIMBURSEMENT

Editor's Note: *Cutting through the red tape to make certain that you get paid for every dollar you earn has become more difficult than ever, particularly in our current climate of health care reform and ICD-10 transition. The ACEP Coding and Nomenclature Committee has partnered with* ACEP Now *to provide you with practical, impactful tips to help you navigate through this coding and reimbursement maze.*

Moderate (Conscious) Sedation

by CANDACE LEIGH, MD, AND HAMILTON LEMPERT, MD, FACEP, CEDC

Don't overlook sedation services provided by the emergency physician solely or in support of another clinician, such as an orthopedist. Fill out your hospital's conscious sedation forms and submit these to your coders to document the necessary information to bill for these services. The initial moderate sedation code covers the first 30 minutes of intraservice time, defined as the continuous time from when meds are first given until your personal contact ends. (This code is fulfilled after at least 16 minutes are performed and documented.)

After 30 minutes, a code for every additional 15-minute increment can be used (fulfilled after a minimum of eight minutes). When calculating the total sedation time, be sure to only include the minutes involved in direct face-to-face monitoring of the patient. Do not include any separately identifiable evaluation and management service prior to sedation or the time it took for the patient to recover from the sedation while being monitored by a nurse. For example, when a clinician goes into a room to reduce a shoulder, there is some preparatory discussion and exam. When the sedating agent is given by the physician, that is the beginning of the intraservice time. The shoulder is then reduced. The clinician stays a few minutes to ensure the patient's mental status improves, then the physician leaves the room. When the physician leaves the room, that is the end of the intraservice time. If the total intraservice time is 16 minutes or more, then the sedation codes can be used. ⊕

Brought to you by the ACEP Coding and Nomenclature Committee.

DR. LEIGH is a practicing academic emergency physician at the Cleveland Clinic Akron General Campus in Ohio. **DR. LEMPERT** is vice president and medical director, health care financial services, at TeamHealth, based in Knoxville, Tennessee.

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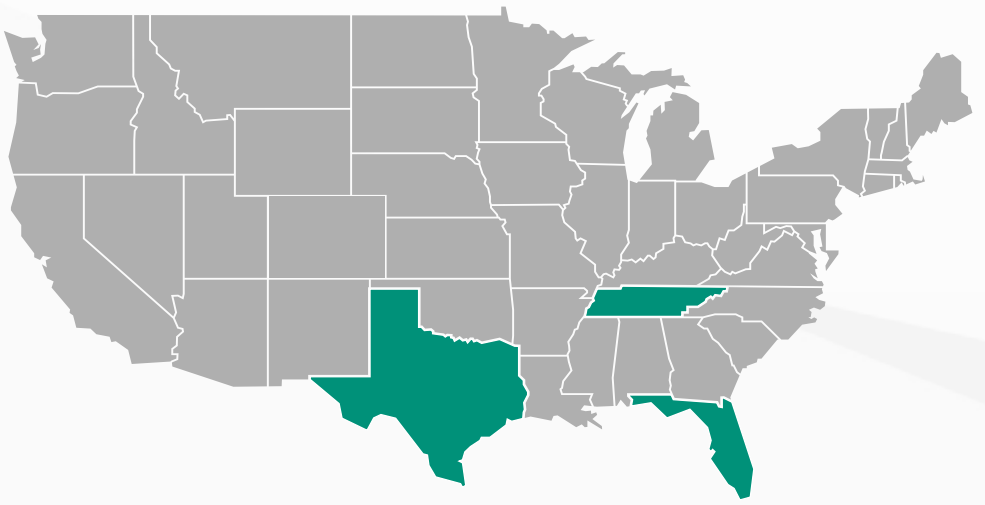

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