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The CDC says Tamiflu is in—well,
the jury is still out!

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The CDC Speaks Out

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NOVEMBER 2014

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NEW DRUG COMING YOUR WAY

Three patients with 25B-NBOMe intoxication

by HENRY K. SU, BA; MARK BAKER, MD; AND LARRY J. BARAFF, MD

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2+2=5

EMERGENCY MEDICINE OBJECTS TO RESIDENCY RANKINGS

Groups say misleading
results attributed to poor
methodology of recent
residency program survey

by HANS R. HOUSE, MD,
FACEP; AND LAURA GORE

Emergency physicians from top
organizations representing
emergency medicine traveled to
Washington, D.C., on Sept. 22, 2014,
to meet with Ben Harder, managing
editor and director of health care
analysis at *U.S. News & World Report*,
and Nate Gross, MD, cofounder of
Doximity, an online social-network-
ing service for U.S. physicians that
conducts surveys for *U.S. News*.

The purpose of these meetings
was to convey the concerns of nine
emergency medicine organizations
(see list on page 10) about the re-
sults of a Doximity survey, which
was promoted by *U.S. News & World
Report*, identifying the nation's top
emergency medicine residency
programs. Emergency physicians

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Growing Pains, Progress for Telemed in the Carolinas

Two states report mixed results with
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THE BREAK ROOM

Let's Enforce the Ethical Standards We Have

As the article ["Do We Need a New Standard of Proof in Medical Malpractice Cases?" Sept. 2014] points out, a higher standard of proof is a partial solution to the problem of marginal and spurious malpractice claims. However, as is also clearly shown, this standard can be completely subverted when "expert witnesses" ignore the standard and mislead juries by misinterpreting it in order to service their clients.

ACEP has crafted excellent expert witness policies and related ethics policies to address the problem of unethical testimony by members. However, the policies are not well-publicized and are largely ignored.

For example, renewal of membership used to carry with it an explicit promise to uphold the ethical standards of the College, including those related to expert witness testimony. Now the renewal document is simply a bill.

We have yet to provide any educational courses or materials for members on what constitutes ethical medical expert testimony. I have taught such courses in other medical specialty societies, which do deem it to be important. Our members have told us they would appreciate some guidance, and we know that many do testify.

Although we have excellent procedures in place to pursue unethical experts among our members and to clarify the actual standard of care, these are rarely utilized. (I am hopeful they may be in the cited case.)

But if the problem of unethical experts from within our own ranks were not enough, we in EM are uniquely vulnerable to "experts" from other specialties who believe that they know our standard from what they may remember in an ED rotation in medical school or residency, or from what they glean as consultants to us, or they simply testify convincingly that the standard in their own specialty is the same as in ours.

It is obvious that we could do more to address this problem than simply to rail against it.

—Louise B. Andrew, MD, JD, FACEP, FIFEM
Sidney, British Columbia, Canada

Be Precise with Health Care Terminology

Regarding the recent Survey of ACEP Councillors and the question about the single payer health care system [June 2014], the response percentage may have been influenced by the definition of a "single payer system." I have found in my discussions with people that there is often confusion regarding single payer systems and universal health coverage. These two terms are not synonymous. Universal health coverage refers to the number of people being covered by health care, single payer refers to a health payment mechanism. There are some countries with a single payer system, usually by a government, but that for various reasons do not have universal coverage. Other countries do not have a single payer system, but have universal coverage, such as some Euro-

pean countries where there is a combination of government programs and private insurance companies. Some countries do have universal coverage with a single payer system.

—Helmut Meisl, MD, FACEP
Bellingham, Washington

Praise for Evidence-Based Advice

Dr. Radecki,

I appreciate the extensive review of the research in regards to the perils of providing antibiotics to mostly viral etiologies ["Emergency Physicians Don't Follow Evidence When Prescribing Antibiotics, and That Needs to Change," Sept. 2014]. When people do things contrary to the evidence and rational thought, it sometimes is helpful to ask why. It might be helpful to review "The Real Reason People Won't Change," *Harvard Business Review*, November 2001, by Robert Kegan and Lisa Laskow Lahey.

Good work.

—Anthony Ferroggiaro, MD,
MHA, Marietta, Georgia

Great article! ["Blood Culture Testing: Send Samples Selectively to Lower Costs, Medico-Legal Risk," Sept. 2014.]

In future versions, it would be useful to discuss the cost of false-positive cultures (usually \$4,000–\$7,000 per false positive in a hospitalized patient).

Also, it is not so important whether or not a culture is positive but rather how often it changes management. While 4 percent of ED-drawn blood cultures may be positive (and half of those being false positives), a positive culture almost never prompts a change in [antibiotics]. When it does, it is almost always in an immunosuppressed patient or those with severe sepsis/septic shock.

—Stephen Colucciello, MD
Charlotte, North Carolina

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Kevin Klauer, DO, EJD, FACEP
kklauer@acep.org

EDITOR

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ART DIRECTOR

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jcarris@wiley.com

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DIRECTOR, MEMBER COMMUNICATIONS AND MARKETING

Nancy Calaway
ncalaway@acep.org

ASSOCIATE EXECUTIVE DIRECTOR, MEMBERSHIP AND EDUCATION DIVISION

Robert Heard, MBA, CAE
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COMMUNICATIONS MANAGER

Darrin Scheid
dscheid@acep.org

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ldionne@wiley.com

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NEWS FROM THE COLLEGE

Congratulations, ACEP Award Recipients

Last month at ACEP14, the College celebrated the achievements of several people who have made a positive impact on the specialty. Here's a list of those recognized.

Leadership Award Winners

OUTSTANDING CONTRIBUTION IN RESEARCH AWARD

Lance B. Becker, MD, FACEP



Dr. Becker has pioneered life-saving innovations in resuscitation for more than 25 years. He is professor of emergency medicine and founder and director of the Center for Resuscitation Science in the Department of Emergency Medicine at the University of Pennsylvania in Philadelphia. He is a powerful advocate for resuscitation studies, securing funding and encouraging international collaboration. One of the field's most productive and highly cited researchers, Dr. Becker shares his findings in countless lectures and peer-reviewed publications. Dr. Becker founded the center in 2006 to translate basic science into real-world improvements in care. His team's work on the use of automated external defibrillators in public settings led to placement of the devices in airports nationwide.

HONORARY MEMBERSHIP AWARD

Phyllis L. Edans, CPA, CAE



As chief financial officer, Ms. Edans kept ACEP's fiscal house in order for more than 27 years. Dedicated to excellence and committed to the mission of emergency medicine, she helped ACEP experience tremendous growth in areas dependent on stellar financial performance. From membership, the annual budget, members' equity, and the investment portfolio to NEMPAC, the Emergency Medicine Foundation, and more, she was a trusted manager and advisor on significant decisions that shaped the College's future. One of her first successes was creating a comprehensive financial compendium that still guides the Board of Directors' annual review of fiscal policy.

OUTSTANDING CONTRIBUTION IN EMS AWARD

Marianne Gausche-Hill, MD, FACEP



Dr. Gausche-Hill has labored tirelessly for nearly three decades to improve prehospital care for children and adults both at home and around the world. She is professor of clinical medicine and pediatrics at the David Geffen School of Medicine at the University of California, Los Angeles (UCLA) and vice chair and chief of the division of pediatric emergency medicine and director of pediatric emergency medicine and EMS fellowships in the department of emergency medicine at Harbor-UCLA Medical Center. She is the cocreator of numerous influential courses, director of research projects, and author of hundreds of publications. She is an active champion for EMS delivery and development locally, nationally, and internationally.

JOHN G. WIEGENSTEIN LEADERSHIP AWARD

J. Brian Hancock, MD, FACEP



Dr. Hancock has served his patients and ACEP with excellence for decades. Dr. Hancock is chief medical officer for the Department of Veterans Affairs' Veterans Integrated Service Network 11 in Ann Arbor, Michigan, caring for veterans in central Illinois, Indiana, Michigan, and northwest Ohio. Born in Evanston, Illinois, and raised in Chicago, Dr. Hancock was a talented classical pianist, but he knew at age 16 that he wanted to be a physician. He completed undergraduate studies at Northwestern University and medical school at Rush Medical College, both in Chicago. Dr. Hancock became a Councillor for the Michigan College of Emergency Physicians early in his career. He went on to hold every national College office, culminating in a dynamic and productive term as President from 2003 to 2004.

OUTSTANDING CONTRIBUTION IN EDUCATION AWARD

William K. Mallon, MD, FACEP



Smart, funny, engaging, and informative, Dr. Mallon is one of the most respected and sought-after speakers in emergency medicine. He has delivered more than 1,000 hours of ACEP continuing medical education and taught in 18 countries on six continents. He is professor of clinical emergency medicine in the Keck School of Medicine at the University of Southern California in Los Angeles and former director of the fellowship of international emergency medicine at Los Angeles County USC Medical Center. Dr. Mallon has educated a generation of residents at Los Angeles County Hospital and played an instrumental role in the growth and development of emergency medicine in Chile. He has also helped educate the public about emergency medicine as an executive producer of the award-winning documentary *Code Black*.

COUNCIL MERITORIOUS SERVICE AWARD

Catherine Anna Marco, MD, FACEP



Dr. Marco has been a dynamic, committed member of the ACEP Council since 2004. She is a professor in the department of emergency medicine at Wright State University and active in clinical practice at Miami Valley Hospital, both in Dayton, Ohio. At home and on the ACEP Council, Dr. Marco has served Ohio Chapter ACEP with excellence, holding important chapter leadership positions, including President and Chair of the Government Affairs Committee. Dr. Marco has been an active leader and participant on several Council committees and strives to bring forward the perspective of Ohio and all members of ACEP. As chair of the national ACEP Ethics Committee, Dr. Marco shared her

commitment and insight as she helped the College address vital ethical issues, including best practices for care at the end of life.

COLIN C. RORRIE JR. AWARD FOR EXCELLENCE IN HEALTH POLICY

Lynne D. Richardson, MD, FACEP



Dr. Richardson has dedicated her career to ending health disparities and improving emergency care for all Americans. She is professor and vice chair of emergency medicine and professor of health evidence and policy in the Icahn School of Medicine at Mount Sinai in New York City. Dr. Richardson began her commitment to better, fairer health care in the 1980s, doing landmark work in EMS policy at the regional and state levels. Since then, she has excelled as a leader and advocate in every capacity, from clinical care, education, and research to municipal, state, and federal policy. She is Past Chair of ACEP's Public Health and Injury Prevention Committee, ACEP's current liaison to the Commission to End Health Care Disparities, and on the Advisory Committee to the Director of the Centers for Disease Control and Prevention.

JAMES D. MILLS OUTSTANDING CONTRIBUTION TO EMERGENCY MEDICINE AWARD

David P. Sklar, MD, FACEP



Dr. Sklar has led emergency medicine with excellence for more than three decades. He is distinguished professor emeritus and retired associate dean for graduate medical education at the University of New Mexico Health Sciences Center in Albuquerque. Retired in name only, he continues to care for patients, teach, conduct research, and provide guidance on health policy. He is also editor-in-chief for *Academic Medicine*, the journal of the Association of American Medical Colleges. Dr. Sklar's contributions to emergency medicine and health care span every sphere. As residency director, Dr. Sklar helped design an innovative program that emphasizes public health and injury prevention as fundamentals. A prolific researcher whose interests include quality improvement and injury prevention, Dr. Sklar's work on migraine headache treatment has also contributed to emergency medicine clinical care.

JOHN A. RUPKE LEGACY AWARD

Arlo F. Weltge, MD, MPH, FACEP



Dr. Weltge is an exemplary leader whose contributions have strengthened emergency medicine and ACEP in Texas and across the nation. Dr. Weltge is clinical professor of emergency medicine at UTHealth, the University of Texas Medical School at Houston. He also serves as medical director for AMR's Houston EMS operations and the EMS program at Houston Community College. Born in Des Moines, Iowa, Dr. Weltge

spent his childhood in Waco, Texas. After undergraduate studies at MIT in life sciences, he headed to Houston for medical school at the University of Texas and a rotating internship at Baylor College of Medicine in Houston. Three months before the specialty was recognized, he launched his career in emergency medicine. He joined Houston Emergency Physicians and went on to be a cofounder of Southeast Texas Emergency Physicians.

DISASTER MEDICAL SCIENCES AWARD

Frederick "Skip" M. Burkle, Jr., MD, MPH, DTM, PhD (Hon.), FAAP, FACEP



Dr. Burkle is a senior fellow and scientist at the Harvard Humanitarian Initiative in Cambridge, Massachusetts, and senior international public policy scholar at the Woodrow Wilson International Center for

Scholars in Washington, D.C. He is a former senior scholar and now senior associate faculty in the department of international health and the Center for Refugee and Disaster Response at Johns Hopkins Bloomberg School of Public Health in Baltimore. Dr. Burkle has supported and represented ACEP for years at federal meetings and in the Disaster Medicine Section. He is the recipient of the prestigious William Crawford Gorgas Medal for distinguished work in preventive medicine, groundbreaking work in disaster management and humanitarian assistance, and the training of an entire generation of U.S. and international personnel. Dr. Burkle has published more than 200 scientific articles, 53 book chapters, and four books—three on disaster management, including the sentinel text *Disaster Medicine*.

DISASTER MEDICAL SCIENCES AWARD

Joseph F. Waeckerle, MD, FACEP



Dr. Waeckerle is clinical professor of emergency medicine at the University of Missouri-Kansas City School of Medicine and editor emeritus of *Annals of Emergency Medicine*. He is

residency trained and board certified in emergency medicine and sports medicine, with postgraduate work in exercise physiology. He has served emergency medicine organizations since the mid-1970s in many capacities and helped found the Emergency Medicine Residents' Association. A former member of the Board of Directors for ACEP and the Society for Academic Emergency Medicine, Dr. Waeckerle chaired the task force on Domestic Preparedness Against Weapons of Mass Destruction for the Office of Emergency Preparedness in the Department of Health and Human Services. Dr. Waeckerle was invited by the Department of Defense to participate in the Defense Science Board's Task Force on Defense Against Biological Weapons and by the Veterans Hospital Administration to serve on the Technical Advisory Committee on Domestic Preparedness.

CONTINUED on page 4

Research Forum Award Winners

BEST PAPER

Jody Vogel, MD

Denver Health Medical Center and University of Colorado School of Medicine

"Validation of the Denver Emergency Department Trauma Organ Failure Score to Predict Post-Injury Multiple Organ Failure"

YOUNG INVESTIGATOR

Faheem Guirgis, MD, FACEP

University of Florida

"Rapid Discharge of Patients Presenting to the Emergency Department with Cocaine Chest Pain: Application of an Abbreviated Cardiac Enzyme Protocol in the Clinical Decision Unit"

BEST RESIDENT PAPER

Shareen Ismail, MD

University of Florida College of Medicine

"Impact of Video Discharge Instructions from the Emergency Department in Regard to Caregiver Understanding of Their Child's Fever and Closed Head Injury"

BEST MEDICAL STUDENT PAPER

Nathan Itoga

University of Hawaii John A. Burns School of Medicine Department of Pediatrics

"Factors Affecting Nebulized Albuterol Aerosol Particle Sizes"

Section Awards

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Quality Improvement & Patient Safety Section

SERVICE TO SECTION

Wilderness Medicine Section

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Young Physicians Section

AWARDS OF DISTINCTION, SERVICE TO COLLEGE

Emergency Medicine Informatics Section

Geriatric Emergency Medicine Section

Quality Improvement & Patient Safety Section

PROMOTING SECTION MEMBERSHIP

American Association of Women Emergency Physicians

OUTSTANDING SECTION NEWSLETTER

Toxicology Section

2013-14 Faculty Speaker Awards



From left to right: Drs. Granovsky, Bavolek, Bonomo, Gausche-Hill, and Klauer.

OUTSTANDING SPEAKER OF THE YEAR

Marianne Gausche-Hill, MD, FACEP

OUTSTANDING SPEAKER OF THE YEAR HONORABLE MENTION

Kevin M. Klauer, DO, EJD, FACEP

"OVER THE TOP" FACULTY AWARD

Michael A. Granovsky, MD, CPC, FACEP

SCIENTIFIC ASSEMBLY ROOKIE SPEAKER OF THE YEAR

Jordan Bonomo, MD

2013 NEW SPEAKER FORUM WINNER

Rebecca Bavolek, MD

AWARDS OF DISTINCTION, OUTSTANDING SECTION NEWSLETTER

Critical Care Medicine Section

Emergency Ultrasound Section

Pediatric Emergency Medicine Section

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The Inside Scoop on Ebola

CDC expert Tim Uyeki, MD, MPH, outlines must-know facts for emergency physicians

BY JON MARK HIRSHON, MD, PHD, FACEP

*This is the transcript of an interview with **Tim Uyeki, MD, MPH**, the Centers for Disease Control and Prevention (CDC) clinical team lead (Ebola response) and chief medical officer for the influenza division at the CDC's National Center for Immunization and Respiratory Diseases.*

JMH: Thank you for taking the time for this interview. With all the excitement and anxiety, it is important to send a clear and precise message about this disease. Recognizing how busy you are, let me get quickly to our questions. My first question is, from a clinical perspective, what would you recommend for initial evaluation and diagnosis?

TU: Thank you Jon Mark. I appreciate this opportunity to help inform the ACEP membership about Ebola. The key, from a clinical perspective, is a good history. Essentially, there are two groups of people who are most at risk. The first is individuals recently returned from West Africa, and specifically the most affected countries of Liberia, Guinea, and Sierra Leone who have had direct contact with the blood or bodily fluids of a person who was sick with or died of Ebola virus disease (household, community, or health care setting). The second group would be individuals with direct contact with the blood or bodily fluids of a patient with Ebola virus disease in the United States (close contacts, including health care personnel). To date, in the United States, there have only been two imported cases and two secondary cases (nosocomial transmission to two nurses), other than a handful of individuals who had been medically evacuated for further medical care from West Africa. The key pieces of information to obtain are recent travel history, recent contact history, and timeline of illness signs and symptoms.

JMH: That's excellent information. So, really, the risk of transmission in the United States is extremely low. How long after exposure do symptoms typically appear? Let's say that someone presents with possible exposure—what are the signs and symptoms of the disease?

TU: In general, the average incubation period after exposure to fever and symptom onset is eight to 12 days, though symptoms may appear anywhere from two to 21 days after exposure. Initial signs and symptoms are nonspecific and may include low-grade temperature elevation, fatigue, chills, weakness, anorexia, and malaise. Within four to five days, profuse watery diarrhea, nausea, vomiting, and abdominal pain can start along with a high fever ($>38.6^{\circ}\text{C}$). Substantial gastrointestinal fluid losses can lead to intravascular volume depletion, hyponatremia, hypokalemia, hypomagnesemia, and hypocalcemia. Conjunctival injection or subconjunctival hemorrhage may be present. Most patients develop a significant transaminitis with aspartate transaminase (AST) markedly elevated compared to alanine transaminase (ALT). Some patients may also develop a diffuse erythematous mac-

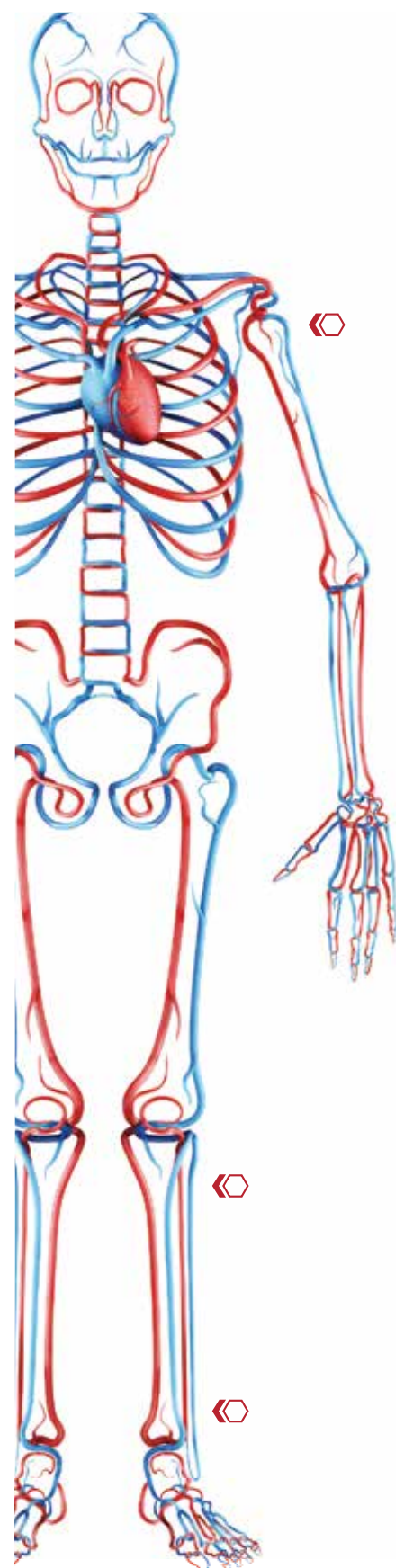
ulopapular rash on the face and torso by days four to six. Although hemostasis is impaired, frank hemorrhage is not common and is usually manifested by gastrointestinal tract bleeding and sometimes with oozing from mucous membranes and intravenous catheter sites in persons with severe disease later in the clinical course. Central nervous system involvement can be manifested by delirium, agitation, sei-

zures, and coma. Patients with fatal disease usually develop more severe clinical signs early during the clinical course and die typically between days six and 16 of complications including multiorgan failure and septic shock.

JMH: One question that I am sure our readers will want to know is, "When are patients infectious?"

TU: While symptomatic individuals are considered infectious, it is clear that the sicker you are, the greater the viremia. So someone with mild initial symptoms within the first 72 hours of clinical disease could have a blood specimen collected that tests negative for Ebola virus with real-time reverse transcription polymerase chain reaction (RT-PCR). There-

CONTINUED on page 6



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THE INSIDE SCOOP ON EBOLA | CONTINUED FROM PAGE 5

fore, if clinical suspicion remains high for Ebola virus disease, it is important to retest symptomatic individuals after 72 hours from illness onset. There is a correlation between the level of viremia and clinical severity. Persons with Ebola virus disease will become progressively worse with higher levels of Ebola virus in their blood, and clinical recovery is correlated with decreasing viremia.

JMH: Along with the concerns about the potential for spread, what should our members do to protect themselves, staff, and other patients?

TU: The discussions and concerns related to personal protective equipment (PPE) are very real issues for health care workers. Based upon the most recent cases, we have updated the specific instructions for PPE. It is important to wear the appropriate PPE and to make sure that donning and doffing the gear is done correctly. Health care workers caring for suspected or confirmed Ebola virus disease patients should have no skin exposure. I would recommend visiting the CDC website for the most up-to-date information (<http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html> and <http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>). In brief, rapid identification and isolation of suspected cases is important, with implementation of recommended PPE and infection control

precautions. Ebola virus is transmitted by direct exposure to blood and bodily secretions (vomit, stool, urine) of a symptomatic patient with Ebola virus disease. Ebola virus disease is not a respiratory illness but a systemic disease with multiorgan infection that triggers a host inflammatory response. This is in contrast to respiratory diseases caused by rare infections such as MERS-CoV and very common infections due to influenza A and B viruses. Work with your hospital infection control to be sure you have an up-to-date response plan.

JMH: Any concluding thoughts or recommendations?

TU: The travel history is extremely important. However, it is critical to remember that the vast majority of sick individuals with fever who have traveled recently from West Africa do not have Ebola virus disease. Also, the most-affected countries are Sierra Leone, Liberia, and Guinea, not all of West Africa or sub-Saharan Africa. In fact, the most common diagnosis in a returned traveler with fever from West Africa is malaria. Another diagnosis to consider is typhoid fever. In all the excitement and anxiety about Ebola, be sure to consider more-likely causes of fever, including common community-acquired pathogens in the United States, depending upon how long the person has been back in the United States. Another key point is to take a detailed history of the timeline and progression of clinical signs and symptoms. Even though the initial signs and symptoms of Ebola virus disease are nonspecific, understanding the progression of symptoms can help point to other etiolo-

gies. For example, vomiting and diarrhea do not typically occur until about four to five days after illness onset in Ebola virus disease—therefore, a patient who presents with fever and diarrhea occurring at illness onset is very unlikely to have Ebola virus disease.

A person who presents with sudden onset of fever, cough, sore throat, and nasal congestion or rhinorrhea is likely to have influenza or other common respiratory viral diseases. This is especially true if household contacts are sick with similar respiratory illness, so ask about similar illness in family members, household contacts, and close contacts. As we approach the fall/winter respiratory virus season, clinicians should not suspect Ebola virus disease in persons with fever who have not traveled recently to West Africa or those who do not have a history of direct contact with the bodily fluids of a person who was sick or recently died of suspected or confirmed Ebola virus disease. Of course, we do not want to miss any imported cases of Ebola virus disease. However, even though there will likely be some medically evacuated patients and rare sporadic imported cases of Ebola virus disease in the United States over the next year, such cases will remain rare here.

The most common diagnosis in a returned travel with fever from West Africa is malaria. Another diagnosis to consider is typhoid fever.

Also, be sure to tell you readers that there is much more information on the CDC website (<http://www.cdc.gov/vhf/ebola>). This is the best single location for updated information about Ebola virus disease and other infectious diseases.

JMH: Thank you again for taking the time to speak with me. I am sure that our members will appreciate your comments and recommendations. ☺

DR. HIRSHON is associate professor of emergency medicine at the University of Maryland School of Medicine in Baltimore and a member of the ACEP Board of Directors.



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IN MEMORIAM



EM Trailblazer and ACEP Past President Dies

Dr. Richard Aghababian is remembered by his colleagues

BY E. JACKSON ALLISON JR., MD, FACEP

OUR DEAR FRIEND and esteemed colleague Richard V. Aghababian, MD, FACEP, died in Southborough, Massachusetts, on Oct. 1, 2014, surrounded by his wife, Ann; their two children, Emily and Andrew; and Emily's husband, Michael Groccia. As fate would have it, Emily's unborn daughter was already past her due date, and Noella Rose did not arrive until one week later.

Dick and I first met at the ACEP Council in the fall of 1980 when we were both alternate Members of the Council. We became fast friends, and we were both bitten by the political bug. We became integral to the Small Chapter Caucus, and both of us eventually served as President of the College. My term was in 1991, and his in 1995.

Dick was a bright, gifted, and visionary leader. He graduated from Harvard and went on to become a member of the founding class at the University of Massachusetts School of Medicine. After a three-year residency in medicine at Harvard, he did a special two-year fellowship in emergency medicine at the University of San Francisco. After a brief stint in the private practice of EM, Dick became the founding chair of the department of emergency medicine at the University of Massachusetts Memorial Medical Center in Worcester. He retired as associate dean of continuing education, also at the University of Massachusetts.

During my tenure as President of ACEP, I made 55 trips in an 11-month span. Whenever I had major conflicts with my heavy schedule, I could always count on Dick to cover for me and the College. He visited Korea, the Philippines, and Mexico, and was a major force in helping our Mexican emergency physician colleagues establish EM as a recognized specialty there. Additionally, Dick was instrumental in doing the same thing in Israel, and I had the good fortune of playing a minor role during those exhausting proceedings.

Dick was a master teacher and possessed enviable skills as an administrator. His expertise was in disaster medicine, and he consulted in Armenia and Mexico following devastating earthquakes, and in Oklahoma City following the terrorist bombing in 1995. He was the editor of two major textbooks in EM, he was a much sought after lecturer, and he raised considerable funds for both the University of Massachusetts and ACEP. He also served for many years as an oral examiner for the American Board of Emergency Medicine and eventually was honored as a senior examiner.

Although far from being a wine snob,

Dick was decidedly a wine connoisseur who had the remarkable ability to identify various red wines by vintner *and* year! He also knew every hole-in-the wall ice cream shop on Cape Cod, and shared many

of those over the years with our family.

Dick will be sorely missed. His last major professional role was that of President of the Massachusetts Medical Society, and it was near the end of his tenure when the bombing occurred during the Boston Marathon. Dick's final speech to that august group heaped praise on the courageous EMS, firefighters, and police personnel who worked together to save so many lives.

May Dr. Richard Aghababian rest in peace. ☘

DR. ALLISON is professor of emergency medical care in the College of Health and Human Sciences at Western Carolina University. He is a Past President of ACEP.



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NEW DRUG COMING YOUR WAY

Three patients with 25B-NBOMe intoxication

BY HENRY K. SU, BA; MARK BAKER, MD; AND LARRY J. BARAFF, MD

The Case

It is a weekend, almost 3 a.m. in the emergency department. Paramedics report they are bringing in three patients from the same home, all with altered mentation and some with very abnormal vital signs. The simultaneous presentation of a toxidrome in three teens makes overdose from a recreational drug highly possible. After repeated questioning, one of the patients utters, "25-B."

Here, we document the presentation and management of three patients who inadvertently overdosed on a new designer drug with the street name 25-B. Designer drugs are manufactured with similar chemical structure and effect to illicit drugs and are advertised as "legal highs."¹ These substances are commonly procured through the Internet or in head shops and are rising in popularity.^{2,3}

The novel, synthetic, psychoactive substance 25B-NBOMe is one such compound. It was first synthesized in 2004 in Germany by Ralf Heim.⁴ 25B-NBOMe is also known by the names 2C-B-NBOMe, Cimbi-36, and 25-B. It is one of the NBOMe class of N-methoxybenzyl-substituted phenethylamine derivatives, similar to the 2C class of illicit hallucinogenic phenethylamines. Other NBOMe compounds include 25I-NBOMe and 25C-NBOMe, commonly known as 25-I and 25-C.

Abuse of these substances and reports of adverse reactions have increased.³ Their toxicology is not well-studied, and the dearth of literature complicates the clinician's task of identifying and treating their toxicity.

Patient Presentation

The three patients were at the home of one of the individuals (patient 1). EMS was called by his mother, who heard him screaming and heard commotion from the other two patients.

Patient 1 is a 19-year-old male who arrives at 2:53 a.m. on a backboard with all extremities restrained because of flailing and constant uncontrolled movement. His extremities are tense and very tremulous. He is not convulsing. Abrasions are noted on his left shoulder and right eyebrow. His mother later states that he had been hallucinating and she had seen him hit his shoulder as if he was trying to hurt himself. He is noncommunicative. He appears frightened and confused. The patient's temperature is 37.1°C, heart rate 171, and respirations 24. Initial blood pressure cannot

be obtained because of motion. He has large nonreactive pupils estimated at 6 mm in diameter, has no bowel sounds, and is incontinent of urine. Laboratory studies include serum Na of 140 mmol/L, K 3.8 mmol/L, CO₂ 12 mmol/L, creatinine 1.88 mg/dL, and creatine phosphokinase 450 U/L. The WBC is 33,700. A urine drug screen is negative.

The patient is agitated and tremulous. He is given diazepam 5 mg IV, after which his heart rate is 159 and blood pressure is 128/86. He is given a second dose of diazepam 5 mg IV and two liters of IV normal saline. After the second dose of diazepam, he is calm, and the restraints are removed. Hospitalization is arranged, but on reevaluation, he is improving rapidly. He is discharged four hours after arrival following resolution of symptoms. At the time of discharge, he is ambulatory and conversant. He has no recollection of coming to the emergency department.

Patient 2 is an 18-year-old female who is awake and looking around the room but unable to communicate. She does say a few words, but they are either unintelligible or out of context. There are no visible signs of trauma.

He is lying on the gurney looking straight up in the ceiling. He has a smile on his face. He does not appear combative. He does not interact with me. Significant laboratory studies included CO₂ 20 mmol/L and a WBC of 28,900.

Her temperature is 37.3°C, heart rate 108, respirations 22, and blood pressure 120/65. She is confused and also has dilated pupils. This patient is the first to mention the drug. With repeated questioning, she utters, "B-25." When she improves to the point that she can communicate, she reports dysphoria and visual hallucinations. Later, she denies dysphoria and reports euphoria instead. The urine drug screen is negative. The WBC is normal. She is given 2 liters of normal saline. She is discharged four hours after arrival following resolution of symptoms.

Patient 3 is a 19-year-old male. He was found supine on the floor of the residence, where he was noted to be occasionally screaming and thrashing. Upon arrival, his temperature is 37.2°C, heart rate 114, respira-

tions 22, and blood pressure 126/67. He is confused and also has large 5 mm nonreactive pupils. Documentation from the examining physician includes: "He is lying on the gurney looking straight up in the ceiling. He has a smile on his face. He does not appear combative. He does not interact with me." Significant laboratory studies include CO₂ 20 mmol/L and a WBC of 28,900. Urine drug screen is negative.

He never looks uncomfortable. He does not communicate initially, but when he improves and is able to communicate, he reports euphoria and visual hallucinations. He is discharged three hours after admission following resolution of symptoms.

When the patients have recovered, they report that they took 25-B after purchasing it on the Internet from another country. The drug had arrived by mail as a cardboard strip, presumably blotter paper for oral or sublingual administration.


Discussion

The NBOMe class of compounds has recently emerged as novel synthetic drug of abuse. In November 2013, the Department of Justice temporarily placed 25B-

NBOMe in Schedule I of the Controlled Substances Act, along with 25I-NBOMe and 25C-NBOMe.⁵

Pharmacologically, 25B-NBOMe is an agonist of the 5-HT_{2A} serotonin receptor.⁵ Our patients exhibited symptoms consistent with serotonin syndrome. An elevated WBC was noted with more severe symptoms. Review of the literature shows limited information describing the clinical course in the emergency department. Toxicology journals report the case of a 19-year-old male with confirmed 25-B overdose who exhibited grand mal seizure activity, fever, sinus tachycardia, dilated pupils, erythema, and purpuric rash.⁶ The most common reported symptoms of acute 25I-NBOMe intoxication are tachycardia, agitation, hallucinations, hypertension, and seizures.⁷ Other reported

symptoms include violent behavior, hyperpyrexia, clonus, an elevated WBC count, elevated creatine kinase, metabolic acidosis, and renal failure.⁸⁻¹⁰ Additionally, Poklis et al. report persistent seizure activity and resultant rhabdomyolysis, requiring sedatives and skeletal muscle blocking agents.⁷ Three deaths resulting from 25I-NBOMe toxicity have been reported in the medical literature, and in each, the decedents exhibited delirious or erratic behavior.^{7,11} Dangerous behavior directly contributed to one death as the decedent appeared to have fallen from an apartment balcony.⁷ Forensic pathologic study in two cases revealed nonfatal injuries, leaving open the possibility of death from pharmacologic effects.¹¹

The patients described in this report improved with symptomatic treatment. One was given benzodiazepines for agitation. There are no antidotes available for 25B-NBOMe or similar compounds. Pharmacologically based therapies may be considered, but efficacy of 5-HT2A antagonists such as cyproheptadine is inconclusive.^{12,13} Accidental NBOMe consumption is possible with intended LSD intoxication.^{2,14} 

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MR. SU is in the department of otolaryngology, head and neck surgery, at Mount Sinai Beth Israel and a research associate at the Thyroid, Head and Neck Cancer Foundation, both in New York. **DR. BAKER** is in the department of emergency medicine Pali Momi Medical Center in Aiea, Hawaii. **DR. BARAFF** is with the emergency medicine center at David Geffen School of Medicine at the University of California, Los Angeles.

Both *U.S. News* and Doximity agreed there were significant limitations to the data and discussed the challenges of developing objective measures for emergency medicine because it is a unique medical specialty.

are concerned that the sampling method fails to achieve the survey's objective: to identify top emergency medicine training programs. ACEP and its members also believe the survey conveys a message that some programs are better than others when, given the survey's limitations, this would not be accurate.

Doximity surveyed its members in July 2014, asking them to nominate the five "best" residency programs in the country. From these nominations, which were heavily weighted toward older, larger programs with more alumni, Doximity assembled its list of top residency programs. No outcomes or public data were used in creating the rankings.

Prior to the meeting, emergency physicians from the nine organizations held a conference call and developed a joint letter to *U.S. News* and Doximity challenging the sampling method and the implications of providing misleading information to medical students and the public.

Four physicians represented the groups at these meetings:

- Hans R. House, MD, FACEP, ACEP Board member
- Jeffrey N. Love, MD, MSC, President, Council of Emergency Medicine Residency Directors
- Jordan Celeste, MD, President, Emergency Medicine Residents' Association

• Mark Mitchell, DO, FACOEP, President, American College of Osteopathic Emergency Physicians

During the meetings, the physicians conveyed to *U.S. News* and Doximity that the results they published:

- Are misleading to medical students because they are not based on objective criteria.
- Are not useful to medical students because residency choices are made for many reasons, including geography, which are not factors in the Doximity survey.
- Are not accurate portrayals of residency programs because they are based solely upon opinions expressed by physicians who have no firsthand knowledge of any residency training programs other than the ones they attended.
- Do not reflect the unique nature of emergency medicine.
- Send a dangerous public health message to patients having medical emergencies.

The physicians expressed that there is potential value in a secure data service for communicating HIPAA-compliant messages between emergency physicians. Also, a resource that provides detailed information on residency programs and their alumni could help medical students in making decisions about their applica-

tions to specialty training. However, the collective organizations that represent all of emergency medicine could not support the data as long as the rankings were included. Both *U.S. News* and Doximity agreed there were significant limitations to the data and discussed the challenges of developing objective measures for emergency medicine because it is a unique medical specialty. Both also agreed that these data would not be promoted to the general public. Of note, emergency medicine was the only specialty that raised objections to this survey and ranking system despite the universally poor methodology.

U.S. News describes its publications that rank hospitals and medical specialties as "consumer decision support," which is intended to help members of the general public make decisions about where to seek care for complex medical problems. Emergency medicine has never been included in these rankings in the past, and there are no plans to begin doing so. *U.S. News* recognizes that, in a medical emergency, the best place to get care is the nearest emergency department. ☺

DR. HOUSE is professor of emergency medicine at the University of Iowa and vice chair for education in the department of emergency medicine. **LAURA GORE** is director of public relations at ACEP.



EMERGENCY MEDICINE STANDS TOGETHER

The following organizations participated in this effort to improve the way emergency medicine residency programs are evaluated by *U.S. News* and Doximity:

American College of Emergency Physicians

American Academy of Emergency Medicine

American Academy of Emergency Medicine Resident and Student Association

American Board of Emergency Medicine

American College of Osteopathic Emergency Physicians

Association of Academic Chairs of Emergency Medicine

Council of Emergency Medicine Residency Directors

Emergency Medicine Residents' Association

Society for Academic Emergency Medicine

REGIONALIZATION OF POST-RESUSCITATIVE CARE

Statewide system of post-arrest emergency care improves outcomes

BY LARRY BERESFORD

“Whether targeted temperature management aims for mild therapeutic hypothermia (32–34 degrees C) or ‘merely’ prevention of fever (36 degrees C), either way, the emergency physician has to gear up in the same way because post-arrest patients reliably have increased body temperature if that is not actively managed.”

—DANIEL SPAITE, MD, director of EMS Research and endowed professor at the University of Arizona in Tucson

A statewide system in Arizona for directing out-of-hospital cardiac arrest patients to 31 designated cardiac receiving center (CRC) hospitals that provide guideline-based post-arrest care more than doubled risk-adjusted rates of both survival and survival with good neurologic status. The impact of this system, with the voluntary participation of 120 emergency medical services (EMS) agencies and covering 80 percent of the state’s population, was recently reported in *Annals of Emergency Medicine*.¹

“We believed lives would be saved if the hospitals implemented the guidelines for post-arrest care and if we were able to get arrest patients to those hospitals,” said lead author Daniel Spaite, MD, director of EMS Research Collaboration and endowed professor at The University of Arizona in Tucson. The project is a partnership between EMS agencies, hospitals, the Arizona Department of Health Services (ADHS), and The University of Arizona in which designated CRCs commit to 24-7 guideline-based provision of therapeutic hypothermia and coronary angiography and percutaneous coronary interventions (cath/PCI), along with a bundle of other interventions.

ADHS worked closely with hospitals on implementing the guidelines and becoming recognized as CRCs starting in 2007. Then the department established protocols directing EMS agencies to transport cardiac arrest patients to the designated centers. Researchers compared survival rates before and after systemwide intervention, with survival increasing by more than 60 percent by 2010 (with adjusted odds ratio of more than 2).

The hospitals in this project followed current guidelines, which recommend mild therapeutic hypothermia. Recent studies have called into question the best target temperature for post-arrest patients. “While we ultimately cannot say for sure, it is very likely that therapeutic hypothermia was responsible for a significant part of the improved outcomes,” Dr. Spaite said. “Whether targeted temperature management aims for mild therapeutic hypothermia [32–34°C] or ‘merely’ prevention of fever [36°C], either way, the emergency physician has to gear up in the same way because post-arrest patients reliably have increased body temperature if that is not actively managed.”

Anticipated controversy from non-CRC hospitals that were bypassed in the protocol because they weren’t CRCs failed to materialize. “It helped that participation was voluntary and a hospital simply had to commit to providing 24-7 guideline-based care and sharing their data,” said co-author Ben Bobrow, MD, the state’s EMS medical director and professor of emergency medicine at The University of Arizona. The number of CRC-designated hospitals has since grown to 40 out of 62 facilities in the state, and small- to medium-sized hos-



pitals have showed as much improvement in survival as large ones.

Safety concerns about bypassing hospitals were allayed by two studies conducted by the authors prior to implementation. The Save Hearts in Arizona Registry & Education (SHARE) database showed that there is no increase in the risk of death when patients spend longer in transport, a finding corroborated by the OPALS database.^{2,3} The protocol in the current study directs EMS agencies to bypass a closer hospital so long as it increases transport interval by no more than 15 minutes.

This is the first study to look at the impact, across an entire state, of regionalization of coordinated out-of-hospital cardiac arrest treatment and transport, as endorsed by the American Heart Association in 2010, Dr. Spaite said.⁴ “It makes us optimistic that this voluntary model of implementation may be transportable to many other settings since it was successful across such a wide variety of EMS systems and receiving facilities.”

The prospective before-and-after study’s findings are consistent with the intent of regionalization and are associated with significant increases in both the number of patients arriving at CRC-designated hospitals and the use of guideline therapies, the *Annals* article notes. Provision of therapeutic hypothermia

among patients who had return of spontaneous circulation increased from 0 percent to 44 percent, while provision of cardiac cath/PCI went from 11.7 percent to 30.7 percent.

The authors encourage emergency physicians to adapt this approach in their own hospitals, EMS systems, and communities. “If you are an emergency medicine leader in your hospital, there’s no reason why you can’t work with other hospitals and EMS leaders to implement this model in your own system,” Dr. Spaite said. ☺

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MR. BERESFORD is a freelance journalist based in California.



Growing Pains, Progress for Telemed in the Carolinas

Two states
report mixed
results with
telepsychiatry
programs

BY CRAIG PRICE, CAE

SOME STATES ARE IMPLEMENTING TELEPSYCHIATRY PROGRAMS to expedite the provision of psychiatric care to patients in crisis and to potentially reduce the incidence of boarding psychiatric patients in the ED. There have been recent published reports about a few of these programs in North and South Carolina. Those reports, coupled with input from emergency physicians in these states, indicate mixed results and provide potentially helpful information for chapters in other states contemplating similar initiatives.

In 2010, North Carolina began a telepsychiatry program in one rural area of the state and subsequently enacted legislation for a state-wide program in 2013. According to a study from the North Carolina Center for Public Policy Research, the initial regional program improved patient outcomes and reduced the length of stay in emergency departments for patients awaiting discharge to inpatient facilities from 48 hours to 22.5 hours.¹ But the report also noted barriers to adoption of the program (including concerns related to licensure, liability, and reimbursement) and made recommendations for additional state action.

Some emergency physicians in North Carolina reported serious concerns about the program, including prolonged waits in getting a

teleconsult and extended lengths of stay in the ED (up to an average of 60 hours in some locations) after the consulting psychiatrist determined patients needed to be admitted. However, efforts to address these concerns

South Carolina emergency physicians indicated a variety of problems with the program, including the frequent reluctance of telepsychiatrists to send anyone home due to liability concerns.

were also noted and included hospital initiatives to move admitted psychiatric patients out of the ED until final placement can be arranged. Other emergency physicians reported success with the program in their hospitals,

particularly after having time to work through some of the issues noted above. They added that emergency physicians have come to trust the patient care received via telepsychiatry.

Meanwhile, five years ago, South Carolina launched a regional telepsychiatry program that was the subject of a Stateline article by The Pew Charitable Trusts a few months ago.² The article indicated that average wait times for a psychiatric examination dropped from four days to less than 10 hours. However, reports from some South Carolina emergency physicians indicated a variety of problems with the program, including the frequent reluctance of telepsychiatrists to send anyone home due to liability concerns, resulting in extended ED stays while trying to place patients who might otherwise have been sent home. That led some hospitals to drop the program.

While telepsychiatry seems to be showing signs of promise in some parts of the Carolinas, there are clearly still ample examples of implementation issues that must be resolved at the local level and that should be anticipated if similar telepsychiatry programs are implemented in other states.

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MR. PRICE is ACEP's associate executive director for policy and administration.

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Don't Step in Quicksand Trying to Become a

GLOBAL VOLUNTEER

How to find the right global health care volunteer position

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

Part 1 of a three-part series.

Interest in practicing and teaching emergency medicine around the world has increased exponentially. Many of our colleagues now have some international experience, many others dream of following a path to remote regions, and most academic centers are considering starting, if not already running, fellowships related to international emergency medical care.

Yet, most emergency physicians don't know how to identify and evaluate global volunteer opportunities, what to expect when they travel to remote lands, or how to prepare for their experience. This article, the first of a three-part series based on *The Global Healthcare Volunteer's Handbook: What You Need to Know Before You Go* (Galen Press, Ltd., March 2014), provides some of the basic information emergency physicians need for these ventures.

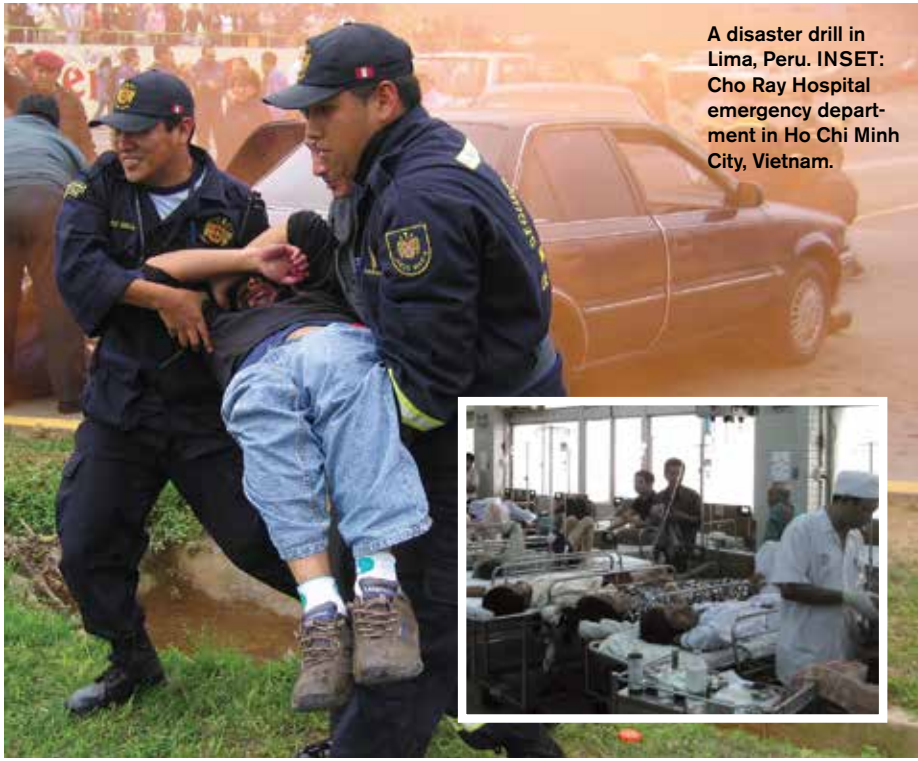
Finding the Right Opportunity

"Make a difference! Visit exotic sites and impart your medical wisdom. One or two weeks. Only \$5,000, plus airfare."

You have always dreamed of working internationally as a teacher, disaster worker, clinician, or a combination of all three. Is the offer above what you imagined? Probably not.

What you want to find is an international medical position that, first, meets your personal and professional needs and, second, has a mission consistent with your goals (see Figures 1 and 2). How do you locate and evaluate these positions? No, not the Internet.

While the Internet seems like an obvious place to start, it's best to begin with any personal contacts that you have. The Web is filled with scams, such as the trip described above, billed as international medical missions rather than what they really are: vacations. If that's the type of trip you're seeking, go for



it. Just note that the Internal Revenue Service won't see it as anything other than pleasure travel. It's best to first search for specific organizations and then evaluate them through their websites.

Locating Organizations

I recommend four places to begin searching for organizations with which to work or volunteer. The first is colleagues who have worked internationally. While their experience may be limited to one or two organizations and locations, they can provide personal insight into groups with which you may wish to work. Moreover, because many international organizations prefer you have global experience before you work with them, these colleagues may pro-

vide a valuable introduction to the group if you decide you are interested in its activities.

Second, consider contacting emergency medicine and general physician professional organizations (see Table 1). Third, you may want to join professional international groups such as ACEP's International or Disaster Medicine Sections and SAEM's Global Emergency Medicine Academy (GEMA). While at their meetings, ask other attendees about international opportunities. You can find additional leads from religious groups with which you are affiliated; many have active international medical missions. Finally, when traveling abroad, consider contacting health care facilities or expatriate volunteer physicians directly to see if your services are needed.

Vetting the Organizations

Once you have identified potential organizations, it's time to assess them with your personal criteria.

Organizations come in a multitude of flavors. First, look at their mission statement. That may seem boring, but it tells you a lot about what they expect volunteers to do onsite. It will also tell you whether their mission is consistent with your goals. Finally, it will indicate whether you generally qualify to work with them. For example, many non-secular religious groups only take people of their faith, and some of these groups see proselytizing (converting others) as their primary interest.

Table 2 describes typical variations among global medical organizations. I like to distinguish between those I think of as legitimate and those that are illegitimate. Legitimate organizations strive to provide long-term, sustainable changes to a health care system, illustrating the timeless adage, "Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime." Within emergency medicine, that usually involves establishing and working at an international EM residency or other long-term education and research programs. In acute disaster situations, while one can occasionally teach, the goal is to provide urgently needed care. In contrast, illegitimate organizations, like the one advertising the \$5,000 trip, rarely provide medical service. Similarly, some government-sponsored missions only provide superficial treatment for public relations purposes. ☹

DR. ISERSON is a fellow of the International Federation for Emergency Medicine and professor emeritus in the department of emergency medicine at The University of Arizona in Tucson.

Table 1. Online Resources to Identify International Volunteer Organizations

ACEP Disaster Medicine Section (www.acep.org/disastermedicinesection): Provides useful questions to ask about organizations with which you may want to work.
ACEP International Section (www.acep.org/internationalsection.com): Provides country reports (under "Resources") with country-specific information, including the status of EM, contact information, and often which U.S.-based EM organizations work in the country. Also provides websites for many international organizations (under "Resources").
Global First Responder (http://www.globalfirstresponder.com): Provides overviews of most countries, including their medical situation. Also has links to many international medical aid organizations. This site can be accessed directly or through the GEMA website.
Other organizations, such as the American College of Physicians (www.acponline.org) , also list opportunities, but you must be a member to access their information.
International Medical Volunteers Association (www.imva.org) and the American Medical Association (www.jamacaercenter.com/volunteer_opportunities.cfm): Provide extensive lists of organizations seeking volunteers, although it is not clear how often the information is updated.
The Global Healthcare Volunteer's Handbook has an up-to-date, vetted, and annotated list of organizations that not only describes the organizations' missions but also the specific health care providers they seek, where they work, the type of work they do, and their current contact information.

Table 2. Typical Differences Among Global Medical Organizations

SECULAR ORGANIZATION	NONSECULAR (RELIGIOUS) ORGANIZATION
Nongovernmental organization (NGO) or governmental (not-for-profit)	Private (generally for-profit agencies)
Big organization	Small organization
Long-term program intervention	Short-term (sustainable) program
Chronically resource-poor setting	Acute disaster
Long-term time commitment	Short-term time commitment
Paid (generally small stipend)	Volunteer
Expenses reimbursed	Expenses not or minimally reimbursed
Fixed clinical sites (hospitals, clinics)	Improvised clinical facilities
In-country/onsite administrator	Distant administration
Mission: long-term system growth	Mission: short-term benefits to local population
Family can accompany you	Unaccompanied assignment
Remote location	Less-remote location
Matches your clinical skills	Requires extending your clinical skills
Your language skills are needed/can be used	No applicable language skills

Adapted from The Global Healthcare Volunteer's Handbook.



DR. NATSUI is a Harvard-affiliated emergency medicine resident at Brigham and Women's Hospital/ Massachusetts General Hospital, in Boston.



DR. BAUGH is director of observation medicine in the department of emergency medicine at Brigham and Women's Hospital.

What's Your Policy on Home Meds for Observation Patients?

ACEP survey aims to better understand how emergency physicians approach patient concerns over medication costs

by SHAW NATSUI, MD, MPA; AND CHRISTOPHER BAUGH, MD, MBA

An 83-year-old woman presents to the emergency department after a syncopal episode. After a normal ED evaluation, emergency department clinicians consider her to be at intermediate risk given her age and comorbidities. She spends the night in an ED observation unit and is discharged the next day after an uneventful night of telemetry. Ten weeks later, she is surprised to see the hospital bill, which includes a \$215 charge for her chronic, routine home medications. There is no insurance coverage for this expense.

Use of observation, both as a billing status and a model of care,

has been increasing steadily in recent years.^{1,2} Currently, about 2.1 percent of all ED visits result in observation care.³ Most hospitals with more than 50,000 annual visits have a dedicated unit to manage these patients, with ED staff managing their care.⁴ Observation patients stay an average of 15.4 hours,⁵ and most are on long-term home medications (eg, nearly half of patients aged 65 or older take five or more prescription medications).⁶ As a result, it is common for observation patients to receive doses of their home medications while in observation status.

In recent years, national conversations about health care reform have drawn attention from the lay press and, in turn, from patients to trends of high and unanticipated out-of-pocket costs (eg, the \$18 baby aspirin).⁷ Observation is considered outpatient care. Hence, an observation stay invokes an outpatient insurance benefit. Medications considered by payers to be “self-administered medications,” typically patients’ home medications, may not be covered depending on many factors, such as primary and secondary insurance coverage. The most financially vulnerable

patients (ie, those without insurance or with traditional Medicare only) are also the most likely to be responsible for medications at the chargemaster (ie, highest) rate at hospitals without a specific policy to address this issue. In 2013, the expense to Medicare patients for medications given during an average observation visit was \$127, about a quarter of the total patient expense.⁸

This loophole in coverage has been previously identified as a policy failure, and advocacy groups and politicians are leading ongoing efforts to fix this.⁹⁻¹¹ In the meantime, clinicians are faced with valid concerns from their patients about the risk of medication costs. This summer, we surveyed members of the ACEP Observation Section and Association of Academic Chairs of Emergency Medicine to better understand how our colleagues are approaching this challenging issue. We received completed surveys from members representing 28 institutions, and their responses highlight the pervasive nature of the problem and various strategies to address it (see Table 1).

Until a policy solution is implemented, providers are left to identify local solutions. Four main strategies are being utilized: do nothing; allow patients to take their home medications (if they happen to bring them in); bill at a reduced rate; or not bill at all. The second option introduces significant logistical barriers because the Joint Commission and the Centers for Medicare & Medicaid Services both require medication verification, a time-consuming activity. After verification, medications typically still require specific orders, nursing involvement in their administration and documentation, and secure storage. Billing at the lowest contract rate or at hospital cost is another option that could mitigate patient fears but still leaves some potential exposure for those patients on many or particularly costly medications, and it does not account for the fact that patients already paid for the medication when

they filled the prescription. Providing medications at no charge shields patients while shifting responsibility entirely to the hospital.

Reducing the exposure to this problem is a challenge to which no obvious solution exists. Advocating for our patients to find a workable solution and building a consensus across emergency physicians and nurses, pharmacists, and hospital administrators is no simple task. You should know how this issue is addressed at your hospital, and if a policy isn’t in place, now is the time to start working on one. If patients have not yet asked you how an observation stay will affect their out-of-pocket costs, just wait—one will soon. ☛

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Table 1. ADMINISTRATION OF HOME MEDICATIONS (N=28)

	YES	NO	UNSURE
Do you permit patients in observation status to take their own medications?	57% (16)	36% (10)	7% (2)
IF YOU DO PERMIT HOME MEDICATIONS			
Do you have a home medication policy in place?	50% (8) ¹	50% (8)	
Do you exclude certain types of medication?	19% (3)	56% (9)	25% (4)
Where are the home medications stored?			
Patient or family member keeps them	63% (10)		
Pharmacist stores them	25% (4)		
Nurses store them	6% (1)		
In Pyxis under patient-profiled meds	6% (1)		
IF YOU DO NOT PERMIT HOME MEDICATIONS			
Why not (choose all that apply)?			
Pharmacy not supportive	36% (4)		
Nursing not supportive	18% (2)		
Could not get consensus for a policy	36% (4)		
Other	9% (1)		
Do you have alternative mechanisms in place to mitigate the expense of self-administered medications during an observation visit?			
Yes	20% (2) ²		
No	60% (6)		
Unsure	20% (2)		

1. Among those that do permit patients to take their own medications, some allow only nonformulary drugs, while others exclude controlled substances (eg, opioids, sedatives).

2. One approach is to not order noncritical home medications. Another is to reduce the amount patients are ultimately billed for these medications.

PROTECT YOUR
POT OF GOLD FROM
BAD ADVICE

THE END OF THE RAINBOW



DR. DAHLE is the author of *The White Coat Investor: A Doctor's Guide to Personal Finance and Investing* and blogs at <http://whitecoatinvestor.com>. He is not a licensed financial advisor, accountant, or attorney and recommends you consult with your own advisors prior to acting on any information you read here.

How to Buy Disability Insurance

You should purchase an amount that will provide for your expenses, not necessarily replace any particular percentage of your income.

by JAMES M. DAHLE, MD, FACEP

QUESTION. I kept hearing that I should buy some disability insurance, so I got a quote on a policy that will cost \$500 per month for a \$10,000 per month benefit. That seems really expensive. My employer offers a group policy, and it is a lot cheaper. Is this disability insurance policy too expensive? I want the coverage, but I don't want to be ripped off.

ANSWER. Unlike term life insurance, which can be ridiculously simple to evaluate and purchase, disability insurance is a very complex financial product. This is primarily because deciding if someone is dead is a rather black-and-white process compared to evaluating a disability, where there are at least 50 shades of gray. The contracts are necessarily complex because disabilities are complex and often temporary. Disability policies also tend to be more expensive than a term life policy primarily because a young, working physician is far more likely to become disabled than to die. Term life insurance is only necessary if you have someone else depending on your income, but nearly every physician who is not yet financially independent should have disability coverage.

I hear variants on this question frequently from physicians. This is not only a result of the sticker shock most doctors get when they first obtain a quote on a solid in-

dividual disability policy but also because these physicians have not followed the appropriate process in purchasing their policy. It is impossible for me to say if this particular policy is too expensive for you, but I can describe the process to follow so you can find out for yourself if you're paying too much. There are five steps involved in this process.

Step 1

Figure out how much income you want in the event of disability, realizing that it will cost real money to protect this income (about 2–5 percent for docs in their early 30s, or up to \$500 a month to provide a \$10,000 a month benefit). You are usually limited to a maximum of 60–70 percent of your current gross income. However, because this benefit, at least for non-employer-provided policies, is tax-free [unless you write off the premium cost as an expense, making the proceeds taxable], that is usually plenty of coverage and some-

times far more than is needed. You should purchase an amount that will provide for your expenses, not necessarily replace any particular percentage of your income.

Step 2

A disability policy cannot be legally purchased without the assistance of an agent (and indirectly paying a commission for that assistance), so you might as well get the maximum value out of that commission. Use an independent disability insurance expert who can sell policies from any of the "Big Six" companies: Berkshire, The Standard, Principal, Ameritas, MassMutual, and MetLife. You also want an experienced full-time agent. This means someone with years of experience who has sold at least 30 policies to physicians in the last year. Another benefit of that experience is that these agents are aware of and have access to significant "multi-life" discounts that a less experienced agent may not.

Step 3

Find out if you are eligible for any group policies through your employer or specialty society. Get copies of sample contracts and quotes, and take them with you to your meeting with the independent agent.

Step 4

Have the independent agent pull the best policies for your specialty, state, and gender, including any possible association, hospital, or multi-life discounts available for you. Now, ask about the differences between each of these policies, including the group policies, and the price for them. This is where the agent earns a substantial commission. Have the agent explain why one policy costs more than the others and whether the extra cost is worth it. Every line and term in the multi-page contract is important; be sure you understand what they all mean. Ask the agent for recommendations.

Some policies will cost more than others. Sometimes this is because the policy has a broader definition of disability or has more bells and whistles, but other times, it is simply a reflection of your state, specialty, gender, or health status. Be aware that a cheaper policy with fewer bells and whistles is not necessarily worse for you. The premium

CONTINUED on page 16



ILLUSTRATION/PAUL JUESTRICH; PHOTOS SHUTTERSTOCK.COM

Find out if you are eligible for any group policies through your employer or specialty society.

saved could be used to invest, pay down debt, or even purchase a larger amount of coverage rather than less coverage with more features.

Step 5

Now that you have all the information you need, you can make a rational decision about which policy to purchase and which riders (policy additions) to pay for. A group policy is generally much cheaper than a solid individual policy, but it often comes with a weaker definition of disability and cannot be taken with you when you change employers. A group policy, however, may be a much better deal (or the only policy available) for a doctor with health issues or dangerous hobbies such as rock climbing, scuba diving, skydiving, and flying. Remember, the agent's bias

is not only to sell you an individual policy, but also to sell you as much coverage as possible with as many riders as you will purchase.

I generally recommend purchasing a residual disability rider, which provides coverage for a partial disability and for a gradual return to full-time work. Residents and attendings anticipating a large jump in income in the future should strongly consider a future purchase option rider, but attendings in their peak earnings years can simply purchase all their needed coverage now. I also recommend a cost-of-living adjustment rider if you are under age 50. Graded premiums (lower when you are young, then higher when older) rather than level premiums can be useful for those who plan to become financially independent and cancel their policies

relatively early in their careers.

If you follow this procedure, you will not have to wonder if your policy is too expensive or if you purchased the wrong one. If you did not follow this procedure, there is no reason to despair. You can always start over at any time—just be sure to also compare your current policy to those now available.

If you've had your policy for a few years already, it may very well still be the best one for you and will almost certainly be the cheapest. Remember that the agent's bias will be for you to replace your policy because that is the only way to get paid.

A Few More Pearls

Women should generally look for a unisex policy because female-specific policies are usually more ex-

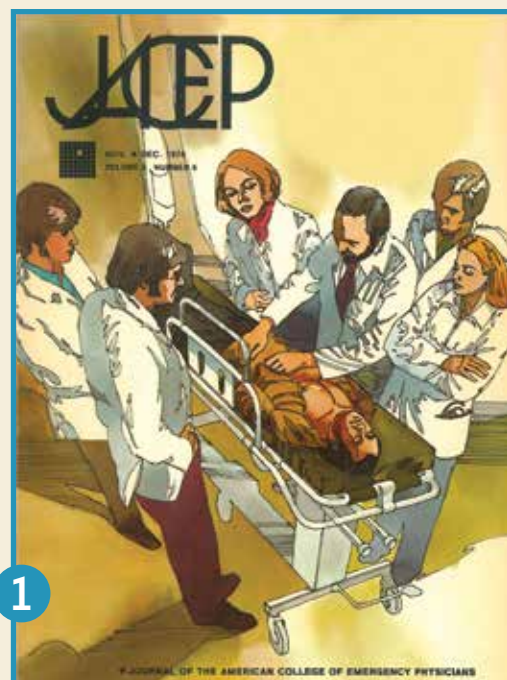
pensive. Most companies will also offer a significant discount if you pay your premiums once per year instead of monthly. Also keep in mind that you do not need to keep your policy right up until the date of your retirement. Once you are financially independent, feel free to cancel it. Even if you plan to work well into your 60s, remember that these policies usually only pay to age 65 or 67. The closer you are to that age, the less total benefits you will receive in the event of a long-term disability.

Long-term disability is a financial catastrophe that most physicians should protect against with an appropriate disability insurance policy. Following the steps outlined in this article will allow you to purchase the policy that is best for you. ☺

THEN & NOW

CUTTING EDGE IN 1974

The specialty has seen many changes in 40 years; some stand the test of time, others don't.



1

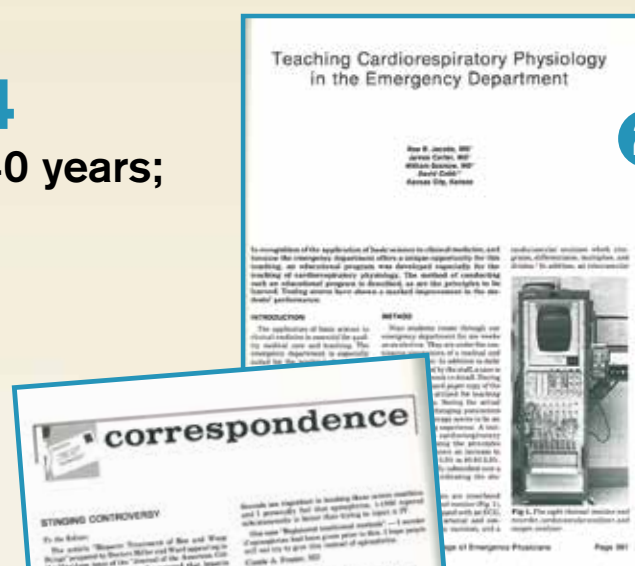
1. Nov./Dec. 1974: The art of physical diagnosis performed with serious sideburns.

2. Simulation training has come a long way since 1974.

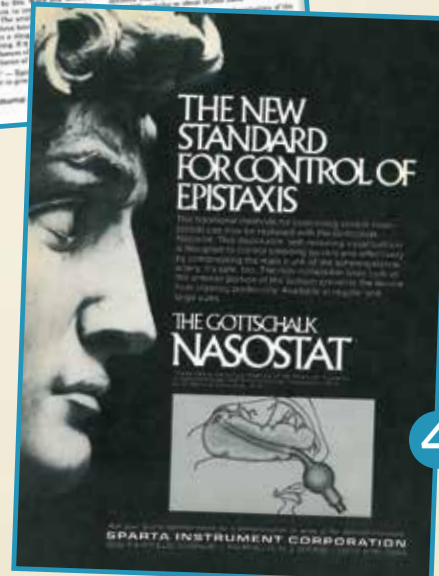
3. Letter to the editor: "Stinging controversy" is an editorial challenging a paper published in the May/June issue reporting that heparin is appropriate for allergic reactions. "The rapidity of its effect would appear to make heparin the drug of choice ..."

4. Nasostat: revolutionary balloon compresses the sphenopalatine artery! It appears that good ideas are worth repeating, even decades later.

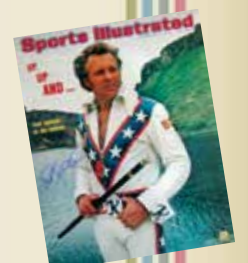
—Compliments of
Bruce Walmsley, MD, FACEP



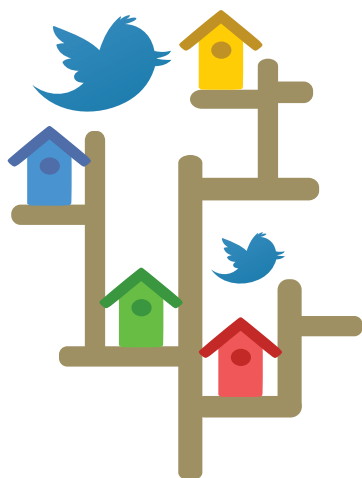
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4



Twitter Presence Trends Up at #ACEP14



ON MONDAY, OCT. 27, AT ACEP14, MORE THAN 4,100 TWEETS WITH THE #ACEP14 HASHTAG were sent all around the world from Chicago. To put that in perspective, on the busiest day last year in Seattle, there were 2,700 #ACEP13 tweets, and in 2012, #ACEP12 had around 1,500 tweets for the entire week in Denver. It's clear that the way we attend conferences is changing before our very eyes. In 2012, there were 314 tweeters. In 2013, that number jumped to 1,367. This year we are already closing in on 1,500 twitter contributors.

Also, for the first time, ACEP had an official social media team. I (@JeremyFaust) was joined by an all-star group of emergency physicians: Salim Rezaie (@srrezaie), Ryan Radecki (@emlitofnote), Jason Nomura (@Takeokun), Lauren Westafer (@LWestafer), Seth Trueger (@MDAware), and Allen Robert (@GruntDoc).

While there were tons of tweets covering the hot lectures from Amal Mattu, MD, FACEP (@AmalMattu), and Scott Weingart, MD, FACEP (@emcrit), there were a lot of great ones from smaller sessions.



From Rajesh Geria, MD, FACEP (@GeriaSonoMD), past chair of the ACEP Ultrasound Section: "ACEP policy statement: Ultrasound is NOT an extension of the physical exam. It is a diagnostic test." This is an important point from the perspective of billing, as well as core skills.



Lauren Westafer, DO (@LWestafer), reported from the end-of-life talk by James Adams, MD, FACEP, "Words matter. Palliative medicine=intensive [medicine]. Doesn't have to take much time."



And the always pearl-packed @LasVegasEM sent out this nifty tidbit that may come in handy: "Tooth Avulsion and don't know where it went? Rule out aspiration and consider a chest x-ray."



Costa Rica ED physician, Manrique Umana (@UmanaMD) was at Dr. Corey Slovis' Cardiology update talk and tweeted "Slovis: 10-30% of non-STEMI's have a fresh clot. 'Hypothermia+cathlab' stat post-arrest is the way to go!"



ACEP14 attendees check Twitter for highlights from the day's sessions.



Bob Stuntz (@BobStuntz) kept up with Scott Weingart's talk "Save the Blade!" on avoiding intubation. Among his best: "Weingart: Lower esophageal sphincter opens at 22-23cm H₂O, so keep NIV [non-invasive ventilation] pressures 15-20."



Since Ebola is all over the news, I would be remiss not to mention Dr. David Pigott's lecture "Inside the Hot Zone: Highly Infectious Pathogens in the ED." Official #ACEP14 social media team member Allen Roberts (@GruntDoc) tweeted that when treating

Ebola, expect "5-10 liters of GI losses [per day] with lyte disturbance." He also tweeted about the FDA's support of compassionate use for unapproved therapies.

For more great information from Chicago, search #ACEP14. ☛

DO YOU HAVE ANY FAVORITE TWEETS THAT ACEP NOW READERS SHOULD KNOW ABOUT VIA THE FEED?

TWEET AT ME
@JEREMYFAUST OR EMAIL TO
JSFAUST@GMAIL.COM.

Ultrasound-Guided Superficial Cervical Plexus Block

Unlike other common nerve blocks, the SCP block does not target an individual nerve but instead targets the fascial plane containing the SCP.

by ARUN NAGDEV, MD; AND ANDREW HERRING, MD

The Case

A 35-year-old man presents to the emergency department after falling off his bicycle. After basic trauma evaluation, a mildly displaced fracture is noted on the distal third of the clavicle. The patient has moderate to severe pain in that area after intravenous opioid and oral NSAID therapy. A multimodal approach to pain control with an ultrasound-guided superior cervical plexus (SCP) block is offered to the patient.

Introduction

The ultrasound-guided SCP block provides anesthesia to the superficial structures of the neck and shoulder, much of the earlobe, and the superior portion of the shoulder (Figure 1A). In the ED, the SCP block is used for clavicle fracture analgesia, as an alternative to local anesthetic infiltration for internal jugular central venous cannulation (CVC), or abscess drainage/laceration repair on the neck or earlobe (Figure 1B). For clinicians already familiar with performing ultrasound-guided internal jugular CVCs, sonographic localization of the target plane for an SCP block is easily accomplished with a stepwise approach to anterior neck anatomy. Once the emergency physician is comfortable with ultrasonographic needle tip visualization, the SCP block can be rapidly integrated into the clinical armamentarium.

Anatomy

The superior cervical plexus originates from the C1–C4 anterior rami and emerges from the posterior border of the sternocleidomastoid (SCM) muscle at the level of the superior pole of the thyroid cartilage. The SCP is composed of four distinct nerves: greater auricular (C2, C3), lesser occipital (C2), transverse cervical (C2, C3), and suprascapular (C3, C4). Together, these nerves provide sensory innervation to a large anatomic area including the skin and superficial structures of the neck, the submandibular area, the area overlying the clavicle and upper chest, and portions of the ear and the superior “cape” of the shoulder (Figure 1). Unlike other common nerve blocks, the SCP block does not target an individual

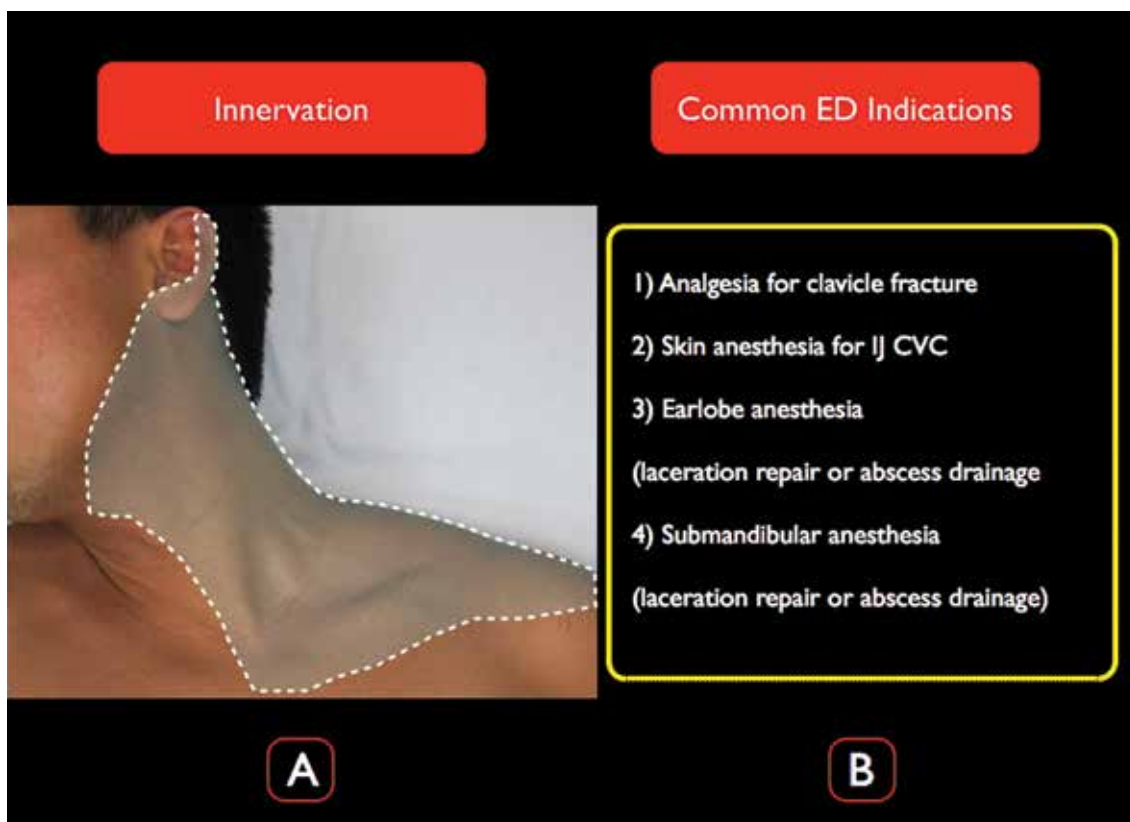


Figure 1.

A) The distribution of the SCP block. Note that the innervation extends down to the T2 level and to the cape of the shoulder. B) Common emergency medicine indications for the SCP block.

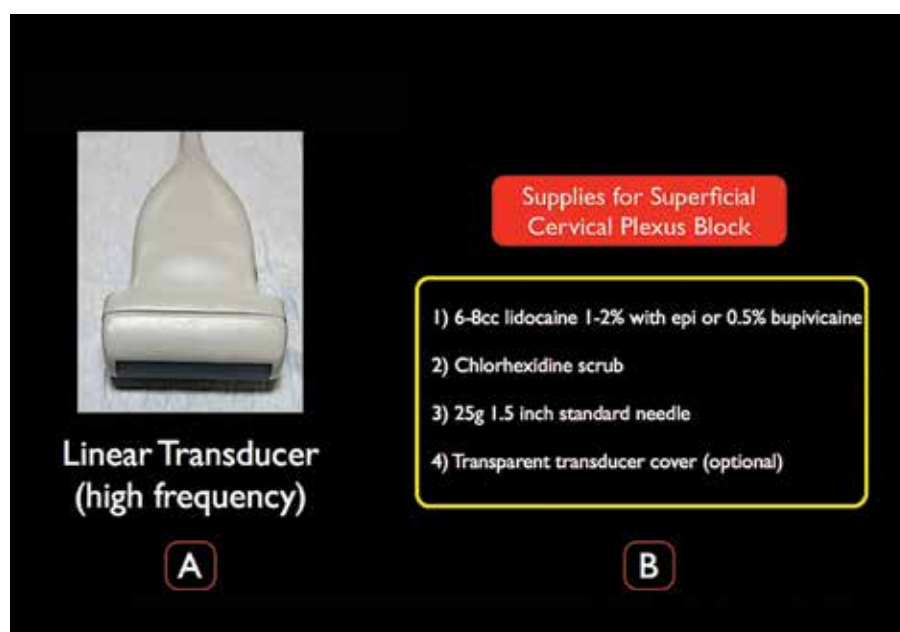


Figure 2.

A) A high-frequency linear transducer is ideal for the ultrasound-guided SCP block. B) Supplies needed for the SCP block.

nerve but instead targets the fascial plane containing the SCP. Thus, the components of the plexus are not visualized as individual nerves, but instead appear as a poorly defined grouping of hyperechoic structures not readily distinguishable from the surrounding connective tissue. The goal of the block is to place anesthetic in the fascial plane just

underneath the belly of the SCM at the C4 level where the SCP emerges along its posterolateral border.

The Procedure

Sterile Preparation. The skin should be prepared with antiseptic solution, and a high-frequency linear (15-6 MHz) ultrasound probe should be disinfected with quater-

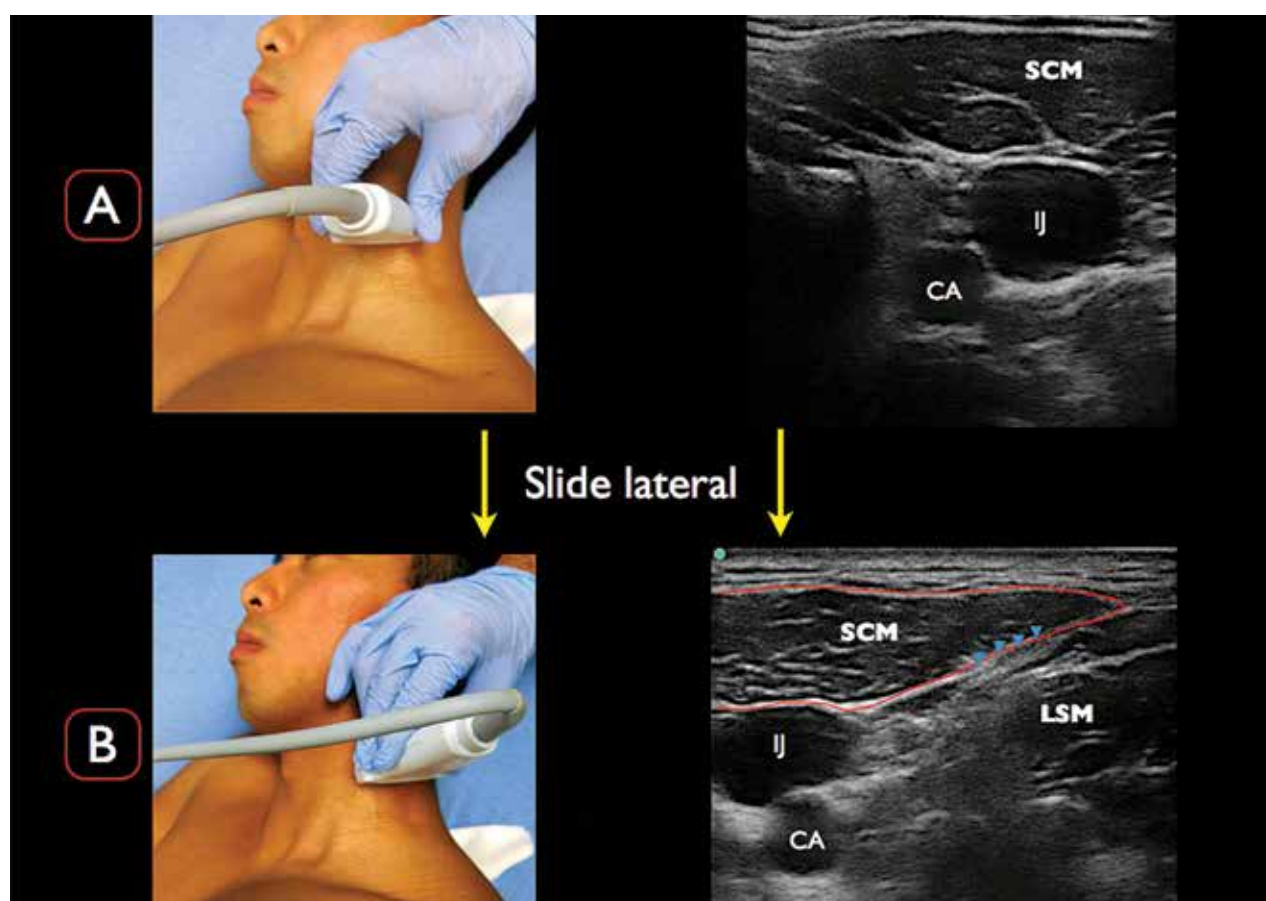
nary ammonia cleaning wipes prior to the procedure. The probe-transducing surface should be covered with a sterile adhesive dressing; a full probe cover is not necessary (Figure 2).

Survey Scan. Place the patient in lateral decubitus position, with the affected side facing up. The ultrasound system should be located

Gentle aliquots of anesthetic should be placed in this location, ensuring anechoic spread of fluid on the ultrasound screen. Common errors include non-visualized anesthetic spread and/or placing the needle tip in either the SCM or levator scapulae muscle belly.

Figure 3.

A) Place the transducer in a transverse orientation to the neck at the superior portion of the thyroid cartilage. Note the classic ultrasonographic landmarks; CA= carotid artery; IJ= internal jugular vein; SCM= sternocleidomastoid muscle. B) At the level of the superior portion of the thyroid cartilage, slowly slide the transducer laterally. Note the tapering of the SCM muscle and the LSM just below. The superior cervical plexus (SCP) denoted by the blue arrowheads) is the group of hyperechoic structures between the SCM muscle and LSM.



Needle Insertion and Injection.

The patient should be placed on continuous cardiac monitoring. Attach a 10 cc syringe filled with 6–8 cc of local anesthetic (eg, bupivacaine 0.5% or lidocaine 1%) to a 25 g 1.5" needle. After the transducer is placed in a transverse position over the anterior neck, we recommend using color Doppler to confirm the lack of aberrant vasculature. An in-plane posterior approach (lateral to medial) will allow the clinician to clearly visualize the needle during the entire nerve block. The goal is to guide the needle tip just under the tapering posterolateral edge of the SCM to the fascial layer between the SCM and LSM (Figure 4). Gentle aliquots of anesthetic should be placed in this location, ensuring anechoic spread of fluid on the ultrasound screen. Common errors include nonvisualized anesthetic spread and/or placing the needle tip in either the SCM or levator scapulae muscle belly.

Potential Complications.

As with all ultrasound-guided nerve blocks, systemic toxicity from inadvertent vascular injection and peripheral nerve injury should always be considered. Specifically for the ultrasound-guided SCP block, if the provider chooses a level too low (C6) or too deep (beneath the prevertebral fascia), phrenic nerve, recurrent laryngeal nerve, deep cervical plexus, or brachial plexus block can occur. Also, a transient Horner's syndrome can occur if the anesthetic travels deep in the prevertebral fascial plane and reaches the cervical sympathetic chain. Even though uncommon, understanding possible unwanted side effects is imperative for any clinician performing the SCP block (or any procedure). ☺

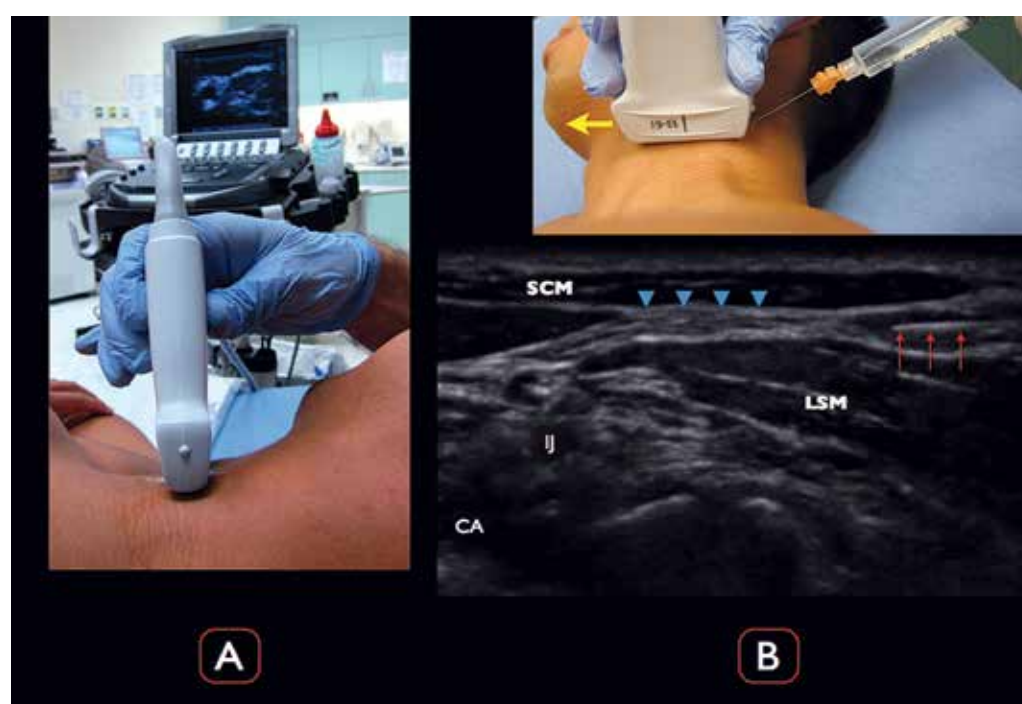


Figure 4.

A) The ultrasound screen is contralateral to the affected extremity, with a clear view of the screen for the clinician. B) The needle and needle tip (red arrows) are visualized clearly entering from the lateral aspect of the ultrasound image. Note that the ultrasound transducer directional marker is medial (yellow arrow). Anechoic anesthetic is being placed between the SCM muscle and LSM, with clear visualization of the needle tip as well as the SCP (blue arrowheads).

contralateral to the affected side, allowing the clinician to comfortably view the screen and the site of injection. Place a high-frequency linear transducer (15–6 MHz) in a transverse plane on the anterior neck at the level of the thyroid cartilage (probe marker pointing medially toward the thyroid). Clinicians who perform ultrasound-

guided CVC should be familiar with the sonoanatomy at this level and be able to visualize the internal jugular vein, carotid artery, thyroid, and sternocleidomastoid muscle (Figure 3A). From this familiar position, the probe should be moved cephalad to the C4 level (the superior pole of the thyroid cartilage) and then laterally until the SCM

muscle tapers to a beak (Figure 3B). The SCP is located just under the SCM and will be noted as a hyperechoic structure below the SCM and just above the levator scapulae muscle (LSM). Visualization of the interscalene groove or components of the brachial plexus indicates a low position; at the target C4 level, scalene muscles are typically quite

small, deep, or not visualized (Figure 3B).

Other commonly used landmarks to ensure the correct cervical level of the SCP block include the midpoint of the SCM from the mastoid to its insertion on the clavicle and the point where the external jugular crosses the posterolateral border of the SCM.

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DR. LEVITAN is an adjunct professor of emergency medicine at Dartmouth College's Geisel School of Medicine in Hanover, N.H., and a visiting professor of emergency medicine at the University of Maryland in Baltimore. He works clinically at a critical care access hospital in rural New Hampshire and teaches cadaveric and fiber-optic airway courses.

Top 10 List for Safety in the Rapid Sequence Airway

by RICHARD M. LEVITAN, MD, FACEP

Not too long ago, safety in airway management hinged on two pillars of safety: the first was the ability to mask ventilate, and the second was cricoid pressure (CP).

Mask Ventilation

The ability to mask ventilate was perceived to be a required first step in elective airway management before giving muscle relaxants. Multiple anesthesia studies have now shown that muscle relaxation correlates with improvement in mask ventilation, not collapse of the airway as many of us were taught. Warters et al. demonstrated that rocuronium improved mask ventilation in 67 percent of patients, resulted in unchanged ventilation in 33 percent, and made ventilation more difficult in no instance.¹

In addition to making mask ventilation easier, muscle relaxation has a second safety benefit—it permits insertion of a supraglottic airway (laryngeal mask airway [LMA] type device, or King LT-D). In the past, difficulty of mask ventilation led to awakening the patient and avoiding rapid sequence intubation; now some anesthesiologists advocate that the response should be the opposite—give muscle relaxants—and improve mask ventilation, insert an LMA, or intubate. Within the anesthesia community, many are questioning whether demonstrating mask ventilation prior to intubation should be abandoned.^{2,3}

According to Kheterpal et al., who studied more than 53,000 anesthesia cases, the frequency of impossible ventilation is approximately 1 in 2,800, and only one in four of those with impossible ventilation were difficult to intubate.⁴ The LMA works in 95 percent of instances of difficult or impossible mask ventilation.⁵

Combining optimal mask ventilation (with muscle relaxants) with an LMA and intubation (direct/video laryngoscopy with passive apneic oxygenation) makes use of muscle relaxants very low risk in the hands of skilled operators.

Cricoid Pressure

The second pillar of safety, CP, seems to be fading fast into medical lore. Many studies show CP impedes

In the past, difficulty of mask ventilation led to awakening the patient and avoiding rapid sequence intubation; now some anesthesiologists advocate that the response should be the opposite—give muscle relaxants—and improve mask ventilation, insert an LMA, or intubate.

laryngoscopy, worsens ventilation, and does not prevent regurgitation. The latest advanced cardiovascular life support (ACLS) guidelines no longer recommend its use in cardiac arrest; in other scenarios, ACLS states CP should be released if it impedes intubation or ventilation. A final nail in the coffin, I would argue, is that CP and the LMA are noncompatible. CP prevents LMA placement in the upper esophagus, and if applied after LMA insertion, it will push the LMA out of position.

New Rules: LMA

The LMA has rewritten the rules of airway management. An estimated 2 billion people around the world have had airway management with the LMA. It is now used in about 50 percent of elective general anesthesia cases in the United States and

more than 90 percent in the United Kingdom. It is universally recognized as an essential backup device in airway management in any setting.

The LMA requires a deep level of anesthesia (with propofol, usually), an absent gag reflex, or muscle relaxation with neuromuscular agents. In this world of new devices and rewritten rules, we now have the “rapid sequence airway.” The term was coined by Darren Braude, MD, who is an airway educator, enthusiast, and EMS director based in New Mexico. Instead of using muscle relaxants to place a tracheal tube, Dr. Braude and his flight crew have used muscle relaxants to insert a su-

praglottic airway (ie, a King LT-D). A similar technique has been adopted by David Duncan, MD, medical director at CALSTAR, which is a helicopter and fixed-wing service with nine bases in California. CALSTAR combines muscle relaxants on scene with insertion of a Cookgas air-Q (an LMA type device; he uses the new air-Q SP version, with a self-pressurizing cuff). Intubation can then be accomplished by the flight crew en route to the hospital if time permits. The Cookgas air-Q has significantly reduced the on-scene time for CALSTAR's trauma patients.

In the ED, Andy Sloas, DO, an emergency physician at the Univer-

sity of Kentucky in Lexington, has been using LMAs after administration of muscle relaxants for years. Once ventilation and oxygenation are stabilized, he uses the LMA as a mucus-free conduit to intubate—combining an endoscope with an Aintree catheter passed via the LMA channel. Though Dr. Sloas's practice is uncommon in the ED setting, intubation through the LMA with endoscopy is widely done in anesthesia.

Airway management is evolving rapidly; we are beginning to rethink the rules laid down 30 years ago (pre-LMA, pre-video laryngoscopy, pre-nasal oxygen during efforts securing a tube [NO-DESAT] or

What do these new rules and devices mean for practicing emergency physicians?

HERE ARE A FEW TAKE-HOME POINTS:

- 1** Safety is about avoidance of vomiting and regurgitation. Vomit is the enemy of laryngoscopy (direct and video) and endoscopy, supraglottic ventilation and face-mask ventilation, and apneic oxygenation.
- 2** Good ventilation practices are critical. Avoid high peak pressures, high rates, and excessive volumes. This is true of mask and supraglottic ventilation.
- 3** Gravity—a fundamental force in the universe—should be respected. Head elevation—always higher than the stomach—is important for pre-oxygenation, alveolar patency, lessening risk of regurgitation, and improving conditions for laryngoscopy. In the trauma patient, tilt the bed feet down if the collar cannot be removed.
- 4** Timing is everything. Assign the registered nurse or team member who is giving the muscle relaxants the task of timing and announcing “60 seconds” after administration. Avoid jumping the gun, which can easily happen in stressed situations. Jumping into the mouth with a laryngoscope (or oral airway) may trigger a still-intact gag reflex and vomitus.
- 5** Muscle relaxants create better mask ventilation and also permit insertion of supraglottic airways, like laryngeal mask airways and the King LT-D. It's not plastic in the trachea that is critical—it's oxygenation, ventilation, and avoidance of vomit in the airway.
- 6** The best types of supraglottic devices in the emergency setting are those that allow gastric decompression. Overventilation can still cause regurgitation around the distal balloon of a King LT-D or the tip of the LMA in the upper esophagus. Suction aggressively first if using these

devices in a soiled airway; they don't work well blocking fluids from below.

- 7** Get your long-acting agent in before the patient recovers their protective reflexes, if you're using succinyl choline and you need to go to plan B (ie, LMA or King LT-D for rescue). Many experts favor rocuronium for this very reason—if intubation fails, you are ready to insert an LMA or King LT-D immediately, and you have time for rescue intubation with an alternative technique.

- 8** Don't MacGyver intubation efforts with supraglottic airways. There are ways to intubate through supraglottic airways, but blindly throwing in bougies and other nonperfected methods you've never used before should be avoided. Learn the details of your rescue devices and practice, practice, practice. Learn endoscopy—many new options now allow ED use of short and long scopes (endoscopic sheaths, single-use endoscopes such as the Amby aScope). For many ED providers, removing a rescue device and switching to a different oral intubation method (with nasal oxygen) may be better than trying the never-practiced route through a supraglottic airway.

- 9** Blow some O's up the nose, ie, NO DESAT. In most patients (except those with significant shunting and high positive end-expiratory pressure requirements), you will dramatically prolong safe apnea, allowing intubation efforts through the mouth without desaturation.

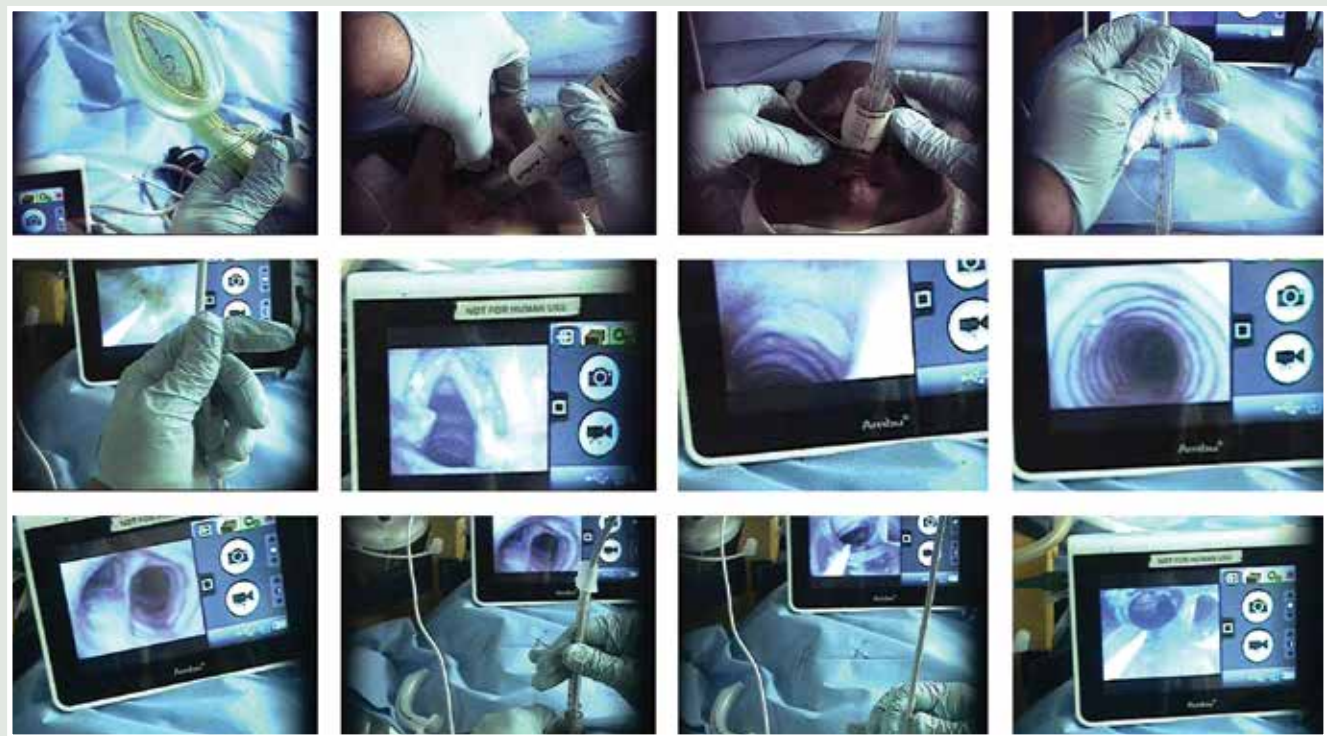
- 10** All bets are off in the “surgically inevitable airway.” In situations when ventilation and passive oxygenation are not possible (eg, distorted anatomy, perilaryngeal pathology, and massive fluids from below that preclude supraglottic airways), sometimes the best airway remains a scalpel to the neck.

apneic oxygenation via nasal cannula during intubation). There are now second- and third-generation supraglottic airways, which permit effective ventilation and gastric decompression. Some of these include the Ambu Aura-GAIN, the Cookgas air-Q SP, the Intersurgical i-gel, the LMA Supreme, and the King LT-D. Many of these devices also serve as great conduits for intubation with endoscopes. ☺

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ENDOSCOPY SEQUENCE



TOP ROW (left to right): 1) Loading the tube into the Aura LMA-type airway, placing tip of the tube at the base of bowl; 2) Inserting the Aura into the patient; 3) Seating the Aura by lifting the mandible and using thumbs to push the device in; and 4) Holding the proximal end of tube in place with the third, fourth, and fifth digits, and inserting the AMBU A-scope (endoscope) into the tube using thumb and index finger.

MIDDLE ROW (left to right): 5) Feeding the scope down the tube; 6) Vocal cords; 7) Passing through cords and looking at the cricothyroid membrane visible below; and 8) Moving down the trachea. Note that the tracheal rings are horseshoe shaped, with membranous trachea (flat) at the bottom.

BOTTOM ROW (left to right): 9) Carina; 10) While an assistant holds the endoscope up, the operator rotates it counterclockwise and advances the tube down the scope through the Aura; 11) Full advancement of tube down the Aura, with the distal tip of the tube extending beyond the endoscope; and 12) View of the distal tube, including the Murphy eye, and the carina as the endoscope is removed. Through the endoscope, the operator can verify tube tip location above the carina and below the cords on endoscope removal.

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DR. WELCH is a practicing emergency physician with Utah Emergency Physicians and a research fellow at the Intermountain Institute for Health Care Delivery Research. She has written numerous articles and three books on ED quality, safety, and efficiency. She is a consultant with Quality Matters Consulting, and her expertise is in ED operations.

How Will Your Next Shift Look?

Know your ED's patient profile to be prepared for whoever walks through your door

by SHARI WELCH, MD, FACEP

Do you have a sense for the national utilization trends for ED services? Do you know who we are caring for in our emergency departments and what the community expects from us? Do you know how your ED compares in terms of census and acuity and who exactly can be expected to show up at your door? You should! Here is a great cocktail-party factoid: the equivalent of the entire U.S. population will visit the ED every three years. You may not go to the ED, but your grandmother goes twice. The emergency department is part of the fabric of everyday life and occupies a central place in most communities.

In this column, I will review the trend data from the National Hospital Ambulatory Medical Care Survey (NHAMCS) to paint a vivid picture about who comes to us in the ED. From these data trends, we can anticipate what this means for the operational management of your ED. The latest date for which we have national ED visit trend data is 2009. The NHAMCS report gives us a context for looking at the trends we are seeing locally. The 2009 report is based on data from a sample of 34,942 ED visits from 356 emergency departments. From this data and using national population census numbers, an estimate of utilization of ED services by populations was developed, and such data should be used to plan whom you will care for and what their anticipated needs will be. A few highlights of this report include:

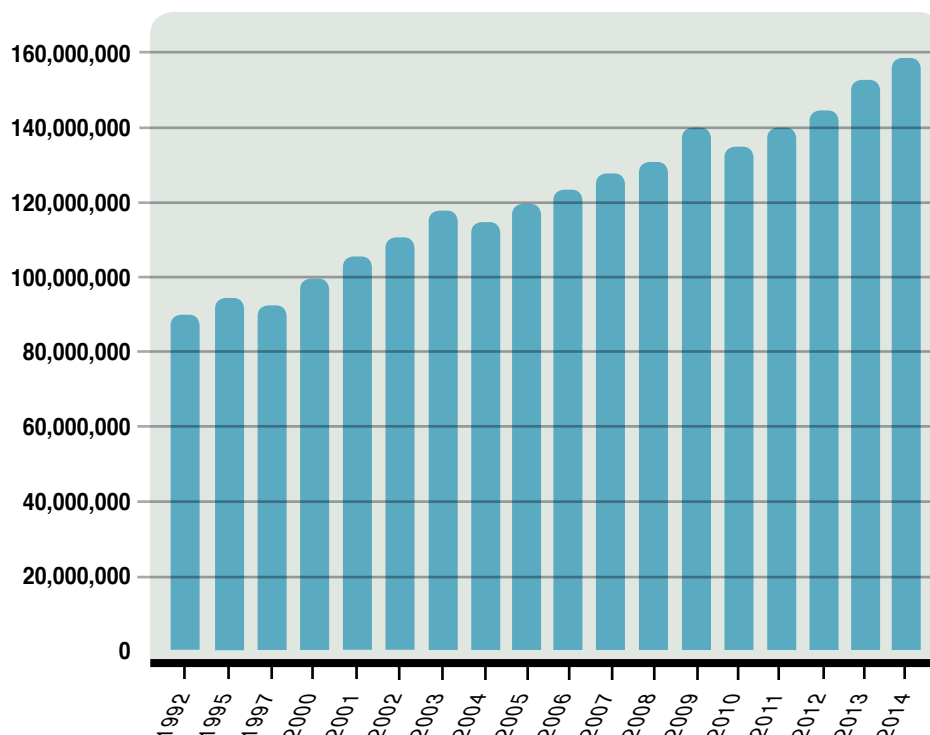
- ED visits continue to rise and will reach more than 140 million this year (2014). ED visits have increased an average of 2.8 percent each year for the last 20 years.
- The population studies indicate the utilization rate of the ED jumped from 414 visits per 1,000 population in 2008 to 451 visits per 1,000 in 2009. Our communities are using us more, often as the only available option for unscheduled care.
- Eighteen percent will arrive by ambulance (this is increasing), and 82 percent will walk in.

Who are the highest utilizers of ED services in your community? You may be surprised. It is probably not unexpected that homeless persons are the high utilizers in terms of ED visits, but infants are as well. In total, with the modified census data, the top prevalence uses of the ED are:

- Homeless persons, at 1,005 visits per 1,000 population (the homeless come more than once per person per year).
- Infants under age one, at 979 visits per 1,000 population, suggesting that we are indeed the place where young families turn when they have concerns about an infant's health and wellness.
- African Americans age 75 and older, at 947 visits per 1,000 population. Elderly minorities are high utilizers.

The CDC Data: Americans Vote With Their Feet

■ ED VISITS



- African Americans ages 15–44, at 902 visits per 1,000 population, likely reflecting access issues.
- Nursing home residents, at 851 visits per 1,000 population, suggesting that efforts to reduce the number of unnecessary transports from nursing homes to the ED, for example, with well-run telemedicine services, would likely be high leverage strategies for responding to high utilization.

It should come as no surprise that there are racial and ethnic disparities in ED visit rates, reflecting overall differences in health care delivery and access. The visit rate for Caucasians is 413 visits per 1,000 population. The visit rate for African Americans is 851 visits per 1,000 population. The visit rate for other races is 242 visits per 1,000 population. The utilization for all groups continues to rise.

A change in the categories of patients presenting to EDs has been noted over the past 30 years. In particular, accidents and injuries are decreasing as a percentage of the ED visits. In 1980, just more than half of ED patients had illness, 40 percent had injuries, and a small percent had behavioral problems. Fast-forward to 2010 and a full 70 percent had illness, only 23 percent had injury, and behavioral complaints accounted for close to 10 percent of ED visits nationwide. The decrease in injuries is a success story about the culmination of many safety initiatives, including seatbelt usage, drunk-driving initiatives, and occupational safety initiatives. Sadly and concurrent with this decrease in accidents and injuries, mental

The admission rate for ED patients has risen insidiously over the past two decades to 17 percent, with many larger urban and tertiary care hospital emergency departments reporting rates of twice that.

health resources have been unfunded, and the behavioral health needs of the community have increased. The behavioral health category of patients encompasses acute psychiatric crises, substance abuse, detoxification needs, and acute drug and alcohol intoxication. These needs are being met with difficulty because strategies and solutions must come from communities and have been harder to develop.

In addition, the percentage of geriatric patients arriving with complex medical problems has been increasing. This has resulted in more complicated diagnostic and man-

agement strategies for patients with many comorbid conditions. The admission rate for ED patients has risen insidiously over the past two decades to 17 percent, with many larger urban and tertiary care hospital emergency departments reporting rates of twice that. Further, the acuity is rising when tracked by CPT codes (by the Emergency Department Benchmarking Alliance Annual Survey). These patients do not lend themselves to a quick in-and-out model for an ED visit and may require changes in the way we orchestrate the ED visit. In addition, the expectations of the public will need to be managed as the services being provided are changing.

Here are a few questions to ask your colleagues at your next department meeting as you look at the data relevant to the patient population you are serving:

1. Do you see enough elderly patients?

Perhaps it is time to think of developing a geriatric ED service line to meet their needs? Could this be done in a clinical decision unit to allow for enough time to fully evaluate complex patients? Do you have enough case management support for these patients? Is your department friendly for seniors in terms of its design and amenities? Do you have care process models in place for common or acute geriatric diagnoses like stroke, hip fracture, and medication-related issues? Do you need to look at nursing home transfers?

2. Have your processes, staff, and patient flow kept pace with the behavioral health needs of your community?

Do you need a small behavioral health unit? Do you have ample support staff in the form of crisis workers and social workers with psychiatry backup? Do you have policies and protocols in place for managing potentially violent or suicidal patients?

3. Do you have appropriate service lines for your pediatric population?

This may include things like a bronchiolitis clinic during the winter months and croup protocols. Would it make sense to flow most pediatric patients through your fast track (low-acuity zone) in lieu of the loss of other accident and injury patients?

4. Have you recognized the ethnic and cultural needs of your community?

For instance, do you have information for common ED conditions in the languages represented by your community? Should you recruit for ethnic and minority representation in your ED team?

The bottom line is this: you need to know who is coming and you need to prepare for every subset of patients. By studying national trends and capturing this data locally, we can optimally prepare for the needs of the communities that we serve. ☐

PEARLS FROM THE
MEDICAL LITERATURE

DR. RADECKI is assistant professor of emergency medicine at The University of Texas Medical School at Houston. He blogs at Emergency Medicine Literature of Note (emlitofnote.com) and can be found on Twitter @emlitofnote.



What's New in Flu

While oseltamivir is still recommended for seasonal influenza, lingering doubts remain about its broad-use effectiveness

by RYAN PATRICK RADECKI, MD, MS

Have you enjoyed the lovely summer and fall? I hope so because as some people say, "winter is coming," and with winter comes the return of influenza.

The 2014–2015 Flu Season

By the first week of September 2014, the yearly cycle of influenza had dropped to its nadir. Only 1 percent of all influenza tests were positive at participating laboratories

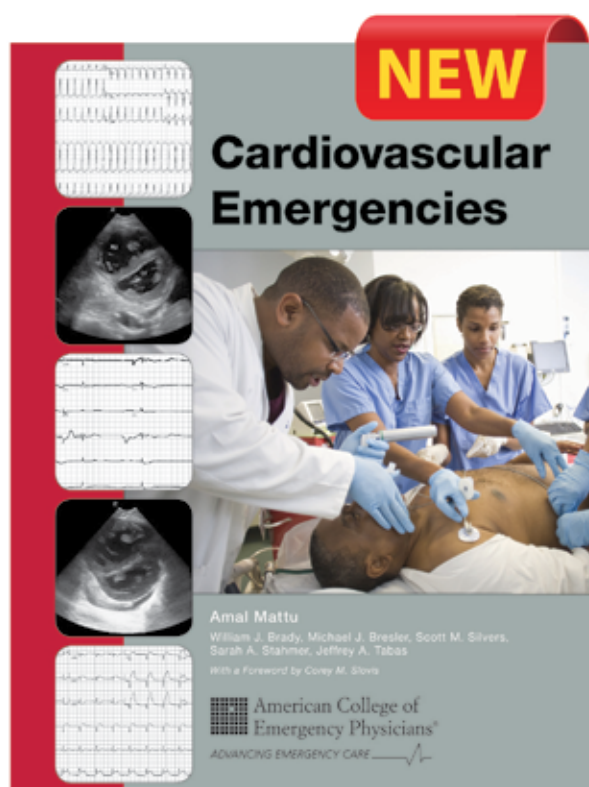
surveyed by the Centers for Disease Control and Prevention (CDC). After peaking at 5,000 positive tests per biweekly period last Christmas, now there were fewer than 20. Since September, we've been witnessing a gradual increase in both positive tests and percentage of tests positive.¹

The last two influenza seasons reached epidemic thresholds in the United States. The winters of both 2013 and 2014 experienced significant spikes in mortality associated with pneumonia and influenza, several standard deviations above the seasonal norm. Last season, at its peak, the

CONTINUED on page 24



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vast majority of infections were influenza A viruses, and the predominant strain was the H1N1 subtype, the so-called “swine flu,” initially detected in 2009. This strain of influenza has been associated with increased case-fatality rates, particularly at the age-range extremes of greater than 65 years and less than 5. This strain is also associated with an excess incidence of the acute respiratory distress syndrome secondary to cytokine and chemokine release in otherwise healthy individuals outside the typical risk groups.

While the particular strains of circulating influenza are challenging to predict, this year’s influenza vaccines in the Northern Hemisphere consist of the following:

- Influenza A/California/7/2009 (H1N1) pdm09–like virus
- Influenza A/Texas/50/2012 (H3N2)–like virus
- Influenza B/Massachusetts/2/2012–like virus.

Approximately half of the doses manufactured for the 2014–2015 season will be tetravalent and include an additional B virus:

- Influenza B/Brisbane/60/2008–like virus

The only change from last year’s vaccine is an updated version of the H3N2 variant, replacing an influenza A/Victoria/361/2011–like virus. Vaccination group recommendations are unchanged from previous years, and health care workers are again universally encouraged to protect themselves and their patients through vaccination.

As with each influenza season, the CDC tracks the emergence of novel influenza A variants. The prevailing worrisome variant has been a highly pathogenic H5N1 strain known as “avian influenza.” At this time, only sporadic cases have been reported to the World Health Organization from the Middle East and Southeast Asia, and they have followed close contact with poultry. Another relatively lethal avian strain, H7N9, has been reported in sporadic cases throughout China and Malaysia. Lastly, a novel variant H3N2v avian strain containing genetic material from the H1N1 swine strain is being tracked. However, after peaking at 309 reported cases in 2012, only two cases of this crossover strain have been reported as of this writing. While it is too late to change the 2014–2015 vaccine components, emergence of any new pathogenic strains may change CDC recommendations for antiviral use.

Updates on Antiviral Use

The CDC has not altered its current recommendations for treatment of seasonal influenza.² As is familiar to most clinicians, this includes the neuraminidase inhibitors oseltamivir (Tamiflu) and zanamivir (Relenza), with recommendations to initiate therapy in high-risk groups within 48 hours of symptom onset. Patients hospitalized for respiratory illness and suspected or confirmed influenza should also be considered for antiviral therapy beyond 48 hours.

However, what is new since the last influenza season is incremental progress in opening the data on oseltamivir. As has been detailed extensively on the BMJ Tamiflu campaign, substantial doubts remain regarding the effectiveness and utility of broad use of oseltamivir for seasonal influenza.³ Independent investigators from The Cochrane Collaboration have persistently campaigned for Roche, manufacturer of

oseltamivir, to provide access to full trial reports, including several early trials for which no data have been released. The overwhelming concern from this group of investigators is the data currently available for review incompletely describe the adverse effects of neuraminidase inhibitors and the quality of reporting of complications is low. Extensive meetings between the Cochrane group, Roche, and another Roche-funded reanalysis group have resulted in additional data available for analysis.

The first such updated publication provides a mixed picture regarding the utility of oseltamivir. The authors report that oseltamivir use in symptomatic adults reduced average symptom duration from 7 to 6.3 days and that use of oseltamivir as influenza prophylaxis reduced risk of influenza transmission at a rate of one case prevented for every 33 treated. However, the use of oseltamivir did not exhibit a significant effect reducing subsequent influenza complications or hospitalizations while resulting in an excess of

nausea, diarrhea, cardiac adverse events, and neuropsychiatric effects. The Cochrane group concludes the use of oseltamivir for treatment of influenza must consider potential benefits and harms of treatment on an individual patient basis.⁴

The CDC, however, prefers to justify its recommendations mostly on observational data reflecting decreased mortality following treatment with neuraminidase inhibitors.⁵ CDC representatives acknowledge the trials may demonstrate little benefit to use

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in healthy individuals, but they note high-risk patients are underrepresented and the observational reports from pragmatic use may be more informative for such populations. Unfortunately, many of these observational reports are from investigators funded by Roche, have hotly debated statistical methodology, and are subject to the many biases inherent to such retrospective investigations.⁶

What's the bottom line? We still don't have good evidence describing the efficacy of os-

eltamivir. An otherwise healthy patient with influenza-like symptoms may receive a trivial half-day reduction in symptoms associated with a weeklong illness at the expense of the cost of medication and risk of adverse medication effects. If this season again is primarily H1N1 or a new highly pathogenic strain, it is probably reasonable to offer the drug to high-risk individuals while communicating that the benefits are suspected but unproven. Finally, for hospitalized patients with severe illness, the potential benefits almost certainly

outweigh the small incremental costs of oseltamivir relative to those of hospitalization, and observational evidence, flawed as it may be, supports its use. ☛

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CHIEF, EMERGENCY MEDICINE
San Francisco General Hospital
University of California, San Francisco

The Department of Emergency Medicine at the University of California, San Francisco (UCSF), School of Medicine, seeks an outstanding leader in Emergency Medicine to serve as Chief of Emergency Medicine at San Francisco General Hospital (SFGH). This position offers an exceptional leadership opportunity as the UCSF Department of Emergency Medicine, and SFGH in particular, are in a phase of expansion. SFGH will open a new hospital, with a 60-bed ED, at the end of 2015 incorporating both adult and pediatric emergency medicine. The Chief will have major responsibilities for faculty recruitment and evaluation, the Division's budget and overseeing the clinical service, research, residency and medical student programs at SFGH.

The UCSF Department of Emergency Medicine provides comprehensive emergency services to a large local and referral adult and pediatric population with approximately 93,000 visits a year at UCSF Medical Center and San Francisco General Hospital. In early 2015, the Department will also staff a new pediatric emergency department at Mission Bay. SFGH is a level-1 trauma center, paramedic base station and training center and currently sees 50,000 patients annually. It is a safety-net hospital serving all of San Francisco, with a clear mission to care for the under-served of the city. It is well resourced and staffed by physicians and residents from UCSF in all medical and surgical specialties. In addition to the opening of a new hospital at SFGH, The Department of Emergency Medicine has a fully-accredited 4-year Emergency Medicine Residency Program with 50 residents and directs fellowship programs in EMS, ultrasound, education, and toxicology. Research is a major priority of the Department, with over 50 ongoing studies and 100 peer-reviewed publications last year.

Successful candidates for this position must demonstrate exceptional leadership, administrative and organizational skills and have a national reputation in academic emergency medicine in the areas of patient care, medical education and research. The applicant must have a minimum of 5 years leadership experience in an academic emergency department and be board certified in Emergency Medicine.

The University of California, San Francisco, is one of the nation's top five medical schools and demonstrates excellence in basic science and clinical research, global health sciences, policy, advocacy, and medical education scholarship. The San Francisco Bay Area is well-known for its great food, mild climate, beautiful scenery, vibrant cultural environment, and its outdoor recreational activities.

Send cover letter and curriculum vitae to:
Neil Powe, MD, Search Committee Chair
c/o Natalya Khait
UCSF Department of Emergency Medicine
533 Parnassus Avenue, Suite U575
San Francisco, CA 94143-0749
Natalya.khait@emergency.ucsf.edu

UCSF seeks candidates whose experience, teaching, research, or community service has prepared them to contribute to our commitment to diversity and excellence. UCSF is an Equal Opportunity/Affirmative Action Employer. The University undertakes affirmative action to assure equal employment opportunity for underutilized minorities and women, for persons with disabilities, and for covered veterans. All qualified applicants are encouraged to apply, including minorities and women. For additional information, please visit our website at <http://emergency.ucsf.edu>

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ARKANSAS OPPORTUNITIES

Summit Medical Center (Van Buren, AR) 19K annual visits. **Medical Director.**

FLORIDA OPPORTUNITIES

Lawnwood Regional. (Ft. Pierce, FL) 60K annual visits, Level II Trauma.

NEW! Memorial Emergency Care- Atlantic (Jacksonville, FL) Brand new freestanding ED, affiliated with Memorial Hospital Jacksonville.

Lake City Medical Center (Lake City, FL) 25K annual visits. **Medical Director and Staff.**

Fishermen's Hospital (Marathon, FL) 9K annual visits.

NEW! Hunter's Creek ER (Orlando, FL) Brand new freestanding ED affiliated with Osceola Regional. Estimated 18K visits/yr.

Poinciana Hospital (Orlando, FL) 35K annual visits.

Gulf Coast Medical Center (Panama City, FL) 60K annual visits.

West Florida Hospital (Pensacola, FL) 51K annual visits.

Westside Medical Center (Plantation, FL) 45K annual visits.

Fawcett Memorial Hospital (Port Charlotte, FL) 25K annual visits.

Doctor's Hospital of Sarasota (Sarasota, FL) 23K annual visits.

FL Hospital Heartland System (Sebring and Surrounding Areas, FL) 3 Hospital System. 11 - 25K annual visits.

Northside Hospital (St. Petersburg, FL) 31K annual visits. **Associate Medical Director and Staff.**

Capital Regional (Tallahassee, FL) 65K annual visits. Affiliated Freestanding ED - **Gadsden Memorial Campus** (Quincy, FL) 15K annual visits.

Bayfront Health (Tampa Bay, FL) 2 campus system. 26K-30K annual visits.

Bayonet Point (Tampa Bay, FL) 36K annual visits, Level II Trauma.

Brandon Regional (Tampa Bay, FL) 106K annual visits; Second campus in Plant City - 15K annual visits.

Medical Center of Trinity (Tampa Bay, FL) 50K annual visits.

NEW! Tampa Community Hospital (Tampa Bay, FL). 18K annual visits. **Medical Director and Staff.**

West Palm Hospital (West Palm Beach, FL) 28K annual visits.

Oakhill Hospital (Springhill, FL). 35K annual visits.

GEORGIA OPPORTUNITIES

Fairview Park (Dublin, GA) 36K annual visits.

Mayo Clinic at Waycross (Waycross, GA) 50K annual visits.

KANSAS OPPORTUNITIES

Wesley Medical Center (Wichita, KS) 65K annual visits. **Regional Medical Director and Staff.**

Menorah Medical Center (Overland Park, KS) 14K annual visits.

KENTUCKY OPPORTUNITIES

Greenview Regional (Bowling Green, KY) 32K annual visits.

Murray-Calloway County Hospital (Murray, KY) 18K annual visits.

LOUISIANA OPPORTUNITIES

CHRISTUS St. Frances Cabrini Hospital. (Alexandria, LA). 45K annual visits. **Medical Director.**

Terrebonne General (Houma, LA) 57K annual visits.

CHRISTUS St. Patrick Hospital (Lake Charles, LA) 25K annual visits.

New Orleans East (New Orleans, LA) Estimated 15K visits in year one.

MISSOURI OPPORTUNITIES

Golden Valley Memorial Hospital (Clinton, MO) 13K annual visits.

Research Medical Center (Kansas City, MO) 55K annual visits.

Belton Regional Medical Center (Belton, MO) 25K annual visits.

NEW HAMPSHIRE OPPORTUNITIES

Portsmouth Regional Medical Center (Portsmouth, NH) 30K annual visits. **Medical Director.**

Parkland Urgent Care (Salem, NH) 25K annual visits. **Medical Director.**

NORTH CAROLINA OPPORTUNITIES

Albemarle Hospital (Elizabeth City, NC) 47K annual visits.

PENNSYLVANIA OPPORTUNITIES

Lancaster Regional Medical Center (Lancaster, PA) 22K annual visits. **Associate Medical Director and Staff.**

SOUTH CAROLINA OPPORTUNITIES

McLeod Dillon/Loris/Seacoast (Dillon and Myrtle Beach area, SC) 23 - 30K annual visits.

TENNESSEE OPPORTUNITIES

NEW! Erlanger North Valley (Dunlap, TN) Brand new freestanding ED, affiliated with Erlanger Health.

Southern Hills Medical Center (Nashville, TN) 41K annual visits. **Medical Director and Staff.**

TriStar ER Portland (Nashville, TN) Brand new freestanding ED, affiliated with TriStar Hendersonville.

University Medical Center (Nashville, TN) 30K annual visits.

NEW! TriStar Parkridge West (Jasper, TN) 18K annual visits. **Medical Director and Staff.**

TEXAS OPPORTUNITIES

CHRISTUS Alon/Creekside (San Antonio, TX) Brand new freestanding ED. Approx 9K annual visits each.

CHRISTUS St. Elizabeth (Beaumont, TX) 50K annual visits. **Medical Director.**

Valley Regional (Brownsville, TX) 33K annual visits. **Medical Director and Staff.**

CHRISTUS Spohn Health System (Corpus Christi & surrounding areas) 6 Hospital System. 21-48 annual visits.

East Houston Regional (Houston, TX) 51K annual visits.

West Houston Regional (Houston, TX) 46K annual visits.

CHRISTUS Jasper (Jasper, TX) 23K annual visits.

CHRISTUS St. Mary (Port Arthur, TX) 27K annual visits.

Metropolitan/Northeast Methodist (San Antonio, TX) 47K/50K visits/yr. 3rd campus - **Methodist Texsan.** 7K visits/yr.

VIRGINIA OPPORTUNITIES

LewisGale Health System (Roanoke/Blacksburg area, VA) 13-41K annual visits. **Medical Director and Staff.** (Montgomery).

Henrico Doctors' Hospital (Richmond, VA) 4 Hospital System. 14-34K annual visits.

Spotsylvania Regional (Fredericksburg, VA). 27K annual visits.

For details, contact: SoutheastOpportunities@EmCare.com or Call 727-507-2526

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North Shore-LIJ is America's third largest, non-profit, secular health system, with a network of 17 hospitals serving the greater **New York metropolitan area**. Our Department of Emergency Medicine Services includes the Emergency Departments of five tertiary care teaching hospitals, a children's hospital, several community hospitals, urgent care centers and our new Freestanding Emergency Department in Greenwich Village.

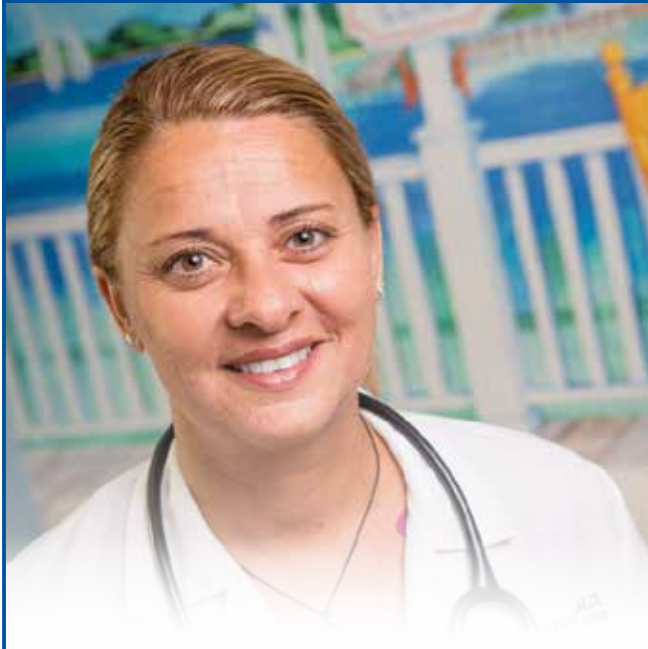
If you're a BC/BE Emergency Medicine-trained physician with outstanding skills, we want you to join our growing team. Whether you're an experienced physician, a new graduate or an experienced EM leader seeking a Chair or Associate Chair position, there are exciting opportunities throughout the health system for you.

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St. Elizabeth Health Center
Boardman, OH - 50k
Austintown, OH - 31k
Youngstown, OH - 50k

St. Joseph's Health Center
Warren (Eastland), OH - 43k

UH Geauga Medical Center
Chardon, OH - 19k

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Honolulu, Hawaii**

The Emergency Group, Inc. (TEG) is a growing, independent, democratic group that has been providing emergency services at The Queen's Medical Center (QMC) since 1973. QMC is the largest and only trauma hospital in the state and cares for more than 60,000 ED patients per year.

QMC's newest medical center opened in west Oahu in May and is expected to see an additional 40,000 ED patients annually.

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EMERGENCY MEDICINE FACULTY


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The Department of Emergency Medicine at East Carolina University Brody School of Medicine seeks BC/BP emergency physicians and pediatric emergency physicians for tenure or clinical track positions at the rank of assistant professor or above, depending on qualifications. We are expanding our faculty to increase our cadre of clinician-educators and further develop programs in pediatric EM, ultrasound, and clinical research. Our current faculty members possess diverse interests and expertise leading to extensive state and national-level involvement. The emergency medicine residency is well-established and includes 12 EM and 2 EM/IM residents per year. We treat more than 120,000 patients per year in a state-of-the-art ED at Vidant Medical Center. VMC is a 960+ bed level 1 trauma center and regional stroke center. Our tertiary care catchment area includes more than 1.5 million people in eastern North Carolina, many of whom arrive via our integrated mobile critical care and air medical service. Our new children's ED opened in July 2012, and a new children's hospital opened in June 2013. Greenville, NC is a fast-growing university community located near beautiful North Carolina beaches. Cultural and recreational opportunities are abundant. Compensation is competitive and commensurate with qualifications; excellent fringe benefits are provided. Successful applicants will be board certified or prepared in Emergency Medicine or Pediatric Emergency Medicine. They will possess outstanding clinical and teaching skills and qualify for appropriate privileges from ECU Physicians and VMC.

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h. Total (Sum of 15f and g)		39475	39510
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16. <input type="checkbox"/> Total circulation includes electronic copies. Report circulation on PS Form 3526-X worksheet.			
17. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the issue of this publication.		November 2014	
18. Signature and Title of Editor, Publisher, Business Manager, or Owner Elizabeth Konkle, Manager, Financial Planning & Analysis		Date 10/1/14	

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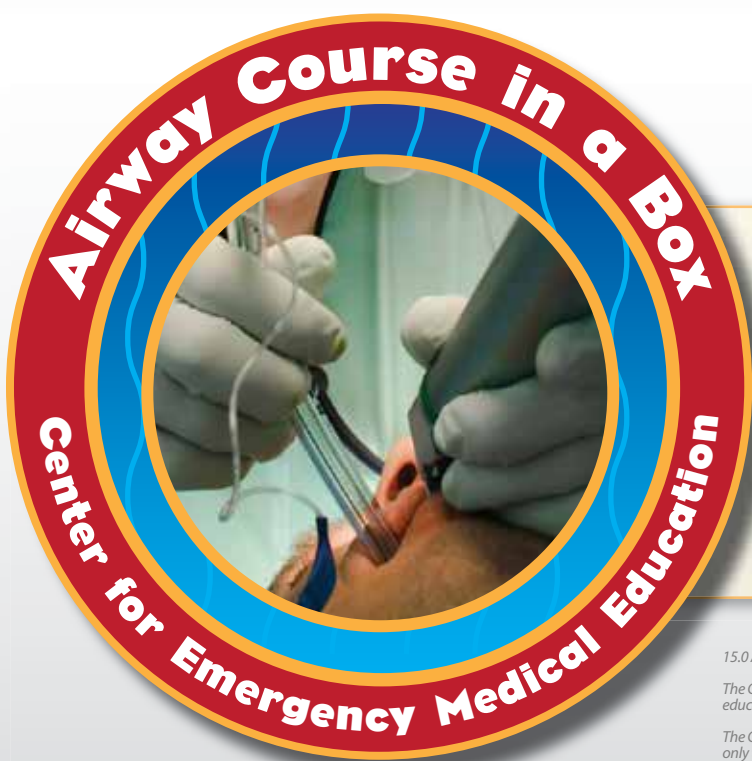
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