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# Hospitalists finding their role in hospital quality ratings

CMS considers how to assess  
socioeconomic factors

By Larry Beresford

**S**ince 2005 the government website Hospital Compare has publicly reported quality data on hospitals, with periodic updates of their performance, including specific measures of quality. But how accurately do the ratings reflect a hospital's actual quality of care, and what do the ratings mean for hospitalists?

Hospital Compare provides searchable, comparable information to consumers on reported quality of care data submitted by more than 4,000 Medicare-certified hospitals, along with Veterans Administration and military health system hospitals. It is designed to allow consumers to select hospitals and directly compare their mortality, complication, infection, and other performance measures on conditions such as heart attacks, heart failure, pneumonia, and surgical outcomes.

The Overall Hospital Quality Star Ratings, which began in 2016, combine data from more than 50 quality measures publicly reported on Hospital Compare into an overall rating of one to five stars for each hospital.

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Courtesy Rush Production Group



Dr. Suparna Dutta

## CEO CORNER

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# The Hospitalist

# The SHM Fellow designation: Class of 2020

Society invites applicants in multiple membership categories

By Caitlin Cowan

In an industry brimming with opportunity and ongoing transformation, it is easy to feel indecisive about your next professional step when ample career paths exist in hospital medicine.

Yingkei Hui, MD, FHM, is an academic hospitalist at St. Vincent Indianapolis, and a Society of Hospital Medicine member since 2015. Seeking to set herself apart as an aspiring patient safety and quality improvement leader while continuing her professional development, she looked to SHM's Fellows designation as the next piece of her career puzzle.

With more than 14 years of experience in the health care industry, Dr. Hui fell in love with the specialty because of its flexibility and patient-centric focus.

"I have a broad interest in medicine and want to learn everything under the larger umbrella of medicine," she said. "I also find myself deeply in love with hospital medicine because it provides me with the opportunity to participate in various hospital committees and allows me to enjoy my practice from a macroscopic view of U.S. health care transformation – especially given the popular value-based patient care approach from recent years."

Dr. Hui's breadth of experience has allowed her to gain a unique set of perspectives and experiences from international and domestic standpoints. From attending medical school at the Chinese University of Hong Kong to completing her residency on the East Coast at Pennsylvania Hospital – part of the University of Pennsylvania Health System – Dr. Hui has held active medical licenses in New Jersey and, currently, Indiana.

"SHM's Fellows designation allows me to chal-

lenge myself in setting my career goal as a patient safety and quality improvement leader in my program," she said. "It means a lot to me as it is a stand-out recognition of my participation in and contribution to patient care in my institution."

When asked about the most rewarding aspect of being a part of the hospital medicine community, Dr. Hui identified "satisfaction in the teaching role." She said she is "motivated by the holistic care for the patients, the integration of medical knowledge and coordination of care, and also the opportunity to conduct quality improvement projects."

Motivated by her colleagues, Dr. Hui credits SHM with providing her with the inspiration and tools to push herself and advance her career in hospital medicine.

"I enjoy immersing myself in SHM's patient safety and quality improvement resources; they are perfect for frontline hospitalists and also provide CME [continuing medical education]," she noted. "My previous medical directors were all Senior Fellows; they are my role models and continue to inspire me throughout my career."

Dr. Hui also said that networking within the SHM community has been encouraging. "I've met talented Fellows at a number of hospital medicine annual conferences who have inspired me in the areas of patient care, education, and health promotion," she explained. "Some of them have extensive publications; they are truly amazing physicians. SHM's annual conference provides great opportunities for networking."



Dr. Hui

As Dr. Hui continues to progress her career in hospital medicine, she believes that communication is a key pillar in her success. "Be a true listener and fill your heart with compassion, empathy, and courage," she said. "Recognize your role as the enabler for the patients to improve their health."

Completing her Master's degree in Population Health Management at Johns Hopkins Medicine and expecting to graduate in May 2020, Dr. Hui is the designer of system safety (comprised of patient safety, second victim safety, quality improvement, and just culture) in the academic setting of her residency program. She is also chairing a pioneer project for the St. Vincent IM residency program.

Dr. Hui plans to apply for a Senior Fellow designation with SHM in the future.

If you would like to join Dr. Hui and other like-minded hospital medicine leaders in taking your career to the next level, SHM is currently recruiting for the Fellows and Senior Fellows: Class of 2020. Applications are open until Nov. 29 of this year. These designations are available across a variety of membership categories, including physicians, nurse practitioners, physician assistants, and qualified practice administrators. Dedicated to promoting excellence, innovating, and improving the quality of patient care, Fellows designations provide members with a distinguishing credential as established pioneers in the industry.

For more information and to review your eligibility, visit [hospitalmedicine.org/fellows](https://hospitalmedicine.org/fellows).

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

## Glycemic Control eQUIPS yields success at Dignity Health Sequoia Hospital

Glucometrics database aids tracking, trending

In honor of Diabetes Awareness Month, *The Hospitalist* spoke with Stephanie Dizon, PharmD, BCPS, director of pharmacy at Dignity Health Sequoia Hospital in Redwood City, Calif. Dr. Dizon was the project lead for Dignity Health Sequoia's participation in SHM's Glycemic Control eQUIPS program. The hospital was recognized as a top performer in the program.

The eQUIPS program offers a virtual library of resources, including a step-by-step implementation guide that addresses issues that range from subcutaneous insulin protocols to care coordination and good hypoglycemia management. The program also

offers access to a data center for performance tracking and benchmarking.

### What inspired your institution to enroll in the GC eQUIPS program?

Sequoia Hospital started in this journey to improve overall glycemic control in a collaborative with eight other Dignity Health hospitals in 2011. At the time, Dignity Health saw variations in insulin management and adverse events, and it inspired this group to review their practices and try to find a better way to standardize them.

Enrollment in the GC eQUIPS program helped Sequoia Hospital

efficiently analyze data that would otherwise be too large to manage. By tracking and trending these large data sets, it helped us not only to see where the hospital's greatest challenges are in glycemic control but also to observe what the impact is when making changes.

We were part of a nine-site study that proved the effectiveness of GC eQUIPS and highlighted the collective success across the system.

### What did you find most useful in the suite of resources included in eQUIPS?

The benchmarking webinars provided by Greg Maynard, MD, have

been especially helpful. The glucometrics database is helpful for tracking and trending – we share these reports on a monthly basis with nursing and provider leadership. Being able to benchmark ourselves with other hospitals pushes us to improve. Having access to the program tools is very powerful for data analysis and benchmarking. It allows people at an institution to focus on day-to-day tasks, clinical initiatives, and building a culture that can make a program successful instead of focusing on data collection.

For more information, or to enroll in eQUIPS, visit [hospitalmedicine.org/gc](https://hospitalmedicine.org/gc).

# The 2018 SoHM Report: Takeaways for pediatric hospitalists

Increased complexity in workforce staffing

**By Sandra Gage, MD, PhD,  
SFHM**

In November 2019, more than 1,500 pediatric hospitalists will be first to take the subspecialty exam approved by the American Board of Pediatrics (ABP) for certification in pediatric hospital medicine (PHM). This landmark signifies the recognition of hospital medicine as an essential component of the health care landscape and further acknowledges the importance of our expanding field.

But recent controversy over the requirements set by the ABP to sit for the exam has highlighted the new considerations for practice management that will be associated with this change. The need to analyze and understand how PHM programs function has never been more important for hospital medicine groups that care for children. This information is essential if they are to remain nimble in their approach to the changes that will occur in the years ahead.

To understand the impact that the new subspecialty board exam will have on groups that care for children, we need to first understand the criteria for eligibility. As for all ABP subspecialty boards, applicants must be Pediatric Board certified. The ABP has established three pathways by which practitioners can attain eligibility to sit for the PHM exam.<sup>1</sup> Most currently practicing hospitalists have applied to take the exam under the "practice pathway," which will be available temporarily to allow candidates to apply for the certifying exam based on experience rather than fellowship training. This temporary period will span the first three examination cycles (2019, 2021, 2023). The requirements for inclusion via this pathway, recently modified by the ABP in response to concerns voiced by the PHM community at large,<sup>2</sup> consist of the following:

- Practice period of 4 years (with a start date of July 2015) to be eligible for the November 2019 exam.
- Work hours for all PHM professional activities of more than 900-1,000 hours/year.
- Patient care hours in PHM of more

than 450-500 hours per year, every year for the preceding 4 years.

- Scope of practice covering the full range of hospitalized children.
- Practice experience and hours acquired in the United States or Canada.

children are not pediatrics board certified and therefore will not be eligible to sit for the subspecialty exam.

## Question 2: What portion of the current PHM new hires are fellowship trained?

The 2018 *State of Hospital Medicine Report* notes that over 50% of new physicians joining a group treating only children come directly from residency, while only 5.1% come from a hospital medicine fellowship. For groups that treat adults and children, this percentage is even more significant, with 63% coming directly from residency and only 2.2% coming from a fellowship program.

The residents who recently graduated in 2019 are the last to be eligible to meet the practice duration criteria (4 years) during the "practice pathway" temporary period, thereby allowing them to sit for the subspecialty board exam without completing a fellowship. Recent surveys have shown that over 10% of graduating residents in pediatrics plan to pursue a career in PHM (over 280 respondents); however, only under 75 fellows graduate from PHM fellowships each year.<sup>3</sup> As the current number of fellowship positions in PHM are not adequate to meet the demand of the rapidly expanding workforce, groups treating children will need to continue to fill staff vacancies with variably trained clinicians.

In the years to come, information from the *State of Hospital Medicine Report* will be increasingly important, as programs that care for children meet the challenge of blending their workforce to include members with variable board certification and eligibility.

## Question 3: How do the "patient care hours" and "work hours for all PHM activities" requirements affect currently practicing hospitalists in terms of their board eligibility?

Because of rigorous ABP criteria to sit for the PHM subspecialty exam, especially those regarding the minimum clinical and overall work hours in the care of children, many part



This set of criteria raises several questions about the eligibility of the physicians currently caring for children in the hospital setting. The *State of Hospital Medicine Report* is an excellent source of information about hospital medicine trends in staffing and much more. While the response to the survey is more robust from practices that care for adults only, important information can be gleaned from the participant groups that care for children.

## Question 1: How many clinicians that care for children in the hospital are trained in pediatrics, thereby meeting the first criteria to sit for the boards?

Based on the 2018 *State of Hospital Medicine Report*, 100% of groups that treat only children had physicians trained in pediatrics, 41.7% employed physicians trained in med/peds, and 5.6% had clinicians trained in internal medicine.

In groups that treat both children and adults the variation in practitioner type was much broader. While 85.7% of groups reported employing physicians trained in internal medicine and 64.3% employed family medicine practitioners, only 35.7% reported employing physicians trained in pediatrics and 46.4% with training in med/peds. A smattering of other clinician types was also noted, most of which were not likely to be pediatrics trained.

If information based on this relatively small number of respondents is generalizable, it means that a large number of the practitioners currently caring for hospitalized



Dr. Gage is associate division chief, department of hospital medicine, at Phoenix Children's Hospital and clinical associate professor, University of Arizona, Phoenix. She is a member of the SHM Practice Analysis Committee.

**"To understand the impact that the new subspecialty board exam will have on groups that care for children, we need to first understand the criteria for eligibility."**

time and med-peds practitioners may find that they are not board eligible. Variations in clinical coverage needs at individual sites, as well as competing nonclinical tasks in the adult setting, may limit pediatric-specific work hours for med/peds trained hospitalists.

As noted above, in groups that treat only children and groups that treat both adults and children, the 2018 *State of Hospital Medicine Report* shows that over 40% had physicians trained in med-peds. These highly trained and capable physicians will continue to be assets to their group; however, they may wish to find other ways to achieve merit-based distinction. For these physicians, the Fellow designation through SHM may provide an alternate means of recognition.

*Continued on following page*

# SHM and Jefferson College of Population Health partner to provide vital education for hospitalists

**B**oth the Society of Hospital Medicine and Jefferson College of Population Health, of Thomas Jefferson University in Philadelphia, share a goal to educate physicians to be effective leaders and managers in the pursuit of health care quality, safety, and population health, and they have entered into a partnership with this in mind.

Alexis Skoufalos, EdD, associate dean, strategic development, for Jefferson College of Population Health, recently spoke with *The Hospitalist* to discuss the importance of population health to hospital medicine professionals, the health care landscape as a whole, and the benefits of this new partnership with SHM.

## Can you explain the importance of population health in the current health care landscape?

Many people confuse population health with public health. While they are related, they are different disciplines. Public health focuses on prevention and health promotion (clean water, vaccines, exercise, use of seat belts, and so on), but it stops there.

Population health builds on the foundation of public health and goes a step further, working to connect health and health care delivery. It takes a more holistic approach, looking at what we need to do inside and outside the delivery system to help people to get and stay healthy, as well as take better care of them when they do get sick.

We work to identify and understand the health impact of social and environmental factors, while also looking for ways to make health care delivery safer, better, and more affordable and accessible.

This can get complicated. It involves sorting through lots of information to uncover the best way to meet the needs of a specific group, whether that is a community, a neighborhood, or a patient with a particular condition.

It's about taking the time to really look at things from different vantage points. You won't see the same view if you are looking at something through a telescope as you would looking through a microscope. That information can help you to adjust your perspective to identify the best course of action.



Dr. Skoufalos

In order to be successful in improving population health, providers need to understand how to work with the other stakeholders in the health care ecosystem. Collaboration and coordination are the best ways to optimize the resources available.

It is important for delivery systems to establish good working relationships with community nonprofit and service organizations, faith-based organizations, social service providers, school systems, and federal, state, and local government.

At Jefferson, we thought it was important to create a college and programs that would prepare professionals across the workforce for this new challenge.

## How did this partnership between SHM and Jefferson College of Population Health come to fruition?

Hospitalists are an important link with a person's primary care team. The work they do to prepare a person and their family for successful discharge to the community after a hospital stay can make all the difference in a person's recovery, condition management, and prevention of readmission to the hospital.

Because both of our organizations are based in Philadelphia, we have had longstanding connections with SHM leadership. It was only natural for us to talk with SHM about how we can build upon the society's excellent continuing education offerings and work together to provide members with additional content that can equip them to advance their careers.

## How did SHM and Jefferson College of Population Health identify the mutually beneficial educational offerings in each institution that are included in this partnership?

Members of our respective leadership teams got together to complete a detailed review of the offerings from each organization. SHM's Leadership Academy and JCPH's Population Health Academy are rigorous continuing education programs that can provide physicians with excellent just-in-time information they can put to use right away.

After a careful examination of the curriculum, JCPH determined that SHM members can apply the credits they earn from completing two qualified sessions from the Leadership

Academy to satisfy the elective course requirement for a Master's degree. (Note: This does not apply to the Population Health Intelligence Program, which does not include an elective course.)

## How will this partnership benefit Jefferson College of Population Health?

Our mission is to prepare health care leaders with the skills and tools they need to be effective in improving population health. Clinicians who work in a hospital setting have a key role to play.

**“Population health builds on the foundation of public health and goes a step further, working to connect health and health care delivery. It takes a more holistic approach.”**

We are also dedicated to making a difference right here in Philadelphia. The more students we have in our programs, the more of an impact we (and they) will have in improving outcomes in our own community.

We need to move the needle and get Philadelphia County out of the basement in terms of health rankings. We have a responsibility to do what we can to make a difference, and we appreciate the partnership with SHM to make it happen.

## What other components of the partnership are especially noteworthy to highlight?

In addition to what I've already discussed, the following are some of the significant benefits that SHM members are entitled to as a result of the partnership with JCPH:

- 15% discount on tuition for any JCPH online graduate degree program.
- Registration discount for JCPH's Population Health Academy in Philadelphia.
- Special registration rate for Annual Population Health Colloquium.

For more information about this partnership, visit [hospitalmedicine.org/jefferson](http://hospitalmedicine.org/jefferson).

Continued from previous page

With the increasing complexity of staffing a workforce for the treatment of children that the PHM board subspecialty exam brings, the SHM Practice Analysis Committee developed a task force of pediatric leaders from across the country to aid in the development of additional

pediatric-specific questions for the 2020 version of the *State of Hospital Medicine Report*. The questions to be included in the 2020 version will request information about the number of clinical hours (rather than shifts) per year required for full-time faculty, the percentage of the workforce that is part time, and

the percentage of personnel in each group that is board certified in pediatric hospital medicine.

It is our hope that all groups treating children will respond to the 2020 *State of Hospital Medicine survey*, as a robust response will provide meaningful information to direct the leaders of these groups

in the changing days ahead.

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1. American Board of Pediatrics. Pediatric Hospital Medicine Certification. 2019 Edition.
2. American Board of Pediatrics. ABP responds to pediatric hospital medicine petition. 2019 Aug 29.
3. Pediatric Hospital Medicine Fellows. 2019 Edition.

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# Ratings

Continued from page 1

These ratings are designed to enhance and supplement existing quality measures with a more “customer-centric” measure that makes it easier for consumers to act on the information. Obviously, this would be helpful to consumers who feel overwhelmed by the volume of data on the Hospital Compare website, and by the complexity of some of the measures.

A posted call in spring 2019 by Centers for Medicare & Medicaid Services for public comment on possible methodological changes to the Overall Hospital Quality Star Ratings received more than 800 comments from 150 different organizations. And this past summer, the CMS decided to delay posting the refreshed Star Ratings in its Hospital Compare data preview reports for July 2019.

The agency says it intends to release the updated information in early 2020. Meanwhile, the reported data – particularly the overall star ratings – continue to generate controversy for the hospital field.

## Hospitalists' critical role

Hospitalists are not rated individually on Hospital Compare, but they play important roles in the quality of care their hospital provides – and thus ultimately the hospital's publicly reported rankings. Hospitalists typically are not specifically incentivized or penalized for their hospital's performance, but this does happen in some cases.

“Hospital administrators absolutely take note of their hospital's star ratings. These are the people hospitalists work for, and this is definitely top of their minds,” said Kate Goodrich, MD, MHS, director of the Center for Clinical Standards and Quality at CMS.

“I recently spoke at an SHM annual conference and every question I was asked was about hospital ratings and the star system,” noted Dr. Goodrich, herself a practicing hospitalist at George Washington University Medical Center in Washington.

The government's aim for Hospital Compare is to give consumers easy-to-understand indicators of the quality of care provided by hospitals, especially where they might have a choice of hospitals, such as for an elective surgery. Making that information public is also viewed as a motivator to help drive improvements in hospital performance, Dr. Goodrich said.

“In terms of what we measure, we try to make sure it's important to patients and to clinicians. We have frontline practicing physicians, patients, and families advising us, along with methodologists and PhD researchers. These stakeholders tell us what is important to measure and why,” she said. “Hospitals and all health providers need more actionable and timely data to improve their quality of care, especially if they want to participate in accountable care organizations. And we need to make the information easy to understand.”

Dr. Goodrich sees two main themes in the public response to its request for comment. “People say the methodology we use to calculate star

ratings is frustrating for hospitals, which have found it difficult to model their performance, predict their star ratings, or explain the discrepancies.”

Hospitals taking care of sicker patients with lower socioeconomic status also say the ratings unfairly penalize them. “I work in a large urban hospital, and I understand this. They say we don't take that sufficiently into account in the ratings,” she said.

“While our modeling shows that current ratings highly correlate with performance on individual measures, we have asked for comment on if and how we could adjust for socioeconomic factors. We are actively considering how to make changes to address these concerns,” Dr. Goodrich said.

In August 2019, CMS acknowledged that it



Dr. Goodrich

**“Hospitals and all health providers need more actionable and timely data to improve their quality of care.”**

plans to change the methodology used to calculate hospital star ratings in early 2021, but has not yet revealed specific details about the nature of the changes. The agency intends to propose the changes through the public rule-making process sometime in 2020.

## Continuing controversy

The American Hospital Association – which has had strong concerns about the methodology and the usefulness of hospital star ratings – is pushing back on some of the changes to the system being considered by CMS. In its submitted comments, AHA supported only three of the 14 potential star ratings methodology changes being considered.

AHA and the American Association of Medical Colleges, among others, have urged taking down the star ratings until major changes can be made.

“When the star ratings were first implemented, a lot of challenges became apparent right away,” said Akin Demehin, MPH, AHA's director of quality policy. “We began to see that those hospitals that treat more complicated patients and poorer patients tended to perform more poorly on the ratings. So there was something wrong with the methodology. Then, starting in 2018, hospitals began seeing real shifts in their performance ratings when the underlying data hadn't really changed.”

CMS uses a statistical approach called latent variable modeling. Its underlying assumption is that you can say something about a hospital's underlying quality based on the data you already have, Mr. Demehin said, but noted “that can be a questionable assumption.”

He also emphasized the need for ratings that compare hospitals that are similar in size and model to each other.

Suparna Dutta, MD, division chief, hospital medicine, Rush University, Chicago, said analyses done at Rush showed that the statistical model CMS used in calculating the star ratings was dynamically changing the weighting of certain measures in every release. “That meant one specific performance measure could play an outsized role in determining a final rating,” she said. In particular the methodology inadvertently penalized large hospitals, academic medical centers, and institutions that provide heroic care.

“We fundamentally believe that consumers should have meaningful information about hospital quality,” said Nancy Foster, AHA's vice president for quality and patient safety policy at AHA. “We understand the complexities of Hospital Compare and the challenges of getting simple information for consumers. To its credit, CMS is thinking about how to do that, and we support them in that effort.”

## A handle on quality

Hospitalists are responsible for ensuring that their hospitals excel in the care of patients, said Julius Yang, MD, hospitalist and director of quality at Beth Israel Deaconess Medical Center in Boston. That also requires keeping up on the primary public ways these issues are addressed through reporting of quality data and through reimbursement policy. “That should be part of our core competencies as hospitalists.”

Some of the measures on Hospital Compare don't overlap much with the work of hospitalists, he noted. But for others, such as for pneumonia, chronic obstructive pulmonary disease, and care of patients with stroke, or for mortality and 30-day readmissions rates, “we are involved, even if not directly, and certainly responsible for contributing to the outcomes and the opportunity to add value,” he said.

“When it comes to 30-day readmission rates, do we really understand the risk factors for readmissions and the barriers to patients remaining in the community after their hospital stay? Are our patients stable enough to be discharged, and have we worked with the care coordination team to make sure they have the resources they need? And have we communicated adequately with the outpatient doctor? All of these things are within the wheelhouse of the hospitalist,” Dr. Yang said. “Let's accept that the readmissions rate, for example, is not a perfect measure of quality. But as an imperfect measure, it can point us in the right direction.”

Jose Figueroa, MD, MPH, hospitalist and assistant professor at Harvard Medical School, has been studying for his health system the impact of hospital penalties such as the Hospital Readmissions Reduction Program on health equity. In general, hospitalists play an important role in

dictating processes of care and serving on quality-oriented committees across multiple realms of the hospital, he said.

"What's hard from the hospitalist's perspective is that there don't seem to be simple solutions to move the dial on many of these measures," Dr. Figueroa said. "If the hospital is at three stars, can we say, okay, if we do X, Y, and Z, then our hospital will move from three to five stars? Some of these measures are so broad and not in our purview. Which ones apply to me as a hospitalist and my care processes?"

Dr. Dutta sits on the SHM Policy Committee, which has been working to bring these issues to the attention of frontline hospitalists. "Hospitalists are always going to be aligned with their hospital's priorities. We're in it to provide high-quality care, but there's no magic way to do that," she said.

Hospital Compare measures sometimes end up in hospitalist incentives plans – for example, the readmission penalty rates – even though that is a fairly arbitrary measure and hard to pin to one doctor, Dr. Dutta explained. "If you look at the evidence regarding these metrics, there are not a lot of data to show that the metrics lead to what we really want, which is better care for patients."

A recent study in the British Medical Journal, for example, examined the association between the penalties on hospitals in the Hospital Acquired Condition Reduction Program and

clinical outcome.<sup>1</sup> The researchers concluded that the penalties were not associated with significant change or found to drive meaningful clinical improvement.

#### Engaging with Compare

Dr. Goodrich refers hospitalists seeking quality resources to their local quality improvement organizations (QIO) and to Hospital Improvement Innovation Networks at the regional, state, national, or hospital system level.

One helpful thing that any group of hospitalists could do, added Dr. Figueroa, is to examine the measures closely and determine which ones they think they can influence. "Then look for the hospitals that resemble ours and care for similar patients, based on the demographics.

"We can then say: 'Okay, that's a fair comparison. This can be a benchmark with our peers,'" he said. Then it's important to ask how your hospital is doing over time on these measures, and use that to prioritize.

"You also have to appreciate that these are broad quality measures, and to impact them you have to do broad quality improvement efforts. Another piece of this is getting good at collecting and analyzing data internally in a timely fashion.

"You don't want to wait 2-3 years to find out in Hospital Compare that you're not performing well. You care about the care you provided today,

not 2 or 3 years ago. Without this internal check, it's impossible to know what to invest in – and to see if things you do are having an impact," Dr. Figueroa said.

"As physician leaders, this is a real opportunity for us to trigger a conversation with our hospital's administration around what we



Dr. Figueroa

**"You don't want to wait 2-3 years to find out in Hospital Compare that you're not performing well."**

went into medicine for in the first place – to improve our patients' care," said Dr. Goodrich. She said Hospital Compare is one tool for sparking systemic quality improvement across the hospital – which is an important part of the hospitalist's job. "If you want to be a bigger star within your hospital, show that level of commitment. It likely would be welcomed by your hospital."

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# Documentation tips: Acute respiratory failure

By Sarah O. DeCaro, MD

It's always important for everyone to remember why we document things in the chart so that we are on the same page and ultimately do what is best for the patient. We document for insurance companies to prove the need for hospitalization, for legal purposes, and for other clinicians – to clearly communicate the acuity of each patient.

One of the diagnoses that we can often forget to use is acute respiratory failure. Documenting acute respiratory failure matters, regardless if it is, or is not, the primary diagnosis; it increases the estimated Length of Stay (LOS), Severity of Illness (SOI), and Risk of Mortality (ROM). This diagnosis adds an additional degree of specificity to patients with pneumonia, pleural effusions, chronic obstructive pulmonary disease (COPD) exacerbations, etc. While we may be hesitant to document this (perhaps feeling that this applies only to patients who are intubated in the ICU), the reader will hopefully have more confidence using it after reviewing the diagnostic criteria.

Acute respiratory failure can stem from impaired oxygenation or impaired ventilation. Here are some examples:

- Impaired oxygenation. Can be seen in pneumonia, pulmonary edema, and pulmonary embolism, and can present as a low O<sub>2</sub> saturation or a low pO<sub>2</sub> on an arterial blood gas (ABG) test.
  - Impaired ventilation. Can be seen in COPD or asthma where there is increased effort to ventilate the lungs, which can lead to impaired CO<sub>2</sub> exchange and acidosis.
- One needs to have two of the following three criteria to make a formal diagnosis of acute respiratory failure:
- pO<sub>2</sub> less than 60 mm Hg (hypoxemia).
  - pCO<sub>2</sub> greater than 50 mm Hg (hypercapnia) with pH less than 7.35.
  - Signs and symptoms of acute respiratory distress.

One might think it would be difficult to meet criteria without an ABG. Although an ABG is the standard, a patient meets criteria 1 without a blood gas if an O<sub>2</sub> saturation less than or equal to 90% is docu-

Primary Diagnosis	Circulatory disorder except AMI	Circulatory disorder except AMI
Medicare Severity Diagnosis Related Group	Circulatory disorder except AMI, with cardiac catheterization without MCC 287	Circulatory disorder except AMI, with cardiac catheterization with MCC 286
Secondary Diagnosis	Hypoxia	Acute respiratory failure
Relative Weight	1.175	2.2282
Risk of Mortality	1	3
Severity of Illness	1	3
Length of Stay	3.3	7.1
Reimbursement	\$4,896.05	\$8,590.01

Primary Diagnosis	Heart Failure and Shock	Heart Failure and Shock
Medicare Severity Diagnosis Related Group	Heart Failure & Shock without MCC 293	Heart Failure & Shock with MCC 291
Secondary Diagnosis	Hypoxia	Acute respiratory failure
	Essential hypertension Type 2 Diabetes	Essential hypertension Type 2 Diabetes
Relative Weight	0.6736	1.4759
Risk of Mortality	1	3
Severity of Illness	1	3
Length of Stay	3	4.5
Reimbursement	\$3,137	\$5,951.43

mented. In most cases, if you have a documented O<sub>2</sub> saturation less than or equal to 90% on room air with a physical exam showing signs of respiratory distress, your patient will qualify for the diagnosis of acute respiratory failure, thus negating the need to always have an ABG.

It is important to document the

symptoms and physical exam findings that go along with the diagnosis. Patients should have tachypnea with a respiratory rate (RR) less than 20 or a decreased rate less than 10. They may have wheezing, difficulty moving air, nasal flaring, and accessory muscle use. All of these findings are extremely helpful to validate

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the diagnosis and would make it extremely difficult for it to be rejected by a biller or insurance company.

These patients are often given supplemental oxygen (nasal cannula, Venturi mask, non-rebreather) and other treatments including steroids, inhaled bronchodilators, mucolytics, and respiratory therapy. Documenting these interventions in your plans can assist reviewers trying to understand your thought process in the treatment of the patient. If your patient has to be initiated on bilevel positive airway pressure (i.e., the patient was not on BIPAP at home, but needed to be started because of his/her respiratory status), this almost always means they have acute respiratory failure.

In the two tables accompanying this article, we see examples of how documenting acute respiratory failure can improve LOS, ROM, SOI, and reimbursement. The numbers at the top are based on a specific Diagnosis Related Group used by coders.

Let's say we have a 58-year-old male presenting with chest pain, shortness of breath, and concern for unstable angina. Given his symptoms, he is being taken to the cardiac catheterization lab. If we note only that he was hypoxic and required 3L for an O<sub>2</sub> saturation of 94%, one can see the ROM, SOI, estimated LOS, and reimbursement in the first column. However, if we write that his oxygen saturation on room air is 87%, he is using intercostal muscles to breathe, and he has marked dyspnea with conversation, we can say that he has acute respiratory failure. Making this distinction increases his expected LOS by almost 4 days and nearly doubles reimbursement.

For the second example, we have an 81-year-old female with diabetes type 2, hypertension, and chronic systolic congestive heart failure who presents with an acute systolic CHF exacerbation. The patient is saturating 85% on room air, has tachypnea (RR 34), and was given large doses of intravenous furosemide in the ED. She is stabilized with improvement in her respiratory rate and can go to the floor, but by documenting that this was acute respiratory failure, one can again see the significant improvements in the projected LOS, ROM, and reimbursement as opposed to documenting hypoxia.

#### Key take-home points

- Document accurately, including any applicable comorbid and major comorbid conditions.
- Acute respiratory failure comes from impaired oxygenation, im-

paired ventilation, or both.

- One must document two of three criteria to formally diagnose acute respiratory failure: pO<sub>2</sub> less than 60 mm Hg (or room air oxygen saturation less than or equal to 90%), pCO<sub>2</sub> greater than 50 mm Hg with pH less than 7.35, and signs/symp-

toms of respiratory distress.

- Document physical exam findings that correlate with acute respiratory failure (RR less than 20 or greater than 10, wheezing, nasal flaring, accessory muscle use, etc.).
- If your patient has to be initiated on BIPAP (i.e., the patient was not

on BIPAP at home, but needed to be started because of his/her respiratory status), they likely have acute respiratory failure.

*Dr. DeCaro is a hospitalist and medical director for care coordination at Emory University in Atlanta.*

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# The Hospitalist

# Better time data from in-hospital resuscitations

Benefits of an undocumented defibrillator feature

By John A. Stewart, RN, MA

**R**esearch and quality improvement (QI) related to in-hospital cardiopulmonary resuscitation attempts ("codes" from here forward) are hampered significantly by the poor quality of data on time intervals from arrest onset to clinical interventions.<sup>1</sup>

In 2000, the American Heart Association's (AHA) Emergency Cardiac Care Guidelines said that current data were inaccurate and that greater accuracy was "the key to future high-quality research"<sup>2</sup> – but since then, the general situation has not improved: Time intervals reported by the national AHA-supported registry Get With The Guidelines–Resuscitation (GWTG-R, 200+ hospitals enrolled) include a figure from all hospitals for times to first defibrillation of 1 minute median and 0 minutes first quartile.<sup>3</sup> Such numbers are typical – when they are tracked at all – but they strain credibility, and *prima facie* evidence is available at most clinical simulation centers simply by timing simulated defibrillation attempts under realistic conditions, as in "mock codes."<sup>4,5</sup>

Taking artificially short time-interval data from GWTG-R or other sources at face value can hide serious delays in response to in-hospital arrests. It can also lead to flawed studies and highly questionable conclusions.<sup>6</sup>

The key to accuracy of critical time intervals – the intervals from arrest to key interventions – is an accurate time of arrest.<sup>7</sup> Codes are typically recorded in handwritten form, though they may later be transcribed or scanned into electronic records. The "start" of the code for unmonitored arrests and most monitored arrests is typically taken to be the time that a human bedside recorder, arriving at an unknown interval after the arrest, writes down the first intervention. Researchers acknowledged the problem of artificially short time intervals in 2005, but they did not propose a remedy.<sup>1</sup> Since then, the problem of in-hospital resuscitation delays has received little to no attention in the professional literature.

## Description of feature

To get better time data from un-

monitored resuscitation attempts, it is necessary to use a "surrogate marker" – a stand-in or substitute event – for the time of arrest. This event should occur reliably for each code, and as near as possible to the actual time of arrest. The main early events in a code are starting

**Figure 1. Sample event record**

Time	Event
07:13:22	AC power loss
07:15:34	Power on
07:16:34	Initial rhythm
07:20:34	Vital signs
07:22:14	Shock 150 j
07:24:34	Shock 200 j
07:25:34	Vital signs

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Note: Record can be printed on the defibrillator monitor strip or uploaded for analysis.

Source: Mr. Stewart

basic CPR, paging the code, and moving the defibrillator (usually on a code cart) to the scene. Ideally these events occur almost simultaneously, but that is not consistently achieved.

There are significant problems with use of the first two events as surrogate markers: the time of starting CPR cannot be determined accurately, and paging the code is dependent on several intermediate steps that lead to inaccuracy. Furthermore, the times of both markers are recorded using clocks that are typically not synchronized with the clock used for recording the code (defibrillator clock or the human recorder's timepiece). Reconciliation of these times with the code record, while not particularly difficult,<sup>8</sup> is rarely if ever done.

Defibrillator Power On is recorded on the defibrillator timeline and thus does not need to be reconciled with the defibrillator clock, but it is not suitable as a surrogate marker because this time is highly variable: It often does not occur until the time that monitoring pads are placed. Moving the code cart to the scene, which must occur early in the code, is a much more valid surrogate marker, with the added benefit that it can be marked on the defibrillator timeline.

The undocumented feature described here provides that marker. This feature has been a part of the

LIFEPAK 20/20e's design since it was launched in 2002, but it has not been publicized until now and is not documented in the user manual.

Hospital defibrillators are connected to alternating-current (AC) power when not in use. When the defibrillator is moved to the scene of the code, it is obviously necessary to disconnect the defibrillator from the wall outlet, at which time "AC Power Loss" is recorded on the event record generated by the LIFEPAK 20/20e defibrillators. The defibrillator may be powered on up to 10 minutes later while retaining the AC Power Loss marker in the event record. This surrogate marker for the start time will be on the same timeline as other events recorded by the defibrillator, including times of first monitoring and shocks.

Once the event record is acquired, determining time intervals is accomplished by subtracting clock times (see example, Figure 1).

In the example, using AC Power Loss as the start time, time intervals from arrest to first monitoring (Initial Rhythm on the Event Record) and first shock were 3:12 (07:16:34 minus 07:13:22) and 8:42 (07:22:14 minus 07:13:22). Note that if Power On were used as the surrogate time of arrest in the example, the calculated intervals would be artificially shorter, by 2 min 12 sec.

With this undocumented feature, any facility using LIFEPAK 20/20e defibrillators can easily measure critical time intervals during re-

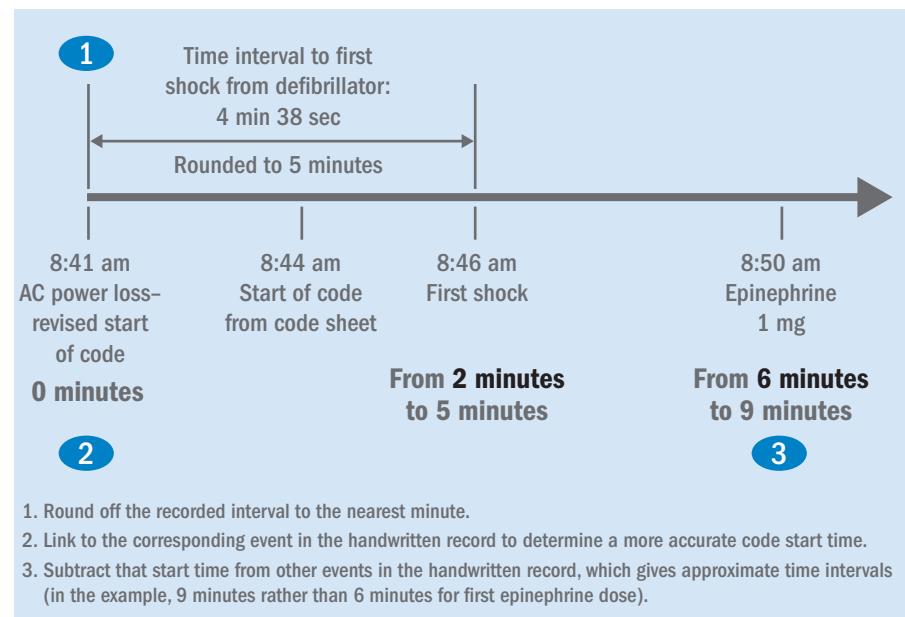
suscitation attempts with much greater accuracy, including times to first monitoring and first defibrillation. Each defibrillator stores code summaries sufficient for dozens of events and accessing past data is simple. Analysis of the data can provide a much-improved measure of the facility's speed of response as a baseline for QI.

If desired, the time-interval data thus obtained can also be integrated with the handwritten record. The usual handwritten code sheet records times only in whole minutes, but with one of the more accurate intervals from the defibrillator – to first monitoring or first defibrillation – an adjusted time of arrest can be added to any code record to get other intervals that better approximate real-world response times.<sup>9</sup>

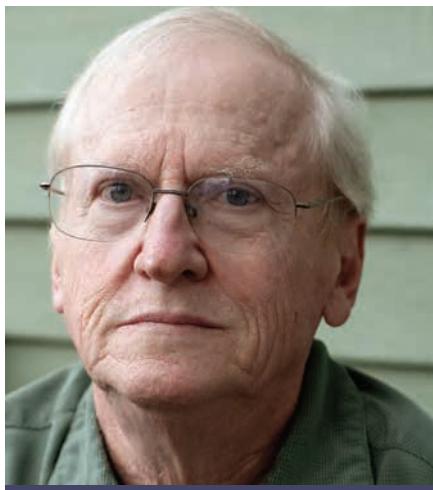
## Research prospects

The feature opens multiple avenues for future research. Acquiring data by this method should be simple for any facility using LIFEPAK 20/20e defibrillators as its standard devices. Matching the existing handwritten code records with the time intervals obtained using this surrogate time marker will show how inaccurate the commonly reported data are. This can be done with a retrospective study comparing the time intervals from the archived event records with those from the handwritten records, to provide an example of the inaccuracy of data reported in the medical literature. The more

**Figure 2. Approximate time intervals**



Source: Mr. Stewart



*Mr. Stewart has worked as a hospital nurse in Seattle for many years, and has numerous publications to his credit related to resuscitation issues. You can contact him at jastewart325@gmail.com.*

accurate picture of time intervals can provide a much-needed yardstick for future research aimed at shortening response times.

The feature can facilitate aggregation of data across multiple facilities that use the LIFEPAK 20/20e as their standard defibrillator. Also, it is possible that other defibrillator manufacturers will duplicate this feature with their devices – it should produce valid data with any defibrillator – although there may be legal and technical obstacles to adopting it.

Combining data from multiple sites might lead to an important contribution to resuscitation research: a reasonably accurate overall survival curve for in-hospital tachyarrhythmic arrests.

A commonly cited but crude guideline is that survival from tachyarrhythmic arrests decreases by 10%-15% per minute as defibrillation is delayed,<sup>10</sup> but it seems unlikely that the relationship would be linear: Experience and the literature suggest that survival drops very quickly in the first few minutes, flattening out as elapsed time after arrest increases. Aggregating the much more accurate time-interval data from multiple facilities should produce a survival curve for in-hospital tachyarrhythmic arrests that comes much closer to reality.

#### Conclusion

It is unknown whether this feature will be used to improve the accuracy of reported code response times. It greatly facilitates acquiring more accurate times, but the task has never been especially difficult – particularly when balanced with

the importance of better time data for QI and research.<sup>8</sup>

One possible impediment may be institutional obstacles to publishing studies with accurate response times due to concerns about public relations or legal exposure: The more accurate times will almost certainly be longer

than those generally reported.

As was stated almost 2 decades ago and remains true today, acquiring accurate time-interval data is “the key to future high-quality research.”<sup>2</sup> It is also key to improving any hospital’s quality of code response. As described in this article, better time data can

easily be acquired. It is time for this important problem to be recognized and remedied.

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# The Hospitalist

## Key Clinical Question

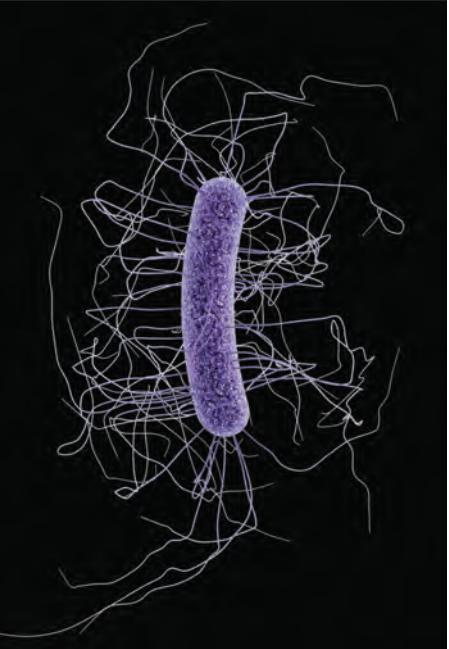
# Treatment of recurrent *C. difficile* infection

FMT is an option for some patients

By John Bell, MD, MPH, FHM, and Ali Farkhondehpour, MD

**The case**

A 67-year-old woman with a medical history significant for diabetes mellitus type 2 and chronic kidney disease stage 3 was recently hospitalized for a community-acquired pneumonia and treated for 5 days with moxifloxacin. In the week following this hospitalization, she began to have watery diarrhea and was found to have *Clostridioides difficile* diarrhea. She was treated with 10 days of oral vancomycin for her *C. difficile* infection (CDI). Approximately 3 weeks later, she again developed watery diarrhea with some abdominal cramping and has a leukocyte count of 22.4.



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**Key clinical questions****When is *C. difficile* considered recurrent?**

*C. difficile* is considered recurrent when a patient experiences symptom onset and has a positive test in the 2- to 8-week period following the resolution of symptoms from the previous episode that had been confirmed with a positive test.<sup>1</sup>

**What is the recurrence rate for *C. difficile*?**

Of patients who are initially diagnosed with *C. difficile*, about 20%-35% develop recurrence of their infection, and of those who experience recurrence, roughly 40%-60% will experience a second recurrence.<sup>2</sup>

**What are the risk factors for recurrent *C. difficile*?**

Risk factors for recurrence of *C. difficile* include older age (older than 65 years), female sex, white ethnicity, ongoing antibiotic use, concurrent proton pump inhibitor use, and more severe initial disease.

Also, receiving antineoplastic chemotherapy, being an organ transplant recipient, chronic kidney disease, inflammatory bowel disease, hypogammaglobulinemia, or other immunodeficiency, as well as having exposure to infected adult or infant carrier of *C. difficile* have all been risk factors for recurrent disease. There is still some degree of ongoing controversy over the role of proton pump inhibitors as a risk factor.<sup>2</sup>

**What are the treatment options for initial *C. difficile* infection?**

The recent Infectious Diseases Society of America (IDSA) guidelines recommend treating for an initial

CDI with a 10-day course of oral vancomycin or fidaxomicin instead of metronidazole. This change is based on a combined analysis of two large randomized controlled trials that demonstrated better clinical response rates with vancomycin, compared with metronidazole (81.1% vs. 72.7%;  $P = .002$ ).<sup>1,3</sup>

**What are the treatment options for first recurrence?**

The data are overall limited in treatment of first recurrence of CDI. The IDSA guidelines recommend that a first recurrence of CDI may be treated with oral vancomycin followed by a tapered and pulsed regimen or with a 10-day course of fidaxomicin. If metronidazole was used for the first episode, a 10-day course of vancomycin can be used.<sup>1</sup>

**What are the treatment options for second and subsequent recurrences?**

Second or subsequent CDI recurrences may be treated with oral vancomycin as a tapered and pulsed-dose regimen or with fidaxomicin as described above, but this is based on low quality of evidence.

The IDSA guidelines strongly recommend fecal microbiota transplantation (FMT) for patients who have two or more *C. difficile* recurrences and in whom standard antibiotic treatment has not been successful. FMT has demonstrated high efficacy rates of 80%-90% for clinical remission of recurrent CDI.

FMT can be administered through various routes. The choice of delivery depends in part on local expertise, patient preference, cost, and risk of the procedure.<sup>1,4-6</sup>



Dr. Bell



Dr. Farkhondehpour

Dr. Bell is associate clinical professor in the division of hospital medicine at the University of California, San Diego, Medical Center. Dr. Farkhondehpour is a hospitalist and assistant clinical professor at UC San Diego Health.

**What new therapies exist for reducing recurrence?**

Bezlotoxumab is a humanized monoclonal antibody directed against *C. difficile* toxin B that was approved by the Food and Drug Administration in 2016 for prevention of recurrent CDI. Randomized placebo-controlled trials demonstrated that a single infusion of bezlotoxumab, given in combination with usual antibiotics for CDI in adults, was effective in reducing CDI recurrence within 12 weeks (rate of recurrent infection in both trials was 16.5% in the bezlotoxumab groups and 26.6% in the placebo groups).

In a post hoc analysis, the highest benefit was in patients with three or more risk factors: older than 65 years, history of CDI, immunocompromised status, or severe CDI. Although the best

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## In the Literature

# Clinician reviews of HM-centric research

By Arfaa Ali, MD; Cory Cheatham, MD; Hiral Choksi, MD, FACP, SFHM; Adam J. Fritz, MD, MSHA; Joshua Mayer, DO; Adam Merando, MD; Justin Purdy, MD; Farzana Hoque Sharmy, MD; and Keniesha Thompson, MD

Division of Hospital Medicine, Saint Louis University School of Medicine

## IN THIS ISSUE

1. Adverse events occur in LTC residents transitioning from hospital to nursing home
2. Patients with HF have higher risks of postop mortality, complications after ambulatory noncardiac surgery
3. CRP testing in acute COPD exacerbations cuts antibiotic use without compromising outcomes
4. Intensive glucose control after acute ischemic stroke does not improve functional outcomes
5. Risk associated with perioperative atrial fibrillation
6. Higher 10-day mortality of lower-acuity patients during times of increased ED crowding
7. Excess antibiotics and adverse events in patients with pneumonia
8. A multicenter trial of vena cava filters in severely injured patients
9. Natural history of adrenal incidentalomas with and without mild autonomous cortisol excess

By Arfaa Ali, MD

### 1 Adverse events occur in LTC residents transitioning from hospital to nursing home

**CLINICAL QUESTION:** What are the frequency, severity, and preventability of adverse events occurring during the 45 days after hospitalization for residents of

long-term care facilities?

**BACKGROUND:** Adverse events in the immediate posthospitalization period are a serious threat to patients 65 years and older who are residents of long-term care facilities. Changes during hospitalization – such as fasting for procedures, immobility, change in surroundings, disruption of sleep, and medication

adjustments – can lead to adverse events such as falls, pressure ulcers, adverse drug reactions, and health care–acquired infections. However, the frequency and preventability of these adverse events has not been measured.

**STUDY DESIGN:** Prospective cohort study.

**SETTING:** Nursing homes in the New England states.

**SYNOPSIS:** This study sampled 762 hospital discharges for 555 long-term care residents of 32 nursing homes who were discharged from the hospital back to their same long-term care facility and followed for 45 days. A trained nurse reviewed records using a trigger tool developed by the Institute for Healthcare Improvement. Each trigger linked to a possible harm was reviewed by two physicians. Adverse events were categorized into health care–acquired infec-



Dr. Ali

tions and events related to resident care, medications, and procedures. The severity and preventability of each event was assessed.

Of the 555 residents, 65.5% were female and the mean age was 82.2. There were 379 adverse events identified; 52% involved pressure ulcers, skin tears, and falls with injury, which were deemed preventable. Healthcare-acquired infections totaled 28.5% and adverse drug events were 16.5%. Close to half of the events were serious, life threatening, or fatal. The study was limited by subjectivity in classifying the adverse events.

Hospitalists should ensure proper coordination and handoff when transitioning patients back to their nursing home.

**BOTTOM LINE:** Adverse events occur in 4 of 10 discharges from the hospital to long-term care facilities, and most events are preventable.

**CITATION:** Kapoor A et al. Adverse events in long-term care residents transitioning from hospital back to

*Continued on page 24*

Continued from previous page

strategy for prevention of CDI recurrence remains to be determined, bezlotoxumab remains an option.<sup>7,8</sup>

### Back to the case

The patient had a *C. difficile* polymerase chain reaction test sent that came back positive for *C. difficile*. Because she had previously been treated with a 10-day course of oral vancomycin, she was started on a tapered and pulsed-dose regimen of oral vancomycin. Five days later her diarrhea resolved, and her leukocyte count returned to normal.

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C. difficile Infection	Treatment
Initial	Oral vancomycin 125 mg four times daily for 10 days or fidoxamycin 200 mg twice daily for 10 days.  Metronidazole can be used if oral vancomycin or fidoxamycin are contraindicated or unavailable
First recurrence	Tapered and pulsed oral vancomycin: Oral vancomycin 125 mg four times daily for 10 days, then 125 mg two times daily for a week, then 125 mg once daily for a week, and then 125 mg every 2 or 3 days for 2-8 weeks.
Second and subsequent recurrences	Fecal microbiota transplantation is recommended for patients with multiple recurrences of CDI who have failed appropriate antibiotic treatments
Fulminant (may be characterized by hypotension or shock, ileus, or megacolon)	Oral vancomycin 500 mg four times daily. If ileus is present, vancomycin can also be administered per rectum (500 mg in approximately 100 mL normal saline per rectum every 6 hours as a retention enema).
Plus	Intravenous metronidazole 500 mg every 8 hours daily
	Surgical consultation for consideration of subtotal colectomy if necessary

Continued from page 19

nursing home. *JAMA Intern Med.* 2019 Jul 22;179(9):1254-61.

**Dr. Ali** is assistant professor of internal medicine and section chief of hospital medicine.

By Cory Cheatham, MD

## 2 Patients with HF have higher risks of postop mortality, complications after ambulatory noncardiac surgery

**CLINICAL QUESTION:** How does heart failure affect the risk of postoperative mortality and complications in ambulatory noncardiac surgery?

**BACKGROUND:** Heart failure is a known risk factor for postoperative mortality and complications. Many of the studies used to establish this association, however, have focused on major high-risk surgeries and not on outpatient surgeries. Improved medical care has increased the survival rate of patients with heart failure and an increasing number of these patients are undergoing elective surgical procedures. This has led to an increasing need to better understand the degree to which heart failure affects preoperative risk in the outpatient setting.

**STUDY DESIGN:** A retrospective cohort study.

**SETTING:** Multiple Veteran's Affairs Hospitals using data from the VA Surgical Quality Improvement Program (VASQIP) and the VA Corporate Data Warehouse.

**SYNOPSIS:** A total of 355,121 patients who underwent outpatient surgeries were analyzed. 19,353 patients had heart failure and 334,768 did not. Patients with heart failure had a higher risk of 90-day mortality with an adjusted odds ratio of 1.95 (95% confidence interval, 1.69-2.44), and this risk progressively increased as the ejection fraction decreased. The risk of 30-day complication also increased in patients with heart failure with an adjusted OR of 1.10 (95% CI, 1.02-1.19).

Limitations of this study include the patient population, which were all veterans and mostly male. The nature of the inclusion criteria was limiting as well, in that all the patients in this study were deemed fit for surgery. There were no data available for patients who had been considered but ultimately did not undergo surgery or for patients who were considered for ambulatory surgery but ultimately underwent inpatient surgery. These limitations may have resulted in a selection bias, which

limited the generalizability of the study's findings when assessing patients for ambulatory surgery. **BOTTOM LINE:** Patients with heart failure had a higher risk of 90-day postoperative mortality and 30-day postoperative complication in ambulatory noncardiac surgery. The risk of postoperative mortality increased as systolic function decreased.

**CITATION:** Lerman BJ et al. Association between heart failure and postoperative mortality among patients undergoing ambulatory noncardiac surgery. *JAMA Surg.* 2019 Jul 10. doi: 10.1001/jamasurg.2019.2110.

Dr. Cheatham is a hospitalist and clinical educator.

By Hiral Choksi, MD, FACP, SFHM

## 3 CRP testing in acute COPD exacerbations cuts antibiotic use without compromising outcomes

**CLINICAL QUESTION:** Does C-reactive protein (CRP) point-of-care testing used in the assessment of acute chronic obstructive pulmonary disease (COPD) exacerbations in the primary care setting safely reduce antibiotic use?

**BACKGROUND:** A previous study has shown that patients with acute COPD exacerbations had little difference in rate of clinical cure with placebo or antibiotics when CRP is less than 40 mg/L.

**STUDY DESIGN:** Multicenter, open-label, randomized controlled trial.

**SETTING:** 86 general medical practices in the United Kingdom from January 2015 through September 2017.

**SYNOPSIS:** More than 600 patients who presented to a primary care physician with an acute COPD exacerbation were randomized to point of care CRP testing vs. usual care. Clinicians in the CRP testing group were provided with a point-of-care testing unit along with an algorithm for results. If the CRP was greater than 40 mg/L, antibiotics were thought to be beneficial; but they were urged not to prescribe antibiotics if the level was less than 20 mg/L. For levels between 20 mg/L and 40 mg/L, it was suggested that antibiotics might be beneficial if the sputum is purulent.

The primary outcomes were patient-reported use of antibiotics for an acute COPD exacerbation within 4 weeks of randomization along with measurement of COPD-related health status on the Clinical COPD Questionnaire at 2 weeks of randomization. Fewer antibiotics were pre-

scribed in the CRP testing group over the usual care group (57% vs. 77%). The adjusted mean difference in the Clinical COPD Questionnaire total score at 2 weeks was -0.19 points, in favor of the CRP-guided group.

**BOTTOM LINE:** The use of point-of-care testing CRP as an adjunctive

guide to antibiotic use in acute COPD exacerbations may lower the amount of antibiotic prescribing without compromising clinical outcomes.

**CITATION:** Butler CC et al.

C-reactive protein testing to guide antibiotics prescribing for COPD exacerbations. *N Engl J Med.* 2019 Jul 11; 381:111-120.

Dr. Choksi is a hospitalist and associate professor of internal medicine at Saint Louis University, where she is assistant dean of admissions. She is president of the SHM St. Louis Chapter.

By Adam J. Fritz, MD, MSHA

## 4 Intensive glucose control after acute ischemic stroke does not improve functional outcomes

**CLINICAL QUESTION:** Does intensive blood glucose control improve functional outcomes at 90 days for patients who have suffered acute ischemic stroke?

**BACKGROUND:** Higher glucose immediately following acute ischemic stroke is known to be associated with poor outcomes. Patients with elevated glucoses in the aftermath of an acute ischemic stroke are more likely to have expansion of ischemic area and are more likely to have hemorrhagic conversion.

**STUDY DESIGN:** Randomized, controlled trial, with blinded outcome assessment.

**SETTING:** 63 sites in the United States.

**SYNOPSIS:** A total of 1,151 patients were randomized to either intensive (goal blood glucose, 80-130 mg/dL) or standard (goal blood glucose, 80-179 mg/dL) glucose control for up to the first 72 hours after presenting with acute ischemic stroke. Patients in the intensive control group were given continuous IV insulin and patients in the standard

control group were given subcutaneous sliding. There was no difference between groups (intensive vs. standard) with regards to the primary outcome, which was the percentage of patients who achieved a modified Rankin Score at 90 days of 0-2 (20.5% vs 21.6%; adjusted relative risk, 0.97; 95% confidence interval, 0.87-1.08;  $P = .55$ ). Severe hypoglycemia (blood glucose of less than 40 mg/dL) occurred in the intensive control group only. The American Heart Association/American Stroke Association guidelines support target blood glucose of 140-180 mg/dL, though limited evidence to support this guideline is noted.

**BOTTOM LINE:** Patients who underwent intensive glucose control regimens following acute ischemic stroke did not have significantly different functional outcomes at 90 days than those who had standard glucose control therapy.

**CITATION:** Johnston KC et al. Intensive vs. standard treatment of hyperglycemia and functional outcome in patients with acute ischemic stroke: The SHINE randomized clinical trial. *JAMA.* 2019 Jul 23/30;322(4):326-35.

Dr. Fritz is assistant professor of medicine and the director of hospitalist operations.

By Joshua Mayer, DO

## 5 Risk associated with perioperative atrial fibrillation

**CLINICAL QUESTION:** Does new-onset perioperative/postoperative atrial fibrillation (POAF) increase risk of stroke and death?

**BACKGROUND:** New-onset POAF occurs with 10% of noncardiac surgery and 15%-42% of cardiac surgery. POAF is believed to be self-limiting and most patients revert to sinus rhythm before hospital discharge. Previous studies on this topic are both limited and conflicting, but several suggest there is an association of stroke and mortality with POAF.

**STUDY DESIGN:** Systematic review and meta-analysis. Odds ratios with 95% confidence intervals were used for early outcomes and hazard ratios were used for long-term outcomes.

**SETTING:** Prospective and retrospective cohort studies.

**SYNOPSIS:** A total of 35 carefully selected studies were analyzed for a total of 2,458,010 patients. Outcomes of interest were early stroke or mortality within 30 days of surgery and long-term stroke or mortality after 30 days. The reference group was patients without POAF at baseline.

Subgroup analysis included separating patients into cardiac surgery and noncardiac surgery.

New-onset POAF was associated with increased risk of early stroke (OR, 1.62; 95% CI, 1.47-1.80) and early mortality (OR, 1.44; 95% CI, 1.11-1.88).



Dr. Mayer

POAF also was associated with risk for long-term stroke (hazard ratio, 1.37; 95% CI, 1.07-1.77) and long-term mortality (HR, 1.37; 95% CI, 1.27-1.49). The risk of long-term stroke from new-onset POAF was highest among patients who received non-cardiac surgery.

Despite identifying high-quality studies with thoughtful analysis, some data had the potential for publication bias. The representative sample did not report paroxysmal vs. persistent atrial fibrillation separately. Furthermore, the study had the potential to be confounded by detection bias of preexisting atrial fibrillation.

**BOTTOM LINE:** New-onset POAF is associated with early and long-term risk of stroke and mortality. Subsequent strategies to reduce this risk

have yet to be determined.

**CITATION:** Lin MH et al. Perioperative/postoperative atrial fibrillation and risk of subsequent stroke and/or mortality. *Stroke*. 2019 May;50:1364-71.

Dr. Mayer is a hospitalist and assistant professor of medicine.

By Adam Merando, MD

## 6 Higher 10-day mortality of lower-acuity patients during times of increased ED crowding

**CLINICAL QUESTION:** Does ED crowding affect 10-day mortality for patients triaged as lower acuity who do not require inpatient hospitalization and are discharged home?

**BACKGROUND:** Studies have assessed mortality effect from ED crowding on high-acuity patients, but limited evidence exists for how this affects lower-acuity patients who are discharged home.

**STUDY DESIGN:** Retrospective cohort study.

**SETTING:** Emergency department, Karolinska University Hospital, Solna, Sweden.

**SYNOPSIS:** During 2009-2016, 705,813 encounters seen in the ED, triaged to lower-acuity levels 3-5 and discharged without further hospitaliza-

tion needs were identified. A total of 623 patients died within 10 days of the initial ED visit (0.09%). The study evaluated the association of 10-day mortality with mean ED length of stay and ED-occupancy ratio.

The study demonstrated an increased 10-day mortality for mean ED length of stay of 8 hours or more vs. less than 2 hours (adjusted odds ratio, 5.86; 95% CI, 2.15-15.94). It also found an increased mortality rate for occupancy ratio quartiles with an aOR for quartiles 2, 3, and 4 vs. quartile 1 of 1.48 (95% CI, 1.14-1.92), 1.63 (95% CI, 1.24-2.14), and 1.53 (95% CI, 1.15-2.03), respectively.

While this suggests increased 10-day mortality in this patient population, additional studies should be conducted to determine if this risk is caused by ED crowding and length of stay or by current limitations in triage scoring.

**BOTTOM LINE:** There is an increased 10-day mortality rate for lower-acuity triaged patients who were discharged from the ED with-

out hospitalization experiencing increased ED length of stay and during times of ED crowding.

**CITATION:** Berg L et al. Associations between crowding and 10-day mortality among patients allocated lower triage acuity levels without need of acute hospital care on departure from the emergency department. *Ann Emerg Med*. 2019 Sep;74(3):345-56.

Dr. Merando is a hospitalist and assistant professor of internal medicine.

By Justin Purdy, MD

## 7 Excess antibiotics and adverse events in patients with pneumonia

**CLINICAL QUESTION:** Do longer courses of antibiotics given to patients hospitalized with pneumonia result in higher rates of adverse events?

**BACKGROUND:** Past surveys of providers revealed a tendency to select longer durations of antibiotics to reduce disease recurrence, but recent studies have shown that shorter courses of antibiotics are safe and equally effective in treatment for pneumonia. In addition, there has been a renewed focus on reducing unnecessary use of antibi-

*Continued on following page*

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Continued from previous page

otics to decrease adverse effects.

**STUDY DESIGN:** Retrospective cohort study.

**SETTING:** 43 hospitals in the Michigan Hospital Medicine Safety Consortium.

**SYNOPSIS:** A retrospective chart review of 6,481 patients hospitalized with pneumonia revealed that 67.8% of patients received excessive days of antibiotic treatment. On average, patients received 2 days of excessive treatment and 93.2% of the additional days came in the form of antibiotics prescribed at discharge.

Excessive treatment was defined as more than 5 days for community-acquired pneumonia (CAP) and more than 7 days for health care-associated pneumonia, methicillin-resistant *Staphylococcus aureus*, or gram-negative organisms. The authors adjusted for time to clinical stability when defining the expected duration of treatment.

After statistical adjustment, excess antibiotic days were not associated with increased rates of *C. diff* infection, emergency department visits, readmission, or 30-day mortality. Additional treatment was associated with increased patient-reported adverse effects including diarrhea, gastrointestinal distress, and mucosal candidiasis.

The impact of this study is limited by a few factors. The study was observational and relied on provider documentation and patient reporting of adverse events. Also, it was published prior to updates to the Infectious Diseases Society of America CAP guidelines, which may affect how it will be interpreted once those guidelines are released.

**BOTTOM LINE:** Adherence to the shortest effective duration of antibiotic treatment for pneumonia may lead to a reduction in the rates of patient reported adverse effects while not impacting treatment success.

**CITATION:** Vaughn VM et al. Excess antibiotic treatment duration and adverse events in patients hospitalized with pneumonia: A multihospital cohort study. Ann Intern Med. 2019 Aug 6;171(3):153-63.

Dr. Purdy is a hospitalist and assistant professor of internal medicine.

By Farzana Hoque Sharmy, MD

## 8 A multicenter trial of vena cava filters in severely injured patients

**CLINICAL QUESTION:** Can early (within 72 hours) prophylactic placement of inferior vena cava filter

decrease the risk of pulmonary embolism or death in severely injured patients?

**BACKGROUND:** Venous thromboembolism and pulmonary embolism are common after major trauma. Anticoagulant prophylaxis usually is not considered because of the increased risk of bleeding. Despite the limited data, many trauma centers use inferior vena cava (IVC) filters as a primary means to prevent pulmonary embolism.

**STUDY DESIGN:** Randomized, controlled, and multicenter trial.

**SETTING:** Four tertiary hospitals in Australia.

**SYNOPSIS:** 240 major trauma patients were randomly assigned to receive either IVC filter or no IVC filter within 72 hours after admission. The primary endpoint was a composite of 90-day mortality or symptomatic pulmonary embolism confirmed on imaging. There was no difference in the rate of composite outcome in those with IVC filter, compared with those with no IVC filter.

**BOTTOM LINE:** After major trauma, early prophylactic placement of IVC filter did not reduce the 90-day mortality or incidence of symptomatic pulmonary embolism.

**CITATION:** Ho KM et al. A multicenter trial of vena cava filters in severely injured patients. N Engl J Med. 2019 Jul 25;381:328-37.

Dr. Hoque Sharmy is a hospitalist and assistant professor of medicine in the division of hospital medicine.

By Keniesha Thompson, MD

## 9 Natural history of adrenal incidentalomas with and without mild autonomous cortisol excess

**CLINICAL QUESTION:** Is there significant change in the tumor size or hormonal function of benign nonfunctioning adrenal tumors (NFATs) or adenomas causing mild autonomous cortisol excess (MACE) over time?

**BACKGROUND:** Studies have suggested that adrenal incidentalomas may increase risk of cardiometabolic disease in patients. Guidelines for repeat imaging and hormonal assessment of adrenal incidentalomas are inconsistent because of inadequate studies.

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

**SETTING:** MEDLINE, EMBASE, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, and Scopus were searched.

**SYNOPSIS:** Of 1,139 studies screened; 32 met inclusion criteria: adult patients with adrenal adenoma who had 12 or more months of follow-up and outcomes of interest. Larger adrenal adenomas were less likely to have significant change in size on repeat imaging than did smaller tumors. There was no malignant transformation observed.



Dr. Thompson

Development of Cushing syndrome was seen in 6 of 2,745 patients. Cardiometabolic comorbid conditions were common in both MACE and NFAT patients with hypertension being the most frequently reported (64% and 58.2% respectively). Worsening of dyslipidemia was observed in both groups. Weight gain and the development of type 2 diabetes occurred more frequently in MACE

than in NFAT patients (21.0% vs. 8.7%). In 1,356 patients, all-cause mortality was 11.2% (95% confidence interval, 9.5%-13.0%) for both groups over a mean follow-up of 56.3 months. Cardiovascular events accounted for 43.2% deaths. Limitations included the small number of patients in the studies assessed and the inconsistent definition of outcomes.

**BOTTOM LINE:** Patients with adrenal adenomas should be counseled on modifying cardiovascular risk factors whereas tumor growth, change in hormone production, and malignant transformation are less concerning based on the studies included.

**CITATION:** Elhassan YS et al. Natural history of adrenal incidentalomas with and without mild autonomous cortisol excess: A systematic review and meta-analysis. Ann Intern Med. 2019 Jun 25;121:107-16.

Dr. Thompson is a hospitalist and assistant professor of medicine in the division of general internal medicine.

## SHORT TAKES

program. Ann Intern Med. 2019 Jul 16;171:91-8.

### Measles 2019: Most cases occurred in close-knit, undervaccinated communities

A total of 1,249 measles cases were reported in the United States during Jan. 1-Oct. 1, 2019.

While 22 outbreaks were reported in 17 states during 2019, the majority of measles cases occurred in a pair of outbreaks that started in late 2018, one in New York City and the other in New York state. These two outbreaks, which occurred in underimmunized, close-knit communities, accounted for 934 (75%) of the 2019 total. An additional six outbreaks in similar communities accounted for nearly half of the remaining reported cases.

Overall median patient age was 6 years, with 31% being children aged 1-4 years; 27% being school-age children aged 5-17 years; and 29%, adults aged at least 18 years. The rate of patients who were either unvaccinated or had unknown vaccination status ranged from 87% to 91%. A total of 119 patients were hospitalized, 20% of whom were younger than 1 year; no deaths were reported.

**CITATION:** Patel M et al. MMWR Morb Mortal Wkly Rep. 2019 Oct 4. doi: 10.15585/mmwr.mm6840e2.



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## **DIVISION CHIEF, HOSPITAL MEDICINE DEPARTMENT OF MEDICINE**

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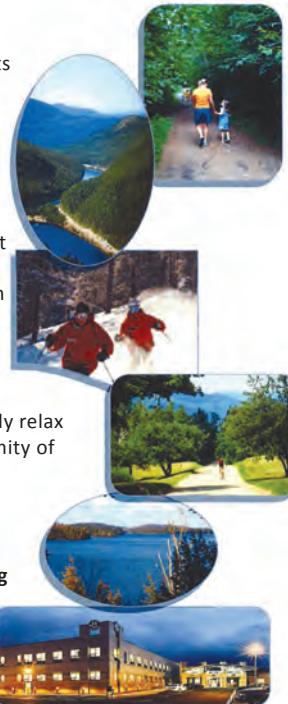


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# Was the success of hospital medicine inevitable?

Early on, SHM defined the specialty

By Larry Wellikson, MD, MHM

**W**hen I started at the Society of Hospital Medicine – known then as the National Association of Inpatient Physicians (NAIP) – in January 2000, Bill Clinton was still president. There were probably 500 hospitalists in the United States, and SHM had about 200-250 members.

It was so long ago that the iPhone hadn't been invented, Twitter wasn't even an idea, and Amazon was an online book store. SHM's national offices were a cubicle at the American College of Physicians headquarters in Philadelphia, and our entire staff was me and a part-time assistant.

We have certainly come a long way in my 20 years as CEO of SHM.

When I first became involved with NAIP, it was to help the board with their strategic planning in 1998. At that time, the national thought leaders for the hospitalist movement (the term hospital medicine had not been invented yet) predicted that hospitalists would eventually do the inpatient work for about 25% of family doctors and for 15% of internists. Hospitalists were considered to be a form of "general medicine" without an office-based practice.

One of the first things we set about doing was to define the new specialty of hospital medicine before anyone else (e.g., American Medical Association, ACP, American Academy of Family Physicians, American Academy of Pediatrics, the government) defined us.

Most specialties were defined by a body organ (e.g., cardiology, renal), a population (e.g., pediatrics, geriatrics), or a disease (e.g., oncology), and there were a few other site-specific specialties (e.g., ED medicine, critical care). We felt that, to be a specialty, we needed certain key elements:

- Separate group consciousness
- Professional society
- Distinct residency and fellowship programs
- Separate CME
- Distinct educational materials (e.g., textbooks)
- Definable and distinct competencies
- Separate credentials – certification and/or hospital insurance driven

Early on, SHM defined the Core Competencies for Hospital Medicine for adults in patient care and,

eventually, for pediatric patients. We rebranded our specialty as hospital medicine to be more than just inpatient physicians, and to broadly encompass the growing "big tent" of SHM that included those trained in internal medicine, family medicine, pediatrics, med-peds, as well as nurse practitioners, physician assistants, pharmacists, and others.

We were the first and only specialty society to set the standard for hospitalist compensation (how much you are paid) and productivity (what you are expected to do) with our unique State of Hospital Medicine (SOHM) Report. Other specialties left this work to the Medical Group Management Association, the AMA, or commercial companies.

Our specialty was soon being asked to do things that no other group of clinicians was ever asked to do.

Hospitalists were expected to

other hospital staff.

At the same time, SHM was focusing on becoming a very unique medical professional society.

SHM built on the energy of our young and innovative hospitalists to forge a different path. We had no reputation to protect. We were not bound like most other specialty societies to over 100 years of "the way it's always been done."

While other professional societies thought their role in quality improvement was to pontificate and publish clinical guidelines that often were little used, SHM embarked on an aggressive, hands-on, frontline approach by starting SHM's Center for Quality Improvement. Over the last 15 years, the center has raised millions of dollars to deliver real change and improvement at hundreds of hospitals nationwide, many times bringing

**"While other professional societies thought their role in quality improvement was to pontificate and publish clinical guidelines that often were little used, SHM embarked on an aggressive, hands-on, frontline approach."**

**Save Money** by reducing length of stay and the use of resources on the sickest patients. Hospitalists were asked to **Improve Measurable Quality** at a time when most other physicians or even hospitals weren't even being measured.

We were expected to form and **Lead Teams** of other clinicians when health care was still seen as a solo enterprise. Hospitalists were expected to **Improve Efficiency** and to create a **Seamless Continuity**, both during the hospital stay and in the transitions out of the hospital.

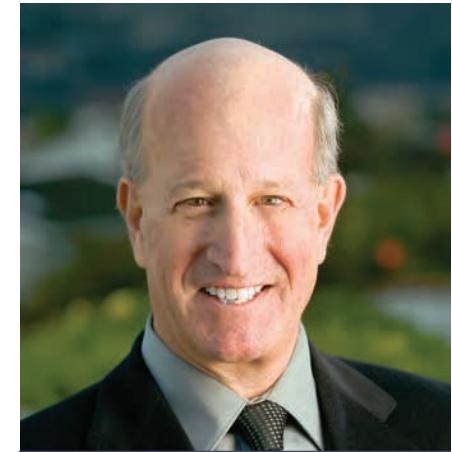
Hospitalists were asked to do things no one else wanted to do, such as taking on the uncompensated patients and extra hospital committee work and just about any new project their hospital wanted to be involved in. Along the way, we were expected to **Make Other Physicians' Lives Better** by taking on their inpatients, inpatient calls, comanagement with specialists, and unloading the ED.

And both at medical schools and in the community, hospitalists became the **Major Educators** of medical students, residents, nurses, and

work plans and mentors to support and train local clinicians in quality improvement skills and data collection. This approach was recognized by the National Quality Forum and the Joint Commission with their prestigious John Eisenberg Award for Quality Improvement.

When we went to Washington to help shape the future of health care, we did not ask for more money for hospitalists. We did not ask for more power or to use regulations to protect our new specialty. Instead, we went with ideas of how to make acute medical care more effective and efficient. We could show the politicians and the regulators how we could reduce incidence of deep vein thrombosis and pulmonary emboli, how we could make the hospital discharge process work better, how we could help chart a smoother medication reconciliation process, and so many other ways the system could be improved.

And even the way SHM generated our new ideas was uniquely different than other specialties. Way back in 2000 – long before Twitter



Dr. Wellikson is the CEO of SHM. He has announced his plan to retire from SHM in late 2020. This article is the first in a series celebrating Dr. Wellikson's tenure as CEO.

and other social media were able to crowdsource and use the Internet to percolate new ideas – SHM relied on our members' conversations on the SHM electronic mail discussion list to see what hospitalists were worried about, and what everyone was being asked to do, and SHM provided the resources and initiatives to support our nation's hospitalists.

From these early conversations, SHM heard that hospitalists were being asked to **Lead Change** without much of an idea of the skills they would need. And so, the SHM leadership academies were born, which have now educated more than 2,700 hospitalist leaders.

Early on, we learned that hospitalists and even their bosses had no idea of how to start or run a successful hospital medicine group. SHM started our practice management courses and webinars and we developed the groundbreaking document, Key Characteristics of Effective Hospital Medicine Groups. In a typical SHM manner, we challenged most of our members to improve and get better rather than trying to defend the status quo. At SHM, we have constantly felt that hospital medicine was a "work in progress." We may not be perfect today, but we will be better in 90 days and even better in a year.

I have more to say about how we got this far and even more to say about where we might go. So, stay tuned and keep contributing to the future and success of SHM and hospital medicine.

# Gender bias and pediatric hospital medicine

## Where do we go from here?

By Anika Kumar, MD, FAAP

**A**utumn is a busy time for pediatric hospitalists, with this autumn being particularly eventful as the first American Board of Pediatrics (ABP) certifying exam for Pediatric Hospital Medicine (PHM) will be offered on Nov. 12, 2019.

More than 1,600 med/peds and pediatric hospitalists applied to be eligible for the 2019 exam, 71% of whom were women. At least 3.9% of those applicants were denied eligibility for the 2019 exam. These denials resulted in discussions on the American Academy of Pediatrics Section on Hospital Medicine (AAP SOHM) email listserv related to unintentional gender bias.

PHM was first recognized as a subspecialty by the American Board of Medical Specialties in December 2015. Since that time, the ABP's PHM sub-board developed eligibility criteria for practicing pediatric and med/peds hospitalists to apply for the exam. The sub-board identified three paths: a training pathway for applicants who had completed a 2-year PHM fellowship, a practice pathway for those satisfying ABP criteria for clinical activity in PHM, and a combined pathway for applicants who had completed PHM fellowships lasting less than 2 years.

Based on these pathways, 1,627 applicants applied for eligibility for the first PHM board certification exam. However, many concerns arose with the practice pathway eligibility criteria, which initially included:

- General pediatrics board certification.
- PHM practice "look back" period ends on or before June 30 of the exam year and starts 4 years earlier.
- More than 0.5 full-time equivalent professional PHM-related activities (patient-care, research, administration), defined as more than 900 hours/year every year for the preceding 4 years.
- More than 0.25 FTE direct patient care of hospitalized children, defined as more than 450 hours/year every year for the preceding 4 years.
- Practice covers the full range of hospitalized children with regard to age, diagnoses, and complexity.
- Practice interruptions cannot exceed 3 months in the preceding

4 years, or 6 months in the preceding 5 years.

- Practice experience and hours were acquired in the United States and Canada.

The start date and practice interruptions criteria in the practice pathway posed hurdles for many female applicants. Many women voiced concerns about feeling disadvantaged when applying for the PHM certifying exam and some of these women shared their concerns on the AAP SOHM email listserv. In response to these concerns, the PHM community called for increased transparency from the ABP related to denials, specifically related to unintentional gender bias against women applying for the exam.

David Skey, MD, and Jamee Walters, MD, pediatric hospitalists at Arnold Palmer Medical Center in Orlando, drafted a petition with the help of legal counsel that "demand[ed] immediate action," and "request[ed] a formal response from the ABP regarding the practice pathway criteria." The petition also stated that there were insufficient data to determine if the practice pathway "disadvantages women." The petition asked the ABP to "facilitate a timely analysis to determine if gender bias" was present, or to perform an internal analysis and "release the findings publicly."

The petition was shared with the PHM community via the AAP SOHM listserv on July 29, 2019, and submitted to the ABP on Aug. 6, 2019, with 1,479 signatures.

On Aug. 29, 2019, the ABP's response was shared on the AAP SOHM email listserv and was later published in the *Journal of Hospital Medicine*. In its response, the ABP stated that the gender bias allegation was "not supported by the facts" as there was "no significant difference between the percentage of women and men who were denied" eligibility. In addressing the gender bias allegations and clarifying the practice pathway eligibility, the ABP removed the practice interruption criteria and modified the practice pathway criteria as follows:

- General pediatrics board certification.
- PHM practice started on or before July 2015 (for board eligibility in 2019).
- Professional PHM-related activities (patient-care, research, adminis-

tration), defined as more than 900-1,000 hours/year every year for the preceding 4 years.

- Direct patient care of hospitalized children, defined as more than 450-500 hours/year every year for the preceding 4 years.
- Practice covers the full range of hospitalized children with regard to age, diagnoses, and complexity.
- Practice experience and hours were acquired in the United States and Canada.

Following the release of the ABP's response, many members of the PHM community remain concerned about the ABP's revised criteria. Arti Desai, MD, pediatric hospitalist at Seattle Children's and senior author on a "Perspectives in Hospital Medicine" in *JHM*, was appreciative that the ABP chose to remove the practice interruptions criterion. However, she and her coauthors remain concerned about lingering gender bias in the ABP's practice pathway eligibility criteria surrounding the "start date" criterion. They state that this criterion differentially affects women, as women may take time off during or after residency for maternity or family leave.

Other members of the PHM community also expressed concerns about the ABP's response to the PHM petition. Beth C. Natt, MD, director of pediatric hospital medicine regional programs at Connecticut Children's in Hartford, felt that the population may have been self-selected, as the ABP's data were limited to individuals who applied for exam eligibility. She was concerned that the data excluded pediatric hospitalists who chose not to apply because of uncertainty about meeting eligibility criteria. Clint Schwenk, MD, pediatric hospitalist at Norton Children's Hospital in Louisville, Ky., said he wished the ABP had addressed the number of pediatric hospitalists who elected not to apply based on fear of ineligibility before concluding that there was no bias.

Courtney Edgar-Zarate, MD, associate program director of the internal medicine/pediatrics residency at the University of Arkansas, expressed concerns that the ABP's stringent clinical patient care hours criterion may unintentionally result in ineligibility for many mid-career or senior med/peds hospitalists.

The Society of Hospital Medi-



Dr. Kumar is clinical assistant professor of pediatrics at the Cleveland Clinic Lerner College of Medicine at Case Western Reserve University and a pediatric hospitalist at Cleveland Clinic Children's. She is the pediatric editor of *The Hospitalist*.

cine shared its position in regard to the ABP's response in a Special Announcement in *JHM*. In it, SHM's pediatric leaders stated that SHM would continue to support all hospitalists, independent of board eligibility status, and would continue to offer these hospitalists the merit-based Fellow designation. They also proposed future directions for the ABP, including a Focused Practice Pathway in Hospital Medicine (FPHM), such as what the American Board of Internal Medicine and the American Board of Family Medicine have adopted for board recertification. This maintenance of certification program that allows physicians primarily practicing in inpatient settings to focus their continuing education on inpatient practice, and is not a subspecialty.

SHM's pediatric leaders hope that rather than excluding those who are not PHM board eligible/certified, institutions and professional organizations will consider all qualifications when hiring, mentoring, and promoting physicians who care for hospitalized children. SHM is leading the way, and will continue to allow all hospitalists who care for children to receive Fellow designation.

For a longer version of this article, and a full list of references, please visit [www.the-hospitalist.org/hospitalist/article/210028/pediatrics/gender-bias-and-pediatric-hospital-medicine](http://www.the-hospitalist.org/hospitalist/article/210028/pediatrics/gender-bias-and-pediatric-hospital-medicine).

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