December 2018
Volume 22 | No. 12

The Hospitalist

shm
the-hospitalist.org

Building on diversity

Maryland SHM chapter follows expansive vision

By Suzanne Bopp

Nidhi Goel, MD, MHS, is a Med-Peds hospitalist and assistant professor of internal medicine and pediatrics at the University of Maryland, Baltimore. Since August 2017, she has been the president of the Maryland chapter of SHM.

The Hospitalist recently sat down with her to discuss some of the initiatives that the large and active Maryland chapter is focused on.

Can you talk about your background and how you became interested in hospital medicine?

I grew up in the Baltimore area, and I went to medical school at the University of Maryland in Baltimore. I trained in internal medicine and pediatrics, also at the University of Maryland. Then I joined the faculty after I finished residency in 2014. I practiced as a hospitalist in internal medicine and pediatrics and was also a teaching hospitalist.

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Dr. Nidhi Goel

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The Hospital Leader

Bring Schwartz Rounds to your hospital

By Jordan Messler, MD, SFHM

If you are not doing Schwartz Rounds, get them started. ASAP.

I recently completed a 4-year tenure as physician moderator for our hospital's Schwartz Rounds. An amazing team at my hospital helped pull the bimonthly sessions together. These compassionate care rounds are a national initiative to help foster empathy and compassion in the health care setting.

We gather a panel of two to three people involved in our patient presentation who share and move quickly through the clinical details, and head on toward the thornier ethical issues, emotional triggers, and responses. The best sessions are when the audience's voice is heard for the bulk of the time.

Dr. Messler is a hospitalist at Morton Plant Hospitalist group in Clearwater, Fla. He previously chaired SHM's Quality and Patient Safety Committee and has been active in several SHM mentoring programs, most recently with Project BOOST and Glycemic Control.

The emotional cadence flows from boiling in frustration, drowning in tears, followed by comfort, and ending in thoughts for the next session. It is a more powerful arc than an episode of the television program "This is Us." Largely, because this *was* us. This was real life. Real-time catharsis in the hospital.

In the daily grind, we often skip the step of processing our frustration, sadness, and anger, moving right on to the next patient and walking into the next room with that stoic layer of equanimity. I walk the hallways and find I grab my phone to catch up on emails, walking to the wrong floor because I'm not paying attention. Always something to do, someone to talk to, a family to call, pagers going off, phone calls. When do we sit and reflect?

These Schwartz Rounds are those moments of reflection – a slowdown in the day to think more deeply about the case. We talk about everything and anything. We have discussions with opposing views:

"Everything should have been done!"

"How did you not stop care?!"

"I agree with the doctors."

"I can see the patient's view more clearly now."

Our first Schwartz Rounds tended to be end-of-life stories, particularly regarding the family mantra of "Do everything." The health care team watches the suffering of a patient, a family, in a seemingly futile situation. Conversations around the end of life, choices, and quality of life are cut short daily by family members who simply recite, "Do everything."

After several of these sessions, a case swings us in the other direction. The elderly gentleman with treatable cancer, who could easily survive another 20 years, declines treatment. "I'm fine, doc; I've lived long enough." His wife at his bedside, shaking her head, tells us, "I don't know why he wants to give up. He's been as stubborn as a mule since the day I met him." I spend 30 minutes convincing him to stay. The nurse does the same. Now we have a patient with a "Do nothing." The patient's decisions conflict with the family and the health care team.

Every day in the hospital provides a new ethical dilemma, a frustrating case, a challenging patient. Fodder for rounds.

Read the full post at hospitalleader.org.

Also on *The Hospital Leader* ...

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- New SoHM Report Provides Unique Window into Hospital Medicine Practice Trends by Leslie Flores, MHA, SFHM
- IGNITE Change: Improving Care via Interprofessional Clinical Learning Environments by Vineet Arora, MD, MAPP, MHM

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Volume 22 | No. 12

THE HOSPITALIST (ISSN 1553-085X) is published monthly for the Society of Hospital Medicine by Frontline Medical Communications Inc., 7 Century Drive, Suite 302, Parsippany, NJ 07054-4609. Print subscriptions are free for Society of Hospital Medicine members. Annual paid subscriptions are available to all others for the following rates:

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The Future Hospitalist

Hospital medicine fellowships

Is it the right choice for me?

By Will Schouten, MD, and Michele Sundar, MD

As Dr. Melanie Schaffer neared the end of her family medicine residency in the spring of 2015, she found herself considering a hospital medicine fellowship. Unsure if she could get a hospitalist job in an urban market given the outpatient focus of her training, Dr. Schaffer began searching for fellowships on the SHM website.[1]

Likewise, in 2014 Dr. Micah Prochaska was seriously contemplating an HM fellowship. He was about to graduate from internal medicine residency at the University of Chicago and was eager to gain skills and experience in clinical research.

In 2006, there were a total of 16 HM fellowship programs in the United States, catering to graduates of internal medicine, family medicine, and pediatric residencies.[2] Since that time, the number of HM fellowships has grown considerably, paralleling the explosive growth of hospital medicine as a specialty. For example, at one point in the summer of 2018, the SHM website listed 13 clinical family practice fellowships, 29 internal medicine fellowships, and 26 pediatric fellowships. Each fellowship emphasized different aspects of hospital medicine including clinical practice, research, quality improvement, and leadership.

"You could get a master's degree on your own, but with the fellowship program, your mentors can help you think about the next steps in your career."

Now more than ever, residents interested in hospital medicine may get overwhelmed by the multitude of options for fellowship training. So, why pursue fellowship training in the first place?

"I learned that as a family physician it is harder to get a job as a hospitalist outside of smaller communities, and I wanted to have extra training and credentials," Dr. Schaffer said. "I pursued a fellowship in hospital medicine to hone my inpatient skills, obtain more ICU exposure, and work on procedures."

Dr. Schaffer's online search eventually led her to the Advanced Hospital Medicine Fellowship at Swedish Medical Center in Seattle. This 1-year HM fellowship started in 2008 with an intentional clinical focus, aiming to provide additional training opportunities in hospital medicine primarily to family medicine residency graduates.

"The goal of our program is to bridge the gap between the training of family medicine and internal medicine so our trainees can refine and develop their inpatient skills," said Dr. David Wilson, program director of the Swedish Hospitalist Fellowship.

During her fellowship year, Dr. Schaffer cared for hospitalized adult patients on a general medical ward with supervision from dedicated teaching hospitalists. She completed rotations in the ICU, on subspecialty services, and received advanced training in point-of-care ultrasound.

Now in her second year of practice as a full time adult hospitalist at Swedish Medical Center, Dr. Schaffer believes her year of hospital medicine fellowship prepared her well for her current position.

"I am constantly using the tools and knowledge I acquired during my fellowship year," she said. "I would encourage anyone who has an interest in working on procedural skills and gaining more ICU exposure to pursue a similar fellowship."

In contrast to Dr. Schaffer, Dr. Prochaska was satisfied with his clinical training but chose to pursue a hospital medicine fellowship to develop research skills. Prior to starting the 2-year Hospitalist Scholars Training Program at the University of Chicago in 2014, Dr. Prochaska had a clear vision of becoming a hospital medicine health outcomes investigator, and believed this career would not be possible without the additional training offered by a research-focused fellowship program.

The Hospitalist Scholars Program at the University of Chicago, one of the first programs of its kind, offers a built-in master's degree to all participants. At the conclusion of his fellowship training in 2016, Dr. Prochaska completed his Master's in Health Sciences, which gives considerable attention to biostatistics and epidemiology. According to Dr. Prochaska, the key to becoming a successful academic researcher lies in one's ability to write grants and receive funding, a skill he honed during this fellowship.

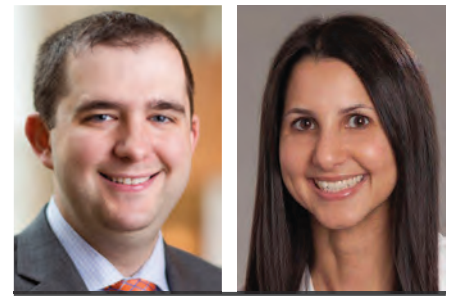
Now on faculty at the University of Chicago in the Section of Hospital Medicine, Dr. Prochaska devotes approximately 75% of his time to research and 25% to patient care.

Beyond the research training and experience he gained during his hospital medicine fellowship, Dr. Prochaska said he values the mentorship afforded to him. He noted that one of the most meaningful experiences during his 2 years of fellowship was having the opportunity to sit down with his program directors, Dr. Vineet Arora and Dr. David Meltzer, to discuss the trajectory of his career in academic medicine.

"It is hard to find senior mentors in hospital medicine," Dr. Prochaska said. ""You could get a master's degree on your own, but with the fellowship program, your mentors can help you think about the next steps in your career."

For Dr. Schaffer and Dr. Prochaska, fellowship provided training and experience well matched to their individual goals and helped foster their careers in hospital medicine. For some, however, a fellowship may not be a necessary step on the path to becoming a hospitalist. Receiving little more than a resident's salary for an additional year or more during fellowship may not be financially tenable, and given the ongoing demand for hospitalists, the lack of a fellowship on your resume may not significantly diminish your chances of securing a position, especially in the community setting.

In the end, the decision of whether to pursue a hospital medicine fellowship is a personal one, and the programs available are as varied as the individuals completing them. "Any hospitalist interested in more than simply patient care – potentially QI, medical education, policy, or administration – should consider a fellowship," Dr. Prochaska said. "Hospitalists have a unique opportunity to be involved in all these areas, but there are absolutely critical skills you need to develop beyond your clinical skills to succeed."



Dr. Schouten is a hospitalist at Mayo Clinic in Rochester, Minn., and serves on the Society of Hospital Medicine Physicians in Training Committee. Dr. Sundar is a hospitalist at Emory Saint Joseph's Hospital in Sandy Springs, Ga., and serves as the Site Assistant Director for Education.

The best advice to those considering a hospital medicine fellowship? Dedicate some time to self-assessment and goal setting, before jumping to SHM's online list of programs.

Ask yourself: "Where do I see myself in 10 years? What do I wish to accomplish in my career as a hospitalist? What additional training (clinical, research, quality improvement, leadership) might I need to achieve these goals? Will completion of a hospital medicine fellowship help me make this vision a reality?"

For Dr. Schaffer, a clinical practice–focused HM fellowship served as a necessary bridge between her family medicine residency and her current position as an adult hospitalist. While for Dr. Prochaska, a research-intensive hospital medicine fellowship was a key step in launching his academic career.

Of course, for many trainees at the end of residency, your self-assessment may lead you in the opposite direction. In that case it is time to find your first "real job" as an attending physician. But if you feel you need more training to meet your personal goals you should rest assured – there is almost certainly a hospital medicine fellowship that is right for you.

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Developing essential skills at all career stages

SHM Leadership Academy continues to grow

By Eric E. Howell, MD, MHM

Dr. Howell is a professor of medicine at Johns Hopkins University, Baltimore, and chief of the division of hospital medicine at Johns Hopkins Bayview Medical Center. He is also chief operating officer at the Society of Hospital Medicine and course director of the SHM Leadership Academy.

This fall I attended the 2018 Society of Hospital Medicine Leadership Academy, held in Vancouver. Once again, this conference sold out weeks ahead of time, and 300 hospitalists took time out of their busy schedules for learning and fun. There have been about 18 Leadership Academies over the years, with approximately 3,000 total participants, but this one may have been the best to date.

Why was it so good? Here are my top four reasons that Leadership Academy 2018 was the best ever:

Setting: Vancouver is just beautiful. My family has a strong maritime background, and I am a water person with saltwater in my veins. My inner sailor was overjoyed with the hotel's views of False Creek and Vancouver Harbor, and I loved the mix of yachts and working boats. I even saw a seaplane! The hotel was a great match for the 300 hospitalists who traveled to the JW Marriott for 4 days of learning and relaxing. It was the perfect blend, whether for work or play; the hotel and city did not disappoint.

Networking: What's more fun than getting to know 300 like-minded, leadership-oriented hospitalists for a few days? I am always energized by seeing old friends and making new ones. I really enjoy hearing about the professional adventures hospitalists at all career points are going through. Plus, I get really good advice on my own career! I also appreciate that a number of hospital medicine leaders come to SHM's Leadership Academy. Over half of the SHM Board of Directors were there, as were a number of current and previous SHM presidents (Mark Williams, Jeff Wiese, Burke Kealey, Bob Harrington, Nasim Afsar, Rusty Holman, Ron Greeno, Chris Frost, and John Nelson), as well as Larry Wellikson, the CEO who has led our society through its many successes.

Faculty: The faculty for all four courses (yes, Leadership Academy junkies, we've added a *fourth* course!) are absolutely phenomena – just the right blend of expert hospitalists (Jeff Glasheen, Rusty Holman, Jeff Wiese, Mark Williams, John Nelson) and national experts outside of hospital medicine. For example, Lenny Marcus of Harvard T.H. Chan School of Public Health, Boston, brings his experience coaching the Department of Defense, the White House, and many others to the Influential Management and Mastering Teamwork courses. Lenny's experience working with national leaders through disasters like Hurricane Katrina and the Ebola outbreak make for more than riveting stories; there are real, tangible lessons for hospitalist leaders trying to improve clinical care. Nancy Spector is a pediatrician, nationally recognized for her work in mentoring, and is the executive director of Drexel University's Executive Leadership in Academic Medicine. We have been fortunate to have her join the Academies, and Nancy successfully led the first group of hospitalists through the launch of SHM's fourth leadership course.

Continued on following page

Unit-based assignments: Pros and cons

Geographic cohorting shows 'variable success'

By Bryan Huang, MD, FHM

A relatively recent practice catching on in many different hospitalist groups is geographic cohorting, or unit-based assignments. Traditionally, most hospitalists have had patients assigned on multiple different units. Unit-based assignments have been touted as a way of improving interdisciplinary communication and provider and patient satisfaction.[1]

How frequently are hospital medicine groups using unit-based assignments? SHM sought to quantify this trend in the recently published 2018 State of Hospital Medicine Report. Overall, among hospital medicine groups serving adults only, a little over one-third (36.4%) of groups reported utilizing unit-based assignments. However, there was significant variation, particularly dependent on group size. Geographic cohorting was used only in 7.6% of groups with 4 or fewer FTE's, and in 68.8% of groups with 30 or more FTE's. These data seem logical, as the potential gains from cohorting likely increase with group/hospital size, where physicians would otherwise round on an increasingly large number of units.

As has been shared in the hospital medicine literature, groups have experienced variable success with geographic cohorting. Improvements have been achieved in interprofessional collaboration, efficiency, nursing satisfaction,[2] and, in some instances, length of stay. Unit-based assignments have allowed some groups to pilot other interventions, such as interdisciplinary rounds.

But geographic cohorting comes with its implementation challenges, too. For example, in many hospitals, some units have differing telemetry or nursing capabilities. And, in other institutions, there are units providing specialized care, such as care for neurology or oncology patients. The workload for hospitalists caring for particular types of patients may vary, and with specialty units, it may be more difficult to keep a similar census assigned to each hospitalist.

While some groups have noted increased professional satisfaction, others have noted decreases in satisfaction. One reason is that, while the frequency of paging may decrease, this is replaced by an increase in face-to-face interruptions. Also, unit-based assignments in some groups have resulted in hospitalists perceiving they are working in silos because of a decrease in interactions and camaraderie among providers in the same hospital medicine group.

At my home institution, geographic cohorting has largely been a successful and positively perceived change. Our efforts have been particularly successful at one of our two campuses where most units have telemetry capabilities and where we have a dedicated daytime admitter (there are data on this in the Report, and a dedicated daytime admitter is the topic of a future column). Unit-based assignments have allowed the implementation of what we've termed focused interdisciplinary rounds.

Our unit-based assignments are not perfect – we re-cohort each week when new hospitalists come on service, and some hospitalists are assigned a small number of patients off their home unit. Our internal data have shown a significant increase in patient satisfaction scores, but we have not realized a decrease in length of stay. Despite an overall positive perception, hospitalists have sometimes noted an imbalanced workload – we have a particularly challenging oncology/palliative unit and a daytime admitter that is at times very busy. Our system also requires the use of physician time to assign patients each morning and each week.

In contrast, while we've aimed to achieve the same success with unit-based assignments at our other campus, we've faced more challenges there. Our other facility is older, and fewer units have telemetry capabilities. A more traditional teaching structure also means that teams take turns with on-call admitting days, as opposed to a daytime admitter structure, and there may not be beds available in the unit assigned to the admitting team of the day.

Overall, geographic cohorting is likely to be considered or implemented in many hospital medicine groups, and efforts have met with varying success. There are certainly pros and cons to every model, and if your group is looking at redesigning services to include unit-based assignments, it's worth examining the intended outcomes. While unit-based assignments are not for every group, there's no doubt that this trend has been driven by our specialty's commitment to outcome-driven process improvement.

Dr. Huang is physician adviser for care management and associate clinical professor in the division of hospital medicine at the University of California, San Diego. He is a member of SHM's practice analysis subcommittee.

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High energy & continued growth: There continues to be an enormous amount of energy around the Leadership Academy. The Vancouver courses sold out months ahead of the actual meeting! Hospitalists across the country continue to take on leadership roles and have told us that they value the skills they have learned.

Hospitalist leaders want more

In addition to the current 4-day courses (Strategic Essentials, Influential Management, and Mastering Teamwork), hospitalists are looking for a course that continues skill building once they return home.

That's why SHM has developed a fourth Leadership Academy course. Called the Capstone Course, it was launched in Vancouver and consists of 2 days of on-site skill development and team building (during the first 2 days of the traditional Leadership Academy) and 6 months of a longitudinal learning collaborative. The learning collaborative component consists of a learning "pod" of five or six fellow hospitalists and monthly virtual meetings around crucial leadership topics. They are led by an experienced Leadership Academy facilitator.

Dr. Spector is the lead faculty; her expertise made the Capstone launch a huge success. She will work with SHM and the Capstone participants throughout the entire 6 months to ensure the Capstone course is as high quality as the previous three Academy courses.

If you haven't been, I invite you to attend our next Leadership Academy. Over the years, despite being course director, I have learned many take-home skills from colleagues and leaders in the field that I use often. Just to name a few:

- Flexing my communications style: Tim Keogh's lecture opened my eyes to the fact that not everyone is a data-driven introvert. I now know that some people need a social warm up, while others just want the facts, and that there are "huggers and shakers." (In summary, it's fine to shake hands with a hugger, but be wary of hugging a shaker.)
- I send birthday emails after I heard Jeff Wiese's talk.
- Lenny Marcus taught me to be aware when I am "in the basement" emotionally. I now know to wait to send emails or confront others until I can get out of the basement.

In closing, the Vancouver Leadership Academy was fantastic. Good friends, great professional development, a setting that was amazing, and an Academy that remains relevant and dynamic to our specialty. I can't wait to see how the 2019 Leadership Academy shapes up for its debut in Nashville. My inner sailor may have to give way to my inner musician! I hope to see you and 300 of my closest friends there.

Learn more about SHM's Leadership Academy at shmleadershipacademy.org.

Maryland SHM

Continued from page 1

Early in my residency, I worked with teaching hospitalists. I rotated on the hospitalist teams, and I was inspired by their perspective on taking care of patients through a lens of quality and safety. I gained a greater appreciation for the risks associated with taking care of a patient in the hospital setting, and the opportunities to mitigate those risks and provide really high-quality patient care. It made me realize that was what I wanted to do – and also to teach residents and students how to do the same.

University of Maryland Medical Center

Dr. Nidhi Goel is a Med-Peds hospitalist at the University of Maryland, Baltimore.

So it was a philosophical attraction to the hospitalist approach?

Yes, and intellectually I'd say that I liked taking care of really complicated, very sick patients. I found that to be interesting – and rewarding when they got better.

Tell us more about what kind of research you do.

I work primarily on projects centered on quality and safety; they involve both adult internal medicine and pediatric patients. Currently on the adult medicine side, we have a project looking at improving outcomes for sepsis in the hospital setting. On the pediatric side, I've done a lot of work related to throughput – trying to increase the efficiency of our admissions – and especially our discharge process. Moving patients through the system efficiently has become a significant quality issue, especially during the winter months when our volumes pick up.

How long have you been involved in the Maryland SHM chapter, and what are the rewards of participation?

Early in my residency, I got involved in the chapter because some of the hospitalist faculty I worked with were chapter officers. They believed that the chapter was a good place for residents to be exposed to research and to other hospitalists for networking and camaraderie. So they began inviting us to Maryland chapter meetings, and I found those meetings to be very enlightening – from the practical and research content related to hospital medicine, and to networking with other hospitalists.

I was invited to be part of the Maryland chapter advisory board when I was still a resident, so that I might present trainee perspectives on how the chapter could continue to grow and target some of their activities for the benefit of residents. I stayed involved with the chapter after I finished residency, and when the opportunity presented itself to become an officer, I decided to take it. I thought serving as a chapter officer would be a really interesting chance to meet more people in the field and to continue to innovate within the chapter setting.

Tell us more about the Maryland chapter.

We are a large chapter and we're very, very active. Around 7 or 8 years ago, the Maryland chapter reached a significant turning point because the officers that were in place at that time had a vision for building the chapter. That was a major inflexion point in how active the chapter became, leading to the kinds of activities that we do now, and the variety of memberships.

One thing that I'm super proud of our chapter for is that we've really tried to continue building on the diversity that is represented in our membership. We have members stretching geographically all through the Baltimore and the Washington corridor, as well as out to western Maryland and the Eastern shore. The Maryland chapter has been able to attract members from different organizations throughout the state and from a diversity of practice settings. We have active members who are not just physicians, but also a nurse practitioners, physician assistants, and clinical pharmacists. We have members from throughout the health care delivery process, which really enriches the discussion and the value of the chapter as a whole.

What kind of initiatives and programs is the chapter working on?

Every year we have an abstracts competition at our fall meeting. Whoever wins that competition is allowed to present at the national SHM conference, which is a great opportunity. We're really pushing that competition to make it an even more robust experience.

One thing that we had heard from some of our members, and that we recognized as a need as well, was to make our career guidance a little bit more robust. To that end, we're creating a separate job fair that is almost like an employment workshop – to help people to buff up their CVs, to talk about interviewing skills, contracts, salary negotiations, as well as exposing job candidates to various hospital groups from throughout the area. That's something that we're really excited about. It's going to take a lot of work, but I think it could be a really high-yield event for our members.

We're also encouraging our nonphysician members to take more active leadership roles in the chapter; several of our nonphysician members on our chapter advisory board, including pharmacists and physician assistants, and we are trying to make sure that we're also liaising with some of the professional organizations that represent our nonphysician members. So, for example, the clinical pharmacist who's on our advisory board also is president of the Maryland chapter of the Society for Hospital Pharmacists. She brings a lot of really great ideas and interesting perspectives, and she's brought a lot of exposure of our SHM chapter to the clinical pharmacy community as well.

What about more long-term goals for your chapter? What's on the horizon?

We're targeting early-career hospitalists and helping them to develop their career goals in whatever fashion they see as appropriate.

So, as someone who's in academics, obviously research and publications are very important for me, but they're not necessarily as important for other hospitalists. I think our early-career hospitalists are increasingly looking to incorporate things into their practice aside from direct patient care. Our members have interests in various elements of hospital medicine, including patient safety and quality improvement initiatives, clinical informatics, advocacy (especially related to the myriad aspects of health care reform), and strategies surrounding billing and denials. I think having our chapter help our members to realize some of those opportunities and develop their skills in a way that's personally meaningful to them, as well as good for their marketability as they build their careers, would be a really positive step.

The ultimate goal of the chapter is to service members, so whatever long-term goals we have right now could definitely be fluid as time goes on.

What are some concerns of the chapter?

One area of significant discussion among hospitalists in Maryland has been global budgets. Our system of reimbursement is unique in the nation. It's a system that aims to emphasize high-value care: The idea is to prioritize quality over quantity.

This system requires that hospitals rethink how we provide care in the inpatient setting, and how we create a continuum of care to the post-acute setting. It poses a lot of challenges, but also a lot of opportunities. Hospitalists are positioned perfectly to play a substantial role in implementing solutions.

Why might readers want to consider getting involved in their local SHM chapters?

I think it's really beneficial to have the exposure that being involved with an SHM chapter brings – to people, to perspectives, to knowledge. There's not really a downside to being involved with a chapter. You can take as little or as much as you want out of it, but I think most of our members find it to be a very enriching experience. Being involved in a chapter means you can have a voice, so that the chapter ends up serving you and your needs as well.

Be proactive with prophylaxis to tame VTE

By Heidi Splete
MDedge News

Venous thromboembolism (VTE) is the No. 1 cause of preventable deaths in hospitals, and 60% of all VTE cases occur during or following hospitalization, according to Jeffrey I. Weitz, MD, of McMaster University in Hamilton, Ont.

Hospitalized patients should receive prophylaxis to reduce their risk for VTE, he said in a webinar to promote World Thrombosis Day.

"To prevent VTE, people need to be aware of the problem," he said. Hospitalization for any reason increases the risk of VTE, but thromboprophylaxis may be underused in medical patients, compared with surgical patients, because most surgical patients are automatically considered at risk.

Prevention of VTE involves understanding the risk factors, Dr. Weitz said. He pointed to a triad of conditions that promote clotting: slow blood flow, injury to the vessel wall, and increased clotability of the blood.

In a study of VTE risk factors, recent surgery with hospitalization and trauma topped the list, but hospitalization without recent surgery was associated with a nearly eightfold increase in risk (Arch Intern Med. 2000;160[6]:809-15).

Evidence supports the value of anticoagulant prophylaxis, Dr. Weitz said. In a 2007 meta-analysis, use of anticoagulants reduced the risk of VTE by approximately 60% (Ann Intern Med. 2007 Feb 20;146[4]:278-88), and a 2011 update showed a reduction in risk of approximately 30% (Ann Intern Med. 2011 Nov 1;155[9]:602-15).

While risk assessment remains a challenge, several models can help, said Dr. Weitz.

Current guidelines from the American College of Chest Physicians suggest a shift toward individualized assessment of VTE risk, and the Centers for Medicare & Medicaid Services mandates VTE risk assessment, Dr. Weitz said.

He offered seven steps to improve prophylaxis in the hospital:

1. **Obtain commitment** from hospital leadership, including formation of a committee.
2. **Have a written** hospital policy on thromboprophylaxis.
3. **Keep the policy simple** and standard in terms of who gets prophylaxis and when.
4. **Use order sets**, computer order entry, and decision support.
5. **Make the prophylaxis** decision mandatory.
6. **Involve all of** the members of the care team and patients.
7. **Use audits** to measure improvement.

Several risk assessment models for VTE in hospitalized medical patients have been studied, including the Padua and IMPROVE models, Dr. Weitz said. For any model, factoring in the D-dimer can provide more information. "If D-dimer is increased more than twice the upper limit of normal, it is a risk factor for VTE," he said.

Another consideration in thromboprophylaxis involves extending the duration of prophylaxis beyond the hospital stay, which is becoming a larger issue because of the pressure to move patients out of the hospital as quickly as possible, Dr. Weitz said. However, trials of extended thromboprophylaxis have yielded mixed results. Extended doses of medications, including rivaroxaban, enoxaparin, apixaban, and betrixaban can reduce the risk of VTE, but can also increase the risk of major bleeding.

"I think at this point we are not yet there at identifying patients who should have thromboprophylaxis beyond the hospital stay," Dr. Weitz said.

But VTE risk should be assessed in all hospitalized patients, and "appropriate thromboprophylaxis is essential for reducing the burden of hospital-associated VTE," he said.

Dr. Weitz encouraged clinicians to explore more resources for managing VTE risk at worldthrombosisday.org.

Dr. Weitz reported relationships with companies including Bayer, Boehringer-Ingelheim, Bristol-Myers Squibb, Daiichi-Sankyo, Pfizer, Portola, Ionis Pharmaceuticals, Janssen, Merck, Novartis, and Servier. He also reported research support from the Canadian Institutes of Health Research, Heart and Stroke Foundation of Canada, and the Canadian Fund for Innovation.

Designing a better EHR

Hospitals can create a more effective system

It's well known that overuse is an enormous problem in medicine, and when it comes to antibiotics, the problem is even more striking.

"Half of all inpatient antibiotic use is inappropriate," says Valerie Vaughn, MD, MSc, a hospitalist at the University of Michigan, Ann Arbor, and coauthor of a BMJ editorial about EHRs and antibiotic overuse.

"This has led to an increase in antibiotic-related adverse events (~20% of all hospitalized patients on antibiotics), *Clostridium difficile* infections (half a million infections and 29,000 deaths in U.S. annually), and resistant bacteria (which now account for nearly 12% of all bacterial infections, costing $2.2 billion annually)."

EHRs can be a tool to combat that trend – if they are well designed. Clinicians are influenced by the design of their electronic health record, Dr. Vaughn said. "Rather than leave its influence to chance, we should capitalize on what is known about design to promote appropriate testing and treatment through the EHR." Hospitalists – integral to quality improvement – can have a role in making these changes.

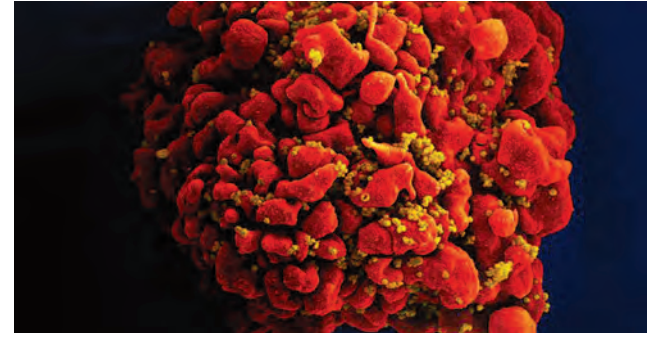
"These improvements will be the most effective if behavioral economics and nudging are considered while designing," Dr. Vaughn said. "For example, when creating order sets, list recommended options first and when possible make them the default," she said. "This little change will greatly improve appropriate use."

For every hour physicians spend on direct patient care, they spend another 2 with the EHR, Dr. Vaughn wrote. "Given this degree of attention, it is not surprising that the EHR influences physician behavior, especially the overuse of low-value medical care. … Displaying brand-name instead of generic options leads to more expensive prescribing. Allowing labs to be ordered recurrently increases unnecessary phlebotomy. Even individually listing inappropriate antibiotics (rather than grouping them) can make them more noticeable, resulting in more broad-spectrum use."

"All hospitalists – and humans – are affected by knee-jerk responses. One of the most common in medicine is the urge to treat a positive culture or any positive test. Recognize this urge and resist!" she said. "Antibiotics may be the correct response, but clinicians should first think about whether treatment is necessary based on that patient's symptoms and comorbidities. Resist the knee-jerk urge to give antibiotics for every positive culture."

Reference

Vaughn VM et al. Thoughtless design of the electronic health record drives overuse, but purposeful design can nudge improved patient care. BMJ Qual Saf. 24 Mar 2018. doi: 10.1136/bmjqs-2017-007578.



NIAID

Launching an HIV testing reminder

A new tool may reduce infection rates

The world's largest gay dating app, Grindr, changed its software earlier this year to create reminders for users to get regular HIV tests.

According to Grindr, 3.3 million users around the world visit the site daily; it sends those who opt into the service a reminder every 3-6 months to get a test. The message also directs them to the nearest testing site. Grindr also plans to give clinics, gay community centers, and other testing sites free advertising.

Among health care providers, the decision has been widely applauded. "This will 'demedicalize' testing and destigmatize it," Perry N. Halkitis, PhD, dean of the Rutgers School of Public Health, in Newark, N.J., told the New York Times. "The more you make it normal, the more people are going to access it."

Studies have shown that reminders by text or phone can triple or quadruple the chance that the recipient will get tested.

Reference

McNeil Jr. DG. Grindr app to offer H.I.V. test reminders. The New York Times. March 26, 2018. Accessed Apr 5, 2018.

How to assess an antimicrobial stewardship program

A study compares the merits of DOT and DOTA

The currently recommended method for hospital antimicrobial stewardship programs (ASPs) to measure antibiotic use is Days of Therapy/1,000 patient-days, but there are a few disadvantages of using the DOT, said Maryrose Laguio-Vila, MD, coauthor of a recent study on stewardship.

"For accurate measurement, it requires information technology (IT) support to assist an ASP in generating reports of antibiotic prescriptions and administrations to patients, often from an electronic medical record (EMR). In hospitals where there is no EMR, DOT is probably not easily done and would have to be manually extracted (a herculean task)," she said. "Second, DOT tends to be an aggregate measurement of antibiotics used at an institution or hospital location; if an ASP does a specific intervention targeting a group of antibiotics or infectious indication, changes in the hospital-wide DOT or drug-class DOT may not accurately reflect the exact impact of an ASP's intervention."

OKSIX/THINKSTOCK

The paper offers an alternative/supplemental method for ASPs to quantify their impact on antibiotic use without using an EMR or needing IT support: Days of Therapy Avoided. "DOTA can be tracked prospectively (or retrospectively) with each intervention an ASP makes, and calculates an exact amount of antibiotic use avoided," Dr. Laguio-Vila said. "If the ASP also tracks the types of antibiotic recommendations made according to infectious indication, comparison of DOTA between indications – such as pneumonia versus UTI [urinary tract infection] – can lead to ideas of which type of indication needs clinical guidelines development, or order set revision, or which type of infection the ASP should target to reduce high-risk antibiotics."

Also, she added, because most ASPs have several types of interventions at once (such as education on pneumonia guidelines, as well as penicillin-allergy assessment), aggregate assessments of institutional antibiotic use like the DOT cannot quantify how much impact a specific intervention has accomplished. DOTA may offer a fairer assessment of the direct changes in antibiotic use resulting from specific ASP activities, because tracking DOTA is extracted from each specific patient intervention.

"Now that the Joint Commission has a requirement that all hospitals seeking JC accreditation have some form of an ASP in place and measure antibiotic use in some way at their institution, there may be numerous hospitals facing the same challenges with calculating a DOT. DOTA would meet these requirements, but in a 'low tech' way," Dr. Laguio-Vila said. "For hospitalists with interests in being the antibiotic steward or champion for their institution, DOTA is an option for measuring antibiotic use."

Reference

Datta S et al. Days of therapy avoided: A novel method for measuring the impact of an antimicrobial stewardship program to stop antibiotics. J Hosp Med. 2018 Feb 8. doi: 10.12788/jhm.2927.

Decreasing burnout for hospitalists

How one hospital benefited from applying LEAN

The symptoms of burnout include emotional exhaustion, depersonalization, and reduced personal efficacy, and burnout is a widespread problem among hospitalists; recent data suggest that half of physicians are experiencing at least one such symptom.

Health care leaders are increasingly concerned that these levels of physician burnout pose a threat to patient quality and safety. "As a result, some health care systems are shifting emphasis from the Triple Aim – population health, reduced costs, and patient satisfaction – to the Quadruple Aim, which incorporates health care provider wellness," according to a recent abstract.

JUPITERIMAGES/THINKSTOCK

The authors began their own attempt to address the problem when Penn State Health in Dauphin County, Pa., built a stand-alone children's hospital and experienced bed demands that exceeded bed availability, creating decreased organizational efficiency, high stress, and elevated physician burnout.

The LEAN principles offer a process-focused, customer-centered methodology that improves efficiency and quality. "We redesigned our service line using LEAN principles, such as 'staff to demand' and 'standardize work,'" the authors wrote. "To 'staff to demand,' we hired three additional FTE [full-time equivalent employees]. This allowed creation of two rounding teams ([up] from one) and reduced our patient-to-attending ratio from 15:1 to 8:1. Workflow was resequenced and standardized, which enabled teams to see discharges at the start of rounds. We also provided in-house evening and overnight resident supervision. Our model permitted flexibility in physicians' schedules, deemphasized reliance on RVUs, and heightened purpose and efficiency in work as determinants of providers' value-adding capacity."

As a result, both service line and hospital efficiency improved and faculty stress decreased in their hospital. "Mean stress scores decreased from 23 (preintervention) to 15 over the first 2 years and has remained steady for a period of 3 years. Our divisional work-life balance measurement 2 years after the intervention was 85%, well above the reported average of 41%. We have maintained a low physician turnover rate at 3.5% over the last 3 years."

Reference

Keefer L et al. LEAN in: Our secrets to decreasing provider stress, maximizing efficiency on a pediatric hospitalist service [abstract].

Meal programs for dual eligibles

Do food delivery programs reduce the use of costly health services and decrease medical spending in a population of patients dually eligible for Medicare and Medicaid?

Researchers in Massachusetts wanted to determine whether home meal delivery of either medically tailored food or nontailored food reduces the use of selected health care services and medical spending in a sample of adult "dual eligibles."

"Compared with matched nonparticipants, participants had fewer emergency department visits in both the medically tailored meal program and the nontailored food program," the investigators found. "Participants in the medically tailored meal program also had fewer inpatient admissions and lower medical spending. Participation in the nontailored food program was not associated with fewer inpatient admissions but was associated with lower medical spending."

Reference

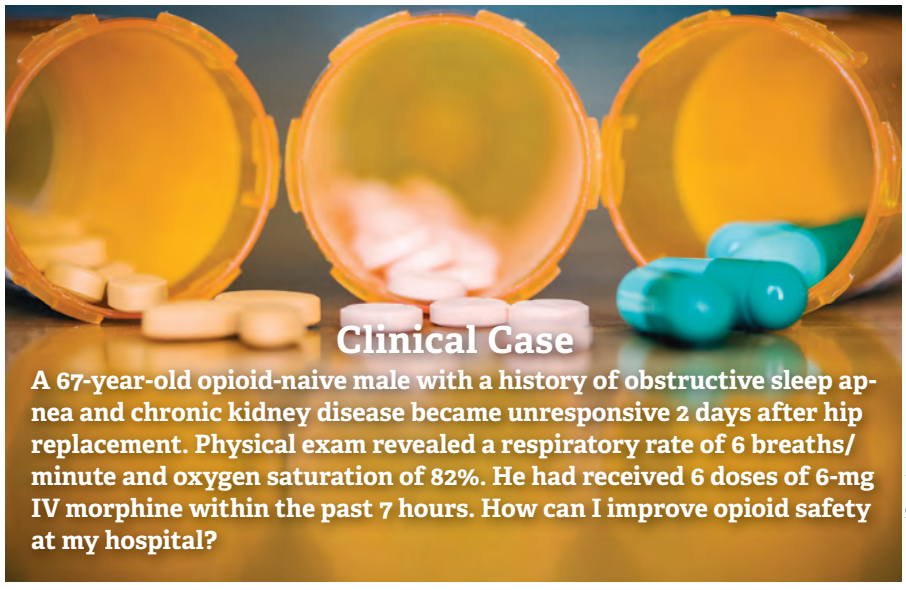
Berkowitz SA et al. Meal delivery programs reduce the use of costly health care in dually eligible Medicare and Medicaid beneficiaries. Health Aff (Millwood). 2018 Apr;37(4):535-42.

Key Clinical Question

How can I improve opioid safety at my hospital?

Quality improvement is essential

By Keri T. Holmes-Maybank, MD, MSCR, FHM; and Thomas W. Frederickson, MD, MBA, FACP, SFHM



SDOMINICK/GETTY IMAGES

Clinical Case

A 67-year-old opioid-naive male with a history of obstructive sleep apnea and chronic kidney disease became unresponsive 2 days after hip replacement. Physical exam revealed a respiratory rate of 6 breaths/minute and oxygen saturation of 82%. He had received 6 doses of 6-mg IV morphine within the past 7 hours. How can I improve opioid safety at my hospital?

Background

Opioids are the most commonly prescribed class of medication in the hospital and the second–most common class causing adverse drug events (ADEs), the most serious being respiratory depression and death.[1]

Opioid ADEs and side effects can cause prolonged length of stay and patient suffering. These vary from potentially life-threatening events such as serotonin syndrome and adrenal insufficiency to more manageable problems still requiring intervention such as constipation, urinary retention, cognitive impairment, nausea, and vomiting. Treatment of side effects can lead to complications, including side effects from antiemetics and urinary tract infections from catheters.

A 4-year review found 700 deaths in the United States attributed to patient-controlled analgesia (PCA) use.[2] Another study revealed that 1 out of every 200 patients has postoperative respiratory depression attributable to opioids.[3]

It is estimated that 2 million patients a year become chronic opioid users. Inpatient opioid prescribing contributes to this problem;[4] for instance, 5.9% of patients after minor surgery and 6.5% after major surgery become chronic opioid users if discharged with an opioid.[5] Calcaterra et al. found 25% of opioid-naive medical patients received an opioid at discharge from a medical service.[6] Those patients had an odds ratio of 4.90 for becoming a chronic opioid user that year.[6]

Most hospitals have incomplete or outdated policies and procedures for safe opioid prescribing and administration.[7] The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has specific pain standards for pain assessment, pain management, and safe opioid prescribing for hospitals. Additions and revisions were developed to go into effect Jan. 1, 2018. (Table 1)[8]

TABLE 1

Examples of Joint Commission pain assessment and management standards

Develop defined criteria to screen, assess, and reassess pain	Establish a leadership team responsible for pain management and safe opioid prescribing
Use evidence-based medicine for pain management	Develop strategies to improve opioid safety and minimize risk and improve pain management
Provide medical staff with pain and opioid education	Establish protocols and quality metrics and review performance data
Provide nonpharmacologic pain treatment modalities	Provide patient and family opioid education including storage and disposal
Promote safe opioid use by identifying and monitoring high-risk patients	Facilitate clinician access to prescription drug monitoring program databases
Involve patients in treatment decisions about pain management including setting realistic expectations and measurable goals	Assess pain impact on physical and psychosocial function
Refer complicated pain to complex pain management	Refer patients with opioid use disorder to treatment programs

Source: Jt Comm Perspect. 2017;37(7):2-4

Quality improvement

Quality improvement (QI) is an effective way to improve opioid safety. The Society of Hospital Medicine has developed a QI guide, "Reducing adverse drug events related to opioids" or "RADEO," to increase safety and decrease serious ADEs attributable to opioids.[7]

The steps in the RADEO program are as follows:

1. Assemble your team

It is critical to identify and include stakeholders from multiple disciplines on your project team. This team will be essential to develop a practical project, identify barriers, create solutions, and gain buy-in from medical staff and administrative leadership.

Front-line staff will have invaluable insight and need to be team members. The majority of interventions are performed by nurses; therefore, nursing leadership and input is essential. Representatives from pharmacy, information technology, and the quality department will be extremely valuable team members to guide you through the correct approach to a successful QI project.

A project champion can keep a high profile for the project and build and lead the team.

Identify an "executive sponsor" such as your CEO, chief medical officer, or chief nursing officer. This leader will focus the team on issues critical to your organization, such as accreditation from governmental agencies and help you obtain dedicated time and resources. Aligning with hospital goals will make your project a priority.

Coordinate with existing opioid initiative teams in the hospital to integrate efforts. This will keep the work of different departments aligned and allow you to learn from pitfalls and barriers the other groups experienced.

Patients/families contribute a unique and valuable perspective. Consider including a member of your hospital's patient and family advisory council on your team.

2. Perform a needs assessment

Determine the current state of your hospital including: opioid prescribers; opioids prescribed; areas with increased ADEs or naloxone use; formulary restrictions, policies, or guidelines for monitoring, prescribing, and administering opioids; order sets; safety alerts;

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provider education; or patient education.

Your risk management or quality department may be able to share a root cause analysis of ADEs related to opioids. Joint Commission and the Centers for Medicare & Medicaid Services recommendations as well as other regulatory requirements may shape your QI interventions.[8]

Most importantly, review all of the concerns and priorities of your diverse team, which will identify areas of most pressing need and provide insight regarding needs you have not considered.

3. Develop SMART aims

Frame your QI project into a series of well-defined, clear SMART aims.[9]

Specific: Who will carry out the intervention? Who is your target population? What will be improved? In what way will it be improved?

Measurable: What will be measured? How it will be measured? Does it measure the outcome that needs to be improved?

Attainable/achievable: Ensure you have the resources and time to achieve the aim.

Relevant: Ensure each aim moves your team toward the project vision.

Timely: The aim should be achieved within a realistic time frame, long enough to meet goals but not so long that interest is lost.

An example of a poor aim is "Clinicians will improve knowledge of opioids."

An example of a SMART aim is "75% of inpatient opioid prescribers, including MDs, NPs, and PAs, will complete and pass the opioid safety training module by July 1, 2018."

4. Choose metrics

Outcome metrics measure if the intervention has improved patient safety, for example, measuring a decrease in opioid-related ADEs. Structure metrics are the physical and organizational properties of the health care delivery setting, for example, the presence of EMR opioid safety. Processes are communication and practice patterns, for example, adherence to policy by examining nursing documentation of pain assessments.

5. Develop and implement[7,10]

Use PDSA for development and implementation of the QI intervention.

Plan: Determine the intervention group such as a specific unit, number of units, and if there will be a control group. Determine who will collect the data, if baseline data will be collected, and who will analyze the data. Your information technology department will be essential to determine if the data can be collected via the EMR and how. Input from your multidisciplinary team is critical to anticipate unintended consequences, such as limiting opioid prescribing at discharge inadvertently increasing ED visits for pain control.

Do: Start as a small pilot study to make it as easy as possible to implement the project and begin data collection. A small-scale intervention will be more manageable and allow rapid responses to unanticipated problems.

Study: Analyze the data early to determine if the intervention is improving opioid safety and if alterations are needed. At this stage both process metrics (are processes being followed?) and outcome metrics (is the process leading to a desired outcome?) are important.

Act: Based on data analysis, refine the intervention as necessary. You may have to repeat cycles of PDSA to develop the final intervention. Then implement the final intervention to the entire hospital.

Recommended reading

- Dowell D et al. CDC guideline for prescribing opioids for chronic pain – United States, 2016. Recommendations and Reports. 2016 Mar 18;65(1):1-49.
- Frederickson TW et al. Using the 2018 guidelines from the Joint Commission to kickstart your hospital's program to reduce opioid-induced ventilatory impairment. Anesthesia Patient Safety Foundation Newsletter. 2018;33(1):1-32.
- Herzig SJ et al. Safe opioid prescribing for acute noncancer pain in hospitalized adults: a systematic review of existing guidelines. J Hosp Med. 2018 Apr;13(4):256-62. doi: 10.12788/jhm.2979.
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- Joint Commission enhances pain assessment and management requirements for accredited hospitals. The Joint Commission Perspectives. 2017;37(7):2-4.

The Joint Commission recommendations for opioid QI

The Joint Commission recommends[7] the following to reduce opioid-related respiratory depression:

- Effective processes, which include processes such as tracking and analyzing ADEs related to opioids.
- Safe technology, which includes using technology such as the EMR to monitor opioid prescribing of greater than 90 morphine milligram equivalents.
- Effective tools, which include valid and reliable tools to improve opioid safety, such as the Pasero Opioid Induced Sedation Scale.
- Opioid education and training, which includes provider and patient education such as patient discharge education.

Education

Develop educational interventions to ensure medical and hospital staff are aware of new processes, with an emphasis on "why."[7] If possible, use web-based programs that provide CME. Improve education interventions by using multiple live, interactive, and multimedia exposures.

Principles for successful interventions

- Keep it simple for the end user. This makes it more likely that the intervention is performed. Minimize complex tasks such as

Continued on following page

Key Points

- Quality improvement is required by the Joint Commission and is an effective method to improve opioid safety in the hospital setting.
- It is critical to the success of a QI project to develop a multidisciplinary team.
- Input from frontline users of the intervention is essential to produce an effective intervention.
- Executive sponsorship and aligning the goals of your QI project with those of your institution will prioritize your project and increase resource availability.

Continued from previous page

calculations and if possible design automated processes.

- Build your process into current work flow. If possible simplify or streamline work flow. A project that competes with staff's other tasks and competing priorities is doomed to fail. It is critical to have input from those performing the intervention to develop a user-friendly and less disruptive intervention.
- Design reliability into the process. Make your intervention the default action. Build prompts into the work flow. Standardize the intervention into the work flow. And, consider having the intervention at scheduled intervals.[7]

Opioid safety QI interventions

Interventions for improving opioid safety and reducing opioid -related ADEs may be generalized into areas including risk screening and assessment, pain treatment, opioid administration, pain assessment, and patient and provider education (Table 2).[7]

Back to the case

The patient received naloxone. His respiratory rate and oxygen saturation returned to normal. His dose of morphine was reduced and his interval increased. A multimodal approach was implemented including low-dose scheduled acetaminophen. There were no further ADEs while maintaining good pain control.

A multidisciplinary opioid task force was created and performed a hospital-wide review of opioid ADEs. Opportunities for improvement were identified and new procedures implemented. The Pasero opioid sedation scale (POSS) was added to the nursing work flow to monitor patients who received an opioid for sedation. An algorithm was developed for opioid-naive patients including guidance for opioid selection, dosing, and frequency. Multiple pain control modalities were added to pain control order sets. Annual training was developed for opioid prescribers, pharmacists, and nurses regarding safe and responsible use of opioids.

And, lastly, in-hospital and discharge patient education was developed for patients and families to be well informed of opioid risk and benefit including how to identify and respond to ADEs.

Bottom line

Quality improvement is an effective method to improve patient safety and reduce serious adverse events related to opioids in the hospital setting.

TABLE 2

Examples of opioid safety quality improvement

Risk assessment for respiratory depression ex: STOPBang, Berlin Questionnaire, Epworth Sleepiness Scale	Risk assessment for opioid misuse or opioid use disorder ex: Opioid Risk Tool
Tool to identify patients for risk of adverse drug events ex: RIOSARD	EMR embedded alerts ex: MME, risk factors for adverse drug events (ADEs), concomitant medications
EMR embedded alerts ex: educational links, opioid conversion tool	Multimodal pain order sets
Algorithm/guidelines for opioid choice, dose, and frequency in opioid-naive patients	Monitoring for sedation post opioid administration ex: Pasero Opioid Sedation Scale
Patient inpatient education including appropriate use, side effects, ADEs, benefits, and alternatives ex: video	Patient discharge education including appropriate use, side effects, ADEs, benefits, alternatives, storage, and disposal
Medical staff education for safe and responsible opioid prescribing ex. Institutional modules, CME	Rapid response system algorithm to identify and respond to patients with impending respiratory depression
Algorithm for appropriate inpatient naloxone use	Creation and implementation of patient functional assessment
Documentation of nursing patient pain assessment	Tracking of prescription of adjunctives
Embed prescription drug monitoring programs in the EMR	Concomitant order sets for side effects, such as stool softener and laxatives
Naloxone discharge education	Development of pain consult team
Identification and referral to treatment for patients with opioid use disorder	Provision of medication disposal bags at discharge
Development of nonpharmacologic therapies ex. art therapy, mindfulness training, pet therapy	Monitoring opioid prescriptions with concomitant medications such as benzodiazepines

Source: Society of Hospital Medicine

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9. Minnesota Department of Health. SMART objectives.
10. Agency for Healthcare Research and Quality. Health Literacy Universal Precautions Toolkit, 2nd Edition.

Plan-Do-Study-Act (PDSA) Directions and Examples.

Quiz

1 Based on a needs assessment at your hospital, you assemble a multidisciplinary team to improve education for patients discharged on opioids. You recognize the importance of multidisciplinary input to develop a successful intervention for discharge education. Essential team members include all EXCEPT the following:

A. Executive sponsor
B. Patient representative
C. Nursing
D. Medical student representative

The correct answer is D. The assembly of a multidisciplinary team is critical to the success of a QI intervention. An executive sponsor may assist you in aligning your goals with that of the hospital and provide resources for its development and implementation. Patient input would help determine how to best deliver the education. Lastly, the individuals carrying out the intervention are essential to develop an intervention that will easy for the end user and increase the likelihood of being used, in this case nursing.

2 You performed a review of naloxone use at your hospital and find that it is greater than similar hospitals. Prior to starting the QI project, you review SHM's "Reducing adverse events related to opioids implementation guide" and learn that keys to success for QI implementation include:

A. A team of primarily hospitalists
B. Implementing the intervention hospital wide
C. Information technology input for data collection
D. No team – it is more effective to work alone

The correct answer is C. Successful implementation of a QI project involves a multidisciplinary team. It is critical to involve information technology early in the development of the project to determine how and if the data can be collected from the EMR. It is best to pilot the intervention on one or two units to make alterations as needed rapidly and perfect the final intervention prior to rolling it out to the entire hospital.

3 You have assembled a multidisciplinary team to respond to the newly revised JCAHO pain standards. An example of a requirement from the new and revised JCAHO standards for pain assessment and management includes:

A. Programs for physician wellness
B. No opioids for chronic pain
C. No more than 5 days of opioids for acute pain
D. Nonpharmacologic pain management options

The correct answer is D. JCAHO released new and revised requirements for pain assessment and management including offering nonpharmacologic pain management options. (See Table 1)

4 Your multidisciplinary QI team decides to develop a project to reduce respiratory depression in patients receiving opioids by monitoring for sedation with the Pasero Opioid Induced Sedation Scale. Principles for successful QI interventions include:

A. Complex tasks
B. Make the intervention a default action
C. Avoid EMR prompts
D. Competing with other hospital priorities

The correct answer is B. Principles for successful QI interventions include keeping tasks simple, ensuring the intervention does not compete with other priorities, making the intervention the default action, installing prompts in the EMR, and standardizing the intervention into the work flow.

Septic shock: Innovative treatment options in the wings

By Andrew D. Bowser
MDedge News

AT THE ACS CLINICAL CONGRESS / BOSTON / Vitamin C, angiotensin-II, and methylene blue are emerging options on the cutting edge of refractory septic shock treatment that require more investigation, but nevertheless appear promising, Rishi Rattan, MD, said at the annual clinical congress of the American College of Surgeons.

Trials evaluating vitamin C in this setting have demonstrated a large mortality impact with an absence of side effects, according to Dr. Rattan, a trauma and critical care surgeon with the Ryder Trauma Center at the University of Miami.

"It's something that I have decided to start early adopting, and many of my colleagues do as well," Dr. Rattan said in a panel session on updates in septic shock. "We're anecdotally so far at least seeing good results and are going to be excited to see what these ongoing trials show."

As an antioxidant, vitamin C has anti-inflammatory properties that may possibly attenuate the overly exuberant inflammatory response seen in septic shock, Dr. Rattan said in his presentation.

The limited clinical data for vitamin C in refractory shock include three studies, of which two are randomized controlled trials, comprising a total of 146 patients, he added.

"I will admit an N of 146 is hardly practice changing for most people," Dr. Rattan said. "There's still a significant and sustained large mortality effect for the use of vitamin C, with nearly no adverse effects."

Pooled analysis of all three studies revealed a marked reduction in mortality with the use of vitamin C (odds ratio, 0.17; 95% confidence interval, 0.07-0.40; *P* less than .001), according to a meta-analysis recently just published in Critical Care that Dr. Rattan referenced in his presentation (2018;22:258. doi: 10.1186/s13054-018-2191-x).

When taken in recommended dosages, vitamin C given with corticosteroids and thiamine is without known side effects, researcher Paul E. Marik wrote earlier this year in Pharmacology & Therapeutics (2018;189[9]:63-70. doi: 10.1016/j.pharmthera.2018.04.007) noted Dr. Rattan, who said he uses the intravenous vitamin C, thiamine, and hydrocortisone protocol previously reported by Dr. Marik.

There are 13 ongoing trials, including some prospective blinded, randomized trials, looking at the role of vitamin C in refractory shock.

Angiotensin-II is another intervention that may be promising in refractory septic shock, Dr. Rattan told attendees, pointing to the 2017 publication of the ATHOS-3 trial in the New England Journal of Medicine (2017; 377:419-430. doi: 10.1056/NEJMoa1704154) showing that treatment increased blood pressure in patients with vasodilatory shock not responding to conventional vasopressors at high doses.

Likewise, methylene blue has shown promise in septic shock, at least in some limited clinical investigations and anecdotally in patients not improving despite standard interventions. "I've been able to have a couple patients walk out of the hospital with the use of methylene blue," Dr. Rattan said. "Again, the plural of 'anecdote' is not 'data,' but it's something to consider for the early adopters."


ANDREW BOWSER/MDEDGE NEWS

Dr. Rishi Rattan is a trauma and critical care surgeon with the Ryder Trauma Center at the University of Miami.

In the Literature

ITL: Clinician reviews of HM-centric research

By Seth Scott, MD; Eva Angeli, MD; Jacob Imber, MD; and Cassie Shaw, MD

Division of Hospital Medicine, University of New Mexico, Albuquerque

IN THIS ISSUE

By Seth Scott, MD

1 Aspirin shows little benefit for primary prevention of vascular disease in diabetes

CLINICAL QUESTION: Is aspirin for primary prevention of cardiovascular events in patients with diabetes worth the risk of adverse bleeding events?

BACKGROUND: Multiple large, randomized, controlled trials and meta-analyses that used aspirin as primary prevention for vascular events showed decreased vascular events, but a significant counterbalanced risk of bleeding. Since diabetes carries a higher risk of vascular events, this study examines aspirin for primary prevention of vascular events in diabetic patients.

STUDY DESIGN: Large, randomized, controlled trial.

SETTING: British registry-based study.

SYNOPSIS: This is a 9-year randomized, controlled trial that included 15,480 British patients with diabetes without known vascular disease who were randomized to receive a 100-mg aspirin daily or placebo. Participants in each group were closely matched patients with diabetes who were recruited using registry data and were aged 40 years and older with no alternative strong indication for aspirin.

Overall, aspirin provided no difference in mortality but showed an absolute 1.3% decrease in first vascular events or revascularization procedures with an absolute 1.1% increase in first occurrence of major bleeding event. Approximately 60% of the bleeding events were gastrointestinal or "other" urinary/nose bleeding, and there was no statistically significant increase in intracranial hemorrhage, hemorrhagic stroke, or vision-threatening eye bleeding. Vascular events were defined as transient ischemic attack (TIA), nonfatal MI, nonfatal ischemic stroke, or vascular death excluding intracranial hemorrhage. The major limitation of this study is that it had a composite of endpoints of different clinical significance. Furthermore, TIA as a major vascular event was added after the study began to increase statistical power, and when it is excluded, the difference for vascular events is not statistically significant.

Dr. Scott

BOTTOM LINE: Aspirin when used in primary prevention of vascular events in diabetes provides no improvement in mortality, and the benefit of prevention of vascular events must be weighed against the risks of bleeding.

CITATION: The ASCEND Study Collaborative Group. Effects of aspirin for primary prevention in diabetes. N Eng J Med. 2018 Oct 18;379(16):1529-39.

2 Add magnesium to treatment of AF with rapid ventricular response

CLINICAL QUESTION: Is magnesium a useful addition to atrioventricular (AV) nodal blockers in achieving faster rate control for atrial fibrillation (AF) with rapid ventricular response in emergency department patients?

BACKGROUND: Most large studies of magnesium sulfate for assistance with rate control in AF occurred in the postoperative setting. This study compared rate control in the ED using magnesium sulfate at high (9 g) and low (4.5 g) doses vs. placebo in combination with usual treatment with atrioventricular nodal-blocking agents.

STUDY DESIGN: Double-blind, prospective, randomized, controlled trial.

SETTING: Three tertiary Tunisian EDs.

SYNOPSIS: This trial in Tunisian EDs enrolled 450 patients who presented with AF with rapid ventricular response and were divided into three groups: placebo, low-dose magnesium, and high-dose magnesium. Each patient's trial medication was given as a 100-cc infusion. Patients were then treated with AV nodal-blocking agents at the discretion of the ED physician. The primary outcome was 20% reduction in rate or heart rate of less than 90 beats per minute. Notable exclusion criteria included hypotension, altered consciousness, decompensated heart failure, MI, and renal failure.

Rate control was achieved at 4 hours in 64% of patients with low-dose magnesium, 59% with high-dose magnesium, and 43% with placebo. At 24 hours, reduction in rate was controlled for 97% of patients on the low dose, 94% on the high dose, and 83% on placebo. Adverse events were mostly flushing, which occurred more frequently with the high dose than the low dose. Major limitations of the study included a lack of statistical assessment regarding baseline similarity between the two groups and that generalizability was limited by a preference for digoxin as the AV nodal agent.

BOTTOM LINE: This trial demonstrated that 4.5 g of magnesium sulfate was a useful addition to AV nodal blockers in achieving faster rate control for atrial fibrillation with rapid ventricular response in selected ED patients.

CITATION: Bouida W et al. Low-dose magnesium sulfate versus high dose in the early management of rapid atrial fibrillation: Randomized controlled double blind study. Acad Emerg Med. 2018 Jul 19. doi: 10.1111/acem.13522.

Dr. Scott is an assistant professor in the division of hospital medicine, University of New Mexico.

By Eva Angeli, MD

3 Weekly ciprofloxacin as effective as daily norfloxacin in prevention of SBP

CLINICAL QUESTION: Does ciprofloxacin administered once weekly prevent spontaneous bacterial peritonitis (SBP) as effectively as daily norfloxacin?

BACKGROUND: Studies have shown that daily administration of norfloxacin is effective for primary prophylaxis as well as secondary prevention of SBP in patients with cirrhosis and ascites. Prior studies have demonstrated efficacy of weekly ciprofloxacin, but no previous studies have compared the two antibiotics.

Dr. Angeli

STUDY DESIGN: Investigator initiated open-label randomized, controlled trial.

SETTING: Seven tertiary hospitals in South Korea.

SYNOPSIS: The investigators enrolled 124 patients aged 20-75 with cirrhosis and ascites, ascitic cell count less than 250/mm^3, and either ascitic protein less than 1.5g/dL or a history of spontaneous bacterial peritonitis. The patients were randomized to receive norfloxacin 400 mg daily or ciprofloxacin 750 mg weekly, with routine visits during the 12-month study period.

The primary end point of SBP prevention rates at 1 year were 92.7% (51/55) in the norfloxacin group and 96.5% (55/57) in the ciprofloxacin group (P = .712), which met criteria for noninferiority. Other outcomes included no difference in rates of liver transplantation, infectious complications, hepatorenal syndrome, hepatic encephalopathy, variceal bleeding, and hepatocellular carcinoma. A subgroup analysis of patients at higher risk of developing SBP showed 87% prevention rates for the norfloxacin group and 94% for the

Short Takes

Evidence is uncertain for benefit of short-stay unit hospitalization

A Cochrane review of 14 randomized trials evaluating short-stay unit hospitalization for internal medicine conditions was unable to ascertain any definite benefit or harm, compared with usual care, with concerns for heterogeneity, bias, and random error in the studies.

The authors recommended conducting more trials with low risk of bias and low risk of random errors.

CITATION: Strøm C et al. Hospitalisation in short-stay units for adults with internal medicine diseases and conditions. Cochrane Database Syst Rev. 2018;8. CD012370. doi: 10.1002/14651858.CD012370.pub2.

Hospice use among Medicare patients with heart failure

Of the 4% percent of Medicare patients discharged to hospice from a hospitalization for heart failure, 25% died within 72 hours of discharge, which led the authors to conclude that hospice is underutilized and initiated too late in the setting of heart failure.

CITATION: Warraich HJ et al. Trends in hospice discharge and relative outcomes among Medicare patients in the Get With The Guidelines–Heart Failure Registry. JAMA Cardiol. 2018 Oct 1;3(10):917-26.

ciprofloxacin group, although this result was not statistically significant.

The major limitation of this study is that it was not double blinded, so patients were aware of which medication they were taking. Additionally, almost 10% of the cohort was lost to follow-up, but this was accounted for in the sample-size calculation.

BOTTOM LINE: Once weekly administration of ciprofloxacin is not inferior to daily norfloxacin for the prevention of SBP in patients with cirrhosis and low ascitic protein levels and may provide a more cost-effective therapy with greater patient compliance.

CITATION: Yim HJ et al. Daily norfloxacin vs weekly ciprofloxacin to prevent spontaneous bacterial peritonitis: A randomized controlled trial. Am J Gastroenterol. 2018 Aug;113:1167-76.

Dr. Angeli is an assistant professor in the division of hospital medicine, University of New Mexico.

By Jacob Imber, MD

4 Posthospitalization thromboprophylaxis with rivaroxaban is unnecessary

CLINICAL QUESTION: Do symptomatic venous thromboembolism (VTE) complications improve with posthospitalization thromboprophylaxis using rivaroxaban for an at-risk medical population?

BACKGROUND: Anticoagulation for at-risk medical populations for posthospitalization thromboprophylaxis has been investigated in previous studies demonstrating a benefit in reducing risk of asymptomatic deep-vein thrombosis (DVT) development, but no studies have examined symptomatic DVTs.

STUDY DESIGN: Randomized, double-blind, placebo-controlled, multinational clinical trial.

SETTING: 671 multinational hospitals.

Dr. Imber

SYNOPSIS: 11,962 patients were identified as at-risk patients based on length of hospitalization (3-10 days), diagnosis, and additional risk factors identified by an IMPROVE risk score of greater than 4 or 2-3 with a D-dimer level more than twice the upper limit of normal. Patients were randomly assigned to receive rivaroxaban or placebo for 45 days. Primary outcome was composite of any symptomatic DVT or death related to VTE. Safety outcomes were principally related to bleeding. Symptomatic VTE or death from VTE occurred in 0.83% in the anticoagulation group and 1.1% in the placebo group (95% confidence interval, 0.52-1.09; P = .14). No significant difference was found in safety outcomes. The major limitation of the study was the low incidence of VTE and the need to include lower-risk patients (IMPROVE score 2/3 with elevated D-dimer), which may have decreased the effect of anticoagulation in the high-risk group (IMPROVE score 4 or greater).

BOTTOM LINE: No significant improvement in symptomatic VTE complications was found with posthospitalization thromboprophylaxis using rivaroxaban for an at-risk medical population.

CITATION: Spyropoulos AC et al. Rivaroxaban for thromboprophylaxis after hospitalization for medical illness. N Eng J Med. 2018 Sep 20;379:1118-27.

5 p-TIPS improves outcomes for high-risk variceal bleeding

CLINICAL QUESTION: Do high-risk patients undergoing preemptive transjugular intrahepatic portosystemic shunt (p-TIPS) procedures experience improvements in mortality when compared with usual care with medications and endoscopy?

BACKGROUND: Acute variceal bleeding remains the most severe and life-threatening complication of portal hypertension in cirrhotic patients. Several small studies have shown improved outcomes with p-TIPS without worsening of hepatic encephalopathy or other adverse events.

STUDY DESIGN: Multicenter, international, observational study.

SETTING: One Canadian and 33 European referral centers.

SYNOPSIS: 2,138 patients were registered for analysis, of which 671 were identified as high risk based on Child-Pugh score (either Child class C of less than 14 or Child class B with active bleeding seen on endoscopy). Multiple exclusion criteria were used including Child-Pugh score of 14 or more, renal failure, occlusive portal vein thrombosis, sepsis, heart failure, or hepatocellular carcinoma outside Milan criteria. Each patient underwent initial management with vasoactive medications, antibiotics, and endoscopy with subsequent intervention (p-TIPS vs. standard care) based on provider decision. p-TIPS was defined as TIPS within 72 hours of initial bleed. 31.4% of the cohort was lost to follow-up at 1 year. p-TIPS improved 1-year mortality significantly (78% vs. 62%; P = .014) and did not confer an increased risk of hepatic encephalopathy or other complication. Additionally, the authors found that the effect was significantly greater in the Child-Pugh Class C group (1-year mortality rate of 78% vs. 53%; P = .002). The authors then compared observed mortality with MELD-predicted mortality and found that with standard care, MELD scores matched with predicted mortality, but with p-TIPS, MELD scores predicted a greater mortality than the observed mortality. The authors calculated that the number needed to treat to save one life for 1 year with p-TIPS is 4.2. The major limitation of this study is the observational design and the inherent risk of selection bias. Additionally, almost one-third of patients were lost to follow-up.

Significant improvements in mortality are observed when high-risk patients undergo p-TIPS procedures as opposed to usual care with medications and endoscopy.

BOTTOM LINE: Significant improvements in mortality are observed when high-risk patients undergo p-TIPS procedures as opposed to usual care with medications and endoscopy.

CITATION: Hernández Gea V et al. Preemptive TIPS improves outcome in high risk variceal bleeding: An observational study. Hepatology. 2018 Jul 16. doi: 10.1002/hep.30182.

6 Lower rates of patient satisfaction may predict readmission

CLINICAL QUESTION: Do higher rates of patient satisfaction lead to lower rates of hospital readmission?

BACKGROUND: Readmissions account for 32.1% of total health care expenditures in the United States, of which 15%-20% are considered potentially preventable. Multiple studies have examined a variety of possible indicators of readmission, but rarely has patient perspective prior to discharge been examined.

STUDY DESIGN: Thematic interview and questionnaire.

SETTING: Two inpatient medical units at Massachusetts General Hospital, Boston.

SYNOPSIS: 846 patients were enrolled during their index admission with 201 of these patients being readmitted within 30 days of discharge. During the index admission, the patients completed a questionnaire developed by the authors and underwent a formal, thematic interview with identification of core domains performed by trained research coordinators. The primary outcome was 30-day readmission. Readmitted patients were less likely to have reported being "very satisfied" with their overall care (67.7% vs. 76.4%; P = .045) and were less likely to have reported that physicians "always listened" to them (65.7% vs. 73.2%; P = .048). Interestingly, if

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health care providers discussed the possible need for help after hospital stay, the patient had an increased risk of readmission (adjusted odds ratio, 1.56; 95% confidence interval, 1.02-2.39; *P* = .04) and patients who predicted they were "very likely" to require readmission were not more likely to be readmitted (aOR, 1.35; 95% CI, 0.83-2.19; *P* = .22). The major limitations of this study are that researchers interviewed only English-speaking patients who were able to participate in an in-depth interview and survey, perhaps resulting in a healthier-patient bias, as well as an inability to capture hospital admission at other institutions. Additionally, these patients are drawn from a tertiary-care service designed to care for medically complex cases and may not be generalizable to larger populations.

BOTTOM LINE: Lower rates of 30-day hospital readmission were associated with higher rates of patient satisfaction and a higher level of patient perception that providers were listening to them.

CITATION: Carter J et al. The association between patient experience factors and likelihood of 30-day readmission: A prospective cohort study. BMJ Qual Saf. 2018 Sep;27:683-90.

Dr. Imber is an assistant professor in the division of hospital medicine, University of New Mexico.

Lower rates of 30-day hospital readmission were associated with higher rates of patient satisfaction and a higher level of patient perception that providers were listening to them.

By Cassie Shaw, MD

7 Restrictive transfusion strategy in cardiac surgery remains noninferior

CLINICAL QUESTION: Does using a restrictive transfusion strategy with patients undergoing cardiac surgery affect long-term outcomes?

BACKGROUND: Using a restrictive transfusion strategy in patients undergoing cardiac surgery is known to use fewer units of allogeneic red cells, compared with a liberal strategy, while still having noninferior short-term clinical outcomes. At this time, little is known about such a strategy's long-term effects.

STUDY DESIGN: Randomized, open-label, noninferiority trial.

SETTING: 74 hospitals in 19 countries.

SYNOPSIS: 5,243 adults undergoing nontransplant cardiac surgeries and having at least a moderate predicted risk for death were randomly divided into a liberal or restrictive transfusion strategy. Restrictive-strategy participants received a transfusion when hemoglobin was less than 7.5 g/dL, compared with either a hemoglobin of 8.5 g/dL on the floor or 9.5 g/dL in the ICU for the liberal-strategy group. During the hospitalization, the restrictive group received fewer U of red cells and had a lower mean predischarge hemoglobin. At 6 months, the groups were compared for the primary outcomes of death, MI, stroke, or renal failure requiring dialysis, finding an occurrence of such in 402/2,317 in the restrictive-strategy group and 402/2,347 in the liberal-strategy group (*P* = .006 for noninferiority). Limitations include the study being a noninferiority trial and the very specific patient population selected.


Dr. Shaw

BOTTOM LINE: In patients undergoing cardiac surgery, a restrictive transfusion strategy is noninferior to a liberal strategy with respect to death from any cause, MI, stroke, and new renal failure requiring dialysis at 6 months postop.

CITATION: Mazer CD et al. Six-month outcomes after restrictive or liberal transfusion for cardiac surgery. N Eng J Med. 2018 Sep 27;379(13):1224-33.

8 Subsegmental PEs overtreated despite link with patient harm

CLINICAL QUESTION: How often are physicians treating isolated subsegmental pulmonary embolisms?

BACKGROUND: CT pulmonary angiography (CTPA) often detects distal, subsegmental pulmonary embolisms (SSPE) for which there is unclear clinical significance. For these isolated SSPEs, the 2016 CHEST guidelines recommend clinical surveillance in lieu of treatment. Such clinical surveillance has not been associated with an increased recurrence of venous thromboembolism (VTE) over 3 months.

STUDY DESIGN: Retrospective review.

SETTING: Tertiary care center in Quebec.

SYNOPSIS: A review of all CTPAs at McGill University in Montreal, from 2014-2016 yielded 222 acute pulmonary emboli (PEs), 71 of which were SSPEs without associated Doppler imaging positive for deep vein thrombosis. Of those 71, 62 (87%) were systemically anticoagulated, compared with 135/143 (94%) of the more proximal PEs. The adverse events of both groups of anticoagulated patients were common and similar. Over the following 3 months, 26 patients in the SSPE group visited the ED or were readmitted (42%; 95% confidence interval, 30%-55%), 21 had a drop in hemoglobin level of 2 g/dL or greater and/or received a blood transfusion (34%; 95% CI, 22%-47%), and 10 died from causes unrelated to VTE (16%; 95% CI, 8%-28%). Limitations of this study included the small number of participants and short time to follow-up.

BOTTOM LINE: Although SSPEs have unknown clinical significance, they are being treated with systemic anticoagulation at a similar rate to more proximal PEs and are associated with patient harm.

CITATION: Raslan IA et al. Rates of overtreatment and treatment-related adverse effects among patients with subsegmental pulmonary embolism. JAMA Intern Med. 2018 Sep 1;178(9):1272-4.

Dr. Shaw is an assistant professor in the division of hospital medicine, University of New Mexico.

Short Takes

Culprit lesion PCI has 1-year mortality similar to immediate multivessel PCI

This is the follow-up study to CULPRIT-SHOCK trial, which examined percutaneous coronary intervention in culprit lesion only vs. multivessel PCI in the setting of cardiogenic shock. The initial trial showed improved 30-day mortality outcomes with culprit lesion PCI only, and the follow-up demonstrated no significant difference in 1-year mortality between the two groups.

CITATION: Thiele H et al. One-year outcomes after PCI strategies in cardiogenic shock. N Engl J Med. 2018 Nov 1;379(18):1699-710.

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Interested physicians should email their CV to profrecruiting@ochsner.org or call 800-488-2240 for more information.

Reference # SHM2017.

Ochsner Health System

Sorry, no opportunities for J1 applications.

Ochsner is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, sexual orientation, disability status, protected veteran status, or any other characteristic protected by law

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Penn State Health is a multi-hospital health system serving patients across central Pennsylvania seeking exceptional physicians to join our Penn State Health family to provide patient care as a Hospitalist.

What we're offering:

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What we're seeking:

- Collaborative individual to work with diverse population and staff;
- Medical degree - MD, DO, or foreign equivalent;
- Completion of an accredited Internal Medicine or Family Medicine program;
- BC/BE in Internal or Family Medicine;
- Must have or be able to acquire a license to practice in the Commonwealth of Pennsylvania;
- No J1 visa waiver sponsorships available.

What the area offers:

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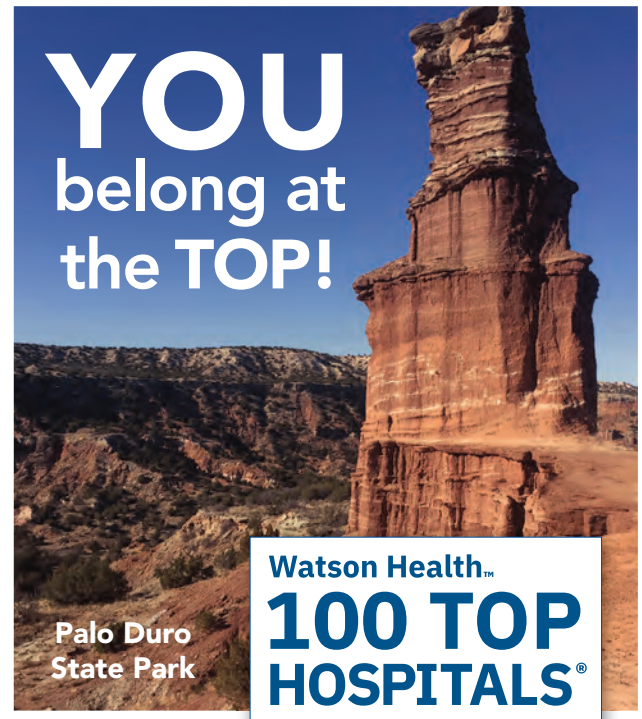
For more information please contact: Heather Peffley, Physician Recruiter at: **hpeffley@pennstatehealth.psu.edu**

PennState Health

Penn State Health is committed to affirmative action, equal opportunity and the diversity of its workforce. Equal Opportunity Employer – Minorities/Women/Protected Veterans/Disabled.



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BSA HEALTH SYSTEM

To apply or for more information:
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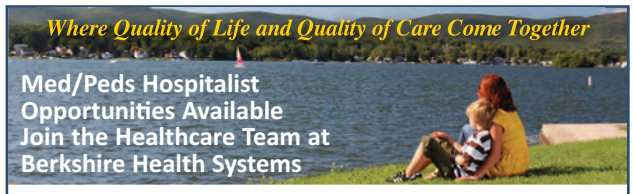
Eileen.Harpole@bsahs.org



Berkshire Health Systems is currently seeking BC/BE Med/Peds physicians to join our comprehensive Hospitalist Department

- Day and Nocturnist positions
- Previous Med/Peds Hospitalist experience is preferred
- Leadership opportunities available

Located in Western Massachusetts Berkshire Medical Center is the region's leading provider of comprehensive health care services

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  - A full spectrum of Specialties to support the team
  - A major teaching affiliate of the University of Massachusetts Medical School and University of New England College of Osteopathic Medicine
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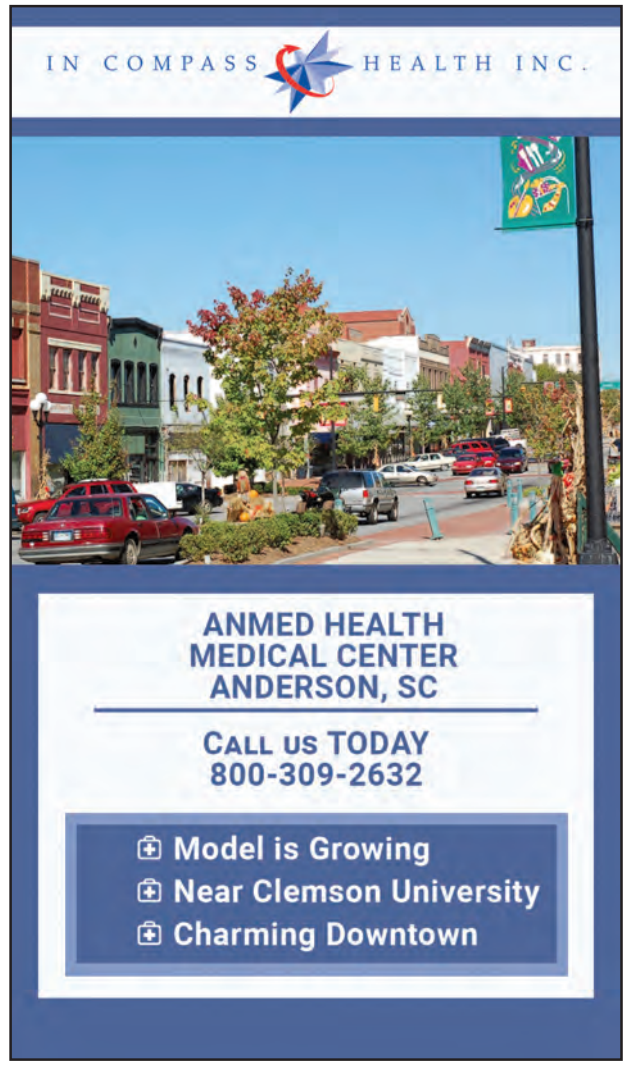
Berkshire Health Systems offers a competitive salary and benefits package, including relocation.

Berkshire Health Systems

Interested candidates are invited to contact:
Liz Mahan, Physician Recruitment Specialist, Berkshire Health Systems
725 North St. • Pittsfield, MA 01201 • (413) 395-7866.
Applications accepted online at **www.berkshirehealthsystems.org**



Academic Nocturnist Hospitalist

The Division of General Internal Medicine at **Penn State Health Milton S. Hershey Medical Center**, Penn State College of Medicine (Hershey, PA) is seeking a BC/BE Internal Medicine **NOCTURNIST HOSPITALIST** to join our highly regarded team. Successful candidates will hold a faculty appointment to Penn State College of Medicine and will be responsible for the care in patients at Hershey Medical Center. Individuals should have experience in hospital medicine and be comfortable managing patients in a sub-acute care setting.

Our Nocturnists are a part of the Hospital Medicine program and will work in collaboration with advanced practice clinicians and residents. Primary focus will be on overnight hospital admission for patients to the Internal Medicine service. Supervisory responsibilities also exist for bedside procedures, and proficiency in central line placement, paracentesis, arthrocentesis, and lumbar puncture is required. The position also supervises overnight Code Blue and Adult Rapid Response Team calls. This position directly supervises medical residents and provides for teaching opportunity as well.

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http://tinyurl.com/j29p3fz Ref Job ID#4524

For additional information, please contact:
Brian Mc Gillen, MD — Director, Hospitalist Medicine
c/o Heather Peffley, PHR FASPR — Physician Recruiter
Penn State Health
hpeffley@pennstatehealth.psu.edu

PennState Health
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Contact: Rochelle Woods
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Please email your CV to Drea Rosko at
physicianrecruitment@sluhn.org

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or call **(434) 654-7580**

Ingredients for effective team-based care

Changing times for U.S. health care

By Christopher Frost, MD, SFHM

The current health care environment is undergoing a rapid transformation. In evolutionary biology, a theory exists called punctuated equilibrium. This theory suggests there are long periods of little or no morphological change among species and then, geologically speaking, short periods of rapid change in response to pressures within the environment. This rapid period of change adds significant diversity to the landscape of existing species. In health care, we are undergoing a period of "punctuation."

A testament to the degree of change is a scan of the various consolidation activities occurring across the health care space. Some are more traditional, such as mergers of health systems with different or competing geographical footprints or hospitalist management companies that provide similar services and desire to increase their market share. Others that are more interesting are those that include mergers of seemingly different business lines or offerings, like CVS Health and Aetna; Humana and Kindred; or even organizations such as Amazon, Berkshire Hathaway, and JP Morgan hiring Atul Gawande as the CEO of their newly formed health care venture. The latter examples serve as an illustration of the reorganization that is occurring within health care delivery. This represents, at the very least, a blurring of the lines – if not a deconstruction and complete rebuild – of traditional lines of separation between payers, providers, employers, and retailers.

"In other words, the silos are coming down, and there will be significant diversity in the landscape of existing species."

In other words, the silos are coming down, and there will be significant diversity in the landscape of existing species. A common theme across these changes is that most – if not all – participants will share some portion of the financial risk associated with these evolving models. High-deductible health plans, alternative payment models (APMs), and advanced APMs are examples of tactics and models that distribute the financial risk. The consolidations referenced above will likely continue to encourage distribution of the financial risk across patients, providers, employers, and payers.

A key theme coming into focus is that the evolving care delivery system will not be defined by bricks and mortar. Rather, it will follow the patient and go wherever he or she goes to meet his or her specific needs. This is why we're seeing mergers of a variety of assets, including personnel, technology, critical supplies (such as pharmaceuticals), and funding resources. This very purposeful and deliberate melting pot phenomenon will restructure and reformat the care delivery model.

To be successful within this new landscape, there will need to be a renewed focus on working within a collaborative model. The days of a single entity or provider being able to serve as the "be all" or "do all" are over, and the days of practicing medicine as the Lone Ranger are anachronistic. Instead, there is a need for health care providers to embrace and lead a team-based care model. Team-based care should have the patient at the center of the care delivery model and leverage the expertise of the various team members to practice at the "top of their expertise."

In hospital medicine, this includes a variety of team members – from physicians, nurse practitioners, physician assistants, and clinical pharmacists to case managers, physical therapists, subject matter experts in quality improvement, and analysts – who identify operational priorities from the data rather than reporting predefined goals on dashboards. Although possibly a good start, this is by no means an exhaustive list of team members. The team will be defined by the goals the health care team aspires to achieve. These goals may include closer alignment with payers, employers, and post-acute partners; the goals will influence the composition of the team. Once the team is defined, the challenge will be to effectively integrate team members so they are contributing their expertise to the patient care being delivered.

Some ingredients for effective team-based care include the following:

- **Developing an effective process for engagement and providing a voice for all team members.** Interdisciplinary team rounds where there is an established time for team members to plan and operationalize their plans around patient care can serve as an example of this type of structured process.
- **Creating well-defined roles and responsibilities with key performance indicators to promote accountability.** The team will have outcomes they are measuring and striving to impact, and each team member will have a role in achieving those goals. Being able to parse out and measure how each team member contributes to the overall outcome can be beneficial. This provides an opportunity for each team member to play a meaningful role in accomplishing the overall goal and allows for a measurement process to track success. For example, an overall team goal may be to have a specific percentage of eligible discharges completed by 11:00 a.m. To accomplish this goal, there may be specific objectives for the clinicians to have discharge orders in the chart by 9:30 a.m. and for case management to have communicated with any post-acute services the day before discharge. These specific accountability measures facilitate accomplishing the larger team goal.
- **Developing a culture of safety and transparency.** Effective teams promote an environment where all members are empowered and encouraged to speak and share their perspectives and knowledge. Communication is based on the value it provides to accomplishing the team's goals rather than based on a hierarchy which determines who contributes and when.
- **Defining and then redefining the competencies required of the team to promote continued development and growth.** In this time of dynamic change, the skill sets that helped us get where we are today may be different then the skill sets that are needed for success in the future. There will continue to be a need for functional and knowledge-based competencies in addition to the need to focus on competencies that engender a culture of team-based care. For example, hospitalist leaders will need to understand evidence-based medicine to support appropriate management of a septic patient and simultaneously understand evidence-based management/leadership to affect sepsis care across his or her health care system.

With this change in the health care environment come new and exciting opportunities. Hospital medicine has always elected to assume a leadership role in these times of change, these periods of "punctuation." Development of effective team-based care is a great place for those of us working in hospital medicine to demonstrate our leadership as we care for our patients.

Dr. Frost is chief medical officer of hospital-based physicians for Hospital Corporation of America, Brentwood, Tenn. He is president-elect of the Society of Hospital Medicine.

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