Managing mental health care at the hospital

Care integration is more of an attitude than a system

By Suzanne Bopp

The numbers tell a grim story. Nationwide, 43.7 million adult Americans experienced a mental health condition during 2016—an increase of 1.2 million over the previous year. Mental health issues send almost 5.5 million people to emergency departments each year; nearly 60% of adults with a mental illness received no treatment at all. If that massive—and growing—need is one side of the story, shrinking resources are the other. Mental health resources had already been diminishing for decades before the recession hit—and hit them especially hard. Between 2009 and 2012, states cut $5 billion in mental health services; during that time, at least 4,500 public psychiatric hospital beds nationwide disappeared—nearly 10% of the total supply. The bulk of those resources have never been restored.

Provider numbers also are falling. “Psychiatry is prob-

How will SNF readmissions penalties affect hospitalists?

Post-acute care utilization is rising, resulting in rapidly increasing costs

By Larry Beresford

S tarting in 2018, skilled nursing facilities (SNFs), like acute care hospitals before them, will be subject to a penalty of up to 2% of their Medicare reimbursement for posting higher-than-average rates of readmissions.

The Protecting Access to Medicare Act of 2014 established a value-based purchasing component for SNFs, including incentives for high-performing facilities and a measure for all-cause, all-condition readmissions to any hospital from the SNF within 30 days following hospital discharge—designed to recognize and reward, or punish, facilities’ performance on preventing unnecessary readmissions. Public reporting of SNF quality data, including readmission rates, started in October 2017. Penalties follow a year later.

Some patients’ readmissions could trigger penalties for both the hospital and the SNF.

According to 2010 data, 23.5% of patients discharged from acute care hospitals to SNFs were readmitted to the hospital within 30 days, at a financial cost of $10,362 per readmission or $4.34 billion per year. Seventy-eight percent of these readmissions were labeled avoidable. More recent evidence suggests that hospitalization rates for dual-eligible patients living in long-term care facilities decreased by 31% between 2010 and 2015. As increasing numbers of hospitalists spend some or all of their work week in post-acute care settings, how will the SNF readmission penalty affect their practice?
Building a better SHM

New HMX platform and website are highlights

By Brett Radler

As we enter the holiday season, the Society of Hospital Medicine is preparing to unwrap a refreshed experience for all members and partners. Next month, SHM will launch its new association management system (AMS), its new online community platform for the Hospital Medicine Exchange (HMX), and a brand new website to better serve the needs of its constituents.

While many may be unaware of the systems and platforms SHM currently uses, an AMS is essentially SHM’s EHR for its members. It houses each member’s information, so the more information SHM has, the more SHM can customize the types of information you receive. All systems will be integrated so you can quickly access information on the chapter, interest group, or committee to which you belong.

What does this mean to you?

• You’ll be prompted to create a new password for your SHM account. When you set up your new password, we urge you to update your profile to make sure your information is current and that you are receiving content that is most relevant to you.

• As you update your profile, you will have an opportunity to edit your email preferences. If you have previously opted out of SHM emails, we urge you to opt back in to receive information on your local chapter meetings and more targeted messages about SHM offerings tailored specifically to your interests.

• The SHM website, www.hospitalmedicine.org, will be optimized for your smartphone and tablet and have a fresh look and feel on all devices, complete with new, intuitive navigation and streamlined content – making it easier for you to find the information that is the most relevant for you in even less time.

• The Hospital Medicine Exchange (HMX) will move to an intuitive new platform to enhance your online discussions and group collaborations, including chapters, interest groups, committees, and more.

In addition to these technological enhancements, watch for a refreshed design of The Hospitalist, the Journal of Hospital Medicine, and the overall SHM brand to bring a refined, sleek look to all SHM-related products, programs, and communications.

We look forward to better serving the needs of our members and partners with these improvements and encourage you to share your thoughts at feedback@hospitalmedicine.org.

Mr. Radler is marketing communications manager at the Society of Hospital Medicine.

All systems will be integrated so you can quickly access information on the chapter, interest group, or committee to which you belong.
EVERYTHING WE SAY AND DO: Adopting the patient’s perspective

Take time to communicate, express concern

By Larry Sharp, MD, SFHM

Editor’s note: “Everything We Say and Do” provides readers with thoughtful and actionable communication tactics that can positively impact patients’ experience of care. In the current series of columns, physicians share how their experiences as patients have shaped their professional approach.

I have been fortunate to have had very few major health issues throughout my life. I have, however, had three major surgical procedures in the last 10 years—two total hip arthroplasties and a carotid removal with lens implant in between. The most recent TKA was October 2017. Going through each procedure helped me see things from a patient’s perspective, and that showed me how important little things are to a patient, things which we may not think are all that big a deal as a provider.

For example, during my first total hip arthroplasty, the surgeon took time to sit down in the room during each visit. He continued to write in the chart periodically while we spoke, but he was sitting while doing it. I could not believe the difference in how that made me feel about his visits! I felt like he was taking his time, and it put me more at ease. I knew what he was doing and why he was doing it (I had been preaching it to my team for years), and yet, it still made a difference to me.

Almost all of the medical personnel who came to care for me during my stays identified themselves and why they were there, and that made me feel comfortable, knowing who they were and their role. However, there were a few who did not do this, and that made me uncomfortable, not knowing who they were and why they were in my room. Not knowing is an uncomfortable feeling for a patient.

Almost every registered nurse who came to me with medication explained what the medication was and why they were administering it, with the exception of one preop RN. I met before to my caratrac procedure. She walked up to me, told me to open my eye wide, held the affected eye open, and started dripping cold drops into my eye without explanation. She then said she would be back every 10 minutes to repeat the process. I had to inquire as to what the medication was and why there was a need for this process. It was a jolting experience, and she showed no compasion toward me as a patient or a person, even after I inquired.

This was not a good experience. Although caratrac surgery was a totally new experience for me, she had obviously done this many times before and had to do it many times that day. However, she acted as if she should have known what she was going to do and as if she need not explain herself to anyone—which she did not, even after being queried. Everyone during the admission process for all three procedures was solicitous and warm except for one person. Unfortunately, this individual was the first person to greet my wife and me when we arrived for my last total hip arthroplasty. She was seated at the welcome desk with her head down. After we arrived, she kept her head down and asked “How can I help you?” without ever looking up. I did not realize how unwelcome I would feel when the first person I encountered in the surgical preop admissions area failed to make eye contact with me. Her demeanor was nice enough, but she did not even attempt to make a personal connection with me—and she was at the welcome desk!

Overall, I had tremendously good experiences at three facilities in three different parts of the United States, but as we all know, it is the things that do not go well that stand out. I choose to use those things, along with some of the good things, as “reinforcers” for many of the patient-experience behaviors we identify as best practices.

What I say and do
During each patient encounter, I make eye contact with the patient and each person in the room and identify who I am and why I am there. I sit down during each visit unless there is simply no place for me to do so. I explain the procedures that are to take place, set expectations for those procedures, and then use “teachback” to ensure that my discussion with the patient has been effective. Setting expectations is very important to me: If you do not ensure that patients have appropriate expectations, their expectations will never be met and they will never have a good experience. I explain any new medication I am ordering, what it is for, and any possible significant side effects and again use teachback. The last thing I do is ask “What questions do you have for me today?” giving the patient permission to have questions, and then I respond to those questions with plain talk and teachback.

Why I do it
Not knowing what was going on and feeling marginalized were the most uncomfortable things I experienced as a patient. Using best practices for patient experience shows courtesy and respect. These practices show a willingness to take time with the patient and demonstrate my concern that I am effectively communicating my message for that visit. All of these behaviors decrease uncertainty and/or raise the patient’s feelings of importance, thereby decreasing marginalization.

How I do it
I remind myself each day I am on a clinical shift that my goal is to treat each patient like I would want my family (or myself) to be treated, and then I go out and do it. After “forcing” myself to put these behaviors into my rounding routine, they have become second nature, and I feel better for providing this level of care because it made me feel so good when I was cared for in this manner.
Cultivating women leaders in health care

By Vineet Arora, MD, MPP, MHM

Cultivating women leaders in health care

On my flight home from Scotland, I had a moment to watch a movie while my daugh-
ter was caught up in the encore adventures of Moana. I stum-
bled upon “Hidden Figures,” the story of the African American
women at NASA who helped launch John Glenn into space, reviving
the nation’s space program.

These women were true heroes and patri-
ots—they lived in a man’s world and a white
world, and they still managed to overcome
and lead when needed. Yet, their story was “hidden” from the public
until years later when popularized into this screenplay. On
the plane, I realized I needed a fresh take to
start my women in medicine webinar for
this month’s American Medical Associa-
tion Women in Medicine webinar. Instead
of exploring the “leaky pipeline” that
resulted in only one in five professors who
are female, I wondered whether there were
hidden figures—women leaders among us
who we don’t see.

Turns out I wasn’t the only one who
stumbled upon this. Harvard researcher
Julie Silver, MD, raised the question about
invisible women leaders when reviewing
quotes in magazines like Modern Health-
care or Forbes. Moreover, her research
demonstrates that, for many professional
society awards, 0% are given to women!
This is happening in specialties that had
nearly even proportions of women and men
in practice, such as dermatology and rehab
medicine. Last month, I was dumbfounded
when I saw a full-page New York Times ad
of Top Surgeons by Castle Connolly feat-
uring 16 surgeons, all male.

While Castle Connolly does name female
top doctors and market at opportunities to
women and men, I learned that only men
sign up for the ads. While this raises more
questions, the optics remain problematic—
women doctors are hidden. Regardless of
the venue, we must do a better job profiling
our female leaders. In addition, it is impor-
tant to recognize that female leaders face
well-documented and somewhat controver-
sial challenges that require careful thought:
• **Stereotype threat:** Some of the original
research on stereotype threat done in
college students showed that, if women
who are about to take a math test are told
that the test will expose gender differ-
ences, such as men do better at math,
women will perform worse. AND men
will do better. The threat of stereotypes
is that women can internalize them and this
may hamper their progress. The good
news is that education on stereotype
threat apparently helps.
• **Imposter syndrome:** Even highly success-
ful people apparently suffer from impos-
ter syndrome, the fear that they do not
deserve their success, but it is much worse
in women than in men. You are always trying
to conquer the little voice in your head
that tells you that you are not good enough.

Read the full post at hospitalleader.org.
A

rmed with a background in engineering, Sheri Chernetsky Tejedor, MD, SFHM, had already adopted a mindset of system reliability and design improvement when she began her journey in hospital medicine at Johns Hopkins University in Baltimore.

After completing her studies there, Dr. Tejedor was quick to find a place at Emory University who helped influence her success in QI: Mark V. Williams, MD, FACP, MHM, who is now the director of the Center for Health Services Research at the University of Kentucky in Lexington, and Jason Stein, MD, SFHM, who is currently a hospitalist at Emory University Hospital.

“They wanted to develop quality improvement expertise and get some of us trained,” she said. “These advocates, or mentors, were critical for me. They are people who went above and beyond to help with career planning and thinking through possibilities.”

Dr. Tejedor and Dr. Stein traveled to Intermountain Healthcare, a not-for-profit health system based in Salt Lake City that focuses on medical innovation, to participate in a rigorous quality training program. “It was extremely intense,” said Dr. Tejedor. “You worked over several months to get a certificate from the Institute for Healthcare Delivery Research, and it’s all focused on quality improvement methodology.”

After completing this program, Dr. Tejedor continued on her quality improvement path by focusing on research while also simultaneously working part-time and taking care of her three young children. During this phase of her career, Dr. Tejedor and her colleagues published a study on idle central venous catheters, which became a primary reference for part of the ABIM Foundation’s Choosing Wisely® campaign.

Dr. Tejedor said that, in addition to research, she explored different leadership roles, such as taking charge of central line teams and nurses working on device insertion practices. Her successful projects drew notice, and soon Dr. Tejedor and Dr. Stein helped to implement a stronger focus on quality improvement at their organization. “Our health system was very entrenched in that QI culture,” Dr. Tejedor said. “After Jason and I went to Intermountain, many of the Emory Healthcare leadership also got trained in Utah, and we ultimately built a quality course at Emory that mirrored it.”

Dr. Tejedor’s research evolved to intersect with clinical informatics. She leveraged the organization’s electronic medical record to test her work. “[The EMR] is ubiquitous, and that was a good way to reach staff, test interventions, and get data,” Dr. Tejedor said. “I built a lot of tools that were helpful for the health system.”

One of these tools was a device to monitor central line infections that was linked with clinical informatics as part of a large grant project. This led to another leadership opportunity: She assumed the role of chief research information officer and director for analytics at Emory Healthcare in 2013. In 2014, Dr. Tejedor began working with the Centers for Disease Control and Prevention as the first hospitalist and informatics specialist on the Healthcare Infection Control Practices Advisory Committee, where she continues to hold a position. She is also a medical adviser for the CDC’s Division of Healthcare Quality Promotion, focusing on electronic quality measures.

For those hospitalists pursuing QI, exposure to formal training is essential, Dr. Tejedor said. That may not mean flying to Utah, she noted, but garnering a deeper understanding of informatics is crucial. “Learn just enough to understand what goes on behind the scenes when one of our computer systems is down,” she said. “Learn how to get data,” Dr. Tejedor said. “I built a lot of tools that were helpful for the health system.”

When it comes to leadership, Dr. Tejedor recommends that those looking to take charge develop social skills and embrace parts of medicine that may be unfamiliar yet essential. “Learn a little bit about the business side, which you may not know much about as a doctor taking care of patients,” she said. “Learn just enough to understand what goes into people’s decision making when they are choosing what projects get approved.”

Dr. Tejedor encourages hospitalists to focus on developing relationships because that was one of the keys to her success as a quality improvement leader. “It’s about gaining the trust of the staff, mutual respect, working with the nurses, and getting to know the leadership and the people who make the financial decisions,” she said. “Even if you have the money for a quality improvement project, it will fail if you don’t work with the various teams to understand their needs and how to make it work for them.”

By Eli Zimmerman
Frontline Medical News

QI ENTHUSIAST TO QI LEADER:
Sheri Chernetsky Tejedor, MD
Research, informatics, and patient care intersect

Trained as an engineer, Dr. Sheri Chernetsky Tejedor says knowledge of informatics and the business of medicine is key to institutional quality improvement.
Chronic granulomatous disease (CGD): A Primary Immunodeficiency Disease Characterized by Serious Infections and Hospitalizations

CGD impairs the body’s ability to kill certain bacteria and fungi; people with CGD are at a higher risk for severe, unusual, and repeat infections associated with hospitalizations.

CGD may become apparent at any time from infancy to late adulthood; however, most affected individuals are diagnosed before age 5.

Serious infections in patients with CGD are often associated with hospitalizations and the use of intravenous antibiotics.

**Recognizing the 10 Warning Signs of CGD Can Lead to a Diagnosis**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Serious, unusual, and repeat infections in many areas of the body, including the lungs, liver, and bones</td>
</tr>
<tr>
<td>2.</td>
<td>Skin and soft tissue abscesses that don’t go away</td>
</tr>
<tr>
<td>3.</td>
<td>Diarrhea or abdominal pain</td>
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<tr>
<td>4.</td>
<td>Pain or difficulty eating or going to the bathroom</td>
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<tr>
<td>5.</td>
<td>Vomiting after meals</td>
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<td>6.</td>
<td>Swollen lymph nodes</td>
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<tr>
<td>7.</td>
<td>Fever, cough, fatigue, or bone/joint pain</td>
</tr>
<tr>
<td>8.</td>
<td>Failure to thrive</td>
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<tr>
<td>9.</td>
<td>Granulomas, which usually appear in the bladder and intestines</td>
</tr>
<tr>
<td>10.</td>
<td>Family members or relatives who have had unusual or serious infections that have resulted in hospitalizations or even death</td>
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**CGD is most commonly diagnosed by using a laboratory test called a dihydrorhodamine (DHR) test.**

To learn more about CGD or to request a test kit, visit CGDPathways.com

Presented as a public service by:

Jeffrey Modell Foundation
Curing PI. Worldwide.

Horizon Pharma
# Pathogens and the Infections They Commonly Cause

<table>
<thead>
<tr>
<th>Bacterial</th>
<th>Fungal</th>
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<tbody>
<tr>
<td><strong>Staphylococcus aureus</strong></td>
<td><strong>Aspergillus species</strong></td>
</tr>
<tr>
<td>Soft tissue infections, lymphadenitis, liver abscess, perirectal abscess, osteomyelitis, pneumonia, sepsis</td>
<td>Pneumonia, lymphadenitis, osteomyelitis, brain abscess, skin lesions, meningitis</td>
</tr>
<tr>
<td><strong>Burkholderia (pseudomonas) cepacia complex</strong></td>
<td><strong>Candida species</strong></td>
</tr>
<tr>
<td>Pneumonia, sepsis</td>
<td>Sepsis, soft tissue infection, liver abscess, mucocutaneous candida infections, lymphadenitis</td>
</tr>
<tr>
<td><strong>Serratia marcescens</strong></td>
<td></td>
</tr>
<tr>
<td>Osteomyelitis, soft tissue infections, pneumonia, sepsis</td>
<td></td>
</tr>
<tr>
<td><strong>Nocardia species</strong></td>
<td></td>
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<tr>
<td>Pneumonia, osteomyelitis, brain abscess</td>
<td></td>
</tr>
<tr>
<td><strong>Klebsiella species</strong></td>
<td></td>
</tr>
<tr>
<td>Pneumonia, skin infections, lymphadenitis</td>
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</tbody>
</table>

*This is not a complete list of pathogens. Infections may also be caused by other species of bacteria and fungi not listed here.

## How Can Hospitalists Recognize and Help Patients With CGD?

<table>
<thead>
<tr>
<th>Suspect CGD in a patient with frequent, repeat infections; unusually severe infections; infections from a specific group of pathogens</th>
<th>Utilize combination immunomodulatory and prophylactic therapy for the management of CGD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommend DHR testing for at-risk patients</td>
<td>Collaborate with a multidisciplinary care team—including immunologists, hematologists-oncologists, gastroenterologists, and infectious diseases specialists—for the ongoing management of CGD and its potential complications</td>
</tr>
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## References


Presented as a public service by:
Homelessness: Whose job is it?

We need better ways of addressing vulnerability among homeless patients

By Sarah A. Stella, MD, FHM

Despite programs to end homelessness, it remains a substantial and growing problem in many cities in the United States. In 2016, there were an estimated 10,550 homeless people living in my home state of Colorado, a 6% increase from the prior year. A recent point-estimate study found that there were more than 5,000 homeless individuals in the Denver metropolitan area on a single night in January 2017. Because of the relative scarcity of housing, a growing number of cities like Denver now utilize a practice known as vulnerability indexing to prioritize homeless persons at high risk of mortality from medical conditions for placement in permanent supportive housing.

What can hospitalists do to improve the care of homeless patients?

Ask: Ask questions to better understand patients’ housing status and needs.
Learn: Educate yourself on the full range of respite, housing, and other support services available to homeless patients in your community. Advocate: Get involved in community organizations that advocate for policies benefiting those affected by homelessness. Lead: Spearhead collaborative research and other partnerships aimed at improving hospital care and care transitions for vulnerable homeless persons.

Hospitalists are associated with myriad adverse health consequences, including a higher burden of acute and chronic health conditions, high rates of mental illness and substance use, increased utilization of emergency and hospital services, decreased utilization of primary care, and an increased risk of death. Homeless adults who are hospitalized represent a particularly vulnerable group affected disproportionately by morbidity and mortality. In fact, previous research indicates that almost half of adult super-utilizers—patients who accumulate multiple emergency department visits and hospital admissions—are homeless. In addition to homelessness, vulnerability is characterized by high rates of multiple chronic health conditions and mental health and substance use disorders. Although hospitalists like myself frequently care for vulnerable homeless patients in the hospital, most have little formal training in how to best care for and advocate for these individuals beyond treating their acute medical need, and little direct contact with community organizations with expertise in doing so. Instead, we have learned informally through experience. Hospital providers are often frustrated by the perceived lack of services and support available to these patients, and there is substantial variability in the extent to which providers engage patients and community partners during and after hospitalization. Despite the growing practice of vulnerability indexing in the community, hospital-based providers do not routinely assess vulnerability with respect to housing. Previous research indicates that housing status is assessed in only a minority of homeless patients during their hospital stay. Thus, hospitalization often represents a missed opportunity to identify vulnerability and utilize it to connect patients with housing and other resources.

Despite the development of best practices and ongoing research on interventions to improve care transitions in various groups, there is limited research specifically focused on understanding the unique needs, perspectives and preferences of homeless individuals with respect to hospital discharge. Homeless patients often face significant obstacles on discharge, including lack of safe housing and respite options, lack of transportation, and lack of social support. Lack of integration between hospitals and community organizations further exacerbates these problems. Addressing the significant known health disparities faced by homeless persons is one of the greatest health equity challenges of our time. We need better ways of understanding, identifying, and addressing vulnerability among homeless patients who are hospitalized, paired with improved integration with local community organizations. This will require moving beyond the idea that homelessness is the social worker’s job to one of shared responsibility and advocacy.

Collaborative research and other partnerships that engage both community organizations and individuals affected by homelessness are crucial to further understand the specific needs, barriers, challenges, and opportunities for improving hospital care and care transitions in this population. As well-respected community members and systems thinkers who witness these inequities on a daily basis, hospitalists are well positioned to help lead this work.

References

NEWS & NOTES

Two new modules debut on SHM’s Learning Portal
• SHM members have access to free continuing medical education (CME) and Maintenance of Certification (MOC) points with the SHM Learning Portal.

Don’t miss two new modules: Role of the Medical Consultant and Anesthesia for Internists.

Medical consultation is an important role of the medical consultant in hospital medicine. See a full list of member benefits or become a member today at hospitalmedicine.org/join.
A love of teaching: James Kim, MD
Dr. Kim joins The Hospitalist editorial advisory board

By Eli Zimmerman
Frontline Medical News

W hile James Kim, MD, did not originally begin medical school with a plan to become a hospitalist, he has embraced his current role wholeheartedly. Since becoming board certified in both internal medicine and infectious diseases, Dr. Kim has welcomed the opportunity to be part of hospital medicine, which enables him to pursue his other passion: teaching and mentoring.

As an assistant professor of medicine at Emory University in Atlanta, Dr. Kim has tried to emulate his own mentors by not simply distributing factual information to students but also teaching ways of thinking.

“It’s not just what you know but how you convey what you know to other people,” said Dr. Kim. “While you might get useful information from a didactic teaching style, it’s important to ask questions to encourage the learner to think about not only what the right answer is but also what’s the thought process required to get the answer.”

As one of the newest additions to the editorial advisory board of The Hospitalist, Dr. Kim took time to tell us more about himself in a recent interview.

QUESTION: How did you find your career path in medicine?

ANSWER: I originally went into medical school thinking I was going to do pediatrics, but then I realized that I really enjoy talking to people and that I like the process of thinking through diagnoses, managing patients, and learning about what makes their circumstances unique.

Q: How did you get into hospital medicine?

A: When I finished my internal medicine residency, I thought I was going to do medical missions. However, I realized along the way that the care you need to provide in order to really make a difference in other countries requires a constant presence there — not just a week or two. So after my fellowship, I was searching for jobs and found a hospitalist position at the University of California, Los Angeles. When I saw it, I thought “Wow, I really miss doing inpatient medicine.”

Q: Since you started, what have been some of your favorite parts of hospital medicine?

A: When people come to you in the hospital setting, they are usually pretty sick. It is very satisfying when, through the course of a person’s hospital stay, we are able to come up with a plan that can get them acutely better.

Q: What do you think is the hardest part of hospital medicine?

A: I think one of the things that is most frustrating is when we are placed into a situation in which we are not necessarily doing medical work for a patient but are doing something more like social work. For instance, there are cases in which patients cannot be on their own in the community, and there’s no family to take them in, so the hospital, on behalf of the state, has to take them in.

Q: What else do you do outside of hospitalist work?

A: Since I’ve finished medical school, I’ve always been in some kind of academia, which is not something I would have expected. But as time has gone by, I have really come to appreciate being in academia. I really enjoy teaching, and I also think that an academic institution kind of keeps me on my toes. I’m involved with international education at Emory, with teaching medical students, interns, and residents when I’m on teaching service, and obviously now I’m on The Hospitalist editorial board. I’m looking forward to keeping abreast of what’s hot in the world of hospital medicine.

Q: What are you excited about bringing to The Hospitalist editorial board?

A: I want to try to contribute ideas. I feel that, even in my short time at Emory, I’ve gotten to know a few people who might be good resources for reporters to interview or even who might write articles themselves. I also think that seeing what is trending in the world of hospital medicine is a nice way of understanding the future direction of hospital medicine.

Q: Do you see anything in particular on the horizon for hospital medicine?

A: I’ve noticed that there’s been more “hospitalist-ization” — if that’s even a term — of other medical services. At our institution, we already have an acute care service that is basically hospital medicine for general surgery. I think another thing that’s been kind of a hot topic recently is a point-of-care testing, including ultrasounds for line placements.

Q: Where do you see yourself in 10 years?

A: I really enjoy my work at Emory. I want to find more opportunities to teach. For example, I’ve already gotten involved in teaching physician assistant students about how to perform interviews and deliver presentations for attendings. A lot of serendipitous things have happened to me over time, so I think I will continue to teach, but I’m open to those opportunities that present themselves in the future.

Q: What’s the best book you’ve read recently and why?

A: “The Hero with a Thousand Faces,” by Joseph Campbell. This is a very well-known book — I think George Lucas made reference to it when he was writing Star Wars — but I think it was a great literary way to examine the hero’s journey. Once you read the book, and you then watch any kind of movie or read any other kind of adventure narrative, you can’t miss the pattern.

ezimmerman@frontlinemedcom.com
On Twitter @ezatzwets

Q&A with our newest editorial advisory board members

TEAM HOSPITALIST

NEWS & NOTES

clinical component for most hospitalists. Today, hospitalists also are asked to provide both “curbside” advice and more comprehensive comanagement of medical problems. Hospitalists who are effective consultants communicate skillfully and act professionally. The Role of the Medical Consultant module describes the different roles that hospitalists can perform as medical consultants and provides strategies for improving communications and referring physician satisfaction.

Looking for up-to-date information about surgical anesthesia? The Anesthesia for Internists module discusses the basic forms of surgical anesthesia and contraindications to each, as well as the most commonly used anesthetic drugs, their mechanisms of actions, and side effects. Both modules are free for SHM members and $45.00 per module for nonmembers. Earn 2 AMA PRA Category 1 Credits™ and 2 MOC points per each module. Visit shmlearningportal.org to get started today.

Mr. Radler is marketing communications manager at the Society of Hospital Medicine.
Hospitals will feel the squeeze of DSH payment changes

Rule could mean loss of quality physicians, services

By Kelly April Tyrrell

Earlier this year, the Centers for Medicare & Medicaid Services finalized fundamental changes to how it reimburses hospitals for uncompensated care costs. When first proposed, the move raised alarm among physicians, hospitals, health systems, state health departments, and others around the country, and even prompted a lawsuit in New Hampshire. In the months since the official adoption of the CMS, it remains unclear how the change will affect hospitals around the country, particularly the safety-net hospitals that rely on these payments most.

The rule alters the formula previously used to determine Disproportionate Share Hospital (DSH) payments, meant to fill in the gap for those hospitals treating large numbers of Medicaid and uninsured patients. The change is a reinterpretation of regulations that the CMS says have been codified but unenforced since the Omnibus Budget Reconciliation Act of 1993, that say the agency will reimburse DSH-qualified hospitals for the uncompensated costs they incur providing care (inpatient and outpatient) to Medicaid-eligible and uninsured patients. The agency argues that payments made on behalf of these same patients by Medicare, the patients themselves, and other third-party payers should be considered revenue and not contribute to individual hospitals’ DSH limits. Previously, the CMS primarily based payments on the number of Medicaid and uninsured patients any given hospital treated. In its final rule issued in April 2017 and finalized on Aug. 2, 2017, the federal agency said the intent of the change is to more fairly distribute a fixed amount of DSH funds to the hospitals most in need. It also argued the change is a more consistent interpretation of the existing statute (Section 1923[g]), provides clarification around language that has been the subject of inquiry over the last decade, and promotes what it calls “fiscal integrity.”

“These allotments essentially establish a finite pool of available federal DSH funds that states use to pay the federal portion of payments to all qualifying hospitals in each state,” the CMS said. “States often use most or all of their federal DSH allotment, in practice, if one hospital gets more DSH funding, other DSH-eligible hospitals in the state may get less.”

This is not, however, the way all parties see it. For instance, in a comment submitted to the CMS in September 2016, the National Association of Urban Hospitals expressed its concern that DSH payments already are inadequate to cover the financial burden associated with providing care in low-income communities, such as translation services and the costs of employing physicians to practice in more challenged settings. In a letter to the CMS, the Minnesota Department of Human Services said it agrees with the agency that DSH payments should not be used to “subsidize costs that have been paid by Medicare and other insurers,” but disagrees with the agency’s approach. Its argument includes a challenge to the CMS’s statutory authority to change the formula based on existing language.

“I think the reason it’s contentious is because, when you’re dealing with a fixed dollar amount and you’re talking about redistributing dollars, someone is going to lose,” said John McHugh, PhD, professor of health management at the Mailman School of Public Health at Columbia University, New York. “A facility receiving DSH payments is already dealing with high levels of uncompensated care; the hospitals are operating on very thin margins. They are very often getting by because of these payments.”

Despite the CMS’s seemingly good intentions, Bradley Flansbaum, DO, MPH, MHM, a hospitalist at Geisinger Health System and member of the SHM Public Policy Committee, remains skeptical that the hospitals that need and deserve DSH payments will actually see more redistribution in their favor.

“Inner city, safety-net hospitals are always fighting for a piece of the pie. Their payer mix is more favorable, yet they game the system for these funds.”

—Bradley Flansbaum, DO, MPH, MHM

“I think the reason it’s contentious is because, when you’re dealing with a fixed dollar amount and you’re talking about redistributing dollars, someone is going to lose.”

—John McHugh, PhD

How will hospitals adapt?

The CMS did not give hospitals transition time. The reinterpretation became effective in June 2017, just 60 days after the agency issued the final rule. Dr. McHugh said he is not sure why the agency did not build in time for hospitals to adapt, particularly given the uncertainty around the national uninsured rate going forward, with so many potential changes to the American health care system under a new administration.

How many of these changes trickle down to hospitalists remains to be seen, said Dr. Flansbaum. Dr. McHugh believes it could lead to increased patient loads, higher turnover and churn, and fewer experienced physicians in safety-net hospitals as younger doctors are hired and burn out. “At the end of the day, that feeds into patient care and patient satisfaction and quality,” he said.

However, hospitals across the country have been living with this “slow burn” for a long time, said Dr. Flansbaum, though not necessarily due to inadequate DSH payments. At least in some areas, reimbursements have gone down, hospital occupancy rates have declined, rural hospitals have closed, hospitals have consolidated, and people have been laid off.

It’s important to ensure the hospitals providing care for high levels of uninsured or underinsured patients receive the help they need, he said, and it’s also important to examine the role hospitals play as a whole in the American health care system.

“It’s an expensive system,” he said. “We have created a system where, unlike other countries that have developed more vigorous primary or outpatient care, we have created an inpatient health system.”

With the CMS’s change, the government is the only entity that seems to win across the board. Dr. McHugh said. He said he would not be surprised if analysts looked to see how hospitals were affected by it in coming months.

But, he remains optimistic. In fact, the final rule also came with an $800 million increase in the amount of uncompensated care payments for acute care hospitals in fiscal year 2018, the CMS says.

“Hospitals are adaptable,” Dr. McHugh said. “I think what you’ll see is this will spur some innovation in terms of patient care maybe a few years down the road. It may hit some stumbling blocks in the early going but there may be some positive changes in the future.”

References


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Using post-acute and long-term care quality report cards

Discharge planning decisions fall heavily on patients, families, caregivers

By Charlene Harrington, PhD, RN; Leslie Ross, PhD; and Jeffrey Newman, MD, MPH

The challenges of hospital discharge planning are well known and yet have not been adequately addressed by hospitalists and discharge teams. As the complexity of patient care needs has grown, so has the difficulty in developing appropriate discharge goals for post-acute and long-term care (LTC), choosing the appropriate setting(s), and selecting appropriate providers. Post-acute and LTC needs may include rehabilitation, nursing care, home health, supportive services, and/or palliative care in an institutional setting or at home from a wide array of providers with varying levels of quality. Even though 52% of U.S. hospitals received penalties for having higher-than-expected readmissions between 2013 and 2017, inadequate discharge planning for post-acute and LTC continues to contribute to high rates of all-cause 30-day rehospitalization. The discharge process sometimes is deficient in discussion of goals; assessment of discharge needs; appropriate choice of discharge locations; and the provision of additional or different home services. Discharge decisions are complicated by the stressful circumstances of hospitalization and discharge deadlines.

A number of intervention studies have been implemented to improve the discharge planning process including Project RED (Reengineered Discharge) and Project Boost (Better Outcomes for Older Adults Through Safe Transitions). These multi-faceted interventions, both pre- and post-discharge, include institutional self-assessment, team development, stakeholder support, and process mapping. Other policies, practices, and programs have been developed to facilitate transitions after hospitalization, but they have not focused on the use of currently available post-acute and LTC quality report cards that can augment these interventions. Hospital discharge planning decisions fall heavily on patients, families, and caregivers, often with inadequate information about choices and options. More than 30 states have passed the Caregiver Advice, Record, and Enable (CARE) Act into law to require hospitals to provide resources for family caregiver education and instruction, but hospitals do not have to provide information on all LTC options and provider quality ratings.

Quality report cards about LTC providers – a major innovation for consumer education and choice – are often not used in the discharge process for a number of reasons. A significant concern is that using report cards will extend the length of stay. Rather than extending the decision-making time and the length of stay, the use of report cards can reduce length of stay. A focus on identifying the first available nursing home bed or LTC provider often ignores the need to identify the most appropriate high-quality providers. Although individuals on Medicaid and/or with complex medical conditions may have fewer discharge options than other patients, the majority of nursing home providers have low occupancy rates and will accept residents from any payer. Other home- and community-based providers generally have a flexible capacity for serving individuals.

Hospitals and health plans often have established networks of post-acute and LTC providers and these networks must be taken into account in the discharge process. Most hospital and health plan networks have providers with a wide range of ranges, allowing for choices within networks. The Centers for Medicare & Medicaid Services established a web-based nursing home report card called Nursing Home Compare in 1998 that includes information on facility characteristics, deficiencies, staffing information (since 2000), and resident quality indicators (since 2002). In 2008, the website added a “five-star” rating system for home health agency services; home health agencies are rated on facility characteristics, deficiencies, staffing, various quality measures, provider characteristics, and costs. Ratings, similar to the CMS ratings but with more comprehensive state information, are provided.

After establishment of the CMS Nursing Home Compare rating system in 2008, nursing homes improved their scores on certain quality measures and consumer demand significantly increased for the best (five-star) facilities and decreased for one-star facilities. More recently, a clinical trial of the use of a personalized version of Nursing Home Compare in the hospital discharge planning process found greater patient satisfaction, patients being more likely to go to higher ranked a nursing homes, patients rating further to nursing homes, and patients having shorter hospital stays, compared with the control group. Quality report cards show wide variations within and across states ranging from one star (poorest quality) to five stars (highest quality). More than one-third of nursing homes had relatively low overall star ratings (one or two stars) serving 39% of residents in 2015. Federal nursing home regulatory violations range from 0 to more than 40 deficiencies (average of 7) with a scope and severity ranging from minor to widespread harm or jeopardy (including deaths). Total nurse staffing hours (average, 4.1 hours per resident-day) range from less than 3 hours to more than 5.5 hours per resident-day and RN hours are 3.5 times higher in some nursing homes than in the lowest staffed homes. Hospital readmission rates for short-stay residents from nursing homes also vary widely (4%-52%; average, 21%). Hospitalists and discharge planners should inform patients, families, and caregivers about the federal and state LTC quality report cards, provide education and choices, and engage and assist them in the decision-making process. Hospitalists, health plans, and accountable care organizations also need to be more informed about the availability of and benefits of using quality report cards for developing post-acute and LTC provider networks. The use of high-quality LTC networks should be able to reduce hospital length of stay and hospital readmission rates, and improve patient and caregiver satisfaction.

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Phoenix Children’s Hospital integrates care from ground up

When good care is being given, everyone benefits financially

By Thomas R. Collins

About 4 years ago, officials at Phoenix Children’s Hospital stopped and took a look around. The adult health care landscape was zooming toward value-based models and integrating care so that previously separate components were now working together. The health of whole populations mattered more than ever.

But their hospital, they found, accounted for just 9% of the “care touches” — interactions between a patient and a doctor — of their half-million pediatric population. They were not working closely with primary care doctors and independent specialists. Patients come to the hospital, they get treated, and then — poof, they are gone. The hospital came to a realization that there was a better way to provide care.

“We can’t keep doing this alone and saying, ‘We’re going to impact the overall wellness of our patients just by being a hospital,’” said Chad Johnson, senior vice president of Phoenix Children’s Care Network.

They began a process that led to what appears to be a “first-of-its-kind” model, an integrated care network created from the ground up by a hospital venturing out into the community and recruiting private primary care doctors and specialists. Now, more than 1,000 physicians from more than 100 practices are part of the network, joined with the hospital through contracts laden with incentives. When good care is given, the network gets paid, and everyone benefits financially.

“It’s amazing the difference we’re able to provide when we start linking together what used to be very disparate systems,” Mr. Johnson said.

Here are some features of the network:

• Everyone, including the hospital, is now sharing their data. When a child shows up at the ED, the ED doctor can quickly see things like who the primary care doctor is, allergies, medications, and care history.

• Targets such as asthma control, providing basic wellness exams, and following patients appropriately, are tied to financial rewards.

• Children with complex or special health care needs, and patients who are high utilizers, have a care coordinator assigned to look more closely at their cases.

• A corporate entity created by the hospital and its community physician partners has a doctor-heavy board of directors.

Some of the care improvements have been dramatic, Mr. Johnson said. One teenager had made 55 ER visits and 21 inpatient visits over 9 months, but the pattern went unnoticed. With the new tools the problem became apparent. A care coordinator found that the mother didn’t understand how to administer the boy’s medication, prompting repeated medical crises and hundreds of thousands of dollars in unnecessary costs. The teenager has since re-enrolled in school and has had no more hospital admissions, Mr. Johnson said.

He said that, at first, many community doctors had a “real skepticism” of being too closely tied to a hospital financially, but now doctors are reaching out to join the network.

“There’s a leap of faith that has to happen in the initial stages,” he said. “When you get the insurance companies at the table to really work with you to build the right incentives around truly impactful and quality care, you can really start to move the needle. When you see — with data — that what you’re doing is having success, and they see the additional money coming from the incentives, that really helps.”

Amy Knight, chief operating officer of the Washington-based Children’s Hospital Association, said that, while other children’s hospitals have migrated toward more integrated care, they either haven’t needed to recruit community physicians as they have in Phoenix or market conditions have been such that they haven’t expanded as quickly.

“Phoenix saw a huge opportunity and was very smart about how they approached their own market,” she said. “They are definitely on the front end, the cutting edge of doing that.”

Since its network has expanded, Phoenix Children’s has hosted visitors who hope to draw lessons from their experience, she said.

“I think what most people go away with is: ‘Very interesting, very cool – not sure it would work in our market,’” she said. “Still, lessons on thinking about risk and building a governance structure are widely applicable, she said.

She expects a continued move toward integrated care networks, despite talk about repealing and replacing the Affordable Care Act.

“There’s probably some people stepping back in hesitancy, but I don’t think that the political discourse right now will necessarily change the trajectory that we’re on.”
relationships with post-acute facilities! “As of now, the incentives or penalties haven’t gotten to the level of the individual physician working in long-term care,” said Benjamin Frizner, MD, FHM, director of quality and performance for CEP America, a national provider of emergency, hospital, and post-acute medicine. Thus, doctors’ professional fees are not affected, he said.

Experts say SNFs – as with hospitals before them – lack the ability to allocate rewards or penalties for readmission rate performance to individual doctors. But increasingly close collaborative relationships between post-acute facilities and the hospitalists who work in post-acute care mean that the hospitalist has an important role in helping the SNF to manage its readmissions exposure.

“Hospitals and hospitalists want to keep good relationships with the SNFs they partner with, for a variety of reasons,” Dr. Frizner said. “We believe that the best way to reduce readmissions and unplanned transfers from the SNF is for the doctor to know the patient. We need dedicated doctors in the facility. We want hospitalists who already know the patient to come to the facility and see the patient there.”

The hospitalist’s role in post-acute care
Hospitlist who work in post-acute care typi- cally make scheduled, billable medical visits to patients in long-term care facilities, and may also take on roles such as facility medical director or contribute to quality improvement. Relationships may be initiated by a facility seeking more medical coverage, by a hospitalist group seeking additional work or an ability to impact on the post-acute care delivered to hospital patients discharged to the facility, or by health systems, health plans, or accountable care organizations seeking to better manage the quality of care transitions for their beneficiaries.

“The facility can ask the hospitalists to come in, or the hospitalist group can ask to come in. You have all of that – plus you’ve got big regional and national hospitalist companies that sign contracts with hospitals and with large SNFs,” explained Amy Bourwell, MD, MPP, founder of the Massachusetts-based consulting group Collaborative Healthcare Strategies. “It’s clearly becoming more common with current market pressures,” she said.

“What I’m seeing is that, with opportunities for bundled payments, we all have new incentives for moving patients along and reducing waste,” Dr. Bourwell said. “For hospitalists practicing in SNFs, it’s going to be a much bigger phenomenon. They’ll be closely monitoring patients and making more visits than they have been accustomed to. She hopes SNFs are studying what happened with hospitals’ readmission penalties, and will respond more quickly and effectively to their own penalty exposure.

Robert Harrington, Jr., MD, SFHM, a hospitalist in Alpharetta, Ga., and chief medical officer at Reliant Post-Acute Care Solutions, calls the readmission penalties an extension or further progression of the government’s value-based purchasing mentality.

“What we are seeing is an effort to shift folks to lower cost – but still clinically appropriate levels of care,” he said. “These dynamics will force SNFs to reevaluate and improve their clinical competencies, to accept patients and then treat them in place. It’s no longer acceptable for the medical director to make rounds in person twice a month and do the rest by telephone.”

Instead, someone needs to be on site several times a week, working with nursing staff and developing protocols and pathways to control variability, Dr. Harrington said. “And in many cases that will be a hospitalist. Hospitalists are finding ways to partner and provide that level of care. I believe good hospitalist groups can change the facility for the better, and fairly quickly.”

What happens in post-acute care
Cari Levy, MD, PhD, who does hospital coverage and post-acute care for a number of facilities and home health agencies in the Denver area, calls the changes coming to SNFs a thrilling time for post-acute care. “Suddenly medical professionals care about what happens in the post-acute world,” she said. “Everyone is now looking at the same measures. If this works the way it should, there would be a lot more mutual respect between providers.”

SNFs that are concerned about their readmissions rates will want to do root-cause analysis to figure out what’s going on, Dr. Levy said. “Maybe the doctor didn’t do a good assessment. Maybe it was just a tough case. Once you start talking, you’ll develop systems to help everyone responsible. Hospitalists can be part of that conversation,” she said.

Jerome Willborn, MD, national medical director of post-acute care for TeamHealth, Knoxville, Tenn., says his company is one of the largest groups tackling these issues. “We’re aligning around these precipts very quickly. If I’m a hospital administrator, I’m already under the gun with readmissions penalties and with Pen Garey patient satisfac- tion scores weighing heavily on me. Medicare will be paying more based on value, not volume, so our income will be more depend- ent on our outcomes,” Dr. Willborn said.

“You can have a good outcome at Shady Oaks but a terrible outcome at Whispering Pines, for all sorts of reasons. The hospital wants to make sure we’re sending patients to facilities that produce good outcomes,” he explained. “But there has to be communica- tion between providers – the SNF medical director, the hospitalists, and the emergency department.”

A TeamHealth doctor in Phoenix has convened a committee of hospitalists from different care settings to meet and talk about cases and how they could have gone better. “The reality is, these conversations are going on all over,” Dr. Wilborn said. “What’s driv- ing them is the realization of what we all need to do in this new environment.”

Opportunities from reforms
Robert Burke, MD, FHM, assistant chief of Hospital Medicine at the Denver VA Medical Center, is lead author of a study in the Journal of Hospital Medicine highlighting implica- tions and opportunities from reforms in post- acute care. “Hospitalists may not appreciate that post-acute care is poised to undergo transformative change from the recently legislated reforms, opening opportunities for hospitalists to improve health care value by improving transitions of care, he noted.

“Most post-acute care placement deci- sions are made in the hospital,” Dr. Burke said. “As hospitalizations shorten, post- acute care utilization is rising, resulting in rapidly increasing costs. Bundled payments for care improvement often include a single payment for the acute hospital and for post- acute care for up to 90 days postdischarge for select conditions, which incentivizes hospitalists to reduce hospital length of stay and to choose post-acute alternatives with lower costs,” he said.

“My sense is that payment reform will put pressure on physicians to use home health care more often than institutional care, because of the cost pressures. We know that hospitalists choose long-term care facil- ity placements less often when participat- ing in bundled payment,” Dr. Burke said. “I think few hospitalists really know what happens on a day-to-day basis in SNFs – or in patients’ homes, for that matter.”

According to Dr. Burke, there are just not enough data currently to guide these deci- sions. He said that, based on his research, the best thing hospitalists can do is try to understand what’s available in post-acute spaces, and build relationships with post- acute facilities.

“Find ways to get feedback on your discharge decisions,” he said. “Here in Colorado, we met recently with the local chapter of the Society for Post-Acute and Long-Term Care Medicine, also known as AMDA. It’s been revealing for everyone involved.”

He recommends AMDA’s learning modules – which are designed for doctors who are new to long-term care – to any hospitalist who is entering the post-acute world.

References
Readmission rates linked to hospital quality measures

Experts say readmission measure classifies true differences in performance

BY Alicia Gallegos

Poorer-performing hospitals have higher readmission rates than better-performing hospitals for patients with similar diagnoses, a study shows.

Lead author Harlan M. Krumholz, MD, of Yale University, New Haven, Conn., and his colleagues analyzed Centers for Medicare & Medicaid Services hospital-wide readmission data and divided data from July 2014 through June 2015 into two random samples. Researchers used the first sample to calculate the risk-standardized readmission rate within 30 days for each hospital and classified hospitals into performance quartiles, with a lower readmission rate indicating better performance. The second study sample included patients who had two or more admissions for similar diagnoses at least 30 days apart. Researchers compared the observed readmission rates among patients who had been admitted to hospitals in different performance quartiles. The analysis included all discharges occurring from July 1, 2014, through June 30, 2015, from short-term acute care or critical access hospitals in the United States involving Medicare patients who were aged 65 years or older.

In the period studied, there were a total of 7,163,152 hospitalizations, of which 6,510,341 met the inclusion criteria for the hospital-wide risk-standardized readmission measure. Of these hospitalizations, 3,455,171 discharges (involving 2,741,289 patients and 4,738 hospitals) were randomly selected for the first sample for calculation of hospital-readmission performance. The second sample included 3,455,170 discharges, 132,283 of which involved patients who had two or more admissions for similar diagnoses at least 30 days apart.

Results found that among the patients hospitalized more than once for similar diagnoses at different hospitals, the readmission rate was significantly higher among patients admitted to the worst-performing quartile of hospitals than among those admitted to the best-performing quartile (absolute difference in readmission rate, 2.0 percentage points; 95% confidence interval, 0.4-3.5; P = .001) (N Engl J Med. 2017. doi: 10.1056/NEJMa1702521).

The differences in the comparisons of the other quartiles were smaller and not significant, according to the study.

The findings suggest that hospital quality contributes at least in part to readmission rates, independent of patient factors, study authors concluded.

“This study addresses a persistent concern that national readmission measures may reflect differences in unmeasured factors rather than in hospital performance,” study authors noted in the study. “The findings suggest that hospital quality contributes at least in part to readmission rates, independent of patient factors. With use of patients who were admitted twice within 1 year with similar diagnoses to different hospitals, this study was able to isolate hospital signals of performance differences among the patients. In these cases, because the same patients had similar admissions at two hospitals, the characteristics of the patients, including their level of social disadvantage, level of education, or degree of underlying illness, were broadly the same. The alignment of the differences that we observed with the results of the CMS hospital-wide readmission measure also adds to evidence that the readmission measure classifies true differences in performance.” Dr. Krumholz and seven coauthors reported receiving support from contracts with the Center for Medicare & Medicaid Services to develop and reevaluate performance measures that are used for public reporting.

Readmission risk: Isolating hospital effects from patient effects

The Hospital Readmission Reduction Program (HRRP) was established in 2011 by a provision in the Affordable Care Act (ACA) requiring Medicare to reduce payments to hospitals with relatively high readmission rates for patients in traditional Medicare. Since the inception of the HRRP, readmission rates have declined across all measured diagnostic categories resulting in estimates of 565,000 fewer Medicare readmissions through 2015.1 These reductions seem to be driven by penalties demonstrated by the fact that readmissions fell more quickly at hospitals that had readmission penalties than at other hospitals. Although the severity and fairness of the penalties can be debated, the HRRP has been successful in achieving the goal of reducing readmissions.

Despite these declines seen in most hospitals, readmission rates have not declined among all hospitals. Hospitals that have higher proportions of low-income Medicare patients have not had as significant reduction in readmissions as their counterparts.2 One of the biggest complaints leveled at the HRRP program is that it is indifferent to the socioeconomic circumstances of a hospital’s patient population. In many of these hospitals, efforts to reduce readmissions have been seen as futile exercises in a patient population with complex social needs.

A study published in the journal Health Affairs found that socioeconomic factors do appear to drive many of the difference in readmission rates between safety net hospitals and their more prosperous peers. However, it also suggested that hospital performance in these hospitals may play a factor as well.3 The NEJM article, Hospital-Readmission Risk – Isolating Hospital Impact From Patient Effects confirms this. This well-designed review determined that hospitals, independent of a patient’s socioeconomic status, had an impact on the likelihood of patient being readmitted. The more complicated question of what higher functioning hospitals did to reduce readmissions was not addressed. It is certain that some hospitals will face greater challenges in reducing readmissions. It is difficult to determine which socioeconomic factors play the biggest role in driving readmission rates and even more difficult to change them. This study also demonstrates that despite challenging conditions, reductions in readmissions can occur.

As the primary focus and leader of health care in most communities, hospitals are best equipped to reach into the community and to develop successful transition programs that limit readmissions and begin to address complex social needs. Of course this must be a coordinated effort among many groups, but the hospital and its organization is in the right position to take a leading role. It is essential that hospitalists, who are on the front lines of this process, play a significant role.

Many hospitals with patients who have complex needs are rising to the occasion. Motivated by the HRRP, unique innovations to improve care transitions out of hospitals are being developed. Hospitals that are serving low-socioeconomic populations are finding innovative ways to reduce readmissions. These include identifying high-risk social conditions driving readmissions, intensive discharge planning, and deploying community health care workers. A key component of this has been addressing the opioid epidemic.

Despite some opposition, the HHRP has worked by aligning financial incentives with good health care. The program was successful not by developing complicated metrics, but rather by simply providing financial incentives for good care and then allowing innovation to develop independently. Hopefully this study further promotes these efforts.

Kevin Conrad, MD, is medical director of community affairs and healthy policy at Ochsner Health System, New Orleans.

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BP accuracy is the ghost in the machine

BY M. Alexander Otto
Frontline Medical News

EXPERT ANALYSIS FROM JOINT HYPERTENSION 2017

SAN FRANCISCO – Amid all the talk about subgroup blood pressure targets and tiny differences in drug regimens at a recent hypertension meeting, there was an elephant in the room that attendees refused to ignore.

Hypertension control – the No. 1 way to prevent cardiovascular death – depends on a simple measurement taught to all medical practitioners, but one that’s rarely done right: blood pressure measurement. When it comes to the one thing that matters most, “we do it wrong,” said Steven Yarows, MD, a primary care physician in Chelsea, Mich., who estimated he’s taken 44,000 blood pressures in his 36 years of practice.

Inaccurate measurement is such a problem in the United States that someone in his audience half-joked that the American Heart Association should release two hypertension guidelines the next time around, one for when blood pressure is measured correctly, “and one for the rest of us.”

Everyone in medicine is taught that people should rest a bit and not talk while their blood pressure is taken; that the last measurement matters more than the first; and that most Americans need a large-sized cuff. Current guidelines are based on patients sitting for 5-10 minutes alone in a quiet room while an automatic machine averages their last three to five blood pressures.

But when Dr. Yarows asked his 300 or so audience members – hypertension physicians who paid to come to the meeting – how many actually followed those rules, four hands went up. It’s not good enough: “if you are going to make a diagnosis that lasts a lifetime, you have to be accurate,” he said at the joint scientific sessions of the American Heart Association Council on Hypertension, AHA Council on Kidney Cardiovascular Disease, and American Society of Hypertension.

There’s resistance. No one has a room set aside for blood pressure; staff don’t want to deal with it; and at a time when primary care doctors are nickel and dimed for everything they do, insurers haven’t stepped up to pay to make accurate blood pressure a priority.

To do it right, you have to ask patients to come in 10 minutes early and have a room set up for them where they can sit alone with a large oscillometric cuff to average a few blood pressures at rest, Dr. Yarows said. They also need at least one 24-hour monitoring.

“Most of the time, the patient walks over from the waiting room, they get on the scale which automatically elevates the blood pressure tremendously, and then they sit down and talk about their family while their blood pressure is being taken.”

– Steven Yarows, MD

Twenty-four hour monitoring is the only way to really know if patients are hypertensive and need treatment. “Any person you suspect of having hypertension, before you place them on medicine, you should have 24 hour blood pressure monitoring. This is the most effective way to determine if they do have high blood pressure,” he said.

Another patient was 114/85 mm Hg at noon, and 159/73 mm Hg an hour later. “That’s a huge spread,” he said.

Dr. Yarows had no disclosures.
aotto@frontlinemedcom.com
Providers of last resort
But much of the burden of caring for this population ends up falling on hospitals by default. At Denver Health, Melanie Rylander, MD, medical director of the inpatient psychiatric unit, reports seeing this manifest in three categories of patients. First, there is an influx of people coming into the emergency department with primary mental health issues. “We’re also seeing an influx of people coming in with physical problems, and upon assessment it becomes very clear very quickly that the real issue is an underlying mental health issue,” she said. Then there are the people coming in for the same physical problems over and over — maybe uncompensated heart failure or chronic obstructive pulmonary disease exacerbations — because mental health issues are impeding their ability to take care of themselves.

Some hospitalists say they feel ill equipped to care for these patients. “We don’t have the facility or the resources many times to properly care for their psychiatric needs when they’re in the hospital. It’s not really part of an internist’s training to be familiar with a lot of the medications,” said Atashi Mandal, MD, a hospitalist and pediatrician in Los Angeles. “Sometimes they get improperly medicated because we don’t know what else to do and the patient’s behavioral issues are escalating, so it’s really a difficult position.”

It’s a dispiriting experience for a hospitalist. “It really bothers me when I am trying to care for a patient who has psychiatric needs, and I feel I’m not able to do it, and I can’t find resources, and I feel that this patient’s needs are being neglected — not because we don’t care, and not because of a lack of effort by the staff. It’s just set up to fail,” Dr. Mandal said.

Ending the silo mentality
Encouraging a more holistic view of health across health care would be an important step to begin to address the problem — after all, the mind and the body are not separate. “We work in silos, and we really have to stop doing that because these are intertwined,” said Corey Karlin-Zysman, MD, FHM, FACP, chief of the division of hospital medicine at Northwell Health. “A schizophrenic will become worse when they’re medicated, and we’re going to drive up the demand for more people to think about how to better serve people from a mental health perspective.”

Hospitals and communities
It’s axiomatic to say that a better approach to mental health would be based around prevention and early intervention, rather than the less crisis-oriented system we have now. Some efforts are being made in that direction, and they involve, and require, outreach outside the hospital. “The best hospitals doing work in mental health are going beyond the hospital walls; they’re really looking at their community,” Dr. Nguyen said. “You have hospitals, like Accountable Care Organizations, who are trying to move earlier and think about mental health from a pediatric standpoint: How can we support parents and children during critical phases of brain growth? How can we provide prevention services?” Ultimately, those efforts should help lower future admission rates to EDs and hospitals.
That forward-looking approach may be necessary, but it’s also a challenge. “As a hospital administrator, I would think that you look out at the community and see this problem is not going away – in fact, it is likely going to get worse,” Dr. McHugh said. “A health system may look at themselves and say we have to take the lead on this.” The difficulty is that thinking of it in a sense of value to the community, and making the requisite investments, will have a very long period of payoff; a health system that’s struggling may not be able to do it. “It’s the large [health systems] that tend to be more integrated … that are thinking about this much differently,” he said.

Still, the reality is that’s where the root of the problem lies, Dr. Rylander said – not in the hospital, but in the larger community. “In the absence of very basic needs – stable housing, food, heating – it’s really not reasonable to expect that people are going to take care of their physical needs,” she said. “It’s a much larger social issue. How to get resources so that these people can have stable places to live, they can get to and from appointments, that type of thing.”

Those needs are ongoing, of course. Many of these patients suffer from chronic conditions, meaning people will continue to need services and support, said Ron Honberg, JD, senior policy adviser for the National Alliance on Mental Illness. Often, people need services from different systems. “There are complexities in terms of navigat- ing those systems and getting those systems to work well together. Until we make inroads in solving those things, or at least improving those things, the burdens are going to fall on the providers of last resort,” he said.

A collaborative effort may be needed, but hospitals can still be active participants and even leaders. “If hospitals really want to address these problems, they need to be part of the discus- sions taking place in communities among the various systems and providers and advoc- ates,” Mr. Honberg said. “Ultimately, we need to develop a better community-based system of care, and a better way of hand- ling people off from inpatient to commu- nity-based treatment, and some account- ability in terms of requiring that people get services, so they don’t get rehospitalized quickly. You’re increasingly seeing account- ability now with other health conditions; we’re measuring things in Medicare like rehospitalization rates and the like. We need to be doing that with mental health treat- ment as well.”

What a hospitalist can do
One thing hospitalists might consider is starting that practice at their own hospi- tals, measuring, recording, and sharing that kind of information. “Hospitalists should measure system- atically, and in a very neutral manner, the total burden and frequency of the problem and report it consistently to management, along with their assessment that this is impairing the quality of care and creates patient risk,” Dr. Parks said. That information can help hospitalists lobby for access to psychiatric personnel, be it in person or through tele- medicine. “We don’t have to lay hands on you. There’s no excuse for any hospital not having a contract in place for on-demand consultation in the ER and on the floors.”

Track outcomes, too, Dr. Mandal suggests. With access to the right personnel, are you getting patients out of the ED faster? Are you having fewer negative outcomes while these patients are in the hospital, such as having to use restraints or get security involved? “Hopefully you can get some data on terms of how much money you’ve saved by decreasing the length of stays and decreasing inadvertent adverse effects because the patients weren’t receiv- ing the proper care,” he said.

As this challenge seems likely to continue to grow, hospitalists might consider find- ing more training in mental health issues themselves so they are more comfortable handling these issues, Dr. Parks said. “The average mini-psych rotation from medi- cal school is only 4 weeks,” he noted. “The ob.gyn. is at least 8 weeks and often 12 weeks, and if you don’t go into ob.gyn., you’re going to see a lot more mentally ill people through the rest of your practice, no matter what you do, than you are going to see pregnant women.”

Just starting these conversations – with patients, with colleagues, with family and friends – might be the most important change of all. “Even though nobody is above these issues afflicting them, this is still some- thing that is not part of an open dialogue, and this is something that affects our own colleagues,” Dr. Mandal said. “I don’t know how many more trainees jumping out of windows it will take, or colleagues going through depression and feeling that it’s a sign of weakness to even talk about it.”

“We need to create safe harbors within our own medical communities and acknowledge that we ourselves can be prone to this,” he said. “Perhaps by doing that, we will develop more empathy and become more comfortable, not just with ourselves and our colleagues but also helping these patients. People get overwhelmed and throw their hands up because it is just such a difficult issue. I don’t want people to give up, both from the medical community and our society as a whole – we can’t give up.”

A med-psych unit pilot project
Med-psych units can be a good model to take on these challenges. At Long Island Jewish Medical Center, they launched a pilot project to see how one would work in their community and summarized the results in an SHM abstract.

The hospital shares a campus with a 200-bed inpatient psych hospital, and doctors were seeing a lot of back and forth between the two institutions, said Dr. Karlin-Zysman. “Patients would come into the hospital because they had an active medical issue, but because of their behavioral issues, they’d have to have continuous observation. It would not be uncommon for us to have some- times close to 30 patients who needed 24-hour continuous observation to make sure they were not hurting them- selves.” These PCAs or nurse’s assistants were doing 8-hour shifts, so each patient needed three. “The math is staggering – and with not any better outcomes.”

So the hospital created a 15-bed closed med-psych unit for medically ill patients with behavioral health disorders. They staffed it with a dedicated hospitalist, a nurse practitioner, a psychologist, and a nurse manager.

The number of patients requiring contin- uous observation fell to single digits. Once in their own unit, these patients caused less disruption and stress on the medical units. They had a lower length of stay compared to their previous admissions in other units, and this became one of the hospital’s highest performing units in terms of patient expe- rience.

The biggest secret of their success, Dr. Karlin-Zysman said, is cohorting. “Instead of them going to the next open bed, where- ever it may be, you get the patients all in one place geographically, with a team trained to manage those patients.” Another factor: It’s a hospitalist-run unit. “You can’t have 20 differ- ent doctors taking care of the patients; it’s one or two hospitalists running this unit.”

Care models like this can be a true win- win, and her hospital is using them more and more. “I have a care model that’s a stroke unit; I have a care model that’s an onc unit and one that’s a pulmonary unit,” she said.

“We’re creating these true teams, which I think hospitalists really like being part of. What’s that thing that makes them want to come to work every day? Things like this: running a care model, becoming special- ized in something.” There are research and abstract opportunities for hospitalists on these units too, which also helps keep them engaged, she said. “I’ve used this care model and things like that to reduce burnout and keep people excited.”

The persistent mortality gap
Patients with mental illness tend to receive worse medical care than people without, studies have shown; they die an average of
25 years earlier, largely from preventable or treatable conditions such as cardiovascular disease and diabetes. The World Health Organization has called the problem “a hidden human rights emergency.”

In one in a series of articles on mental health, Dr. Rosenbaum: Might physician attitudes toward mentally ill people contribute to this mortality gap, and if so, can we change them?

She recognizes the many obstacles physicians face in treating these patients. “The medicines we have are good but not great and can cause obesity and diabetes, which contributes to cardiovascular morbidity and mortality,” Dr. Rosenbaum said. “We have the adherence challenge for the psychiatric medications and for medications for chronic disease. It’s hard enough for anyone to take a medicine every day, and to do that if you’re homeless or you don’t have insight into the need for it, it’s really hard.”

Also, certain behaviors that are more common among people with serious mental illness – smoking, substance abuse, physical inactivity – increase their risk for chronic diseases.

These hurdles may foster a sense of helplessness among hospitalists who have just a small amount of time to spend with a patient, and attitudes may be hard to change.

“Negotiating more effectively about care refusals, more adeptly assessing capacity, and recognizing when our efforts to orchestrate care have been inadequate seem feasible,” Dr. Rosenbaum writes. “Far harder is overcoming any collective belief that what mentally ill people truly need is not something we can offer.” That’s why a truly honest examination of attitudes and biases is a necessary place to start.

She tells the story of one mentally ill patient she learned of in her research, who, after decades as the quintessential frequent flier in the ER, was living stably in the community. “No one could have known how many tries it would take to help him get there,” she writes. His doctor told her, “Let’s say 10 attempts are necessary. Someone needs to be number 2, 3 and 7. You just never know which number you are.”

**Education for physicians**
A course created by the National Alliance on Mental Illness addresses mental illness issues from a provider perspective.

“Although the description states that the course is intended for mental health professionals, it can be and has been used to educate and inform other healthcare professionals as well,” said Mr. Honberg. The standard course takes 15 hours; there is an abbreviated 4-hour alternative as well. More information can be found at [http://www.nami.org/Find-Support/NAMI-Programs/NAMI-Provider-Education](http://www.nami.org/Find-Support/NAMI-Programs/NAMI-Provider-Education). **Sources**


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“There are complexities in terms of navigating those systems and getting those systems to work well together. Until we make inroads in solving those things, or at least improving those things, the burdens are going to fall on the providers of last resort, and that includes hospitals.”

—Ron Honberg, JD, senior policy adviser for the National Alliance on Mental Illness
When should I transfuse a patient who has anemia?

Weighing the potential adverse effects, cost of transfusions

By Hemal N. Sampat, MD; Rebecca Berger, MD; and Farrin A. Manian, MD, MPH
Massachusetts General Hospital, Boston

Introduction

Anemia is one of the most frequent conditions in hospitalized patients. Anemia is variably associated with morbidity and mortality depending on chronicity, etiology, and associated comorbidities. Before the 1980s, standard practice was to transfuse all patients to a hemoglobin level greater than 10 g/dL and/or a hematocrit greater than 30%. However, with concerns about the potential adverse effects and cost of transfusions, the safety and effectiveness of liberal versus restrictive transfusion thresholds became the subject of many studies.

Risks of red blood cell transfusions include transmission of bloodborne pathogens and, more commonly, immunological reactions and other noninfectious complications. Modern screening methods for HIV, hepatitis B, and hepatitis C infections in developed countries have markedly reduced the incidence of transfusion-related diseases due to these pathogens, such that in the United States the risk of transfusion-related HIV, hepatitis B, or hepatitis C infections is extremely rare (nearly 1 in a million units or less).\(^1,2\) In contrast, noninfectious complications such as febrile transfusion reactions, transfusion-associated circulatory overload, and allergic reactions are much more common.\(^1\)

The 2016 AABB (formerly American Association of Blood Banks) guidelines focused on the evidence for hemodynamically stable and asymptomatic hospitalized patients. The guidelines are based on randomized, controlled trials that measured mortality as the primary endpoint. Most trials and guidelines reinforce that, if a patient is symptomatic or hemodynamically unstable from anemia or hemorrhage, RBC transfusion is appropriate irrespective of hemoglobin level.

Overview of the data

Critically ill patients

The Transfusion Requirements in Critical Care (TRICC) trial, published in 1999, was the first large clinical trial examining the safety of restrictive transfusion thresholds in critically ill patients.\(^3\) The TRICC trial randomized 838 euvolemic critically ill patients with anemia to a restrictive transfusion strategy (transfusing for hemoglobin less than 7 g/dL) or a liberal strategy (transfusing for hemoglobin less than 10 g/dL). Thirty-day mortality was not significantly different between the two groups, though in prespecified subgroups of less acutely ill patients (APACHE-II score 20 or lower) and younger patients (age less than 55 years), mortality was significantly lower in the restrictive transfusion group. Overall in-hospital mortality was also lower in the restrictive strategy arm.

The subsequent Transfusion Requirements in Septic Shock (TRISS) study involved patients with septic shock and similarly found that patients assigned to a restrictive strategy (transfusion for hemoglobin less than 7 g/dL) had similar outcomes to patients assigned to a liberal strategy (transfusion for hemoglobin less than 9 g/dL). The patients in the restrictive group received fewer transfusions, but had similar rates of 90-day mortality, use of life support, and number of days alive and out of the hospital.\(^4\)

These large randomized, controlled trials in critically ill patients served as the basis for subsequent studies in patient populations outside of the ICU.

Acute upper GI bleed

Acute upper gastrointestinal bleeding (UGIB) is one of the most common indications for RBC transfusion.

A 2013 single-center study randomized patients with and without cirrhosis who presented with evidence of UGIB, such as hematemesis, melena, or bloody nasogastric aspirate, to either a restrictive or liberal transfusion strategy, with hemoglobin transfusion thresholds of less than 7 g/dL and less than 9 g/dL, respectively. All patients received 1 unit of RBCs before assessing baseline hemoglobin level, and all patients underwent upper endoscopy within 6 hours. Patients in the restrictive-strategy group had significantly lower mortality at
45 days, compared with the liberal-strategy group. This finding persisted in a subgroup of patients with Childs-Pugh class A or B cirrhosis, but not Childs-Pugh class C.\(^5\)

The TRIGGER trial, a cluster randomized multicenter study published in 2013, also found no difference in clinical outcomes, including mortality, between a restrictive strategy and liberal strategy for transfusion of patients with UGIB.\(^6\)

**Perioperative patients**

Transfusion thresholds have been studied in large randomized trials for perioperative patients undergoing cardiac and orthopedic surgery. The Transfusion Requirements After Cardiac Surgery (TRACS) trial, published in 2010, randomized patients undergoing cardiac surgery at a single center to a liberal strategy of blood transfusion (to maintain a hematocrit 30% or greater) or a restrictive strategy (hematocrit 24% or greater).\(^7\)

Mortality and severe morbidity rates were noninferior in the restrictive strategy group. Mean hemoglobin concentrations were 10.5 g/dL in the liberal-strategy group and 9.1 g/dL in the restrictive-strategy group. Independent of transfusion strategy, the number of transfused red blood cell units was an independent risk factor for clinical complications and death at 30 days.

Subsequently, the Functional Outcomes in Cardiovascular Patients Undergoing Surgical Hip Fracture Repair (FOCUS) study enrolled patients aged 50 years and older with cardiovascular disease or coronary artery disease risk factors undergoing hip surgery randomized to either a liberal transfusion strategy (goal hemoglobin 10 g/dL or greater) or restrictive strategy (goal hemoglobin 8 g/dL or greater) was performed.\(^8\) This study found no difference in outcomes between the two groups, including mortality, inability to walk, or in-hospital complications.

Based on these two trials, as well as other smaller randomized controlled trials and observational studies, the AABB guidelines recommend a restrictive RBC transfusion threshold of 8 g/dL for patients undergoing cardiac or orthopedic surgery.\(^9\)

**Acute coronary syndrome, stable coronary artery disease, and congestive heart failure**

Anemia is an independent predictor of major adverse cardiovascular events in patients with acute coronary syndrome.\(^9\) However, it remains controversial if transfusion has benefit or causes harm in patients with acute coronary syndrome. No randomized controlled trials have yet been published on this topic, and observational studies and subgroups from randomized controlled trials have yielded mixed results.

Similarly, there are no randomized controlled trials examining liberal versus restrictive transfusion goals for asymptomatic hospitalized patients with stable coronary artery disease (CAD). However, patients with CAD were included in the TRICC and FOCUS trials.\(^9,10\) Of patients enrolled in the TRICC trial, 26% had a primary or secondary diagnosis of cardiac disease; subgroup analysis found no significant differences in 30-day mortality between treatment groups, similar to that of the entire study population.\(^3\)

**References**

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Steroids underused in bacterial meningitis despite low risk

By Amy Karan
*Frontline Medical News*

**AT IDWEEK 2017**

SAN DIEGO – Physicians often skipped out on using steroids when treating bacterial meningitis even though the benefits clearly outweigh the risks, Cinthia Gallegos, MD, reported during an oral presentation at an annual meeting on infectious diseases.

In a recent multicenter retrospective cohort study, only 40% of adults with bacterial meningitis received steroids within 4 hours of hospital admission, as recommended by the European Society of Clinical Microbiology and Infectious Diseases (ESCMID), and only 14% received steroids concomitantly or 10-20 minutes prior to antibiotic initiation, as recommended by the Infectious Diseases Society of America (IDSA), said Dr. Gallegos, an ID fellow at University of Texas, Houston.

“Steroids are being underutilized in our patient population,” she said. “And when steroids are used, they are being used later than is recommended.”

To evaluate the prevalence of guideline-concordant steroid use, Dr. Gallegos and her associates analyzed the medical records of 120 adults with culture-confirmed, community-acquired bacterial meningitis treated at 10 Houston-area hospitals between 2008 and 2016.

Median duration of steroid therapy was 4 hours, which is consistent with IDSA guidelines, she noted.

Among the five patients (4%) who developed delayed cerebral thrombosis, three had *Streptococcus pneumoniae* meningitis, one had methicillin-resistant *Staphylococcus aureus* meningitis, and one had *Listeria* meningitis. All received either dexamethasone monotherapy or dexamethasone and methylprednisolone within 4 hours of antibiotic initiation. They showed an initial improvement, including normal CT and MRI, but their clinical condition deteriorated between 5 and 12 days later. Two patients died, two developed moderate or severe disability, and one fully recovered.

The 4% rate closely resembles what is seen in the Netherlands, said Diederik van de Beek, MD, PhD, of the Academic Medical Center in Amsterdam, who co-moderated the session at IDWeek 2017. “We have some recent data where we did autopsies of cases, and we saw a huge amount of bacterial fragments around the blood vessels,” he said. “We have seen this in previous autopsy studies, but here it was a massive amount of bacterial fragments.”

Researchers have suggested that delayed cerebral thrombosis in bacterial meningitis results from increases in CSF and C5b-9 levels in the cerebrospinal fluid and from an increase in the tissue factor VII pathway. These patients historically developed vasculitis, but this complication “has disappeared somewhat in the dexamethasone era,” said Dr. van de Beek, lead author of the 2016 ESCMID guidelines on bacterial meningitis. “It appears that some patients are ‘pro-inflammatory’ and still react 7-9 days after treatment,” he said. “The difficult question is whether we give 4 days of steroids or longer. A clinical trial is not feasible, so we [recommend] 4 days.”

Left untreated, bacterial meningitis is fatal in up to 70% of cases, and about one in five survivors faces limb loss or neurologic disability, according to the Centers for Disease Control and Prevention. The advent of penicillin and other antibiotics dramatically improved survival, but death rates remained around 10% for meningitis associated with *Neisseria meningitidis* and *Haemophilus influenzae* infection, and often exceeded 30% for *S. pneumoniae* meningitis. That’s important because, besides antibiotics, the only treatment that decreases mortality has been shown to be steroids.

High-quality evidence supports their use. In a double-blind, randomized, multicenter trial of 901 adults with bacterial meningitis, adjunctive dexamethasone was associated with a 50% improvement in mortality, compared with adjunctive placebo (N Engl J Med. 2002 Nov 14;347[20]:1549-56). Other data confirm that steroids do not prevent vancomycin from concentrating in CSF or increase the risk of hippocampal apoptosis. But although both IDSA and ESCMID endorse steroids as adjunctive therapy to help control intracranial pressure in patients with bacterial meningitis, studies have shown much higher rates of steroid use in the Netherlands, Sweden, and Denmark than in the United States.

The Grant A. Starr Foundation provided funding. The investigators had no conflicts of interest.

“The difficult question is whether we give 4 days of steroids or longer. A clinical trial is not feasible, so we [recommend] 4 days.”

**Firearms’ injury toll of $3 billion just ‘a drop in the bucket’**

By Randy Dotinga
*Frontline Medical News*

**AT THE ACS CLINICAL CONGRESS**

SAN DIEGO – The true impact of firearms injuries may be greatly underestimated, according to a study presented at the American College of Surgeons Clinical Congress.

The study estimates that firearms injuries cost nearly $3 billion a year in emergency department and inpatient treatment costs. The real cost is likely to be 10-20 times higher, said the lead author of the study, Faiz Gani, MD, a research fellow with the Johns Hopkins Surgery Center for Outcomes Research, Baltimore.

Dr. Gani and his colleagues analyzed data from the Nationwide Emergency Department Sample of the Healthcare Cost and Utilization Project for the years 2006-2014. They identified 150,930 patients who appeared alive in emergency departments over that period with firearms injuries, and they estimated the total weighted number at 704,916. They found that the incidence of firearms injury admissions actually fell during 2006-2013 (from 27.9 visits per 100,000 people to 21.5, P < .001) but bumped up by 23.7% to 26.6 during 2013-2014 (P < .001).

The average costs of emergency and inpatient care for patients injured by firearms were $5,254 and $95,887, respectively, collectively amounting to about $2.8 billion each year. Dr. Gani said that the estimation of the cost and impact of firearms injuries don’t account for people who died of firearms injuries before reaching the ED.

The cost estimates also don’t take follow-up care, rehabilitation, or loss of disability into account. The surgical portion of the cost is likely to be much higher, he said.

“The true impact of firearms injuries may be greatly underestimated.”
Carvedilol fails to reduce variceal bleeds in acute-on-chronic liver failure

By Denise Fulton
Frontline Medical News
AT THE LIVER MEETING 2017
WASHINGTON – Treatment with carvedilol reduced the incidence of sepsis and acute kidney injury and improved survival at 28 days but did not significantly reduce the progression of esophageal varices in patients with acute-on-chronic liver failure.

A total of 136 patients with acute-on-chronic liver failure with small or no esophageal varices and a hepatic venous pressure gradient (HVPG) of 12 mm Hg or greater were enrolled in a single-center, prospective, open-label, randomized controlled trial: 66 were randomized to carvedilol and 70 to placebo, according to Sumreet Kainth, MD, of the Institute of Liver and Biliary Sciences in New Delhi.

More than 90% of patients were men with a mean age of 44 years, and composition of the treatment and placebo groups was similar. About 70% in each group had alcoholic hepatitis (the reason for acute liver failure in most). Mean Model for End-Stage Liver Disease (MELD) scores were about 25. Hemodynamic parameters also were comparable, with a mean HVPG of 19 mm Hg, Dr. Kainth said at the annual meeting of the American Association for the Study of Liver Diseases.

Patients in the treatment group received a median maximum tolerated dose of carvedilol of 12.5 mg, with a range of 3.13 mg to 25 mg. Morbidity and mortality were high, as is expected with acute-on-chronic liver failure, he noted. A total of 36 patients died before the end of the 90-day study period. Another 23 experienced adverse events and 2 progressed to liver transplant.

HVPG at 90 days decreased significantly in both groups. In the carvedilol group, 90-day HVPG was 16 mm Hg, compared with 19.7 mm Hg at baseline (P <.01). For placebo patients, 90-day HVPG spontaneously improved to 14.8 mm Hg from the baseline of 17.2 mm Hg (P = .01).

Carvedilol did not significantly slow the development or growth of varices, however, Dr. Kainth said. At 90 days, varices had progressed in 9 of 40 patients (22.5%) of patients on carvedilol and 8 of 31 (25.8%) of placebo patients.

Significantly fewer patients in the carvedilol group developed acute kidney injury at 28 days (14% vs. 38% on placebo) and sepsis (5% vs. 20%). Mortality also was reduced significantly at 28 days (11% vs. 24%).

Treatment with carvedilol did not achieve significant reductions in variceal bleeding, "possibly due to the low number of bleeds seen in the study [because of] the exclusion of patients with large varices," Dr. Kainth said.

The study was sponsored by Institute of Liver and Biliary Sciences. Dr. Kainth reported no relevant conflicts of interest.

--Sumreet Kainth, MD

Wait 2+ days to replace CVcs in patients with candidemia

By Amy Karon
Frontline Medical News
AT IDWEEK 2017
SAN DIEGO – Wait at least 2 days before replacing central venous catheters (CVC) in patients with catheter-associated candidemia, according to the results of a single-center retrospective cohort study of 228 patients. Waiting less than 2 days to replace a CVC increased the odds of 50-day mortality nearly sixfold among patients with catheter-related bloodstream infections due to candidemia, even after controlling for potential confounders, Takahiro Matsuo, MD, said at an annual scientific meeting on infectious diseases. No other factor significantly predicted mortality in univariate or multivariate analyses, he said. “This is the first study to demonstrate the optimal timing of central venous catheter replacement in catheter-related bloodstream infection due to Candida.”

Invasive candidiasis is associated with mortality rates of up to 50%, noted Dr. Matsuo, who is a fellow in infectious diseases at St. Luke’s International Hospital, Tokyo. Antifungal therapy improves outcomes, and most physicians agree that removing a CVC does, too. To better pinpoint optimal timing of catheter replacement, Dr. Matsuo and his associates examined risk factors for 30-day mortality among patients with candidemia who were treated at St. Luke’s between 2004 and 2015.

Among 228 patients with candidemia, 166 had CVcs, and 144 had their CVC removed. Among 71 patients who needed their CVC replaced, 15 died within 30 days. Central venous catheters were replaced less than 2 days after removal in 87% of patients who died and in 56% of survivors (P = .04). The association remained statistically significant after the researchers accounted for potential confounders (adjusted odds ratio, 5.9; 95% confidence interval, 1.2-29.7; P = .03).

Patients who died within 30 days of CVC replacement also were more likely to have hematologic malignancies (20% versus 4%), to have diabetes (13% vs. 11%), to be on hemodialysis (27% vs. 16%), and to have a history of recent corticosteroid exposure (20% versus 11%) compared with survivors, but none of these associations reached statistical significance. Furthermore, 30-day mortality was not associated with gender, age, Candida species, endophthalmitis, or type of antifungal therapy, said Dr. Matsuo, who spoke at the combined annual meetings of the Infectious Diseases Society of America, the Society for Healthcare Epidemiology of America, the HIV Medicine Association, and the Pediatric Infectious Diseases Society.

An infectious disease consultation was associated with about a 70% reduction in the odds of mortality in the multivariate analysis, but the 95% confidence interval crossed 1.0, rendering the link statistically insignificant.

Given the small sample size and single-center design of this study, its findings ideally should be confirmed in a larger randomized controlled trial, Dr. Matsuo said. The investigators also did not track whether patients were fungemic at the time of CVC replacement, he noted.

The researchers reported having no conflicts of interest.

Hospitalistsnews@frontlinemed.com
VA study finds high MRSA infection risk among those colonized with the bacterium

By Doug Brunk
Frontline Medical News

WASHINGTON DC – Patients colonized with methicillin-resistant Staphylococcus aureus (MRSA) have been shown to be at increased risk of MRSA infection, Dr. Chotiprasitsakul said. Therefore, she and her associates performed a study to evaluate the risk of MRSA infection in adult ICUs at Johns Hopkins Medicine in Baltimore.

But physicians often prescribed vancomycin to patients with positive MRSA cultures taken from sterile sites, including blood, catheter site, or bone. Overall, patients were in their mid-60s, and those who acquired MRSA and those who acquired it were more likely to be male, less likely to be married, and more likely to have health insurance. “The acquirers had by far the highest rates of predischarge infections, which peaked in 2010 and declined through 2015,” said Dr. Nelson, who also holds a faculty position in University of Utah’s department of internal medicine, in the division of epidemiology.

Specifically, the proportion of predischARGE MRSA infections, compared with 30 days post discharge, was 40.4% vs. 59.6%, respectively, in the no colonizer group; 63.4% vs. 57% in the importation group; and 48.8% vs. 29.5% in the acquisition group. The time from acquisition to infection was a mean of 8.7 days in the 30-day analysis and a mean of 22.4 days in the 90-day analysis. Multivariate logistic regression revealed that the impact of colonization status on infection was highest in the acquisition group, compared with the importation group. Specifically, the odds ratio of developing an MRSA infection among the importation group was 29.22 in the predischARGE period, OR 10.87 at postdischarge 30 days, and OR 7.64 at postdischarge 90 days (P < .001 for all). The OR among the acquisition group was 85.19 in the predischARGE period, OR 15.01 at postdischarge 30 days, and OR 8.26 at postdischarge 90 days (P < .001 for all).

Dr. Nelson acknowledged certain limitations of the study, including the fact that it only identified postdischarge infections that were detected in a VA facility. “This is likely an underestimate of postdischarge infections, because we’re missing the infections that occur in non-VA facilities.”

The research was presented at the annual meeting of the Infectious Diseases Society of America, the Society for Healthcare Epidemiology of America, and the HIV Medicine Association, and the Pediatric Infectious Diseases Society. “Also, patients can be colonized in many different body locations, but the VA protocol is that the surveillance test be done in the nostrils. So we may have misclassified patients who were colonized in a different body location as being uncolonized, when in fact they were colonized.”

The study was funded by a grant from the VA. Dr. Nelson reported having no financial disclosures.

Negative nasal swabs reliably predicted no MRSA infection

By Amy Karon
Frontline Medical News

WASHINGTON DC – Only 0.2% of intensive care–unit patients developed methicillin-resistant S. aureus infections after testing negative on nasal surveillance swabs, said Darunee Chotiprasitsakul, MD, of Johns Hopkins University in Baltimore.

But physicians often prescribed vancomycin in patients at very low risk for MRSA infections, she said. “In general, providers have responded favorably to acting upon this new information,” Dr. Cosgrove noted. Johns Hopkins Medicine has modified its antibiotic guidelines for antibiotic use, which are available in an app for Johns Hopkins providers, she said in an interview.

The investigation had no conflicts of interest. The event marked the combined annual meetings of the Infectious Diseases Society of America, the Society for Healthcare Epidemiology of America, the HIV Medicine Association, and the Pediatric Infectious Diseases Society.
Malpractice claims involving the use of electronic health records are on the rise, according to data from The Doctors Company.

Cases in which EHRs were a factor grew from 2 claims during 2007-2010 to 161 claims from 2011 to December 2016, according to an analysis published Oct. 16 by The Doctors Company, a national medical malpractice insurer.

Researchers with The Doctors Company analyzed closed claims during 2007-2016 in their nationwide claims database. Of 66 EHR-related claims from July 2014 through December 2016, 50% were associated with system factors, such as failure of drug or clinical decision support alerts, according to the study. Another 58% of claims involved user factors, such as copying and pasting progress notes. (Numbers do not add up to 100% because some claims had more than one cause.)

The majority of EHR-related claims during 2014-2016 stemmed from incidents in a doctor’s office or a hospital clinic (35%), while the second most common location was a patient’s room. Malpractice claims involving EHRs were most commonly alleged against ob.gyns, followed by family physicians, and orthopedists. Diagnosis errors and improper medication management were the top most frequent allegations associated with EHR claims.

The analysis shows that, while digitization of medicine has improved patient safety, it also has a dark side – as evidenced by the emergence of new kinds of errors, said Robert M. Wachter, MD, a professor at the University of California, San Francisco, and a member of the board of governors for The Doctors Company.

“This study makes an important contribution by chronicling actual errors, such as wrong medications selected from an autopick list, and helps point the way to changes ranging from physician education to EHR software design,” Dr. Wachter said in a statement.

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“This study makes an important contribution by chronicling actual errors, such as wrong medications selected from an autopick list, and helps point the way to changes ranging from physician education to EHR software design.”

—Robert M. Wachter, MD
tumor development in humans is unknown. Tumorigenicity of treatment and periodically.

symptoms consistent with cyanocobalamin deficiency are in the literature. This diagnosis should be considered if clinical

If signs or symptoms consistent with CLE or SLE are noted in milder than non-drug induced SLE. Onset of SLE typically occurred observed without organ involvement.

susceptibility is generally attributed to an idiopathic hypersensitivity reaction. Discontinue PROTONIX if acute interstitial nephritis develops.

Benzimidazole. Hypersensitivity reactions may include anaphylaxis, angioedema, urticaria, erythematous rash, and edema.

by organ involvement. In this trial, the adverse reactions that were reported more commonly (difference in ~4%) in the placebo group compared to the treatment group included headache, nasopharyngitis, and dry cough.

were treated once daily for 8 weeks with one of two dose levels of PROTONIX. In this study, the adverse reactions that were reported more frequently than in the placebo group included headache, nasal congestion, and diarrhea.

CONTRAINICATIONS

CONTRAINDICATIONS

Reproduction studies have been performed in rats at oral doses up to 88 times the recommended human dose and have revealed no evidence of impairment of male reproductive capacity. These results have not been studied in patients with hepatic impairment. In patients receiving PROTONIX for the treatment of Zollinger-Ellison syndrome, use of PROTONIX is contraindicated.

tumorigenicity shown for pantoprazole in rodents may not be predictive of human response. This drug should be used during pregnancy only if the potential benefit to the mother clearly justifies the potential risk to the fetus. There are, however, no adequate and well-controlled studies in pregnant women. In animal reproduction studies, no evidence of impaired fertility or harm to the fetus due to pantoprazole. There were no relevant fertility studies in male rats. There were no data on embryonic and fetal development in rats treated with pantoprazole, and the results in rats may not be extrapolated to humans.

and had not responded to non-pharmacologic interventions for 8 weeks. For safety findings see Adverse Reactions. Because those clinical trials included evidence of a dose response, the Trials were innovative regarding the clinical benefit of PROTONIX in the pediatric population. The effectiveness of PROTONIX in pediatric patients has not been established.

Although this data from the clinical trials support use of PROTONIX in the short term treatment of EE associated with pediatric patients 1 through 11 months of age, there is no commercial labeling information available for patients less than 5 years of age.

tions are listed below by body system:

Drowsiness, somnolence, hallucination, confabulation, delusion.

Pediatric Studies

In this study, the adverse reactions that were reported more commonly (difference in ~4%) in the placebo group compared to the treatment group included headache, nasopharyngitis, and dry cough.

with non-pharmacologic interventions for 8 weeks in an open-label phase, those patients were randomized in a double-blind, placebo-controlled, parallel-group trial to receive PROTONIX (20 mg or 40 mg) or placebo once daily for an additional 16 weeks. Onset of rash typically occurred within 4 to 12 weeks. The incidence of adverse reactions, such as skin reactions, in these trials, and retrospective analyses suggest that concomitant use of cyclosporine and pantoprazole may increase the risk of adverse reactions associated with cyclosporine. Because cyclosporine is extensively metabolized by the cytochrome P-450 system, concomitant administration with pantoprazole may increase the plasma concentration of cyclosporine to levels associated with toxicity. Although the data from the clinical trials support use of PROTONIX in the short term treatment of EE associated with pediatric patients 1 through 11 months of age, there is no commercial labeling information available for patients less than 5 years of age.

Patients with Hepatic Impairment

Doses higher than 40 mg/day have not been studied in patients with hepatic impairment. OVERDOSE

Patients treated receiving proton pump inhibitors, including PROTONIX, and concomitantly receiving ritonavir-boosted atazanavir or nelfinavir with proton pump inhibitors is not recommended. Interference with Antiretroviral Therapy

As the result of gastric pH alterations, pantoprazole can reduce the exposure to the active metabolite of clopidogrel or clopidogrel-IR and may lead to abnormal bleeding and even death. Patients treated with proton pump inhibitors and warfarin should be monitored for any signs of bleeding.

Cisapride, Procap, and Other Drugs for Which Gastric pH Can Affect Bioavailability

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Pediatric Patients

In the mean age group from 4.3 to 5.2 to 6.8 years, the placebo group experienced an incidence rate of 5% or less at 60% to 100% at steady state. Following once daily dosing of approximately 1.2 mg/kg of PROTONIX in infants 1 through 11 months of age, there was an increase in the mean percent gain from 0.1 to 0.8 at steady state and in the mean time that gastric pH was > 4.0 from 3% to 52% at steady state at 60% to 100%. In infants treated for at least 14 days using a single dose of 1.2 mg/kg the acid clearance (CL) is increased with high doses (median CL, 0.08 L/hr). These doses resulted in pharmacodynamic effects that are gastric but not anaphylactic. Following once daily dosing of 2.5 mg/kg of PROTONIX in infants 1 through 11 months of age, there was an increase in the mean percent gain from 0.1 to 0.8 at steady state and in the mean time that gastric pH was > 4.0 from 3% to 52% at steady state at 60% to 100%.

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**Ideal intubation position still unknown**

By Andrew D. Bowser

*Frontline Medical News*

FROM CHEST

In critically ill adults undergoing endotracheal intubation, the ramped position does not significantly improve oxygenation compared with the sniffing position, according to results of a multicenter, randomized trial of 260 patients treated in an intensive care unit.

Moreover, “[ramped] position appeared to worsen glottic view and increase the number of attempts required for successful intubation,” wrote Matthew W. Semler, MD, of Vanderbilt University Medical Center, Nashville, Tenn., and his coauthors (Chest. 2017 Oct. doi: 10.1016/j.chest.2017.03.061). The ramped and sniffing positions are the two most common patient positions used during emergency intubation, according to investigators. The sniffing position is characterized by apine torsos, neck flexed forward, and head extended, while ramped position involves elevating the torso and head.

Some believe the ramped position may offer superior anatomic alignment of the upper airway; however, only a few observational studies suggest it is associated with fewer complications than the sniffing position, the authors wrote.

Accordingly, they conducted a multicenter randomized trial with a primary endpoint of lowest arterial oxygen saturation, hypothesizing that the endpoint would be higher for the ramped position: “Our primary outcome of lowest arterial oxygen saturation is an established endpoint in ICU intubation trials, and is linked to periprocedural cardiac arrest and death,” they wrote.

The investigators instead found that median lowest arterial oxygen saturation was not statistically different between groups, at 93% for the ramped position, and 92% for the sniffing position (P = 0.27), published data show.

Further results showed that the ramped position appeared to be associated with poor intubation, writer Matthew W. Semler, MD, of Vanderbilt University Medical Center, Nashville, Tenn., and his coauthors (Chest. 2017 Oct. doi: 10.1016/j.chest.2017.06.002).

“The results diverge from [operating room] literature of the past 15 years that suggest that the ramped position is the preferred intubation position for obese patients or those with an anticipated difficult airway.”

This may have been caused by shortcomings of this study’s design and differences between it and other research exploring the topic of patient positioning during endotracheal intubation, they wrote.

The study lacked a prespecified algorithm for preoxygenation and the operators had relatively low amounts of experience with intubations. Finally, the beds used in this study could contribute to the divergences between this intensive care unit experience and the operating room literature. The operating room table is narrower, firmer, and more stable, while by contrast, the ICU bed is wider and softer, they noted.

“This may make initial positioning, maintenance of positioning, and accessing the patient’s head more difficult.”

Nevertheless, “[this] important study provides ideas for further study of optimal positioning in the ICU and adds valuable data to the sparse literature on the subject in the ICU setting,” they concluded.

James Aaron Scott, DD, Jens Matthias Walz, MD, FCCP, and Stephen D. Heard, MD, FCCP, are in the department of anesthesiology and perioperative medicine, UMass Memorial Medical Center, Worcester, Mass. The authors reported no conflicts of interest. These comments are based on their editorial.

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**Valuable new data amid sparse literature**

Editorialists praised the multicenter, randomized design of this study, and its total recruitment of 260 patients. They also noted several limitations of the study that “could shed some light” on the group’s conclusions (Chest. 2017 Oct. doi: 10.1016/j.chest.2017.06.002).

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**Thirty-one percent of multidrug-resistant infections were community acquired**

By Amy Karon

*Frontline Medical News*

AT IDWEEK 2017

SAN DIEGO – Thirty-one percent of multidrug-resistant infections were acquired from the community in a prospective single-center study of a regional hospital.

“Multidrug-resistant organisms have escaped the hospital,” Nicholas A. Turner, MD, of Duke University Medical Center, Durham, N.C., and his associates wrote in a poster presented at an annual scientific meeting on infectious diseases. “Community acquisition of multidrug-resistant organisms [MDROs] is increasing, not just within referral centers but also community hospitals. Providers will need to be increasingly aware of this trend.”

In their study, MDROs cause about 2,000,000 illnesses and 23,000 deaths annually in the United States, according to the Centers for Disease Control and Prevention. Until recently, MDROs were considered a plague of hospitals. Amid reports of increasing levels of community acquisition, the researchers studied adults admitted to a 202-bed regional hospital between 2013 and 2016. They defined MDROs as infections of methicillin-resistant *Staphylococcus aureus* (MRSA), gram-negative bacteria resistant to more than three antimiocrobial classes, vancomycin-resistant *Enterococcus* (VRE), or diarrhea with a positive stool culture for *Clostridium difficile*.

A total of 285 patients had MDROs. *C. difficile* (45%) and MRSA (35%) were most common. In all, 88 (31%) MDROs were community-acquired—that is, diagnosed within 48 hours of admission in patients who were not on dialysis, did not live in a long-term care facility, and had not been hospitalized for more than 48 hours in the past 90 days. A total of 36% of MRSA and multidrug-resistant gram-negative infections were community acquired, as were 25% of *C. difficile* infections. There were only 10 VRE infections, of which none were community-acquired.

After the researchers controlled for clinical and demographic variables, the only significant predictor of community-acquired MDRO was cancer (odds ratio, 2.3; 95% confidence interval, 1.02-5.2). Surgery within the previous 12 months was significantly associated with hospital-acquired MDRO (OR, 0.16; 95% CI, 0.03-0.5).

Traditional risk factors for community-acquired MRSA or *C. difficile* infection did not achieve statistical significance in the multivariable analysis, the researchers noted.

“Similar to data from large tertiary care centers, our findings suggest that MDROs are increasingly acquired in the community setting, even at smaller regional hospitals,” they concluded. “Further study is needed to track the expansion of MDROs in the community setting.”

Dr. Turner reported having no conflicts of interest.
1. Check orthostatic vital signs within 1 minute

CLINICAL QUESTION: What is the relationship between timing of measurement of postural blood pressure (BP) and adverse clinical outcomes?

BACKGROUND: Guidelines recommend measuring postural BP after 3 minutes of standing to avoid potentially false-positive readings obtained before that interval. In SPRINT, orthostatic hypotension (OH) determined at 1 minute was associated with higher risk of emergency department visits for OH and syncope. Whether that finding was because of the shortened interval of measurement is uncertain.

STUDY DESIGN: Atherosclerosis Risk in Communities Study prospective cohort.

SETTING: Four U.S. communities over 2 decades.

SYNOPSIS: In a cohort of 11,429 middle-aged patients, upright BP was measured every 25 seconds over a 5-minute interval after participants had been supine for 20 minutes. About 2–3 seconds elapsed between the end of one BP measurement and the initiation of the next. OH was defined as a 20–mm Hg drop in systolic BP. After researchers adjusted for covariates, OH at 30 seconds and 1 minute were associated with higher odds of dizziness, fracture, syncope, death, and motor vehicle crashes recorded over a median follow-up of 23 years. Measurements after 1 minute were not reliably associated with any adverse outcomes.

BOTTOM LINE: Measuring OH at 30 seconds and 1 minute reliably identifies patients at risk for associated adverse clinical outcomes.

CITATION: Jurascheck SP et al. Association of history of dizziness and long-term adverse outcomes with early vs. later orthostatic hypotension times in middle-aged adults. JAMA Intern Med. 2017 Sep 1;177(9):1316-23.

2. Prescribe antibiotics wisely

CLINICAL QUESTION: What is the incidence of antibiotic-associated adverse drug events (ADEs) among adult inpatients?

BACKGROUND: Antibiotics are used widely in the inpatient setting, although 20–30% of inpatient antibiotic prescription are estimated to be unnecessary. Data are lacking about one in five antibiotic prescriptions may not be clinically indicated.

STUDY DESIGN: Retrospective cohort study.

SETTING: A single, 1,194-bed academic tertiary medical center.

SYNOPSIS: Off the 5,579 patients admitted to four inpatient medical services between September 2013 and June 2014, 1,488 (27%) received antibiotics for at least 24 hours. Patients were followed through admission and out to 90 days. A total of 324 unique antibiotic-associated ADEs occurred among 298 (20%) patients within 90 days of initial therapy. The overall rate of antibiotic-associated ADEs was 22.9/10,000 person-days. The investigators determined that 287 (19%) of antibiotic regimens were not clinically indicated, and among those, there were 56 (20%) ADEs. The most common 30-day ADEs were gastrointestinal, renal, and hematologic.

BOTTOM LINE: Antibiotic associated ADEs occur in about one in five inpatients, and about one in five antibiotic prescriptions may not be clinically indicated.


3. Rivaroxaban lowers cardiovascular risk but increases bleeding risk

CLINICAL QUESTION: Is rivaroxaban alone or in combination with aspirin more effective than aspirin alone for secondary prevention of ischemic stroke.

BACKGROUND: Previous studies have shown that patients on long-term anticoagulation who undergo PCI can be managed on oral anticoagulants and PCI2 inhibitors with lower bleeding rates than do those who receive triple therapy.

STUDY DESIGN: Randomized, controlled trial.

SETTING: 414 sites in 41 countries.

SYNOPSIS: In 2,725 patients with nonvalvular atrial fibrillation undergoing PCI, low-dose (110 mg, twice daily) and high-dose (150 mg, twice daily) dabigatran plus a P2Y12 inhibitor lowered absolute bleeding rates by 11.3% and 3.5%, respectively, compared with triple therapy. Rates of thrombosis, death, and unexpected revascularization as a composite endpoint were noninferior to triple therapy for both dabigatran doses studied. In patients on dabigatran for atrial fibrillation, it is reasonable to continue dabigatran and add a single PCI2 inhibitor (clopidogrel or ticagrelor).

4. Triple therapy in question

CLINICAL QUESTION: In patients with nonvalvular atrial fibrillation undergoing percutaneous coronary intervention (PCI), is dabigatran plus a P2Y12 inhibitor safer than, and as efficacious as, triple therapy with warfarin?

BACKGROUND: Recent studies have shown that patients on long-term anticoagulation who undergo PCI can be managed on oral anticoagulants and PCI2 inhibitors with lower bleeding rates than do those who receive triple therapy.

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Invasive fungal infection (IFI) can have a profound impact on your patients

IFI can complicate existing immunosuppression and/or serious illness, which can have a devastating impact on patient outcomes 1,2

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Optimal rate of flow for high-flow nasal cannula in young children

Dr. Stubblefield is a pediatric hospitalist at Nemours/Alfred I. duPont Hospital for Children in Wilmington, Del., and clinical assistant professor of pediatrics at Jefferson Medical College in Philadelphia.

By Matthew Hoegh, MD

5 Brief preoperative score predicts postoperative complications in the elderly

CLINICAL QUESTION: Can a geriatric assessment scale, performed by nonphysician surgical staff, be used to predict postoperative complications in the elderly?

BACKGROUND: Elective operations have become increasingly more common in the elderly. This population is at a higher risk for postsurgical complications. Previous research into preoperative risk assessment relied on geriatricians, of whom there is a national shortage.

STUDY DESIGN: Prospective cohort study.

SETTING: Preoperative surgery clinics at the University of Michigan Health System.

SYNOPSIS: A total of 736 elderly patients had a preoperative Vulnerable Elders Surgical Pathways and Outcomes Assessment (VESPA) administered by a surgical physician assistant in clinic. VESPA assessed activities of daily living, history of falling or gait impairment, and depressive symptoms. Patients underwent a Mini-Cog examination and a Timed Up and Go assessment. Patients were asked whether they expected to manage postoperative self-care alone. Overall, 25.3% of patients had geriatric or surgical complications. The VESPA score predicted postoperative complications (area under the curve, 0.76).

More specifically, procerebral difficulties with activities of daily living, anticipated self-care difficulty, a Charlson Comorbidity index of 2 or greater, male sex, or higher surgical relative value units were all independently associated with postoperative complications.

BOTTOM LINE: Elderly patients at an increased risk of postoperative complications can be identified by nonphysician staff using the VESPA preoperative assessment.


6 Risk-stratification tool predicts severe hypoglycemia

CLINICAL QUESTION: Can a clinical tool be developed to predict severe hypoglycemia in at-risk patients with type 2 diabetes (T2D)?

BACKGROUND: Severe hypoglycemia caused by glucose-lowering medications is a known public health and patient safety issue. Identifying patients with T2D at risk of severe hypoglycemia might facilitate interventions to offset that risk.

STUDY DESIGN: Prospective cohort study.

SETTING: Kaiser Permanente Northern California (derivation and internal validation cohorts); Veterans Affairs Diabetes Epidemiology Cohort and Group Health Cooperative (external validation cohorts).

SYNOPSIS: Through EHR data, 206,435 eligible patients with T2D were randomly split into derivation (80%) and internal validation (20%) samples. EHR data were reviewed for preselected clinical risk factors for hypoglycemia with a primary outcome of ED visit or hospital admission with a primary diagnosis of hypoglycemia over the ensuing year. A predictive tool was built based on six variables: prior hypoglycemia episodes, number of ED encounters for any reason in the prior year, insulin use, sulfonylurea use, presence of severe or end-stage kidney disease, and age. Predicted 12-month risk was categorized as high (greater than 5%), intermediate (1%-5%) or low (less than 1%). In the internal validation sample, 2.0%, 10.7%, and 87.3% of patients were categorized as high, intermediate, and low risk, respectively. Observed 12-month hypoglycemia-related health care utilization rates were 6.7%, 1.4%, and 0.2%, respectively. The external validation cohorts performed similarly.

BOTTOM LINE: A simple tool using readily available data can be used to estimate the 12-month risk of severe hypoglycemia in patients with T2D.

CITATION: Karter AJ et al. Development and validation of a tool to identify patients
7 NSAIDs reduce spinal pain but are not “clinically important” 

**CLINICAL QUESTION:** Are nonsteroidal anti-inflammatory drugs effective at reducing neck and low back pain? 

**BACKGROUND:** Although neck and low back pain are leading causes of pain and disability, there is no consensus first-line pharmacologic therapy for treatment. Recent research has pointed to acetaminophen as being ineffective, which – in combination with increased awareness of opioid dependency and adverse risks – could lead to greater use of NSAIDs. 

**STUDY DESIGN:** Systematic review and meta-analysis. 

**SETTING:** Randomized controlled trials. 

**SYNOPSIS:** Researchers used MEDLINE, EMBASE, CINAHL, CENTRAL, and LILACS to select 35 randomized, placebo-controlled trials evaluating the impact of NSAIDs on reducing spinal pain and disability from a total of 302 full-text articles. Trial data were pooled based on follow-up time and outcomes. Pain and disability outcomes were converted to a 100-point scale with a 10-point difference between groups defined as “clinically important.” NSAIDs were found to offer greater pain reduction than placebo in the immediate (number needed to treat, 5; 95% confidence interval, 4-6) and short (NNT, 6; 95% CI, 4-10) range. However, this effect did not meet the specified 10-point difference to support “clinical importance,” despite having favorable numbers needed to treat. Limited corresponding safety analysis did not find significant adverse event rate differences other than increased reporting of gastrointestinal symptoms. 

**BOTTOM LINE:** NSAIDs reduce spinal pain, compared with placebo, with low numbers needed to treat, but nevertheless were not determined to have a “clinically important” effect. 


Dr. Hoegh is a hospitalist at the University of Colorado School of Medicine. 

By Bryan Lublin, MD, MPH 

**8 Cost transparency fails to affect high-cost medication utilization rates** 

**CLINICAL QUESTION:** Does cost messaging at the time of ordering reduce prescriber use of high-cost medications? 

**BACKGROUND:** Overprescribing expensive medications contributes to inpatient health care expenditures and may be avoidable when low-cost alternatives are available. 

**STUDY DESIGN:** Retrospective, observational analysis of a quality improvement project. 

**SETTING:** Single center, 1,145-bed, tertiary-care academic medical center. 

**SYNOPSIS:** Nine medications were chosen by committee to be targeted for intervention: intravenous voriconazole, IV levetiracetam, IV levothyroxine, IV linezolid, IV eculizumab, IV panoprazole, IV calcium, inhaled ribavirin, and IV mycophenolate. The costs for these nine medications plus lower-cost alternatives were displayed for providers in the order entry system after about 2 years of baseline data had been collected. There was no change in the number of orders or ordering trends for eight of the nine high-cost medications after the intervention. Only ribavirin was ordered less after cost messaging was implemented (16.3 fewer orders per 10,000 patient-days). Lower IV pantoprazole use (73% reduction), correlated with a national shortage unrelated to the study intervention, a potential confounder. Data on dosing frequency and duration were not collected. 

**BOTTOM LINE:** Displaying medication costs and alternatives did not alter the use of these nine high-cost medications. 


CONTINUED ON FOLLOWING PAGE
9 U.S. hospitalists estimate significant resources spent on defensive medicine

**CLINICAL QUESTION:** What percent of inpatient health care spending by hospitalists can be attributed to defensive medicine?

**BACKGROUND:** Defensive medicine contributes an estimated $45 billion to annual U.S. health care expenditures. The prevalence of defensive medicine among hospitalists is unknown.

**STUDY DESIGN:** Survey of U.S.-based hospitalists.

**SETTING:** National survey sent to 1,753 hospitalists from all 50 states identified through the Society of Hospital Medicine database of members and meeting attendees.

**SYNOPSIS:** The survey contained two primary topics: an estimation of defensive spending and liability history. The hospitalists, who had an average of 11 years in practice, completed 1,020 surveys. Participants estimated that defensive medicine accounted for 37.5% of all health care costs. Decreased estimate rates were seen among VA hospitalists (5.5% less), male respondents (35.4% vs. 39.4% for female), non-Hispanic white respondents (32.5% vs. 44.7% for other) and having more years in practice (decrease of 3% for every 10 years in practice). One in four respondents reported being sued at least once, with higher risk seen in those with greater years in practice. There was no association between liability experience and perception of defensive medicine spending. Differences between academic and community settings were not addressed. Because only 30% of practicing hospitalists are members of SMH, it may be difficult to generalize these findings.

**BOTTOM LINE:** Hospitalists perceive that defensive medicine is a major contributor to inpatient health care expenditures.


Dr. Lublin is a hospitalist at the University of Colorado School of Medicine.

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**IN THE LITERATURE**

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**Short Takes**

**Postoperative opioids often underutilized**

Between 67% and 92% of patients report postoperative opioid oversupply, defined as filled but unused opioid prescriptions or unfilled opioid prescriptions. Half of the filled prescriptions were unused, with the majority reporting that the narcotics were not stored in locked containers.


**5-hour protocol for contrast allergy safe and effective**

Observational study showing post-Affordable Care Act reductions in 30-day hospital risk-adjusted readmission rates for heart failure, acute MI, and pneumonia among Medicare beneficiaries did not increase but were weakly associated with decreased 30-day posthospital discharge risk-adjusted mortality.


**Poor food intake and chills predict true bacteremia in hospitalized patients**

Observational study showing that poor food consumption had a sensitivity of 93.7%, and shaking chills a specificity of 95.1% in diagnosing true bacteremia based on blood culture results.


**Lower readmission rates do not lead to increased postdischarge mortality at 30 days**

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Opioid management protocol lowered trauma patient medication use

A targeted pain management protocol for trauma patients addressed the problem of overprescribing of opioids.

By Eli Zimmerman

AT THE AAST ANNUAL MEETING

BALTIMORE – A pain management protocol implemented in a trauma service reduced opioid intake in trauma patients while improving patient satisfaction, according to a retrospective study.

The opioid epidemic continues to grow every day, partly as a result of irresponsible overprescribing of opioid medications, according to Jessica Gross, MB BAo BCh, FACS, a trauma surgeon from Wake Forest (N.C.) Baptist Health at the American Association for the Surgery of the Trauma annual meeting. Dr. Gross and her colleagues developed a pain management protocol (PMP) to provide adequate pain control while using fewer opioids in the postdischarge setting. They tested their PMP through a retrospective chart review of 498 patients admitted to the trauma service between January 2015 and December 2016, half of which were admitted before the PMP was initiated and half of which were admitted afterward.

The PMP involved a stepped approach to treating pain, with acetaminophen or ibuprofen as needed for mild pain, one 5-mg tablet of oxycodone/acetaminophen every 6 hours for moderate pain, two tablets for severe pain, and 50-100 mg of tramadol every 6 hours for breakthrough pain. Counseling services for patients who were found to be in danger of substance use were provided in the hospital, and at discharge, patients received a weaning plan for their medication, according to Dr. Gross.

If the short-acting medications were found to be inadequate to control pain, patients were given slow-release pain medications as needed. Average total medication, including at discharge and for refills, prescribed after PMP initiation was 1,242 morphine milligram equivalents (MME), compared with 2,421 MME prior to the protocol (P<.0001).

After the protocol was implemented, Dr. Gross and her colleagues found the number of patients prescribed a refill dropped from 39.7% to 28.1%, with the size of these refills dropping from 1,032 MME to 213 MME on average.

“By having a comprehensive pain management protocol, we can reduce the amount of pain medications we prescribe for outpatient use, from discharge from the trauma service,” Dr. Gross said.

In response, Dr. Gross said doctors on the floor reviewed patients to make sure they were receiving all doses of pain medications. If doctors felt the patient’s pain regimen was adequate, they documented it in the electronic medical record for fear of repercussions.

Oxford

“By having a comprehensive pain management protocol, we can reduce the amount of pain medications we prescribe for outpatient use, from discharge from the trauma service.”
Abnormal potassium plus suspected ACS spell trouble

By Bruce Jancin

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**AT THE ESC CONGRESS 2017**

**BARCELONA** – A serum potassium level of at least 5.0 mmol/L or 3.5 mmol/L or less at admission for suspected acute coronary syndrome is a red flag for increased risk of in-hospital mortality and cardiac arrest, according to a Swedish study of nearly 33,000 consecutive patients.

That’s true even if, as often ultimately proves to be the case, the patient turns out not to have ACS, Jonas Faxén, MD, of the Karolinska Institute, Stockholm, reported at the annual congress of the European Society of Cardiology.

“This study highlights that, if you have a patient in the emergency department with a possible ACS and potassium imbalance, you should really be cautious,” Dr. Faxén said.

He reported on 32,955 consecutive patients admitted to Stockholm County hospitals for suspected ACS during 2003-2014 and thereby enrolled in the SWEDHEART (Swedish Web System for Enhancement and Development of Evidence-Based Care in Heart Disease Evaluated According to Recommended Therapies) registry.

Overall in-hospital mortality was 2.7%. In-hospital cardiac arrest occurred in 1.5% of patients. New-onset atrial fibrillation occurred in 2.4% of patients. These key outcomes were compared between the reference group – defined as patients with an admission serum potassium of 3.5 to less than 4.0 mmol/L – and patients with an admission serum potassium above or below those cutoffs.

In a multivariate logistic regression analysis adjusted for 24 potential confounders, including demographics, presentation characteristics, main diagnosis, comorbid conditions, medications on admission, and estimated glomerular filtration rate, patients with a serum potassium of 5.0 or less than 3.5 mmol/L were at 1.8-fold increased risk of in-hospital mortality. Those with a potassium of 5.5 mmol/L or greater were at 2.3-fold increased risk.

In contrast, a low rather than a high serum potassium was an independent risk factor cardiac arrest. An admission potassium of 5.0 or less than 3.5 mmol/L carried a 1.8-fold increased risk of in-hospital cardiac arrest, while a potassium of less than 5.0 was associated with a 2.7-fold increased risk.

A serum potassium below 3.0 mmol/L at admission was associated with a 1.7-fold increased risk of new-onset atrial fibrillation.

These elevated risks of bad outcomes didn’t differ significantly between patients with ST-elevation MI, non-STEMI ACS, and those whose final diagnosis was not ACS, Dr. Faxén noted.

Session cochair David W. Walker, MD, medical director of the East Sussex (England) Healthcare NHS Trust, observed, “When I was a junior doctor I was always taught that when patients came onto coronary care we had to get their potassium to 4.5-5.0 mmol/L. I think you might want to change that advice now.”

“The implication would be that, if you intervene quickly in a patient with an abnormal potassium level, you might make a difference. Clearly, a potassium that’s too high is much worse than too low, since patients with in-hospital cardiac arrest can often be resuscitated,” Dr. Walker commented.

Dr. Faxén reported having no financial conflicts regarding his study, which was funded by the Swedish Heart and Lung Foundation and the Stockholm County Council.

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LVAD use soars in elderly Americans

By Mitchel L. Zoler

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**AT THE HFSA ANNUAL SCIENTIFIC MEETING**

**DALLAS** – The percentage of left ventricular assist devices placed in U.S. heart failure patients at least 75 years of age jumped sharply during 2003-2014, and concurrently the percentage of elderly patients who receive an LVAD as destination therapy.

The percentage of LVAD recipients 75 years of age or older rose from 726 placed in 2003 to 3,855 placed in 2014, a greater than 17-fold increase.

In actual numbers, LVAD placement into elderly patients jumped from 23 in 2003 to 66% in 2014, said Dr. Rali, a cardiologist at the Karolinska Institute – defined as patients with an admission serum potassium of 3.5 to less than 4.0 mmol/L – and patients with an admission serum potassium above or below those cutoffs.

In the multivariate logistic regression analysis, elderly patients at least 75 years jumped from 23 in 2003 to 66% in 2014, said Dr. Rali, a cardiologist at the Karolinska Institute – defined as patients with an admission serum potassium of 3.5 to less than 4.0 mmol/L – and patients with an admission serum potassium above or below those cutoffs.

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For further consideration, please send your CV to:
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Penn State Milton S. Hershey Medical Center
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Hershey, PA 17033
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- Additional stipend for nights
- Attractive base compensation with incentive
- Excellent benefits, including malpractice, moving expenses, CME

SLUHN is a non-profit network comprised of physicians and 7 hospitals, providing care in eastern Pennsylvania and western NJ. We employ more than 500 physician and 200 advanced practitioners. St. Luke’s currently has more than 180 physicians enrolled in internship, residency and fellowship programs and is a regional campus for the Temple/St. Luke’s School of Medicine. Visit www.slnh.org

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Choosing location after discharge wisely
A novel, important skill for the inpatient team

By Win Whitcomb, MD, MHM

Of all the care decisions we make during a hospital stay, perhaps the one with the biggest implications for cost and quality is the one determining the location to which we send the patient after discharge. Yet ironically, we haven’t typically participated in this decision, but instead have left it up to case managers and others to work with patients to determine discharge location. This is a missed opportunity, as patients first look to their doctor for guidance on this decision. Absent such guidance, they turn to other care team members for this conversation. With a principal focus on hospital length of stay, we have prioritized when patients are ready to leave over where they go after they leave.

Discharge location has a large impact on quality and cost. The hazards of going to a post-acute facility are similar to the hazards of hospitalization—delirium, falls, infection, and deconditioning are well-documented adverse effects. We may invoke the argument that, all things being equal, a facility is safer than home. Yet, there is scant evidence supporting this assertion. At the same time, when contemplating a home discharge, a capable caregiver is often in short supply, and patients requiring assistance may have few options but to go to a facility.

In terms of cost during hospitalization and for the 30 days after discharge, for common conditions such as pneumonia, heart failure, chronic obstructive pulmonary disease, or major joint replacement, Medicare spends nearly as much on post-acute care—home health, skilled nursing facilities, inpatient rehabilitation, long-term acute care hospitals—as for hospital care. Further, an Institute of Medicine analysis showed that geographic variation in post-acute care spending is responsible for three-quarters of all variation in Medicare spending. Such variation raises questions about the rigor with which post-acute care decisions are made by hospital teams. Perhaps most striking of all, hospitalist care (versus that of traditional primary care providers) has been associated with excess discharge rates to skilled nursing facilities, and savings that accrue under hospitalists during hospitalization are more than outweighed by spending on care during the post-acute period.

Identifying patient factors informing an optimal discharge location may represent a new skill set for many hospitalists and underscores the value of collaboration with team members who can provide needed information. In April, the Society of Hospital Medicine published the Revised Core Competencies in Hospital Medicine. In the Care of the Older Patient section, the authors state that hospitalists should be able to “describe post-acute care options that can enable older patients to regain functional capacity.” Inherent in this competency is an understanding of not only patient factors in post-acute care location decisions, but also the differing capabilities of home health agencies, skilled nursing facilities, inpatient rehabilitation facilities, and long-term acute care hospitals.

References

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Framework for selecting appropriate discharge location

Patient Independence
• Can the patient perform activities of daily living?
• Can the patient ambulate?
• Is there cognitive impairment?

Caregiver Availability
• If the patient needs it, is a caregiver who is capable and reliable available? If so, to what extent is s/he available?

Therapy Needs
• Does the patient require physical, occupational, or speech therapy?
• How much and for how long?

Skilled Nursing Needs
• What, if anything, does the patient require in this area?
For example, a new PEG tube, wound care, IV therapies, etc.

Social Factors
• Is there access to transportation, food, and safe housing?

Home Factors
• Are there stairs to enter the house or to get to the bedroom or bathroom?
• Has the home been modified to accommodate special needs? Is the home inhabitable?