Hospitalists target inpatient glycemic control

**SHM benchmarks provide ‘objective format’ for improving outcomes**

By Larry Beresford

Physicians are trained to manage their patients’ diabetes and often do a meticulous job – one on one. But in order to maximize glycemic control outcomes throughout the hospital, you need a kind of diabetic epidemiology team to focus on the data, said Andjela Drincic, MD, an endocrinologist at Nebraska Medicine, the clinical partner of the University of Nebraska Medical Center in Omaha. As medical director for diabetes stewardship, Dr. Drincic serves as the epidemiologic lead for her hospital.

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What inspired the PPC – and more broadly, SHM – to express support for this bill?
SHM and the PPC have always taken pride in assuming a leadership role when it comes to policy issues affecting hospitalists and the patients they serve, ranging from observation status to addressing the opioid epidemic and now immigration reform. We are one of the first medical societies to support this bill.

What inspired us to take action is that there are country-specific caps when applying for a green card for those immigrants currently in the United States on an H1B visa. In the current green card pool, no country can occupy more than 7% of applications. For more populated countries like India and China, two significant countries of origin for hospitalists practicing in the United States, this creates a significant backlog. At the moment, the projected wait time for applicants from countries in this situation to receive their green cards could easily exceed 25 years.

What impact would this have on hospital medicine providers and patients?
The number of hospitalists trained in the U.S. who have come on visas from other countries is astounding. By virtue of what we do as hospital medicine providers, we are leaders in health care. We own major QI initiatives across the hospital and oversee health care outcomes that many other providers never become involved with. By stifling the ability of people to enter the country and stay here long-term, it would have a devastating impact on our communities. A large chunk of hospitalist staffing companies employ providers who are international medical graduates who completed their residencies in the United States. Without them, health care accessibility would decrease tremendously – especially in rural areas like those in which I work.

This is more than just an issue of citizenship – these caps have a major impact on quality of life and morale for those affected by them. The high level of uncertainty surrounding the current process affects large-scale decision-making. For example, people who are waiting to be approved for their green cards often ask questions like, “Should I buy a house?” and “Can I visit my family abroad and still be able to get back into the United States without any unwarranted delays or hassles?” This demoralizes quality providers personally, and if they feel this way, I can’t see how it wouldn’t affect their performance professionally as hospital medicine providers.

How have the existing restrictions affected you?
I graduated from medical school in India and came to the United States initially as a student and eventually...
Join an SHM committee!
Opportunities to develop new mentoring relationships

By Christopher S. Bartlett, MD, MPH, and Aram A. Namavar, MS

Society of Hospital Medicine committee participation is an exciting opportunity available to all medical students and resident physicians. Whether you are hoping to explore new facets of hospital medicine, or take the next step in shaping your career, committee involvement creates opportunities for individuals to share their insight and work collaboratively on key SHM priorities to shape the future of hospital medicine.

If you are interested, the application is short and straightforward. Requisite SHM membership is free for students and discounted for resident members. And the benefits of committee participation are far reaching.

SHM committee opportunities will cater to most interests and career paths. Our personal interest in academic hospital medicine and medical education led us to the Physicians in Training (PIT) committee, but 17 committees are available (see the complete list below). Review the committee descriptions online and select the one that best aligns with your individual interests. A mentor’s insight may be valuable in determining committee membership.

SHM Committee Opportunities:
- Academic Hospitalist Committee
- Annual Meeting Committee
- Awards Committee
- Chapter Support Committee
- Communications Strategy Committee
- Digital Learning Committee
- Education Committee
- Hospital Quality and Patient Safety Committee
- Membership Committee
- Patient Experience Committee
- Performance Measurement & Reporting Committee
- Physicians in Training Committee
- Practice Analysis Committee
- Practice Management Committee
- Public Policy Committee
- Research Committee
- Special Interest Group Support Committee

The most rewarding aspect of committee membership has been the opportunity to make contributions to the growth of SHM, and the advancement of hospital medicine. As members of the PIT committee, which has been charged with developing a trainee pipeline for future hospitalists, we have been fortunate to play roles in the creation of a Student and Resident Executive Council. This group of young hospital medicine leaders will seek to identify strategies to engage medical students and resident physicians in SHM.

We had the opportunity to lead the first Student and Resident Interest Forum at the 2018 annual meeting, have contributed to the development of a national research study identifying qualities interviewers are looking for in hospital medicine job candidates, and are helping to craft the young hospitalist track offerings. Medical students and resident physicians are encouraged to take advantage of similar opportunities present in each of the committees.

Membership is a boon. While opportunities for personal and professional growth are less tangible than committee work products, they remain vitally important for trainees. Through their engagement, medical students and resident physicians will have the opportunity to develop new mentoring relationships beyond the confines of their training site. We believe that committee engagement offers a “leg up” on the competition for residency and fellowship applications. Moreover, networking with hospital medicine leaders from across the country has allowed us to meet and engage with current and future colleagues, as well as potential future employers. In the long term, these experiences are sure to shape our future careers. More than a line on one’s curriculum vitae, meaningful contributions will open doors to new and exciting opportunities at our home institutions and nationally through SHM.

Balancing your training requirements with committee involvement is feasible with a little foresight and flexibility. Committee participation typically requires no more than 3-5 hours per month. Monthly committee calls account for 1 hour. Time is also spent preparing for committee calls as well as working on the action items you volunteered to complete. Individual scheduling is flexible, and contributions can occur offline if one is temporarily unavailable because of training obligations. Commitments are for at least 1 year and attendance at the SHM annual conference is highly encouraged but not required. Akin to other facets of life, the degree of participation will be linked with the value derived from the experience.

SHM committees are filled by seasoned hospitalists with dizzying accomplishments. This inherent strength can lead to feelings of uncertainty among newcomers (i.e., impostor syndrome). What can I offer? Does my perspective matter? Reflecting on these fears, we are certain that we could not have been welcomed with more enthusiasm. Our committee colleagues have been 110% supportive, receptive of our viewpoints, committed to our professional growth, and genuine when reaching out to collaborate. Treated as peers, we believe that members are valued based on their commitment and not their level of training or experience.

Committees are looking for capable individuals who have a demonstrated commitment to hospital medicine, as well as specific interests and value-added skills that will enhance the objectives of the committee they are applying for. For medical students and resident physicians, selection to a committee is competitive. While not required, a letter of support from a close mentor may be beneficial. Experience has demonstrated time and again that SHM is looking to engage and cultivate future hospital medicine leaders. To that end, all should take advantage.

Ultimately, we believe that our participation has helped motivate and influence our professional paths. We encourage all medical students and resident physicians to take the next step in their hospital medicine career by applying for committee membership. Our voice as trainees is one that needs further representation within SHM. We hope this call to action will encourage you to apply to a committee. The application can be found at the following link: https://www.hospitalmedicine.org/membership/committees/#Apply_for_a_Committee.

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transitional to an H1B visa. After waiting for many years and having participated in numerous QI initiatives, I was fortunate enough to have my green card petition approved under a higher application category termed ‘Aliens of Extraordinary Ability’ with a lesser wait time. However, the nature of the work that they perform, most hospitalists usually are eligible to apply for their green cards under the ‘Exceptional Ability’ or ‘Advanced Degree’ category, the wait times of which are excruciatingly long, and that is what we at the PPC and at the SHM level are striving to address and correct.

If someone is reading and says, “I want to do more and help advocate,” what can they do? You don’t have to be a member of the PPC to have an impact on policy. Every member of SHM can contact their local representatives and be informed using SHM’s Grassroots Network. I have even gone so far as to meet and talk with local representatives to help them understand how policy issues affect both me and my patients. It is imperative that we are on the right side of history for those affected by this bill, and all bills affecting our fellow providers in the future.
Legacies
Positive change through advocacy

SHM seen as an ‘honest broker’ on Capitol Hill

By Ron Greeno, MD, FCCP, MHiM

Editor’s note: The “Legacies of Hospital Medicine” is a recurring opinion column submitted by some of the best and brightest hospitalists in the field, who have helped shape our specialty into what it is today. It is a series of articles that reflect on Hospital Medicine and its evolution over time, from a variety of unique and innovative perspectives.

Medical professional societies have many goals and serve numerous functions. Some of these include education and training, professional development, and shaping the perception of their specialty both in the medical world and the public arena. Advocacy and governmental affairs are also on that list. SHM is no exception to that rule, although we have taken what is clearly an unorthodox approach to those efforts and our strategy has resulted in an unusual amount of success for a society of our size and age.

As my contribution to the “Legacies” series, I am calling upon my 20-year history of participation in SHM’s advocacy and policy efforts to describe that approach, recount some of the history of our efforts, and to talk a bit about our current activities, goals, and strategies.

In 1999 the leadership of SHM decided to create the Public Policy Committee and to provide resources for what was, at the time, a single dedicated staff position to support the work of the committee. As nascent as our efforts were, the strategy for entering into the Washington fray was clear. We decided our priorities were first and foremost to educate our “targets” on exactly what a hospitalist was and on the increasing role hospitalists were playing in the American health care system. The target audience was (and has remained) Congress, the Centers for Medicare & Medicaid Services, and the Medicare Payment Advisory Committee, which is the advisory board tasked to recommend to Congress how Medicare should spend its resources. The goal of this education was to establish our credibility and to advance the notion that we were the experts on care design for acutely ill patients in the inpatient setting. To this end, we decided that, when we met with folks on the Hill, we would ask for nothing for ourselves or our members, an approach that was virtually unheard of in the halls of Congress.

When responding to questions as to why we were not bringing “asks” to our Hill meetings, we would simply comment that we were only offering our services and that, whenever they decided to try to make the health care system better and expertise was required regarding redesign of care in the hospital, they should think about us. Our stated goal: Improve the delivery system and provide better and more cost-effective care for our patients.

We also exercised what I will call “issue discipline.” With very limited resources it was critical that we limit our issues to ones on which we could have significant impact. And we did not make our efforts to shape an effective argument. In addition, as we were going to be operating within a highly partisan system and representing members with varying political views, it was highly important that we did not approach issues in a way that resulted in our appearing politically motivated.

That approach took a lot of time and patience. But as a small and relatively under-resourced organization, we saw it as the only way that we could eventually have our message heard. So for many years the small contingent of SHM staff and the members of the Public Policy Committee (PPC) worked quietly to have our specialty and society recognized by policy makers in Washington and Baltimore (where CMS resides). But in the years just prior to and since the passage of the Affordable Care Act, when serious redesign of the American health care system began, our patience started to pay dividends and policy makers actually reached out for our input on issues related to the care of patients admitted to acute care hospitals. In addition, our advocacy efforts started to gain more traction.

Today, our specialty and society are well known by the key health care policymakers at CMS, MedPAC, and the Center for Medicare and Medicaid Innovation (CMMI). In Congress, especially with the staff for the committees of jurisdiction for federal health care legislation, our society is seen as an “honest broker,” committed not just to the issues that impact our members, but one that has the improvement of the entire health care system at the top of its priority list. We have been told that this perception gives us a voice that is much more influential than would be expected for a society of our age, size, and resources.

Along the way, the PPC has grown to a committee of 20 select members led by committee chair Joshua Lenchus, DO, RPh, SFHM. The PPC is among the most difficult committees to get on, and members commit to hours of work monthly to support our efforts. Our government relations staff in Philadelphia is still small at just three, but they are extremely bright and productive. Recently, my role evolved from being the long-term chairman of the PPC to one of volunteer staff, as the senior adviser for government relations. In this role I hope to support our full-time staff, especially in our Washington-facing efforts.

The SHM staff has brought several systemic improvements to our advocacy work, including execution of several highly successful “Hill Days” and the establishment of our “Grassroots Network” that allows a wider swath of our membership to get involved in the field. The Hill Days occur when the SHM Annual Conference is in Washington, and one of the days includes busing hundreds of hospitalists to Capitol Hill for meetings with their representatives to discuss our advocacy issues.

The success of our advocacy can be seen in several high-level ‘wins’ over the last few years:

- Repeal of the Independent Advisory Board earlier this year.
- Creation of the “Facility Based Option” to replace Merit-Based Incentive Payment System reporting for hospital-based physicians including hospitalists. This voluntary method to replace MIPS reporting was first suggested to CMS by SHM, was developed in partnership with CMS, and will be available in 2019.
- SHM continues to take the lead on issues that impact the U.S. health care system and our patients. For several years we have been explaining to CMS and Congress the complete dysfunction of observation status, and its negative impact on elderly patients and hospitals. More recently, SHM released a consensus statement on the use of opioids in the inpatient setting, along with a policy statement on opioid abuse.
- As the U.S. health care system undergoes a necessary transformation to one in which value creation is tantamount, hospitalists are in a propitious position to guide the development of better federal policy. We still must be judicious in the use of our limited resources and to support our selection of issues. And we must jealously guard the reputation we have cultivated as a medical society that is looking out for the entire health care system and its patients, while we also support our members and their work.

“The success of our advocacy can be seen in several high-level ‘wins’ over the last few years.”

Dr. Greeno is senior advisor for government affairs and past president of SHM.

- Implementation of Advanced Care Planning CPT codes to encourage appropriate use of “end of life” discussions.
- Establishment of a Hospitalist Measure set with CMS.
Q&A

Leadership 101: Learning to trust

Dr. Ramin Yazdanfar grows into the role of medical director

By Felicia Steele

Editor’s note: This month, The Hospitalist spotlights Ramin Yazdanfar, MD, hospitalist and Harrisburg (Pa.) site medical director at UPMC Pinnacle. Dr. Yazdanfar has been a member of SHM since 2016, has attended two annual conferences as well as Leadership Academy, and together with his team received SHM’s Award of Excellence in Teamwork.

How did you learn about SHM and why did you become a member?
I first heard about SHM during my initial job out of residency. Our medical director encouraged engagement in the field of hospital medicine, and he was quite involved in local meetings and national conferences. I became a member because I felt it would be a good way to connect with other hospitalists going through similar experiences and struggles, and in the hopes of gaining something I could take back to use in my daily practice.

Which SHM conferences have you attended?
I have attended two national conferences thus far: The first was the 2016 SHM Annual Conference in San Diego, where our hospitalist team won the Excellence in Teamwork and Quality Improvement Award for our active bed management program under Mary Ellen Pfeiffer, MD, and William “Tex” Landis, MD, among others. I also attended the 2017 Leadership Academy in Scottsdale, Ariz. As a new site director for a new hospitalist group, I thought it would be a valuable learning experience, with the goal of improving my communication as a leader. I also will be attending the 2018 SHM Leadership Academy in Vancouver. I am excited to reconnect with peers I met last year and to advance my leadership skills further.

What were the main takeaways from Leadership: Mastering Teamwork, and how have you applied them in your practice?
My most vivid and actionable memory of Leadership: Mastering Teamwork was the initial session around the five dysfunctions of a team and how to build a cohesive leadership team. Allowing ourselves to be vulnerable and open creates the foundation of trust, on which we can build everything else, such as handling conflict and creating commitment, accountability, and results. I have tried to use these principles in our own practice, at UPMC Pinnacle Health in Harrisburg, Pa. We have an ever-growing health system with an expanding regional leadership team. We base our foundation on trust in one another, and in our vision, so the rest follows suit.

As a separate takeaway, I really enjoyed sessions with Leonard Marcus, PhD, on SWARM Intelligence and Meta-Leadership. He is a very engaging speaker whom I would recommend to anyone considering the Mastering Teamwork session.

What advice do you have for early-career hospitalists looking to advance their career?
My advice to early-career hospitalists is to be open to opportunity. There is so much change and development in the field of hospital medicine. While the foundation of our job is in the patient care realm, many of us find a niche that interests us. My advice is pursue it and be open to what follows, without forgetting that we do this for our patients and community.

Ms. Steele is a marketing communications specialist at the Society of Hospital Medicine.

Play a bigger role at SHM

Your voice and participation are an integral part of SHM. Make a difference and help shape the future of hospital medicine.

Apply for a Committee

SHM is now accepting applications for 2019 committee members.
hospitalmedicine.org/committees

Join or Start a Special Interest Group (SIG)

Applications are now being considered for members interested in launching new SIGs.
hospitalmedicine.org/sigs
You can teach a canary in a coal mine to meditate, but it is still going to die.

I have seen the canary sentiment above – used as a metaphor for health care and burnout – pop up a few times on Twitter, attributed to a few different thoughtful doctors, including Jenny Ramsey, MD, of the Cleveland Clinic (at Hospital Medicine 2018); Lucy Kalanithi, MD, a clinical assistant professor of medicine at Stanford (Calif.) University and widow of Paul Kalanithi, MD, of “When Breath Becomes Air” fame; and Stuart Slavin, MD, associate dean for curriculum and a professor of pediatrics at Saint Louis University.

To be honest, I am rather burned out on reading about physician burnout at this point. Nevertheless, I love the canary idea; it is such a perfect visual of the current problem facing physicians.

I was thinking about the meditating canary when I read the new “Charter on Physician Well-Being,” published in JAMA and already endorsed by most major medical organizations/acronyms, including SHM, ACP, SGIM, AMA, AAMC, AAIM, ABIM, ACCME, APA, and the IHI. This physician well-being charter was created by the Collaborative for Healing and Renewal in Medicine, a group that includes leading medical centers and organizations.

What makes this different from previous attempts at addressing burnout? The charter takes a systems-based approach to physician well-being. Aha, of course! As the patient safety movement realized more than 2 decades ago, real progress would only be made when we stopped focusing our attention, blame, and interventions on individuals and instead looked at systems; now, the physician well-being movement has officially made the same bold proclamation.

It is not the fault of the burned-out physician who apparently just needs to be hammered over the head with better coping skills – just as the majority of medical errors would not be fixed by continuing to tell physicians that they screwed up and should figure out how not to do that again!

We need to make real changes to the system. For example, one of the charter’s authors, Colin P. West, MD, PhD, highlighted why it is important that organizations commit to optimizing highly functioning interprofessional teams: “Can you imagine @KingJames [LeBron James] or @Oprah applying their unique skills AND personally seating the crowd, collecting stats, assessing satisfaction, etc. So why do we?”

The authors also call for organizations to commit to reducing time spent on documentation and administration. Hallelujah!

Now the question is whether this charter will actually have any teeth or whether it will have the same fate as our canary, slowly fading away, never to be heard from again?

Read the full post at hospitalleader.org.

Dr. Moriates is the assistant dean for health care value and an associate professor of internal medicine at the University of Texas, Austin.
Glycemic control

Continued from page 1

tal, which has worked systematically to improve inpatient glycemic control since 2012 — with help from the Society of Hospital Medicine.

“You need a team and to set up a system that works, with protocols and some way of knowing if the protocols are succeeding,” Dr. Drincic said. “Quality improvement targets are never static.”

She credited SHM’s glycemic control eQUIPS (Electronic Quality Improvement Program), an online quality improvement resource and collaborative of 104 participating hospitals, for providing the support and the data needed to drive glycemic QI efforts at Nebraska Medicine. SHM provided reporting metrics, quarterly benchmarking reports, a library of tools and resources, an implementation guide, educational webinars on demand and, for some participants, mentorship and implementation with the advice of a leading expert in the field.

One big reason for giving more attention to glycemic control in the hospital is patient safety, said Gregory Maynard, MD, MHM, clinical professor and chief quality officer at the University of California–Davis Medical Center and SHM’s project team leader for eQUIPS.

“Hyperglycemia in hospitalized patients is an extraordinarily common and growing problem, affecting up to 40%-50% of patients in the hospital,” he said. In 2012, 7.7 million hospital stays involved patients with diabetes, the seventh leading cause of death in the United States.

Hyperglycemia is linked to elevated rates of medical complications, infections, wound complications, hospital mortality, length of stay, readmissions, and ICU admissions, along with other outcomes not directly related to diabetes. Hyperglycemia in hospitalized patients who have not been given a diagnosis of diabetes is, if anything, more dangerous. Add the related risk for hypoglycemia, and clinicians are challenged to keep their patients controlled within the zone between the extremes of hyper- and hypoglycemia. The American Diabetes Association recently issued recommendations with more relaxed glucose targets between 140 and 180 mg/dL for most patients in non-intensive care settings.

“To not have a standardized way of managing hyperglycemia for your hospital seems like an enormous missed opportunity,” Dr. Maynard said. “If someone comes into the hospital with a chronic condition, just sending them back into the world without addressing the underlying condition is not good care. You have missed an important opportunity.”

Dr. Maynard said SHM recognized this opportunity when it established eQUIPS. “Hospitalists are often tasked with taking care of patients with glycemic issues because there may not be an endocrinologist readily accessible in the hospital,” he said. “We have seen through our benchmarking in eQUIPS incredible variability — with 10-fold differences in hyperglycemia and hypoglycemia rates between the best- and worst-performing sites. The biggest variable is whether the hospital systematically manages glycemic control. We have also shown that achieving high levels of glycemic control and low hypoglycemia rates concurrently is very possible.”

Reliable benchmarks

Nebraska Medicine enrolled in eQUIPS in 2012.

“We utilize SHM’s glucometrics (standardized analyses of inpatient glycemic control data),” said Dr. Drincic. “I was looking for a reliable glucometric system and some way to make comparisons with other hospitals when I came across the data Dr. Maynard published about SHM via a PubMed search. We needed outcomes that are validated in the literature and comparison groups.”

Nebraska Medicine has also received a certificate of distinction for inpatient diabetes care from the Joint Commission, and Dr. Drincic is active in PRIDE (Planning Research Inpatient Diabetes), a national consortium of leading investigators in inpatient diabetes care formed to promote collaborative research.

The PRIDE group meets yearly at the ADA conference, communicates regularly by email, and publishes articles.

“Once a year I present our glycemic control data to our administration and to the quality and safety committees at the hospital. I have been pleased with the level of support we have received,” Dr. Drincic said. “We needed a mandate to do this, but when I reported the impact on readmissions and other outcomes, I got the full support of administration. This would have been a lot harder without SHM.”

Engagement with hospitalists is another key to the glucose management project’s success. “We as endocrinologists think we know how to manage diabetes, but hospitalists have the daunting task of dealing with all of the patient’s medical issues. If we don’t have a strong collaboration, how can we change practice hospitalwide?” Rachel Thompson, MD, SFHM, Nebraska Medicine’s chief of hospital medicine, participates in the glucose management project, Dr. Drincic said.

“We occasionally are guests at hospitalist meetings to share new glucose treatment algorithms,” she said. “We’re also looking at collaborating on other quality initiatives, for example, studying how perioperative dexamethasone affects glycemic control. We built this relationship with hospitalists by establishing trust while trying to shed a reputation as ‘sugar police.’ I don’t want hospitalists saying ‘There she goes again whenever I come on the unit. We have tried to establish personal relationships and figure out what the hospitalists need, especially relative to EPIC [the hospital’s electronic medical record software].”

Dr. Thompson said her group’s recent growth to nearly 70 clinicians has increased its footprint hospitalwide and given hospitalists a greater opportunity to influence glycemic control. “We see up to a third of the patients in the hospital outside of the ICU. Glycemic control is something you learn as a hospitalist — it’s a very important frontline quality issue. In the patient list on EPIC every morning we have a field highlighting all patients with glycemic control issues,” she said.

“Poor glucose control is associated with poor outcomes. We need the right systems in place for patient safety. If we are ignoring glycemic control when the patient is in the hospital, we’re sending the wrong message and setting a bad example for our patients when they return home.”

Lack of clear metrics

A significant defect in the infrastructure of many glucose management programs is the lack of clear metrics for outcomes, Dr. Maynard said. Nearly one-third of U.S. hospitals have no standardized metric to track the quality of their inpatient glycemic management, a sobering statistic considering that the first step in any QI initiative is to define and measure the problem at hand.

“I believe the main reason that glycemic control has been left off hospitals’ radar screens is that we still have not adopted national, publicly reported quality measures for glycemic control, although those were proposed recently by a government interagency work group,” Dr. Maynard said. “Until that happens, we’ll continue to see uneven response.

The first step for frontline hospitalists is to learn and understand the basics of glucose control, for example, basal bolus insulin administration, and to stop writing orders for sliding scale insulin as the sole means of controlling hyperglycemia.

“Develop and adopt standards of practice for insulin administration in your hospital,” Dr. Maynard said. “Be part of the solution, not the problem. Once you get into the weeds – patients on steroids or on total parenteral nutrition – it can get tricky. But it’s important to get the basics right and move beyond inertia on this topic.”

The glycemic team at Nebraska Medicine includes, in addition to Dr. Drincic and Dr. Thompson, an endocrinology fellow, diabetes case managers, resource nurses, nurse leadership, pharmacists, inpatient care transitions coordinators, and representatives from pediatrics and critical care, all working to impact the overall quality of glycemic management in the hospital.

Jon Knezevic, Pharm.D, is diabetes stewardship pharmacy coordinator, and Shelly Lautenbaugh, RN, CDE, is diabetes lead care manager and diabetes coordinator for the Joint Commiss-
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... also includes online and live training courses and a class in acute glucose management for the diabetes resource nurses, who bring the knowledge back to their units.

The glucose team’s job is to make sure patients are cared for safely, using appropriate policies and procedures, education, and training, Ms. Lautenbaugh said. “We have a mission as a hospital to transform people’s lives. We try to live our values, and everything follows from the focus on patient safety,” she added. “If our patients can receive extraordinary care and leave better informed about their condition than when they came in, and then we don’t see them again, we’ve achieved our ultimate goal.”

Hyperglycemia is most often not the primary reason why patients are hospitalized, Ms. Lautenbaugh said. “But we need to give them appropriate glucose management regardless. We’ve worked with bedside staff, nurse leadership, and teams to develop plans to raise our outcome scores. We have a lot of different outcomes we examine, and it’s always evolving.”

Quality metrics are incorporated into the electronic medical record, but those reports are not timely enough for day-to-day management, Dr. Knezevich said. “So we created a diabetes dashboard, constantly updated in real time to identify patients who are out of glycemic control.” The measures tracked include a mean patient day glucose score, percentage of readings within recommended limits, mean time between measured low readings and next documented reading or resolution of hypoglycemia, readmission rates, and diabetes nutrition assessments.

For hospitals with diabetes certificates, the Joint Commission also requires that every patient with hyperglycemia receives a clinic visit 30 days after discharge to make sure they are receiving appropriate follow-up care. Other facets of the Nebraska glycemic initiative include utilizing the hospital’s voluntary “Meds to Beds” program, which brings prescribed medications to the patient’s room at discharge. “We offer a diabetes discharge kit for patients who are self-pay, with all of the insulin and medical supplies they will need to get to the 30-day follow-up visit,” Dr. Knezevich said. “We can dream up amazing treatment regimens, but if they can’t afford the medications, what have we accomplished?”

SHM’s external benchmarks have provided an objective format for comparing and improving outcomes. Ms. Lautenbaugh said, “We like to see where we are and use the data to make significant improvements, but we’re also focused on internal assessments. If we make changes for a given metric, how does it affect performance in other areas?” One important metric is percentage of glucose readings within target range hospital-wide. “Our overall goal is 75%. It was 72% in April 2018, and we’ve raised it to 74.4%. It’s a small gain but it shows steady progress. Little steps make small but steady improvement,” she said.

“One area where we were not pleased was the occurrence of hypoglycemia,” Ms. Lautenbaugh said. “We did a root cause analysis of every hypoglycemic event, including several reports for patients who didn’t have diabetes at all. We had to weed out some that weren’t pertinent to our quality questions, but for those that are, the diabetes case manager calls the provider to make sure they were aware of the incident. We were able to identify the outliers in noncritical care, which we’re now able to tackle using a systematic approach.”

Get on the bus

Hospitalists are also integrally involved in a hospital glycemic improvement initiative at Orange Regional Medical Center (ORMC) in Middletown, N.Y. The Glycemic Improvement Team (GIT) was formed in 2012 when a new hospital campus opened and EPIC was implemented as the hospital’s EMR. But glycemic control has taken on greater focus since 2015, when ORMC enrolled in eQUIPS, said Lorraine Porcaro, RN, the hospital’s diabetes clinical manager. The glycemic control team includes representatives from medicine, nursing, case management, laboratory, nutrition,
pharmacy, wound care, and quality improvement. Implementing the new EMR offered the opportunity to track a number of medical values in real time, Ms. Porcaro said. ORMC has focused its glycemic quality improvement efforts on hypoglycemia and hyperglycemia, with a recent emphasis on the need for improvements related to glucose reassessment 15 minutes post hypoglycemia treatment. More than a hundred ‘Diabetes Champions’ have completed 16 hours of advanced training in diabetes and provide in-unit mentorship for other staff.

The ORMC team’s glycemic improvement “bus” is a rolling cart that goes from unit to unit supplying nurse education, reminders, copies of department-specific policies and protocols, and treats for staff. “It’s what we’re known for,” Ms. Porcaro said. Pens with the motto: “Don’t Miss the Bus! Retest in 15!” summarize the GIT’s current focus on post-hypoglycemia treatment retesting.

Hospitalists were part of the glycemic improvement process at ORMC from the beginning and are still involved, said Adrian Paraschiv, MD, FHM, a hospitalist and assistant director of the medical center, as well as the ORMC director of clinical information technology. ORMC initiated hospitalist coverage in 1998 and now has three HM groups, two of them represented on the glycemic improvement team.

“Like any hospital, we feel we should minimize hypoglycemic events,” Dr. Paraschiv explained. “This became important for other hospital departments, and we recognized we needed a major QI initiative to improve our outcomes hospital-wide. In the process, we noticed what other people were saying: Results from improving glycemic control included reduced length of stay, cost, and infections. That provided motivation for the hospital to support our initiative.”

Glucose management isn’t only about blood sugar, but whether the patient ate or not, their other blood work, the level of education for patient and staff, and a variety of other inputs, Dr. Paraschiv said. “All of these things were in the EMR, but EPIC had an incipient structure for pulling the data together, and we modified it to show everything that’s going on with the patient’s glycemic control on a single screen. We can build order sets and issue different reports.”

Today at ORMC, hypoglycemia is reassessed within 30 minutes more than 50% of the time. “It will never be at 100%, but we wanted to at least be at the national mean for eQUIPS hospitals. Our stretch goal was to be in the top quartile, and by the end of 2017, we realized that goal,” Ms. Porcaro said. Sometimes, because of changes in patients and staff, the GIT needs to repeat the education and review policies. “Since then, it’s been a matter of continuing staff education; sharing glucose data with stakeholders; talking about goals for ICU and non-ICU units; and, when needed, rolling out the bus.”

Participation in eQUIPS has made it possible to gather this information in one place and present it in a way that makes sense to physicians, Dr. Paraschiv said. “Using these tools, we started looking at our processes, what needed to change, and what we are able to change. Can we use the electronic system to automatically alert physicians to make changes to the treatment regimen in real time? We continue to improve using upgrades to our EMR, such as an alert system with best practice advisories for the clinician. We now think we can actually achieve what we set out to achieve,” he said.

“Our idea was to market this program throughout the hospital – from the kitchen, meal delivery, IT, laboratory, to the medical and nursing staff,” Ms. Porcaro said. “The issue is multifactorial – it’s for the entire hospital. My heart is warmed when I see the woman who delivers the meals asking the patient: ‘Have you gotten your insulin shot?’”

**References**


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**Clinician reviews of HM-centric research**

By Agnes Libot, MD; Margaret Tsien, MD; Antony Agith, MD; Anthi Katsouli, MD, MPH; Tiffany White, MD; and Paula Marfia, MD

Division of hospital medicine in the department of medicine at Loyola University Chicago, Maywood, Ill.

**IN THIS ISSUE**

1. Palliative care consultations reduce hospital costs
2. Hospital-level care coordination strategies and the patient experience
3. Predicting failure of nonoperative management of spinal epidural abscess

**CLINICAL QUESTION:** Are direct hospital costs for patients with serious illnesses affected by palliative care consultations (PCC)?

**BACKGROUND:** Health care costs are on the rise, and previous studies have found that PCC can reduce hospital costs. Timing of consultation and allocation of palliative care intervention to a certain population of patients may reveal a more significant cost reduction.

**STUDY DESIGN:** Meta-analysis.

**SETTING:** English peer reviewed articles.

**SYNOPSIS:** A systematic search was performed for articles that provided economic evaluation of PCC for adult inpatients in acute care hospitals. Patients were included if they had at least one of seven conditions: cancer, heart failure, liver failure, kidney failure, chronic obstructive pulmonary disease, AIDS/HIV, or neurodegenerative conditions. Six data sets were reviewed, which included 102,118 patients altogether. There was a significant reduction in costs with PCC within 3 days of admission, regardless of the diagnosis (−$3,237; 95% confidence interval, −$3,581 to −$2,893). In the stratified analysis, the pooled meta-analysis suggested a statistically significant reduction in costs for both cancer (−$4,261; 95% CI, −$6,664 to −$3,837; P < 0.001) and noncancer (−$2,105; 95% CI, −$2,698 to −$1,511; P < 0.001) subsamples. In patients with cancer, the treatment effect was greater for patients with four or more comorbidities than it was for those with two or fewer.

**TOP LINE:** Hospital-led care transition strategies with direct patient interactions led to higher patient satisfaction scores.


**3 Predicting failure of nonoperative management of spinal epidural abscess**

**CLINICAL QUESTION:** Can one predict whether nonoperative management of spinal epidural abscesses will fail?

**BACKGROUND:** Even though spinal epidural abscesses have a low incidence and nonspecific presentation, a delay in treatment can lead to significant morbidity. Previously, operative management was the preferred treatment; however, improvements in imaging and timing of diagnosis have led to an increased interest in nonoperative management. Few studies have identified possible predictors of failure for nonoperative management, and no algorithm exists for weighing the different possible predictors with the outcome of nonoperative management failure.

**STUDY DESIGN:** Retrospective cohort study.

**SETTING:** A Massachusetts hospital system with two tertiary academic medical centers and three regional community hospitals.

**SYNOPSIS:** The study evaluated 1,053 patients admitted with a spinal epidural abscess during 1993-2016. Of these, 432 patients were managed nonoperatively, and 367 were included in the analysis. Failure of nonoperative management occurred in 99 patients (27%). These patients were compared with 266 patients with successful nonoperative management with more than 60 days of follow-up. Six independent factors were associated with failure of nonoperative management including motor deficit at presentation (odds ratio, 7.85), pathological or compression fractures (OR, 6.12), active malignancy (OR, 3.32), diabetes (OR, 2.32), sensory
Antibiotic therapy for sinusitis routinely too long

Observational study on the length of antibiotic therapy for uncomplicated acute sinusitis found that the median duration of antibiotic therapy was 10 days, which is higher than the recommendation of 5-7 days in patients with low risk of antibiotic resistance. Overall this duration accounted for more than two-thirds of all antibiotic courses.


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**SHORT TAKES**

4. **Perioperative diabetes and HbA1c in mortality**

**CLINICAL QUESTION:** Do preoperative hemoglobin A1c (HbA1c) and perioperative glucose predict outcomes in patients undergoing noncardiac and cardiac surgeries?

**BACKGROUND:** Hyperglycemia in the perioperative period has been associated with infection, delayed wound healing, and postoperative mortality. Studies have investigated the effects of HbA1c, or hyperglycemia on postoperative outcomes, but none have been performed to assess the effect of one while controlling for the other.

**STUDY DESIGN:** Retrospective analysis.

**SETTING:** Single-center, Duke University Health System.

**SYNOPSIS:** Using a database of electronic health records at Duke University Health System, Durham, N.C., investigators reviewed 13,077 surgeries (6,684 noncardiac and 6,393 cardiac) to determine the association of preoperative HbA1c with perioperative glucose and 30-day mortality. For noncardiac surgery, increased average perioperative glucose was associated with increased mortality (P < .04). In cardiac surgery both low and high average glucose was associated with increased mortality (P < .001). By contrast, HbA1c was not a significant predictor of postoperative mortality in cardiac surgery (P > .08), and in noncardiac surgery, HbA1c was negatively associated with 30-day mortality (P < .02). Overall, perioperative glucose was predictive of 30-day mortality, but HbA1c was not associated with 30-day mortality after researchers controlled for glucose. Because the study is retrospective, no causal relationship can be established. Hospitalists involved in perioperative care should aim for optimization of glucose control regardless of preoperative HbA1c.

**BOTTOM LINE:** Perioperative glucose is related to surgical outcomes, but HbA1c is a less useful indicator of 30-day postoperative mortality.


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3. **Perioperative gabapentin’s effect on postoperative opioid use**

**CLINICAL QUESTION:** Does perioperative gabapentin decrease the time to pain resolution and opioid cessation in patients undergoing eligible surgery?

**BACKGROUND:** Previous studies have shown that perioperative gabapentin has no effect on remote pain cessation but has not linked it with effects on remote opioid cessation. Also, most trials were limited to immediate postoperative use during hospital admission; limited data were available with extensive postoperative longitudinal follow-up.

**STUDY DESIGN:** Randomized, double-blind, placebo-controlled study.

**SETTING:** Tertiary referral teaching hospital.

**SYNOPSIS:** In this study 302 patients admitted to the ICU with severe exacerbations of COPD with or without pneumonia were randomly assigned to groups with antibiotic therapy guided by a PCT protocol or standard guidelines. Overall, the study failed to demonstrate non-inferiority of a PCT-based strategy to reduce exposure to antibiotics. Specifically, the adjusted difference in mortality was 6.6% higher (90% confidence interval, 0.3%-13.5%) in the intervention group with no significant reduction in antibiotic exposure.

**BOTTOM LINE:** A PCT-based algorithm was not effective in safely reducing antibiotic exposure in patients with acute exacerbations of COPD admitted to the ICU.


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2. **Procalcitonin not helpful in critically ill COPD**

**CLINICAL QUESTION:** Can a procalcitonin (PCT)-guided strategy safely reduce antibiotic exposure in patients admitted to the ICU with severe acute exacerbations of chronic obstructive pulmonary disease (COPD) with or without pneumonia?

**BACKGROUND:** Studies have demonstrated PCT-based strategies can safely reduce antibiotic use in patients with severe lower respiratory tract infections, community-acquired pneumonia, or acute exacerbations of COPD. The data on safety of PCT-based strategies in critically ill patients is limited.

**STUDY DESIGN:** Prospective, multicenter, randomized, controlled trial.

**SETTING:** ICUs of 11 hospitals in France, including 7 tertiary care hospitals.

**SYNOPSIS:** In this study 1,805 patients aged 18-75 years who were scheduled for eligible surgery were randomized at a single site to receive either an early preoperative gabapentin algorithm to guide initial antibiotic therapy or standard guidelines. The treatment group received 1,200 mg of gabapentin preoperatively followed by 600 mg 3 times a day postoperatively. Meanwhile, the placebo group received lorazepam 0.5 mg preoperatively followed by inactive placebo postoperatively for 72 hours. With use of intention to treat analysis, this study showed that perioperative gabapentin did not affect time to postoperative pain resolution. However, a modest increase in the rate of opioid cessation was uncovered. Specifically, there was a 24% increase in the rate (hazard ratio, 1.24; 95% confidence interval, 1.00-1.54; P = .05) of opioid cessation after hospital discharge, with a median time of 25 days in the gabapentin group versus 32 days in the placebo group.

**BOTTOM LINE:** Perioperative gabapentin may promote opioid cessation and prevent the development of chronic opioid use after surgery.


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1. **Changes at presentation and location of the abscess**

**CLINICAL QUESTION:** How changes at presentation (3.48), and location of the abscess dorsal to the thecal sac (OR, 0.29). Subsequently, a clinical algorithm was created to predict the likelihood of failure of nonoperative management.

Because of its retrospective design, the study was unable to assess the efficacy of surgery versus nonoperative management.

**BOTTOM LINE:** Specific measures of general health, neurologic status at presentation, and anatomical data of a patient with a spinal epidural abscess have led to the development of a clinical algorithm to determine the risk of failure in nonoperative management of spinal epidural abscesses.


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By Antony Agith, MD

**SHORT TAKES**

4. **Changes at presentation and location of the abscess**

5. **Procalcitonin not helpful in critically ill COPD**

6. **Perioperative gabapentin’s effect on postoperative opioid use**

7. **Association between hospice length of stay and health care costs**

**CLINICAL QUESTION:** Does increasing the length of hospice stays lead to decreased utilization and costs in patients on maintenance dialysis?

**BACKGROUND:** Early hospice referral among Medicare patients is associated with lower rates of hospital admission, intensive care unit admission, and in-hospital death. However, it is not known whether there is association between early hospice referral and health care costs among patients with maintenance hemodialysis.

**STUDY DESIGN:** Cross-sectional observational study.

**SETTING:** Using the United States Renal Data System registry.

**SYNOPSIS:** With the use of data from the United States Renal Data System from 2000-2014, the study examined the relationship between health care utilization during the last month and that of the last week of life among patients with maintenance hemodialysis. The investigators used patients who had renal failure as a primary hospice diagnosis regardless of the decision to discontinue life support.

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**Continued on following page**
Pediatric ITL

Comparison of analgesia methods for neonatal circumcision

Multiple pain management interventions exist

By Samuel C. Stubblefield, MD

Clinical question
What is the optimal way to manage analgesia during neonatal circumcision?

Background
Neonatal circumcision is one of the most commonly performed surgical procedures. The American Academy of Pediatrics in 2012 noted that the health benefits outweigh the minor risks of the procedure, but that parents should make the decision to circumcise based on their own cultural, ethical, and religious beliefs.

One of the primary risks of neonatal circumcision is pain during and after the procedure. Multiple methods for managing analgesia exist, but it is unknown what combination of methods is optimal. Usual analgesia techniques include: local anesthetic cream composed of lidocaine and prilocaine (EMLA) applied to the skin prior to the procedure; oral sucrose solution given throughout the procedure; dorsal penile nerve block (DPNB); and penile ring block (RB).

Study design
Single-center, double-blinded, randomized, controlled trial.

Setting
Multispecialty freestanding hospital.

Synopsis
Parents of infant boys born at 36-41 weeks’ gestation who chose to have their children circumcised were offered participation in the study. Of 83 eligible participants, 70 were randomized, with 10 in the control group (EMLA only) and 20 in each intervention (EMLA + sucrose, EMLA + sucrose + RB, EMLA + sucrose + DPNB). A single pediatric urologist performed all circumcisions using the Gomco clamp technique.

A video camera recorded the infant’s face and upper torso during the procedure. Two researchers, who were blinded to the analgesia plan, scored these videos using a modified Neonatal Infant Pain Scale (NIPS).

The NIPS used ranged from 0 to 6, with 6 considered severe pain. For rating purposes, the procedure was divided into 6 stages with a NIPS score assigned at each stage. There were no significant differences in baseline characteristics among the groups; no significant differences in the duration of the procedure by intervention; and there were no complications. Interrater reliability for the NIPS was good (kappa, 0.84). All interventions were superior to EMLA alone, with significantly decreased NIPS for all stages of the procedure. No significant differences in NIPS were found among the following:

- EMLA + sucrose
- EMLA + sucrose + RB
- EMLA + sucrose + DPNB (for any stage of the procedure).

The one exception was that following lysis of foreskin adhesions, EMLA + sucrose + RB was superior (NIPS 2.25 for EMLA + sucrose + RB vs. NIPS 4.4 for EMLA + sucrose + DPNB vs. NIPS 4.2 for EMLA + sucrose vs. NIPS 5.8 for EMLA alone). In terms of crying time during the procedure, all interventions were significantly superior to EMLA alone. Of the interventions, crying time was statistically and clinically significantly shorter with EMLA + sucrose + RB (5.78 seconds vs. 11.5 for EMLA + sucrose + DPNB vs. 16.5 for EMLA + sucrose vs. 45.4 for EMLA alone). This was a single-center study and the procedures were performed by a pediatric urologist rather than by a general pediatrician, which potentially limits applicability.

Bottom line
All tested analgesia modalities for neonatal circumcision were superior to EMLA alone. The most effective analgesia of those tested was EMLA + sucrose + penile ring block.

Citation

By Tiffany White, MD

Smoking cessation drugs do not increase CV risk

CLINICAL QUESTION: Do pharmacotherapies used in tobacco cessation treatment significantly increase the risk of cardiovascular events? B ACKGROUND: Although it is known that smoking cessation is the most beneficial enhancement of cardiovascular health, many clinicians may be hesitant to prescribe pharmacotherapies because of concerns regarding adverse events. This study reports the cardiovascular safety findings from EAGLES (Evaluating Adverse Events in a Global Smoking Cessation Study) and its nontreatment extension trial.

STUDY DESIGN: Double-blind, randomized, triple-dummy, placebo- and active-controlled trial and its nontreatment extension trial.

SETTING: Conducted by 140 multinational centers. EAGLES was a trial in cohorts of smokers with and without psychiatric disease that assessed the safety and efficacy of pharmacotherapies used for smoking cessation.

The EAGLES extension trial is a nontreatment extension of EAGLES. It began with the first dose of medication and included those who completed an additional 28 weeks of observation.

SYNOPSIS: The study included approximately 8,000 participants aged 18-75 years who smoked 10 or more cigarettes per day.

Continued from previous page

continue hemodialysis before death. Hospital admission, ICU admission, death in the hospital, and one or more inpatient intensive procedures were used as measures for health care utilization.

Among 154,186 (20%) patients receiving hospice service at the time of death, 41.5% enrolled in hospice within 3 days of death. Because more patients were referred to hospice very close to the time of death, the Medicare cost for hospice patients was similar to those patients not referred to hospice ($10,756 vs. $10,871; P = .08). Longer lengths of stay in hospice beyond 3 days were associated with lower rates of health care utilization and costs. Late hospice referral was also associated with inadequate pain control and emotional needs.

The study was not able to capture patients who had end-stage renal disease but were on hemodialysis. Patients with private insurance or those covered by Veterans Affairs were not included.

BOTTOM LINE: Half of hospice referrals among patients with maintenance hemodialysis occur within the last 3 day of life, which has no significant effect on end-of-life costs and health care utilization.


By Dr. Katsouli is a hospitalist in the division of hospital medicine in the department of medicine at Loyola University Chicago, Maywood, Ill.

8 smoking cessation drugs do not increase CV risk

Continued on following page
cigarettes per day and were interested in quitting. The study monitored the development of a major adverse cardiovascular event (MACE), such as cardiovascular death, nonfatal myocardial infarction, or nonfatal stroke, during treatment with varenicline, bupropion, hydrochloride, nicotine replacement therapy, and placebo therapy. Other end points included determining the occurrence of MACE along with other peripheral vascular disease that required either intervention, coronary revascularization, or hospitalization for unstable angina (MACE+). There were no significant differences in baseline characteristics of participants. Investigators at screening and baseline of the included participants, greater than 66% of the participants were in the low risk (less than 10%) cardiovascular risk category, less than 10% had diabetes, less than 5% had coronary heart disease, and less than 1% had carotid artery disease. BOTTOM LINE: The findings provide evidence that, in a general population of smokers, smoking cessation medications do not increase the risk of serious cardiovascular events.


Readmissions after GI bleeds

CLINICAL QUESTION: What is the rate of hospital readmission within 30 days of nonvariceal upper GI hemorrhage, and what are its effects on mortality, morbidity and health care use in the United States?

BACKGROUND: Nonvariceal upper GI hemorrhage is the most common GI emergency that leads to hospital admission (approximately 300,000 admissions/year in the United States). Because of the advances in endoscopic therapy and overall medical care, associated in-hospital mortality has been steadily decreasing. As a result of Medicare and Medicaid shifts toward an alternative payment model, quantifying hospital readmission rate after an episode of nonvariceal upper GI hemorrhage and measuring its effects on patient outcomes and resource use have become a key step in both improving treatment outcomes and health care reimbursement.


SYNOPSIS: The study collected data on hospital readmissions for 203,220 adults who were hospitalized for urgent nonvariceal upper gastrointestinal hemorrhage and discharged. The primary outcome was rate of all-cause readmission within 30 days of discharge. Secondary outcomes were reasons for readmission, readmission mortality rate, morbidity (shock and prolonged mechanical ventilation), and resource use (length of stay and total hospitalization costs and charges). The rate of readmission was determined to be 13%, with only 18% caused by recurrent nonvariceal upper gastrointestinal bleeding. The rate of death among readmissions was higher than among index admissions, and a higher proportion of readmitted patients had morbidities requiring prolonged mechanical ventilation. The total economic in-hospital burden was $30.3 million in costs and $108 million in charges over the span of readmission-associated 133,568 hospital days. Independent predictors of readmission were having Medicaid insurance, having a higher comorbidity score, having a lower income, residence in a metropolitan area, hemorrhagic shock, and longer stays in the hospital.

BOTTOM LINE: Readmissions within 30 days of discharge for upper GI hemorrhage are associated with higher morbidity and mortality and lead to higher resource use.


Dr. White is a hospitalist in the department of medicine at Loyola University Chicago, Maywood, Ill.
Clinical Case

A 70-year-old woman with hypertension, diabetes, nonischemic stroke, moderate renal insufficiency (creatinine clearance CrCl 45 mL/min), heart failure, and non-valvular atrial fibrillation (AF) on chronic anticoagulation therapy is admitted because of a very supratherapeutic INR. She reports labile INR values despite strict adherence to her medication regimen. Her cancer-screening tests had previously been unrevealing. She inquires about the risks and benefits of switching to a novel oral anticoagulant (NOAC) as advertised on television. Should you consider it while she is still in the hospital?

Key Clinical Question

Replacing warfarin with a NOAC in patients on chronic anticoagulation therapy

Hospitalists must consider clinical factors and patient preferences

By Benjamin P. Geisler MD, MPH; Jeff E. Liao, MD; and Farrin A. Manian MD, MPH

Massachusetts General Hospital, Boston

Clinical Case

A 70-year-old woman with hypertension, diabetes, nonischemic stroke, moderate renal insufficiency (creatinine clearance [CrCl] 45 mL/min), heart failure, and non-valvular atrial fibrillation (AF) on chronic anticoagulation therapy is admitted because of a very supratherapeutic INR. She reports labile INR values despite strict adherence to her medication regimen. Her cancer-screening tests had previously been unrevealing. She inquires about the risks and benefits of switching to a novel oral anticoagulant (NOAC) as advertised on television. Should you consider it while she is still in the hospital?

Brief overview of the issue

Lifelong anticoagulation therapy is common among patients with AF or recurrent venous thromboembolism (VTE). Until the advent of NOACs, a great majority of patients were prescribed warfarin, the oral vitamin K antagonist that requires regular blood tests for monitoring of the international normalized ratio. In contrast to warfarin, NOACs are direct-acting agents (hence also known as “direct oral anticoagulants” or DOACs) that are selective for one specific coagulation factor, either thrombin (e.g., dabigatran) or factor Xa (e.g., rivaroxaban, apixaban, and edoxaban, all with an “X” in their names). NOACs have been studied and approved by the Food and Drug Administration for nonvalvular AF; i.e., patients without rheumatic mitral stenosis, mechanical or bioprosthetic heart valve, or prior mitral valve repair. Compared with warfarin, NOACs have fewer drug or food interactions, have more predictable pharmacokinetics, and may be associated with reduced risk of major bleeding depending on the agent. The latter is a particularly attractive feature of NOAC therapy, especially when its use is considered among older patients at risk of intracranial hemorrhage (ICH), such as those with previous strokes, ICH, or reduced renal function. Unfortunately, data on the efficacy and safety of the use of NOACs in certain patient populations (e.g., those with severe renal insufficiency, active malignancy, the elderly, patients with suboptimal medication adherence) are generally lacking.

Overview of the data

There are no randomized controlled trials (RCTs) addressing the clinical benefits of switching from warfarin to NOAC therapy. However, based on a number of RCTs comparing warfarin to individual NOACs and their related meta-analyses, the following conclusions may be made about their attributes:

1. Noninferiority to warfarin in reducing the risk of ischemic stroke in AF.
2. Association with a lower rate of major bleeds (statistically significant or trend) and a lower rate of ICH and hemorrhagic strokes, compared with warfarin.
3. Association with a higher rate of gastrointestinal bleeding, compared with warfarin (except for apixaban, low-dose dabigatran, and edoxaban).
4. Association with a decreased rate of all stroke and thromboembolic events, compared with warfarin.
5. Association with a slightly decreased all-cause mortality in AF, compared with warfarin in many studies, but not all.

NOACs should be used with caution or avoided altogether in patients with severe liver disease or renal insufficiency (see Table 1). Potential advantages and disadvantages of NOAC therapy are listed in Table 2.

The 2016 CHEST guideline on antithrombotic therapy for VTE recommends NOACs over warfarin. The 2012 European Society of Cardiology AF guidelines also recommend NOACs over warfarin. However, the 2014 American College of Cardiology/American Heart Association/Heart Rhythm Society guidelines on AF state that it is not necessary to change to a NOAC when patients are “stable, easily controlled, and satisfied with warfarin therapy.”

Data from a relatively small, short-term study examining the

Table 1. Dosing of NOACs according to renal function

<table>
<thead>
<tr>
<th>NOAC</th>
<th>Normal renal function</th>
<th>Renal dysfunction</th>
<th>Age</th>
<th>Liver dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dabigatran</td>
<td>150 mg b.i.d.*</td>
<td>Not studied in CrCl ≤30 mL/min</td>
<td>Use with caution in ≥75-year-olds</td>
<td>Not available</td>
</tr>
<tr>
<td>Rivaroxaban</td>
<td>AF: 20 mg nightly</td>
<td>AF: CrCl 15-50 mL/min, ≤15 mg nightly, reassess renal function</td>
<td>Consider dose adjustment in ≥65-year-olds with CrCl 30-50 mL/min</td>
<td>Avoid use in moderate to severe impairment (Child-Pugh B/C) or in hepatic coagulopathy</td>
</tr>
<tr>
<td>VTE: 15 mg b.i.d. × 21 days, followed by 20 mg daily</td>
<td>VTE: Avoid if CrCl ≤30 mL/min; consider dose adjustment in ≥65-year-olds with CrCl 30-50 mL/min</td>
<td>Use caution in moderate (Child-Pugh B) and avoid use to severe (Child-Pugh C) impairment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apixaban</td>
<td>AF: 5 mg b.i.d. Reduce to 2.5 mg b.i.d. in the presence of two or more of the following: age ≥80 years, weight ≤60 kg, Cr ≥1.5 mg/dL. Not studied well in patients with serum Cr &gt;2.5 mg/dL or CrCl &lt;25 mL/min</td>
<td>VTE: 10 mg b.i.d. × 7 days, followed by 5 mg b.i.d.</td>
<td>No dose adjustment; not studied when serum Cr &gt;2.5 mg/dL or CrCl &lt;25 mL/min</td>
<td>No recommendation</td>
</tr>
<tr>
<td>Edoxaban</td>
<td>60 mg daily*; 30 mg daily if weight ≤60 kg</td>
<td>CrCl 15-50 mL/min, 30 mg daily; not studied when CrCl ≤30 mL/min; avoid if CrCl &lt;15 mL/min</td>
<td>No restrictions</td>
<td>Avoid use in moderate to severe impairment (Child-Pugh B/C)</td>
</tr>
</tbody>
</table>

* Manufacturer recommends bridging patients with VTE

Notes: CrCl = creatinine clearance; VTE = venous thromboembolism; AF = atrial fibrillation.
Bottom line

Hospitalists are in a great position to discuss a switch to a NOAC in selected patients with history of good medication adherence and labile INRs or ICH risk factors.

References


Key Points

• NOACs represent a clear advancement in our anticoagulation armamentarium.
• Potential advantages of their use include lower rates of intracranial bleed and hemorrhagic strokes, fewer drug or food interactions, and lack of need for routine lab monitoring.
• Potential disadvantages of their use include increased rates of gastrointestinal bleed with some agents, general lack of availability of reversal agents, higher drug cost, unsuitability in patients with poor medication compliance, and lack of efficacy data in certain patient populations.
• Decision to switch from warfarin to a NOAC should thoroughly consider its pros and cons, clinical factors, and patient preferences.

Table 2. Potential advantages and disadvantages of NOACs

<table>
<thead>
<tr>
<th>Potential advantages</th>
<th>Potential disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower rates of intracranial bleed and hemorrhagic strokes than warfarin</td>
<td>Higher drug cost; may require prior insurance approval</td>
</tr>
<tr>
<td>No need for routine lab monitoring</td>
<td>Lack of availability of a reversal agent</td>
</tr>
<tr>
<td>Fewer drug or food interactions than warfarin</td>
<td>Increased risk of gastrointestinal bleeding</td>
</tr>
<tr>
<td>No clear efficacy data in certain patient populations (e.g., patients with malignancy)</td>
<td>Higher rebound rate of VTE events in patients with poor adherence</td>
</tr>
</tbody>
</table>

Application of the data to our original case

Given a high calculated CHADS2-VASC score of 8 in our patient, she has a clear indication for anticoagulation for AF. Her history of labile INRs, ischemic stroke, and moderate renal insufficiency place her at high risk for ICH.

A NOAC may reduce this risk but possibly at the expense of an increased risk for a gastrointestinal bleed. More importantly, however, she may be a good candidate for a switch to a NOAC because of her labile INRs despite good medication adherence. Her warfarin can be held while hospitalized and a NOAC may be initiated when the INR falls below 2.

Prior to discharge, potential cost of the drug to the patient should be explored and discussed. It is also important to involve the primary care physician in the decision-making process. Ultimately, selection of an appropriate NOAC should be based on a careful review of its risks and benefits, clinical factors, patient preference, and shared decision making.

Quiz

From warfarin to a NOAC

When considering a switch from warfarin to a NOAC, all the following factors should be considered a potential advantage, except:

A. No need for routine lab monitoring.
B. Lower risk of gastrointestinal bleeding.
C. Fewer drug interactions.
D. Lower rates of intracranial bleed and hemorrhagic stroke.

The correct answer is B. NOACs have been associated with lower risk of intracranial bleed and hemorrhagic stroke but not gastrointestinal bleed.

Routine lab monitoring is not necessary during their use and they are associated with fewer drug interactions, compared with warfarin.
**Practice Management**

**Documentation and billing: Tips for hospitalists**

Is it AMS, delirium, or encephalopathy?

By David Tong, MD, and Bonnie Epps, MSN, RN

During residency, physicians are trained to care for patients and write notes that are clinically useful. However, physicians are often not taught about how documentation affects reimbursement and quality measures. Our purpose here, and in articles to follow, is to give readers tools to enable them to more accurately reflect the complexity and work that is done for accurate reimbursements.

If you were to get in a car accident, the body shop would document the damage done and submit it to the insurance company. It’s the body shop’s responsibility to record the damage, not the insurance company’s. So while documentation can seem onerous, the insurance company is not going to scour the chart to find diagnoses missed in the note. That would be like the body shop doing repair work without documenting the damage but then somehow expecting to get paid.

For the insurance company, “If you didn’t document it, it didn’t happen.” The body shop should not under-document and say there were only a few scratches on the right rear panel if it was severely damaged. Likewise, it should not overbill and say the front bumper was damaged if it was not. The goal is not to bill as much as possible but rather to document appropriately.

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**Terminology**

The expected length of stay (LOS) and the expected mortality for a particular patient is determined by how sick the patient appears to be based on the medical record documentation. So documenting all the appropriate diagnoses makes the LOS index (actual LOS divided by expected LOS) and mortality index more accurate as well. It is particularly important to document when a condition is (or is not) “present on admission.”

While physician payments can be based on evaluation and management coding, the hospital’s reimbursement is largely determined by physician documentation. Hospitals are paid by Medicare on a capitated basis according to the Acute Inpatient Prospective Payment System. The amount paid is determined by the base rate of the hospital multiplied by the relative weight (RW) of the Medicare Severity Diagnosis Related Group (MS-DRG). The base rate is adjusted by the wage index of the hospital location. Hospitals that serve a high proportion of low-income patients receive a Disproportionate Share Hospital adjustment. The base rate is not something hospitalists have control over.

The RW, however, is determined by the primary diagnosis (reason for admission) and whether or not there are complications or comorbidities (CCs) or major complications or comorbidities (MCCs). The more CCs and MCCs a patient has, the higher the severity of illness and expected increased resources needed to care for that patient.

Diagnoses are currently coded using ICD-10 used by the World Health Organization. The ICD-10 of the primary diagnosis is mapped to an MS-DRG. Many, but not all, MS-DRGs have increasing reimbursements for CCs and MCCs. Coders map the ICD-10 of the principal diagnosis along with any associated CCs or MCCs to the MS-DRG code. The relative weights for different DRGs can be found on Table 5 of the Medicare website (see reference 1).

### Altered mental status versus delirium versus encephalopathy

As an example, let’s look at the difference in RW, LOS, and reimbursement in an otherwise identical patient based on documenting altered mental status (AMS), delirium, or encephalopathy (see Table 1).

<table>
<thead>
<tr>
<th>Primary diagnosis</th>
<th>Acute renal failure</th>
<th>ARF with CC/MCC ARF</th>
<th>ARF with MCC ARF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare Severity Diagnosis Related Group</td>
<td>ARF without CC/MCC 684</td>
<td>ARF with CC 683</td>
<td>ARF with MCC 682</td>
</tr>
<tr>
<td>Relative weight</td>
<td>0.6285</td>
<td>0.9293</td>
<td>1.4865</td>
</tr>
<tr>
<td>Secondary diagnoses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altered mental status</td>
<td>Delirium</td>
<td>Encephalopathy</td>
<td></td>
</tr>
<tr>
<td>Coronary artery disease</td>
<td>CAD</td>
<td>CAD</td>
<td></td>
</tr>
<tr>
<td>Benign hypertension</td>
<td>Benign HTN</td>
<td>Benign HTN</td>
<td></td>
</tr>
<tr>
<td>Type 2 diabetes</td>
<td>T2DM</td>
<td>T2DM</td>
<td></td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>Hyperlipidemia</td>
<td>Hyperlipidemia</td>
<td></td>
</tr>
<tr>
<td>Morbid obesity</td>
<td>Morbid obesity</td>
<td>Morbid obesity</td>
<td></td>
</tr>
<tr>
<td>Range of motion</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Severity of illness</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Length of stay</td>
<td>2.8</td>
<td>4.1</td>
<td>5.8</td>
</tr>
<tr>
<td>Reimbursement</td>
<td>$2,979</td>
<td>$4,035</td>
<td>$5,980</td>
</tr>
</tbody>
</table>

Note: CC = complications or comorbidities; MCC = major complications or comorbidities.

**Key take-home points for hospitalists**

1. Document accurately, including any CCs and MCCs that are applicable.
2. Altered mental status is a sign/symptom complex.
3. Delirium is an acute change in attention, cognition, or perception (primarily a mental/psychiatric diagnosis). It can be caused by a general medical condition, substance intoxication or withdrawal, exposure to a toxin, or a combination.
4. Encephalopathy is any diffuse disease of the brain that alters brain function or structure (primarily due to a medical etiology). The hallmark of encephalopathy is an altered mental state, but it requires a causative agent.
5. Differentiating between delirium and encephalopathy can be tricky at times. Don’t stress too much about getting them exactly right; document as accurately as you can, and your coding department should help with the rest.

Source: Dr. Tong, Ms. Epps
Fluoroquinolones can cause fatal hypoglycemia

By Michele G. Sullivan
MDedge News

Fluoroquinolones have caused at least 67 cases of life-threatening hypoglycemic coma, including 13 deaths and 9 permanent and disabling injuries, according to an internal safety review by the Food and Drug Administration. Most cases (44) were associated with levofloxacin. The review also found new neuropsychiatric side effects associated with fluoroquinolones, including disturbances in attention, memory impairment, and delirium.

Considering these findings, the agency will strengthen warning labels on all fluoroquinolones, which already warn that the antibiotics may cause hypoglycemia and mental health issues, especially in older people, the FDA said in a press statement.

“Health care professionals should be aware of the potential risk of hypoglycemia, sometimes resulting in coma, occurring more frequently in the elderly and those with diabetes taking an oral hypoglycemic medicine or insulin,” the statement said. “Alert patients of the symptoms of hypoglycemia and carefully monitor blood glucose levels in these patients and discuss with them how to treat themselves if they have symptoms of hypoglycemia. Inform patients about the risk of psychiatric adverse reactions that can occur after just one dose. Stop fluoroquinolone treatment immediately if a patient reports any central nervous system side effects.”

The statement also warned not to prescribe fluoroquinolones to patients who have other treatment options for acute bacterial sinusitis, acute bacterial exacerbation of chronic bronchitis, and uncomplicated urinary tract infections because the risks outweigh the benefits in these patients.

The FDA conducted the postmarketing review on all five of the fluoroquinolones (ciprofloxacin, gemifloxin, levofloxacin, moxifloxacin, and ofloxacin). The newest fluoroquinolone, delafloxacin, approved a year ago, was not included in the class review.

However, the agency expects that similar adverse events will be associated with delafloxacin and labeling on that drug will include the new warnings.

The FDA previously warned about other adverse events associated with fluoroquinolones in May 2016, restricting use for certain uncomplicated infections: July 2016, for disabling side effects; August 2013, for peripheral neuropathy; and July 2008, for tendinitis and tendon rupture.

In at-risk patients—those with blood glucose levels under 90 mg/dL—the system considers several variables, such as their weight, creatinine clearance, insulin therapy, and basal insulin doses. If the algorithm considers that a patient is at high risk of a sub-40-mg/dL glucose level dangerously low—then it sends a single alert to medical staff during the patient’s stay.

The idea is that the real-time alerts will go to nurses or pharmacists who will review patient charts and then contact physicians.

Earlier, Dr. Tobin and colleagues prospectively analyzed the alert system’s effectiveness at a single hospital for 5 months. The trial, a cohort intervention study, tracked 655 patients with a blood glucose level under 90 mg/dL.

In 2014, the researchers reported the results of that trial: The alert identified 390 of the high-risk patients as being at high risk for severe hypoglycemia (blood glucose under 40 mg/dL). The frequency of severe hypoglycemia events was just 3.1% in this population vs. 9.7% in unalerted patients who were also deemed to be at high risk (J Hosp Med. 2014[9]:621-6).

For the new study, researchers extended the alert system to nine hospitals and tracked its use from 2011 to 2017. During all visits, the number of severe hypoglycemia events fell from 2.9 to 1.7 per 1,000 at-risk patient-days (P less than .001). The current data reflected in our poster show that the alert process is sustainable over a wide range of clinical settings,” Dr. Tobin said.
More testing of febrile infants at teaching vs. community hospitals, but similar outcomes

By Debra L. Beck
MDedge News

AT PAS 18 / TORONTO / Researchers at UCSF Benioff Children’s Hospital in San Francisco implemented a novel intervention that leveraged existing in-room technology to expedite antiepileptic drug administration to inpatients having a seizure.

With the quality initiative, they were able to decrease median time from seizure onset to benzodiazepine (BZD) administration from 7 minutes (preintervention) to 2 minutes (postintervention) and reduce the median time from order to administration of second-phase non-BZDs from 28 minutes to 11 minutes.

“Leveraging existing patient room technology to mobilize pharmacy to the bedside expedited non-BZD administration by 60%.”

The researchers set out to reduce time to BZD administration from 7 minutes to 5 minutes or less and to reduce time to second-phase non-BZD administration to less than 10 minutes. To accomplish this, a multidisciplinary team that included leadership from physicians, pharmacy, and nursing defined primary and secondary drivers of efficiency, with interventions targeting both team communication and medication delivery.

The intervention period lasted 16 months, during which time there were 61 seizure events requiring urgent antiepileptic treatment. Complete data were available for 57 seizures.

The American Academy of Pediatrics guidelines for fever were written last in 1993, when I was in high school, so they are very due to be revised,” said Dr. Natt. ‘I suspect the new guidelines will have us doing fewer spinal taps in children and more watchful waiting.”

Pediatric inpatient seizures treated quickly

By Debra L. Beck
MDedge News

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Among the interventions they implemented was to stock all medication-dispensing stations with intranasal/buccal BZD available on “nursing override” for easy access and administration.

Because non-BZDs require pharmacy compounding, and the main pharmacy receives many STAT orders with competing priorities, they developed a hospitalwide “seizure rescue” (SR) process by using patient-room staff terminals to activate a dedicated individual from the pharmacy, who would then report to the bedside with a backpack stocked with non-BZDs ready to compound. Nurses were trained to press the SR button for any seizure that may require urgent therapy.

“We didn’t want nurses to waste time on the phone [calling pharmacy], and we considered calling a Code, but we couldn’t really justify the resource utilization as most of these patients didn’t have respiratory compromise, and they didn’t need the whole Code team,” said Dr. Bekmezian. “To our knowledge, this is the first study to report expediting antiepileptic drug delivery to patients in the hospital.”

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The University of Texas Southwestern Medical Center, Department of Internal Medicine, Division of Hematology/Oncology, is seeking physicians to join a thriving oncology and hematologic malignancies program at the new William J. Clements University Hospital. This state-of-the-art facility is the flagship of UT Southwestern’s clinical and educational programs in dynamic and cosmopolitan Dallas, Texas. Applicants must have an M.D. degree, or equivalent, from an approved LCME medical school and satisfactory completion of an Internal Medicine residency program from an ACGME accredited program; individuals who have completed training in hematology and/or oncology are preferred and encouraged to apply as well. Level of appointment will be commensurate with experience. Candidate must be eligible for Texas medical licensure and be board certified in Internal Medicine.

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Thomas Froehlich, M.D.
C/O Shawn Balusek, Division Administrator
UT Southwestern Medical Center
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or email Shawn.Balusek@UTSouthwestern.edu

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CHA is recruiting for an ICU Hospitalist/Nocturnist to cover Everett Hospital. Position requires PM shifts (7p-7a) plus weekend day shifts. Work collaboratively with CHA’s intensivist MDs to round on inpatients within the CHA Everett Hospital ICU. Cross coverage of med/surg inpatient unit included as part of clinical responsibility (10% of total FTE). Applicants should be comfortable with procedures including central lines, vent management, intubation, etc. Internal training and maintenance program exists to assist in certification of these skills competencies. Academic appointment is available commensurate with medical school criteria.

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University of Minnesota
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HOSPITALIST OPPORTUNITY Southwest Ohio
UC Health Hospitalist Group at West Chester Hospital seeking a board certified/prepared Internal Medicine or Family Medicine physician to join our growing Hospitalist group. West Chester Hospital is a community hospital, located just north of Cincinnati OH, with academic affiliation to the University of Cincinnati Health System.

Seeking candidates for a dedicated nocturnist position. Schedule is a combination of 10 and 12 hour shifts. The contracted obligation is for 12 shifts per month with opportunities/incentives for additional shifts if desired. The position is supported by daytime partners covering “swing shifts” and additional cross-cover support with a mid-level provider. There is also 24hr Critical Care Services.

Excellent benefits and retirement packages through the UC Health and the UC College of Medicine. Faculty appointed position at UC College of Medicine with hire. Qualified candidate must be ACLS certified.

CONTACT:
Dr. Brad Evans @ evansb7@ucmail.uc.edu
Director, UC Health Hospitalist Group; 513-298-7325

NYU Winthrop Hospital
An affiliate of NYU Langone

NYU Winthrop Hospital was named the 18th best employer in the country by Forbes in 2017.

DAYTIME & NIGHTTIME HOSPITALISTS
Long Island, NY. NYU Winthrop Hospital, a 591-bed, university-affiliated medical center and an American College of Surgeons (ACS) Level 1 Trauma Center based in Western Nassau County, NY is seeking BC/BE internists for academic Hospitalist positions.

Ideal candidates will have exemplary clinical skills, a strong interest in teaching house staff and a long term commitment to inpatient medicine. Interest in research and administration a plus. Salaried position with incentive, competitive benefits package including paid CME, malpractice insurance and vacation.

Interested candidates, please email CV and cover letter to: dichenouda@nyuwinthrop.org
Or fax to: (516) 663-8964
Attr: Division Chief, Winthrop Hospitalist Associates

NYU Winthrop Hospital is located in the heart of Nassau County in suburban Long Island, 30 miles from NYC and just minutes from LI’s beautiful beaches.

Med/Peds Hospitalist Opportunities Available Join the Healthcare Team at Berkshire Health Systems
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
• Comprehensive care for all newborns and pediatric inpatients including:
  o Level Ib nursery
  o 7 bed pediatrics unit
  o Care for pediatric patients admitted to the hospital
• Comprehensive adult medicine service including:
  o 302-bed community teaching hospital with residency programs
  o Geographic rounding model
  o A closed ICU/CCU
  o A full spectrum of Specialties to support the team
  o A major teaching affiliate of the University of Massachusetts Medical School and University of New England College of Osteopathic Medicine
• 7 on/7 off 12 hour shift schedule
We understand the importance of balancing work with a healthy personal lifestyle
• Located just 2½ hours from Boston and New York City
• Small town New England charm
• Excellent public and private schools
• World renowned music, art, theater, and museums
• Year round recreational activities from skiing to kayaking, this is an ideal family location.
Berkshire Health Systems offers a competitive salary and benefits package, including relocation.
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

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**Hospitalist Opportunity**

Based in Greenwood, S.C., Self Medical Group is a multi-practice, multi-specialty group, seeking a BE/BC Hospitalist and Nocturnist for an expanding practice.

- Work a 7on/7off, 12-hour schedule with NO call.
- Excellent work-life balance with comfortable patient volumes
- Competitive salary package and benefits, including student loan assistance
- EPIC EMR
- Intensivist Provides majority ICU care
- Self Regional is an 11-time Gallop Great Workplace award recipient

**About Greenwood, S.C.**

Just an hour from Columbia and Greenville, Greenwood, or as it is called the “Emerald City,” offers a temperate climate, year-round golf and recreation and lakeside living at pristine Lake Greenwood. It is also home to the S.C. Festival of Flowers, a celebration of flora that features larger-than-life topiaries during the month of June.

**Contact:**
Twyla Camp
Physician Recruiter
864-725-7029
tcamp@selfregional.org

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**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.

Competitive salary and benefits among highly qualified, friendly colleagues foster networking opportunities. Excellent schools, affordable cost of living, great family-oriented lifestyle with a multitude of outdoor activities year-round. Relocation assistance, CME funds, Penn State University tuition discount for employees and dependents, LTD and Life insurance, and so much more!

Appropriate candidates must possess an MD, DO, or foreign equivalent; be Board Certified in Internal Medicine and have or be able to acquire a license to practice in the Commonwealth of Pennsylvania. Qualified applicants should upload a letter of interest and CV at:

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@pennstateneh.psu.edu

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**Hospitalists & Nocturnists**

Greater St. Louis Area

Mercy Clinic is seeking Hospitalists and Nocturnists to join established Hospitalist teams at various hospital locations throughout the Greater St. Louis area.

**Positions Offer:**
- Competitive base salary, quarterly bonus and incentives
- Attractive block schedule
- System-wide EPIC EMR
- Comprehensive benefits including health, dental, vacation and CME
- Relocation assistance and professional liability coverage
- Closed ICU
- No procedures
- No restrictive covenant

For more information, please contact:
Joan Humphries
Director, Physician Recruitment
p 314.364.3821 f 314.364.2597
Joan.Humphries@m Mercy.net

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**ACHIEVE**

extraordinary outcomes

When you’re part of Mercy Medical Group, a service of Dignity Health Medical Foundation, you’ll be able to do more than just care for your patients. You’ll have the opportunity to develop and participate in health, education and wellness programs that will help improve the lives of people throughout your community... and beyond. If you want to achieve extraordinary outcomes, join us today.

**HOSPITALISTS**  Sacramento, CA

Full-time openings are available, as are opportunities for Nocturnists. At our large multi-specialty practice with approximately 450 providers, we strive to offer our patients a full scope of healthcare services throughout the Sacramento area. Our award-winning Hospitalist program has around 70 providers and currently serves 4 major hospitals in the area.

Sacramento offers a wide variety of activities to enjoy, including fine dining, shopping, biking, boating, river rafting, skiing and cultural events.

Our physicians utilize leading edge technology, including EMR, and enjoy a comprehensive, excellent compensation and benefits package in a collegial, supportive environment.

For more information, please contact:
Physician Recruitment
Phone: 888-599-7787 Email: providers@dignityhealth.org
www.mymercymedgroup.org www.dignityhealth.org/physician-careers

These are not J1 opportunities.
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:
- Faculty positions as well as non-teaching hospitalist positions within our multi-hospital system as well as our outpatient practices;
- Network with experienced hospitalist colleagues and collaborative leadership;
- Ability to develop quality improvement projects in transition of care and other scholarly pursuits of interest;
- Commitment to patient safety in a team approach model;
- Potential for growth into leadership roles;
- Competitive salary, comprehensive benefit package, relocation, and so much more!

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:
Located in a safe family-friendly setting in central Pennsylvania, our local neighborhoods boast a reasonable cost of living whether you prefer a more suburban setting or thriving city rich in theater, arts, and culture. Our communities are rich in history and offer an abundant range of outdoor activities, arts, and diverse experiences. We’re conveniently located within a short distance to major cities such as Philadelphia, Pittsburgh, NYC, Baltimore, and Washington DC.

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

Penn State Health is committed to affirmative action, equal opportunity and the diversity of its workforce. Penn State Health is an Equal Opportunity Employer – Minority/Women/Protected Veterans/Disabled.
President’s Desk

Crystal ball: The future of hospital medicine

By Nasim Afsar, MD, MBA, SFHM

At HM18 in Orlando, the Society of Hospital Medicine’s CEO Larry Wellikson, MD, MHM, challenged our thinking by sharing a slide with the attendees that effectively and accurately captured the current environment. Today’s largest retailer, Amazon, owns no inventory; today’s largest taxi company, Uber, owns no cars; and today’s largest provider of accommodations, Airbnb, owns no real estate.

This powerful statement captures a transformative way of thinking, functioning, and thriving that has rapidly evolved over the past decade in the United States. And yet, health care fundamentally functions very similarly to how it did 10 years ago. For example, while we have implemented multimillion-dollar electronic health records (EHRs), most of us use the EHR and capture information in ways similar to how we use our paper charts. I think we can all acknowledge that this is not a sustainable way to advance.

With megamergers dominating the health care landscape in 2017, the industry has become consolidated to weather the economic challenges ahead. Hospital contribution margins have been declining, forcing systems to critically evaluate how they deliver value-based care. In addition, the joining of forces between Amazon, Berkshire Hathaway, and JPMorgan further illustrates the employers’ impatience with inadequacies in health care.

What can we in hospital medicine do to proactively respond to, and shape, the evolving U.S. health care landscape? If I had a crystal ball and could predict the future, I would say hospital medicine will be functioning very differently in 10 years to respond to today’s challenges.

The acute becomes more acute

When I started working as a hospitalist more than a decade ago, in a tertiary/quaternary academic medical center, the patients were severely ill with multiple comorbidities. Yet, in the span of 10 years, we care for many of those diagnoses in the ambulatory setting.

Reflecting on the severity of illness in my patients when I was recently on the medicine wards, I have to admit the patients now have a significantly higher burden of disease with many more comorbidities. As medicine has advanced and we have become more skilled at caring for patients, the acuity of patients has exponentially increased.

“As this trend continues, hospitalists will need greater training in critical care components of hospital-based care. While we may comanage some of these patients with critical care, our skill sets need to intensify to address the growing needs of our patient population.”

“Bread and butter” moves to lower-acuity settings and home

As our ability to manage patients advances, and the existing inpatient beds are occupied by sicker patients, the common hospital medicine diagnoses will move to skilled nursing facilities, long-term acute care settings, and ultimately home.

Delivery systems will have to create robust networks of home health and home services to actively manage patients with accountability. This provides an opportunity for hospitalists to manage acutely ill patients in less-intensive settings of care, and the advancements of telehealth will play a great role in this area. In a Feb. 6, 2018, article in JAMA – “Is It Time for a New Medical Specialty?” – Dr. Michael Nochomovitz and Dr. Rahul Sharma argue that, with rapid advances in technology and the establishment of telemedicine, a new specialty – the virtualist – will need to formally emerge (JAMA. 2018;319(5):437-8). While telehealth has been successfully utilized for the delivery of acute care in remote regions, as well as the delivery of basic services for common diagnoses, it is not robustly and broadly integrated into all aspects of care delivery.

As we move from the hospital setting to less acute settings of care and home-based care, providers need specific training and skill sets in how to manage and deliver care without the patient in front of them. This includes knowledge of how to remotely manage acutely ill patients who are stable and do not require a hospitalization, as well as effectively managing day-to-day issues that arise with patients.

Translating our role in population health management

I have written previously about the expanding role of hospitalists in population health management. In addition to the transitions of care work that we are all involved in, hospitalists must actively partner with our ambulatory colleagues to identify and communicate key barriers to care.

Hospitalists are already instrumental in a number of institutions providing inpatient and ambulatory care for a select group of patients with high utilization. We have the ability to care for high-utilizers and partner with ambulatory providers who can ensure we care for patients with high burdens of disease in the most appropriate settings of care. In the fall of 2018, SHM is convening a group of experts in population health to discuss the role of hospitalists in this area.

While, sadly, I don’t have a crystal ball to predict the future, SHM is committed to proactively defining and advancing our specialty. I am confident that together we can find the solutions that will successfully advance us toward the future.
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