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Dr. Howell

SHM Is Using Its Voice. Help Us Stay on Message.

By Eric Howell
MD, MHM, SHM CEO

I begin this article with the obvious: these are challenging times. Some of the challenges are thrust upon us, like the COVID-19 virus, and some are made by our own society, like the political polarization of, well, basically everything. When I was younger, the list of controversial topics at social functions used to be short: money, religion, politics. The approach was also simple: don't discuss. For better or worse, politics has now dramatically expanded the "controversial" list to include much more: masks (the kind to prevent the spread of infection), vaccines, school safety, weather, the economy, kids' sports, and many other topics. At the same time, norms about how to approach controversial topics have also changed. Individuals are more openly sharing opinions, and often expecting others to do the same (although respect for differences could at times be better). These changing norms, along with numerous platforms for individuals and groups to amplify their messages, have had an enormous influence.

These changing norms aren't just affecting us at the individual level. Our society as a whole is also expecting more from its organizations. The "lay low and avoid the issue" business approach of the past is no longer the safe—or, in my view, even the correct—approach for organizational leaders to address challenging topics. Employees, members of professional societies, customers of businesses, and society at large know that

organizations are run by people, and those people have certain values. If you fail to be sincere as an organization about what those values are, there may be worse backlash than that caused by being transparent about values and dealing (maturely) with the ensuing difference of opinions. These days, an organization that stays silent is sending a message anyway. With that in mind, if I'm going to be judged on my message as an organizational leader, I'd rather go down swinging.

This preamble brings me to the important topic of SHM using its voice, and how that voice is being shaped.

SHM leadership, including the Board of Directors, staff leadership (including me as CEO), and other SHM members, believes that SHM's powerful voice should continue to be used to make a positive impact on issues that are important to us as hospitalists, but also as people. The focus of that positive impact will continue to be on our members and our hospitalized patients, as has always been the case. You have likely seen SHM use its voice very effectively for predominantly hospitalist-centric issues like clinical care, the opioid crisis, clinician well-being, observation care, or billing changes. But more recently, the SHM voice has begun to speak on issues that, while still inside the sphere of medicine, also have an effect on our daily lives. For us to stay silent on polarizing issues like gun violence, abortion, and misinformation, just to name a few, would still send a message—just the wrong message.

The Board and the staff at SHM run the organization using values

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Weijen.ChangMD@baystatehealth.org

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KumarA4@ccf.org

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MJ Drewn
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Fax: 267-702-2690
Website: www.hospitalmedicine.org

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Hospitalists are charged with treating individuals at their most vulnerable moments, when being respected as a whole person is crucial to advancing patients' healing and wellness. Within our workforce, diversity is a strength in all its forms, which helps us learn about the human experience, grow as leaders, and ultimately create a respectful environment for all regardless of age, race, religion, national origin, gender identity, sexual orientation, socioeconomic status, appearance, or ability. To this end, the Society of Hospital Medicine will work to eliminate health disparities for our patients and foster inclusive and equitable cultures across our care teams and institutions with the goal of moving medicine and humanity forward.

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that are important to us as professionals and as people. We want to make a difference and do good for the most people and patients possible, especially those who may need an advocate in their corner. If you've seen me speak, you know I use my own core values to help me reach decisions around complex topics (see "Top 10 Leadership Tips from Dr. Eric Howell" in the March 2022 issue of *The Hospitalist*). Not surprisingly, the SHM Board of Directors and other SHM staff have similar values and apply those to the organization in their own complementary ways. In addition to SHM leadership using our own values as a guide for how and

when to use the SHM voice, we work hard to engage a wide range of voices from across the spectrum. The Public Policy Committee, the Diversity, Equity, and Inclusion Committee, the Annual Conference Committee, Special Interest Groups, and Chapter leaders are all membership platforms that SHM leadership consults regularly.

Our president, Dr. Rachel Thompson, is developing a series of listening sessions with members, starting at the Pediatric Hospital Medicine annual meeting in Orlando, Fla., and will engage others both in person and virtually for regular input from members. We'll provide more information on how

members can be a part of those listening sessions once the details are finalized.

While time and resources don't allow for SHM to connect one-on-one with all 18,000 members, these SHM forums have been, and will continue to be, instrumental in allowing SHM leadership to get perspectives from a wide spectrum of our diverse membership. We genuinely strive to listen to all opinions and respect everyone's voice, even those with opinions that differ from whatever consensus has been reached. Diversity of thought and open dialogue strengthen SHM and often allow for more inclusive messages and

solutions to polarizing and complex issues.

In a perfect world, everything the SHM voice says would resonate with 100% of members, 100% of the time. But since that's not reality, on the (hopefully rare) occasion a member—or members—may not be in complete agreement with SHM's statements, I want you to know what process we use to determine when and how we use SHM's voice. When it comes to using the SHM voice on challenging topics, we listen to our membership, we are guided by our core values, and we try to use that voice to do the most good for those in the most need. ■

Become a Leader With SHM

Your voice and participation are an integral part of SHM and help us positively effect the practice of hospital medicine.

Here are some opportunities for members like you to become more involved with SHM and identify yourself as a leader in hospital medicine:

- Join a Special Interest Group (SIG) to connect with peers who share practice interests and/or settings.
- Engage with an SHM Chapter and take a leadership role to connect with your local hospital medicine community.
- Volunteer on an SHM Committee to play a larger role in SHM's major initiatives, from building resources for hospital medicine to keeping SHM at the forefront of the specialty.
- Write for *The Hospitalist* or submit an article to the *Journal of Hospital Medicine* to let your voice be heard.

Learn more at hospitalmedicine.org/getinvolved.

Not a member? Join today at hospitalmedicine.org/join.

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Nominate yourself or a colleague for SHM's Awards of Excellence 2023. The deadline for submissions is Oct. 3, 2022.

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Wake Forest School of Medicine Research Reviews

By Chi Huang, MD, FACP, SFHM, Sarah M. Nowak, PA-C, MPAS, RD, LDN, Raghava Nagaraj, MBBS, MPH, FACP, SFHM, Stephanie Whalen, MSN, NP, Sumera Andleeb, MD, MPH, and Luqman-Arafath Thazhatuweetil-Kunhahamed, MBBS, MD, FACP, SFHM

Wake Forest School of Medicine, Winston-Salem, N.C.

IN THIS ISSUE

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By Chi Huang, MD, FACP, SFHM

1 There is a decreased risk of hospitalization from heart failure in type II diabetics initiated on a SGLT2 inhibitor when compared to a GLP-1 receptor agonist

CLINICAL QUESTION: Determine the cardiovascular risk outcome in type II diabetic patients initiated on an sodium-glucose cotransporter-2 (SGLT2) inhibitor versus a glucagon-like peptide-1 (GLP-1) receptor agonist.



Dr. Huang

BACKGROUND: Various studies have suggested that several SGLT2 inhibitors and GLP-1 receptor agonists may improve cardiac outcomes—myocardial infarction, stroke, hospitalization for heart failure, and cardiovascular death. Current guidelines recommend using either an SGLT2 inhibitor or GLP-1 receptor agonist for patients with type II diabetes and cardiovascular disease. However, there has been no study directly comparing SGLT2 inhibitors with GLP-1 receptor agonists in patients with type II diabetes.

STUDY DESIGN: 1:1 propensity matched, population-based, cohort study

SETTING: The data was retrieved from two commercial U.S. health insurance data sets: #1 Optum's deidentified Clinformatics Data Mart and IBM Market Scan Database; and #2 Medicare fee-for-service Parts A, B, and D from April 1, 2013, to December 31, 2017.

SYNOPSIS: 186,040 propensity score-matched patients were stratified by cardiovascular disease status and analyzed to assess differences in cardiovascular risk in patients initiated on either an SGLT-2 inhibitor or GLP-1 receptor agonist. The primary outcome was a composite cardiovascular endpoint of hospitalization for acute myocardial infarction (MI), stroke, or heart failure. The median follow-up was approximately seven months. The initiation of SGLT-2 inhibitors versus GLP-1 receptor agonists demonstrated a lower risk of hospitalization for MI (HR, 0.83 [95% CI, 0.74 to 0.93]) and risk for a composite outcome of MI, stroke, or all-cause

mortality (HR, 0.90 [95% CI, 0.82 to 0.98]). There was no difference in the risk for all-cause mortality in those who received SGLT-2 inhibitors versus GLP-1 receptor agonists. The initiation of SGLT-2 inhibitors was associated with an approximately 30% reduction in the risk for heart failure hospitalization in all patients—regardless of cardiovascular disease status—when compared to patients initiated on GLP-1 receptor agonists (HR, 0.70 [CI, 0.64 to 0.77]).

BOTTOM LINE: Both SGLT-2 inhibitors and GLP-1 receptor agonists decrease cardiovascular risk in patients with type II diabetes and cardiovascular disease. However, SGLT-2 inhibitors may decrease the risk of hospitalizations from heart failure more than GLP-1 receptor agonists regardless of a patient's cardiovascular disease history.

CITATION: Patorno E, et al. Sodium-glucose cotransporter-2 inhibitors versus glucagon-like peptide-1 receptor agonists and the risk for cardiovascular outcomes in routine care patients with diabetes across categories of cardiovascular disease. *Ann Intern Med.* 2021;174(11):1528-1541. doi:10.7326/M21-0893.

Dr. Huang is the senior medical director of hospital medicine at Atrium Health Enterprise, the hospital medicine executive medical director at Atrium Wake Forest Baptist Health System, and an associate professor of internal medicine at Wake Forest School of Medicine, Winston-Salem, N.C. Disclosure: Dr. Huang is a scientific advisory board member for Medicus Tek and a hospital medicine editor and board member for Dynamed Plus.

By Sarah M. Nowak, PA-C, MPAS, RD, LDN

2 Transthoracic echocardiography is superior in detecting valvular heart disease

CLINICAL QUESTION: To quantify the extent to which undetectable heart sounds occur in hospitalized patients who are undergoing transthoracic echocardiography and evaluate the association between patient factors and missed valvular heart disease diagnosis.



Ms. Nowak

BACKGROUND: Clinicians using cardiac auscultation achieve approximately a 40-70% sensitivity in detecting valvular heart disease when compared with transthoracic echocardiography. This is irrespective of the clinician's skill set, clinician's experience, and sophistication of the clinician's stethoscope. However, it is uncertain what actual percentage of auscultated heart sounds are missed and if certain patient factors contribute to a missed diagnosis.

STUDY DESIGN: Cross-sectional study

SETTING: University of Michigan Hospital

SYNOPSIS: The study included 200 hospitalized patients (74 female) with 14% identifying as Black. The median age of 65 years (interquartile range, 55-73 years) and median body mass index (BMI) was 29 (interquartile range, 25-34). Congestive heart failure and chronic obstructive pulmonary disease were present in 74% and 50% of patients, respectively. Heart sounds were clinically undetectable at the aortic location in 15% of patients and at the mitral valve location in 65% of patients. Male gender was associated with undetectable aortic heart sounds. Female gender, especially those with a higher BMI, was associated with undetectable mitral sounds. Heart sounds were undetectable in 0% of patients with aortic stenosis, 17% with aortic regurgitation, 50% with mitral stenosis, and 62% with mitral regurgitation. Limitations of the study included the absence of a standard criterion for undetectable heart sounds, a limited convenience sample, and the lack of physiologic maneuvers performed during auscultation. The results of this study confirmed that the role of physical examination in patient care is complex, with limitations in clinical practice, and that the use of transthoracic echocardiography is superior in the detection of valvular heart disease.

BOTTOM LINE: Transthoracic echocardiography has a better yield at determining the presence and extent of valvular heart disease among hospitalized patients in comparison to cardiac auscultation.

CITATION: Jariwala N, et al. Clinically undetectable heart sounds in hospitalized patients undergoing echocardiography. *JAMA Intern Med.* 2022;182(1):86-87. doi:10.1001/jamainternmed.2021.6594.

Ms. Nowak is a physician assistant and registered and licensed dietitian at Atrium Health Wake Forest Baptist, Winston-Salem, N.C.

By Raghava Nagaraj, MBBS, MPH, FACP, SFHM

3 Acute care for the elderly in the home environment increased physical activity levels while lowering costs, health care use, and readmissions

CLINICAL QUESTION: Can hospital-level care be provided in the home environment to reduce costs without compromising the quality of care in the U.S.?

BACKGROUND: Inpatient care is expensive, and is a major contributor to rising health care costs in the U.S. The U.S. health care system continues to experience challenges with overcrowded emergency departments (EDs), lack of inpatient capacity, and quality issues (e.g., readmissions and “post-hospital syndrome” due to deconditioning and lack of sleep). Home hospital-level care is already provided in several developed countries, such as Australia and Spain. However, the literature on this type of care in the U.S. is sparse and limited to a few nonrandomized studies that have suggested that hospital-level care provided in a home setting for select patients can result in reduced cost and improved quality of care.



Dr. Nagaraj

STUDY DESIGN: Parallel design, randomized, controlled trial

SETTING: An academic medical center and a community hospital in Massachusetts between June 12, 2017, and January 16, 2018

SYNOPSIS: A total of 91 adult patients were randomly assigned to either inpatient hospital care (48 patients) or home hospital care (43 patients). Patients were excluded if they lived in a long-term care or rehabilitation facility, required routine administration of controlled substances, required the assistance of more than one person to the bedside commode, or were at high risk for clinical deterioration based on validated, disease-specific, risk algorithms. At baseline, patients in both groups had similar characteristics. However, patients who received inpatient hospital care were younger, more often Black, and less often insured through Medicare. The adjusted mean cost of the acute care episode was 38% lower (95% CI, 24%-49%; $P < 0.001$) for those managed with home hospital care versus inpatient hospital care. Patients who received home hospital care had fewer readmissions within 30 days after discharge (7% versus 23%) and were less often sedentary (median, 12% versus 23%) in comparison to those who received inpatient hospital care. Fewer safety events (9% versus 15%) were observed in the home hospital care group versus the inpatient hospital care group.

BOTTOM LINE: In addition to reducing health care costs, home hospital care may be an opportunity to solve the problem of overcrowded hospitals and EDs across the U.S., which has been exacerbated by the COVID-19 pandemic.

CITATION: Levine DM, et al. Hospital-level care at home for acutely ill adults: a randomized controlled trial. *Ann Intern Med.* 2020;172(2):77-85. doi:10.7326/M19-0600.

Dr. Nagaraj is an assistant professor of internal medicine at Wake Forest School of Medicine, Winston-Salem, N.C.

By Stephanie Whalen, MNS, NP

4 Mirtazapine is not an effective treatment for agitation in dementia

CLINICAL QUESTION: What's the clinical effectiveness and safety profile of mirtazapine in reducing agitation in dementia relative to placebo?

BACKGROUND: Nonpharmacological treatments are considered first-line for the management of agitation in patients with dementia. When these treatments are ineffective, pharma-

cological treatments are sometimes used with caution because of their high side effect profile and low efficacy. Mirtazapine works as a centrally acting alpha-2, 5-HT₁ and H₁-antagonist and therefore has sedative properties. It also has less anticholinergic activity in comparison to other antidepressants and minimal effects on the cardiovascular system, suggesting it might have a more favorable side effect profile.

STUDY DESIGN: Multi-center, parallel-group, double-blind, placebo-controlled randomized trial

SETTING: 26 United Kingdom National Health Service clinical centers

SYNOPSIS: 204 patients with probable or possible Alzheimer's disease with coexisting agitation who did not respond to non-pharmacological strategies participated in the study. Patients were randomized 1:1 into either the mirtazapine (titrated to 45 mg daily) or placebo group. The mean overall dosage in the mirtazapine group was 30.5 mg daily. At six weeks, the severity of agitation (determined by the Cohen-Mansfield Agitation Inventory (CMAI) score) decreased in both the mirtazapine (71.1 ±16.4 to 61.4 ±23.5) and placebo (69.8 ±17.1 to 60.0 ±19.9) groups, but this was not statistically significant. At 12 weeks, the CMAI score decreased in both the mirtazapine (71.1 ±16.4 to 61.4 ±22.6) and placebo (69.8 ±17.1 to 60.8 ±21.8) groups, but this was not statistically significant. The number of adverse events was similar in both the control and mirtazapine group at approximately 65%. They also found there were more deaths in the mirtazapine group (seven deaths) versus the placebo group (one death) by week 16.

BOTTOM LINE: Mirtazapine was no more effective than placebo for the treatment of agitation in dementia and may be associated with a higher risk of death.

CITATION: Banerjee S, et al. Study of mirtazapine for agitated behaviors in dementia (SYM-BAD): a randomized, double-blind, placebo-controlled trial. *Lancet.* 2021;398(10310):1487-1497. doi:10.1016/S0140-6736(21)01210-1.

Ms. Whalen is a nurse practitioner at Atrium Health Wake Forest Baptist Medical Center, Winston-Salem, N.C.

By Sumera Andleeb, MD, MPH

5 Oral antibiotics and a combination regimen of intravenous and oral antibiotics for treatment of acute uncomplicated appendicitis yielded similar success rates

CLINICAL QUESTION: Are oral antibiotics effective and non-inferior to a combination of intravenous and oral antibiotics?

BACKGROUND: Evidence over the past 10 years suggests that antibiotics are a safe alternative to appendectomy in treating acute uncomplicated appendicitis. In prior studies, researchers have evaluated the use of intravenous antibiotics with transition to oral antibiotics, but the effectiveness of a single, oral antibiotic



Ms. Whalen



Dr. Andleeb

for the treatment of acute uncomplicated appendicitis has yet to be evaluated.

STUDY DESIGN: Randomized, open label, non-inferiority, multi-center trial between April 2017 and November 2018

SETTING: Nine Finnish Hospitals, (four university hospitals and five central hospitals)

SYNOPSIS: A total of 599 patients with computed tomography-confirmed, acute, uncomplicated appendicitis were included. Patients ranged in age from 18 to 60 years (mean age of 36 ±12 years), and 43.9% were women. Patients were randomized to receive either oral moxifloxacin (400 mg once daily) for seven days, or intravenous ertapenem (1 g once daily) for two days followed by oral levofloxacin (500 mg daily) plus metronidazole (500 mg three times per day) for five days. Both groups achieved the primary endpoint defined as >65% of patients discharged without surgery and no recurrence for over one year. The treatment success rate at one year was 70.2% (one-sided 95% confidence interval, 65.8% to infinity) for the oral moxifloxacin group and 73.8% (one-sided 95% confidence interval, 69.5% to infinity) for the intravenous ertapenem followed by oral levofloxacin plus metronidazole group. The difference was -3.6% (one-sided 95% confidence interval, -9.7% to infinity), which exceeded the non-inferiority margin that was predefined as -6% ($P=0.26$). The median length of stay was similar in both groups at approximately one day.

BOTTOM LINE: Patients with acute uncomplicated appendicitis were successfully treated with oral moxifloxacin alone. Even though oral moxifloxacin did not meet statistical criteria for non-inferiority, the results support that oral moxifloxacin may be a reasonable option for patients with acute uncomplicated appendicitis who hope to avoid surgery.

CITATION: Sippola S, et al. Effect of oral moxifloxacin vs intravenous ertapenem plus oral levofloxacin for treatment of uncomplicated acute appendicitis: The APPAC II randomized clinical trial. *JAMA.* 2021;325(4):353-362. doi:10.1001/jama.2020.23525.

Dr. Andleeb is an assistant professor of internal medicine at Wake Forest School of Medicine, Winston-Salem, N.C.

By Luqman-Arafath Thazhatuveetil-Kunhahamed, MBBS, MD, FACP, SFHM

6 Low-dose rivaroxaban at discharge prevented some VTE events at one month for high-risk patients recovering from COVID-19

CLINICAL QUESTION: Is extended rivaroxaban prophylaxis (10 mg daily for 35 days) protective against arterial and venous thromboembolism (VTE) events in COVID-19 patients with high-risk features during the post-hospitalization period?

BACKGROUND: Multiple studies have demonstrated an increased risk of thrombosis in patients suffering from a severe SARS-CoV-2 infection. Post-discharge VTE, arterial thromboembolism, and all-cause death following hospital discharge in COVID-19 patients have been reported to be approximately 7%. Preliminary data reported



Dr. Thazhatuveetil-Kunhahamed

a 46% reduction in VTE in patients prescribed prophylactic anticoagulation on discharge. However, there remains no consensus on the role of post-hospital discharge prophylactic anticoagulation.

STUDY DESIGN: Pragmatic, open-label (with blinded adjudication), multi-center, randomized, controlled trial with intention-to-treat analysis

SETTING: 14 hospitals in Brazil from October 8, 2020 to June 29, 2021

SYNOPSIS: 320 adult patients with COVID-19 and high risk for VTE based on a moderate/high IMPROVE VTE risk score (>2) plus an elevated D-dimer level (>500 ng/dL) were included. On discharge, patients were randomly assigned to receive either rivaroxaban (10 mg daily) for 35

days or no anticoagulation. All patients were hospitalized for more than three days, received standard-dose thromboprophylaxis with heparin while hospitalized, and received bilateral lower-extremity venous ultrasound and CT pulmonary angiography at 35 days post-discharge. Patients with general contraindications to anticoagulation or a major bleeding risk were excluded. 52% of patients had intensive-care-unit stays during their hospitalization. 159 patients from each group were included in the intention-to-treat analysis and the primary outcome (symptomatic or asymptomatic VTE or arterial embolism or cardiovascular-related death) was significantly lower in the rivaroxaban group than in the no-anticoagulation group (3.14% versus 9.43%; number needed to treat, 16). Also, there was a reduced rate of symptomatic/fatal VTE in the rivaroxaban group than in the no-anticoagulation

group (0.63% versus 5.03%). No major bleeding events occurred in either group.

BOTTOM LINE: In select high-risk patients recovering from COVID-19, rivaroxaban 10 mg for 35 days post-discharge may decrease VTE events and related mortality without a significant increase in major bleeding.

CITATION: Ramacciotti E, et al. Rivaroxaban versus no anticoagulation for post-discharge thromboprophylaxis after hospitalization for COVID-19 (MICHELLE): an open-label, multicentre, randomized, controlled trial. *Lancet*. 2022;399(10319):50-59. doi:10.1016/S0140-6736(21)02392-8.

Dr. Thazhatuveetil-Kunhahamed is an assistant professor of internal medicine at Wake Forest School of Medicine, Winston-Salem, N.C. ■

Commentary

The Blueprint for Overcoming Burnout Exists

Messages from the U.S. Surgeon General's visit

By Khaalisha Ajala, MD, MBA, FHM

“No one is the same,” whispered a physician seated at an adjacent table, echoing the sentiment of the entire conference room of health care workers at Grady Memorial Hospital in Atlanta. We were invited to discuss burnout with the U.S. Surgeon General, Dr. Vivek Murthy during his visit in May. Burnout develops from chronic workplace stress and includes the triad of emotional exhaustion, depersonalization, and a sense of reduced accomplishment.¹

Dr. Murthy, along with Mayor Andre Dickens, visited Grady to discuss his advisory “Addressing Healthcare Worker Burnout.”² He sought to gain insight about the state of health care workers’ well-being from nurses, residents, faculty physicians, and administrators. He also visited the historically black college-affiliated Morehouse School of Medicine, which has a 40-plus-year partnership with Grady and whose goal is to increase the number of African American physicians who serve underserved communities, which have been hit hard by COVID-19. I was excited to attend but worried that I could not express my experience as a hospitalist who cared for patients affected by COVID-19.

There are 31 million uninsured Americans and more than 1 million uninsured Georgians.³ Safety-net hospitals like Grady are likely the first encounter some adult patients have had with a physician in many years. Emory University School of Medicine has partnered with Grady for more than 100 years in the care of the metro Atlanta community. Grady is also a level-one trauma center with 953 beds. However, we struggle with a

shortage of 200 nurses as well as other essential staff.⁴ Before 2020, the U.S. health care system struggled with staffing, health inequities, and emergency departments with long waits.

As a hospitalist, I witnessed how this phenomenon was exacerbated by a global pandemic, which placed a collective strain on our health system and its workers, from environmental-service employees and social workers to nurses and physicians. This year, the lives lost to COVID-19 reached 1 million Americans, which included our colleagues, family members, and patients. This has taken a tremendous toll on every person who cares for a patient, as well as on the public health sector.

There was a collective sigh of relief when we realized Dr. Murthy understood our health care systems were already at a breaking point and in need of a major culture shift. We also need major changes in systemic practices, from licensing boards to medical and nursing schools. In late 2020, the National Health Service Corps surveyed 20,665 health care workers and found that “Approximately 1 in 3 physicians, APPs [advanced practice providers], and nurses surveyed intend to reduce work hours. One in five physicians and 2 in 5 nurses intended to leave their practice altogether.”⁵ One year later, in the same survey, one out of three health care workers considered leaving their jobs. Many who work in health care had experienced bullying or verbal threats by 2021.⁵

Dr. Lorna Breen was an emergency medicine physician and the director of the emergency department at a New York Presbyterian Hospital affiliate, Allen Hospital, in Manhattan. During New York’s early pandemic devastation, she suffered in silence after personal-

ly battling a COVID-19 infection and returned to work to help keep afloat an emergency department that was drowning in increasing mortality, lack of personal protective equipment, and the uncertainty of how to manage this novel virus.⁶ On April 26, 2020, she died by suicide and her family lost a beloved daughter and sister. She was 49 years old. Her colleagues lost a friend and leader.

Annually, 300 to 400 physicians die by suicide in the U.S. Compared to other female professionals, suicide deaths among female physicians are 250-400% higher.¹ The leading cause of death in medical students and male medical residents is suicide.⁷ In early 2020, a cross-sectional survey of physicians found that 1 out of 15 had thoughts of taking their life and reported being less likely to seek help than counterparts that didn’t report suicidal ideation.¹ Sixty-two percent of nurses and 42% of doctors have reported feeling burnout while battling COVID-19.⁵ Burnout has been shown to cause a 200% increased risk of medical errors.⁵ These data ring the alarm for emergent intervention because the well-being of health care workers is at risk. Burnout has additional downstream effects such as limited service availability, erosion of public trust, and worsened population health outcomes.⁷

On March 18, 2022, the Dr. Lorna Breen Healthcare Provider Protection Act H.R. 1667 became law. This law has established grant funding and requires the Department of Health and Human Services (HHS) to provide grant-funded financial support to various health care institutions and campaign for mental health resource awareness and support among clinicians. HHS will also be required to disseminate best practices for suicide prevention and resiliency and hold



Dr. Ajala

Dr. Ajala is an assistant professor of medicine at Emory University School of Medicine, Atlanta, co-director, education council for Emory Division of Hospital Medicine, assistant site director of education at Grady Memorial Hospital, core faculty for J. Willis Hurst Internal Medicine Residency, and chair of SHM’s Global Hospital Medicine Special Interest Group.

itself publicly accountable for the effectiveness of these federal grant programs. This may seem like a difficult task, but the U.S. Surgeon General’s advisory on burnout creates the roadmap to meet this very important call to action.

The advisory reports the groups of health care workers whose health and well-being have been disproportionately impacted before and during the pandemic are people of color, females, those who earn low-wages, and those in rural and tribal communities. Examination of equitable interventions will be required. For all health care workers, excessive workload and work hours, the politicization of public health, lack of leadership support, and barriers to mental health and substance use care

contribute to burnout.⁷

During the press conference portion of Dr. Murthy's visit, an emergency medicine resident asked about a plan to address state board licensing requirements to report any mental health care throughout a physician's life. Most, if not all, states require this reporting and inadvertently uphold a culture of shame around mental health. As Dr. Lorna Breen's family noted, this must change now. Dr. Murthy acknowledged the trainee's concern and noted that his advisory asks that "Punitive language in licensing, accreditation, and credentialing of health professionals" be eliminated.⁷ Addressing this will be key to a healthy future for every medical student and resident, and even physicians who currently practice medicine.

The COVID-19 pandemic was characterized by the politicization of science and public health. Many health care workers were celebrated as heroes but were simultaneously maligned for our participation in patient care. Due to misinformation campaigns, some physicians feared hostile exchanges on social media and uncomfortable interactions with the public. The advisory also called for decisive action to prevent workplace violence just before the June

Surgeon General's Advisory Tips on Burnout

- Transform workplace culture to empower health workers and be responsive to their voices and needs.
- Eliminate punitive policies for seeking mental health and substance use disorder care.
- Protect the health, safety, and well-being of all health care workers.
- Reduce administrative burdens to help health workers have productive time with patients, communities, and colleagues.
- Prioritize social connection and community as a core value of the health care system.
- Invest in public health and our public health workforce.

2, 2022 tragedy in Tulsa, Okla. Inside a Saint Francis Health System medical building, a former patient murdered his surgeon, another physician, an office receptionist, and a fellow patient. Dr. Preston Phillips was a Harvard-trained orthopedic surgeon who attended theology school at Emory University. His colleague Dr. Stephanie Husen was a sports medicine physician. Amanda Glenn was committed to providing a welcoming experience and William Love was a retired Army veteran.⁸ This day of violence rocked the national medical community and influenced hospital systems to reassess health care worker and patient safety.

The culture of shame and the stigma surrounding mental health

is the other mask that we hide behind. However, this kind of mask won't keep us safe. At the close of Dr. Murthy's visit, he reminded us that this task is urgent, involves multiple institutions, and must engage multiple stakeholders. The Dr. Lorna Breen law will help ensure funding and decisive interventions to protect health workers. Both the law and advisory will increase awareness, foster discussion, and help save the lives of health care workers and patients.

Physician, heal thyself by recognizing burnout. Speak up. Reach out. We have the blueprint, let's hold ourselves and leaders in health and government accountable to put it to use. ■

References

1. Kalmoe MC, et al. Physician suicide: a call to action. *Mo Med*. 2019;116(3):211-216. PMID: 31527944; PMCID: PMC6690303.
2. Murthy, V. et al. Addressing health worker burnout: The U.S. Surgeon General's advisory on building a thriving health workforce. Available at: <https://www.hhs.gov/sites/default/files/health-worker-well-being-advisory.pdf>. Published online 2022. Last accessed July 30, 2022.
3. Cha AE, Cohen RA. Demographic variation in health insurance coverage: United States, 2020. *Natl Health Stat Report*. 2022;(169):1-15. PMID: 35166656.1.
4. Oliviero H, Hart A. Surgeon general warns of 'crisis' level health care burnout during Atlanta visit. *Atlanta Journal and Constitution* website. Available at: <https://www.ajc.com/news/atlanta-news/surgeon-general-warns-of-crisis-level-health-care-burnout-during-atlanta-visit/JOFRGAGU-JRGFHCLMYMWUBNSQYI/>. Published online May 27, 2022. Last accessed July 30, 2022.
5. Sinsky CA, et al. COVID-Related stress and work intentions in a sample of US health care workers. *Mayo Clin Proc Innov Qual Outcomes*. 2021;5(6):1165-1173. doi: 10.1016/j.mayocpiqo.2021.08.007.
6. O'Connor, M. A doctor's emergency. *Vanity Fair* website. Available at: <https://www.vanityfair.com/style/2020/09/will-lorna-breens-death-change-doctors-mental-health>. Published online September 27, 2020. Last accessed July 30, 2020.
7. Shanafelt TD, et al. Suicidal ideation and attitudes regarding help seeking in U.S. physicians relative to the US working population. *Mayo Clin Proc*. 2021;96(8):2067-2080. doi: 10.1016/j.mayocp.2021.01.033.
8. The Associated Press. 2 Doctors, a receptionist and a visitor were killed in the Tulsa shooting. Available at: <https://www.npr.org/2022/06/02/1102813156/2-doctors-receptionist-visitor-killed-tulsa-shooting>. Published online June 2, 2022. Last accessed July 30, 2022.



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"My experience with the Society of Hospital Medicine (SHM) has been exceptional. As a member of the Diversity, Equity, and Inclusion (DEI) Special Interest Group (SIG), and now Chair of the DEI Committee, I have seen how committed the organization is to DEI and the high standards by which they hold themselves to. They have made a concerted effort to develop, support, and enhance DEI efforts and initiatives and are dedicated to integrating DEI into all that we do, including patient care, QI, research, and medical education."

Amira del Pino-Jones, MD
SHM Member - 9 years

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Juggling Medical School, DEI, and Volunteering are All in a Day's Work for This Med Student

By Lisa Casinger

Diversity, equity, and inclusion are three words that, rightfully, get bandied around more and more frequently. The Society of Hospital Medicine does more than bandy the words around. In support of its mission and commitment to enhancing diversity in the hospitalist workforce and eliminating health disparities for hospitalized patients across the country, SHM bestowed its inaugural Hospital Medicine Diversity, Equity, and Inclusion scholarship for students this year.

Thanks to a fund made possible by its Keystone Sponsor, Vituity, the \$25,000 scholarship was for eligible third-year medical students underrepresented in medicine who demonstrated an interest in a career in hospital medicine and a commitment to practicing in an underserved community.

Andrea Martinez checked all those boxes and then some.

Born and raised in Caracas, Venezuela, Ms. Martinez moved to Miami when she was 15. She



Andrea Martinez

completed high school there and earned a biomedical engineering degree from the Georgia Institute of Technology in Atlanta.

As a medical student at Emory

University School of Medicine in Atlanta, Ms. Martinez developed a passion for hospital medicine. "Hospital medicine gives me the ability to be exposed to every organ system, be knowledgeable about all of them, know how to treat the patient as a whole rather than by parts," she said. "It also allows me to get to know patients, build relationships with them, and hear their life stories, which has done nothing but humble me and increase my appreciation for all of my patients."

She also realized, during her rotations, there's little diversity among physicians compared to the populations they serve. "All I could imagine was my loved ones trying to get medical care and not being understood because of language and culture barriers," she said. "The more exposure I get, the more commonplace I realize this is. I've had patients refuse to speak to the team unless I'm present just because I provide that familiarity and comfort with my language and background."

Ms. Martinez said a more equitable representation would help patients feel more comfortable and willing to seek medical care when they need to, instead of being afraid of the physicians and medical system. Representation is also vitally important for the next generation. "When I moved to America, I never saw any physicians who looked or spoke like me, and it really made me doubt my ability to become a physician, as well as fear if and how the medical community would accept me," she said. "Representation is extremely important. It can show the next generation that it's possible, and they shouldn't fear following their passions and dreams."

Her passion and awareness led Ms. Martinez to cofound the Latino Medical Student Association (LMSA) Pipeline, a joint effort with other LMSA officials to try to unite the LMSA Chapter in Georgia and expand its ability to reach and help the Latino population. The Pipeline "allows us to reach Latino students from high school to college, expose them to health care careers, and provide mentorship and guidance," she said.

The Emory LMSA chapter offers a community for Latino students, or any student interested in the culture and community. Ms. Martinez serves as president. "Its goal is to represent, support, educate, and unify medical Latino professionals," she said. "We've developed programs to go out into Latino communities and provide health care, mentorship and connections to faculty for lower classmen, and increase awareness of our culture in the medical school."

Ms. Martinez also volunteered in the COVID-19 Latino Equity Initiative Vaccination Campaign; a program established by the Latino faculty. As a volunteer, she helped administer COVID-19 vaccinations across the Latino community.

Juggling medical school, LMSA, and other passions takes commitment and determination—two things Ms. Martinez has in abundance. "Medical school is definitely extremely time-consuming, but I've been able to schedule and prioritize the activities I care about," she said. "I once heard a talk that really resonated with me. It mentioned that life is all about juggling balls, but the key to life is to determine which balls are made of glass and which balls are made of plastic, meaning, which balls would break if you let them drop versus which balls will just bounce and have no damage if they fall. I've made it a point to determine which of the aspects and activities in my life are made of glass and allot more time on those, and one of those is my commitment to the Latino community."

There's no doubt SHM, hospital medicine, and the Latino community will be well-served by Ms. Martinez in the coming years. But what's next on her agenda? "In five years, I hope to be done with my residency, and I see myself as an attending, working in a large urban hospital in a city with a diverse population," she said. "I hope to be working with underrepresented minorities and continuing to work with the Latino community in any way I can." ■



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The Role of Interferon-gamma Release Assay in Diagnosing Latent and Active Tuberculosis in Adults

By Leela Chockalingam, MD,
Lakshmi Chauhan, MD, and
Amiran Baduashvili, MD

Case: A 41-year-old man with a new diagnosis of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) (CD4 count <200 cells/mm³) presents to his primary care physician's office for initial evaluation post-HIV diagnosis. QuantiFERON Gold-Plus is obtained to evaluate for latent tuberculosis (TB) infection, and it returns indeterminate. Is further testing or treatment for latent TB infection (LTBI) necessary? What should the provider recommend?

Brief overview: LTBI is the result of a delayed cell-mediated immune response that forms granulomas around sites of primary TB, preventing the further progression of primary TB disease. However, *mycobacterium tuberculosis* (mTB) bacilli can remain dormant in these granulomas for years, and 5-10% of affected patients go on to develop reactivation TB, mostly within the first two years of LTBI.¹ In the U.S., 77% of active TB cases are thought to be due to reactivation.²

Key Points

- Among those with a high pretest probability of LTBI or a high risk of progression to active disease, a positive result can be presumed to be a true positive. A positive IGRA result should be followed by initial evaluation for active TB, including symptom assessment and chest imaging.
- Among those with a low pretest probability of LTBI, a positive result should be repeated, as false-positive results are common.
- Indeterminate test results may be repeated with a different test, if available, or the same test, if there is a high pretest probability or high risk of progression.
- Immunocompromised patients with negative or indeterminate IGRAs may be retested as the IGRA sensitivity in these patient populations are generally lower.
- IGRA is of limited utility in the workup for active TB in both immunocompetent and immunocompromised patients.

One of the most common tests used for the diagnosis of LTBI is an interferon-gamma release assay (IGRA). IGRAs measure the TB-sensitized-T-cell mediated release of interferon-gamma in response to certain mTB bacilli antigens, with some cross-reactivity to a few non-mTB antigens. IGRAs are unaffected by prior BCG vaccination and most non-tuberculous bacteria.³ IGRAs are preferable to tuberculin skin tests (TST) in BCG-vaccinated populations.

Whom to test: Diagnosing and treating LTBI reduced the five-year progression to active TB from 14.3% to 3.6% in one study.⁴ LTBI testing should be performed in two groups, those with a high pretest probability of LTBI, and those at high risk of progression to active disease. Those with a high pretest probability of LTBI include close contacts with patients with untreated pulmonary TB, illicit drug users, residents or employees of homeless shelters or correctional facilities, health care workers with recent unprotected exposure to active TB, and persons from countries with high TB burdens. Those at high risk of reactivation include patients with HIV/AIDS or end-stage renal disease on hemodialysis, those initiating tumor necrosis factor-alpha inhibitors, and patients preparing for organ or stem cell transplantation. The pretest probability of LTBI in asymptomatic persons without the above risks or exposures is approximated by the local disease prevalence, which is 3% to 5% in the U.S.⁵ These individuals do not need to be tested for LTBI. Previously, health care workers and other high-risk professions were tested serially. However, a more recent Centers for Disease Control and Prevention guideline now recommends focused testing based on exposure risks, due to high false-positive rates in low-prevalence populations.⁶

The utility of IGRAs for the diagnosis of active TB is very limited. Instead, a full workup including chest radiography, acid-fast bacilli smears, nucleic-acid amplification test (when available), and cultures should be performed.

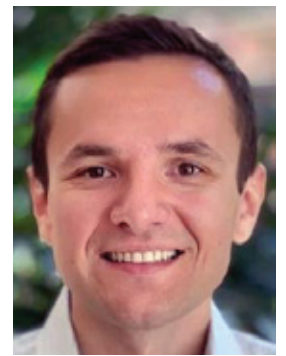
How the IGRAs work: Two types of IGRAs are commonly employed: QuantiFERON-TB Gold-Plus (QFT-GP) assays that measure interferon-gamma release; and T-Spot assays that measure the number of "spots" or the number of interferon-gamma releasing T-cells. Both tests can be reported as positive, negative, and indeterminate, in addition to the borderline cat-



Dr. Chockalingam



Dr. Chauhan



Dr. Baduashvili

Dr. Chockalingam is a resident physician of internal medicine at the University of Colorado School of Medicine, Aurora, Colo. Dr. Chauhan is an assistant professor of medicine, division of infectious diseases, department of medicine at the University of Colorado School of Medicine, Aurora, Colo. Dr. Baduashvili is an associate professor of medicine, division of hospital medicine, department of medicine at the University of Colorado School of Medicine, Aurora, Colo.

Quiz: Testing your knowledge



An asymptomatic health care worker comes in for LTBI testing after recent high-risk exposures. Her IGRA test returns positive. What is the most appropriate next step?

- Repeat the IGRA test
- Proceed to induced sputum for AFB smear and culture
- Obtain a chest radiograph
- Initiate treatment for LTBI

Correct answer: C. Although this patient likely does not have active TB in the absence of symptoms, individuals with a higher pretest probability for LTBI (given her recent exposures) with a positive IGRA test should get a chest radiograph to evaluate for pulmonary TB (choice C). Such a step helps exclude the presence of active TB before the initiation of LTBI treatment (choice D). If the patient has symptoms of active TB, or there is radiographic evidence of active TB, sampling for active TB (choice B) must be pursued. A positive IGRA result typically does not need to be repeated in patients with a high pretest probability of LTBI but can be repeated in persons with low pretest probability when there is a concern for false-positive results (choice A).

egory for the T-Spot assay (Figures 1 and 2). The indeterminate results typically reflect a failure of either the negative control (i.e., high background non-specific interferon-gamma release, high immunogenicity) or positive control (i.e., insufficient interferon-gamma release, due to the patient's immunologic status or blood processing issues). These assays report continuous numerical results, which are then dichotomized into positive and negative results for simplicity. However, the dichotomy can be problematic, especially when the test results are close to the established cut points.⁷ A nuanced approach, discussed below, to the test interpretation may be necessary for management decisions.

Overview of the data: The reference standards for the diagnosis of LTBI are imperfect. Studies evaluating the sensitivity of IGRAs for LTBI primarily employ patients with active TB, with the culture results serving as the reference standard, as no other gold stan-

dard for the diagnosis of LTBI exists.⁸ Studies evaluating IGRA specificity have been performed separately in BCG vaccinated and unvaccinated immunocompetent persons. It was assumed that the asymptomatic HIV-negative participants in low prevalence TB countries were LTBI negative.⁸ Pooled sensitivity and specificity data from multiple meta-analyses were used to calculate the likelihood ratios (LRs) seen in Tables 1-4.⁸⁻¹¹ Available meta-analyses examined QuantiFERON-TB Gold and Gold-In-Tube, which were phased out in mid-2018 but are similar in test characteristics to the currently available QFT-GP.¹²

Negative test results: For average-risk, immunocompetent hosts, a negative IGRA sufficiently reduces the probability of LTBI, and no further workup is warranted. T-Spot has higher sensitivity, but similar specificity compared to QFT-GP assays, thus a better negative LR (Table 1).⁸ However, providers are often limited to the

Table 1: Test characteristics for LTBI in immunocompetent persons

TEST	LR FOR POSITIVE TEST	LR FOR NEGATIVE TEST	SENSITIVITY (95% CI)	SPECIFICITY (95% CI) BCG UNVACCINATED	SPECIFICITY (95% CI) BCG VACCINATED
QuantiFERON Gold*	78	0.22	0.78 (0.73-0.82)	0.99* (0.98-1.00)	0.96* (0.94-0.98)
T-Spot	>100	0.1	0.90 (0.86-0.93)	1.0 (0.84-1.0)	0.93 (0.86 – 1.0)
TST	BCG vaccinated: 1.88 BCG unvaccinated: 25.67	BCG vaccinated: 0.39 BCG unvaccinated: 0.24	0.77 (0.71-0.82)	0.97 (0.95–0.99)	0.59 (0.46-0.73)

* Reporting QuantiFERON-Gold (rather than Gold-Plus) results
BCG=Bacille Calmette Guerin; CI=Confidence Interval; LR=likelihood ratio; LTBI=latent tuberculosis infection; TST=tuberculin skin test

IGRA that their institutions use and cannot choose between the IGRA platforms. When available, T-Spot may be considered the test of choice for patients with a higher pretest probability of LTBI.

The sensitivities of all IGRAs and TST are lower among the HIV-infected population than the general population, especially when CD4 count drops below 200 cells/mm3 (Table 2).^{9,10} Anergy can be caused by HIV/AIDS, protein-calorie malnutrition, use of immunosuppressants, and other immunocompromising conditions, and may lead to higher rates of indeterminate and false-negative IGRA results.³ Since immunocompromised patients have a higher likelihood of progressing to active disease, obtaining a repeat IGRA may be warranted after a first negative test. If the initial test of choice was QFT-GP or TST, a repeat test with T-Spot, when available, may be reasonable given the higher sensitivity (45-60% versus 76%, respectively).

Indeterminate results: Indeterminate results, caused by the failure of positive or negative controls, are more frequent among immunocompromised patients. Immunological anergy can cause insufficient responses to positive controls (Figures 1 and 2).³ Prolonged incubation time (delayed processing) and excessive blood volume in test tubes may falsely lower the interferon response to positive controls. Meanwhile, excessive tube shaking, inadequate blood volume, and incorrect order in which blood is drawn into the tubes may falsely elevate the response to negative controls. T-Spot assay also has a “borderline” test result category, defined as the presence of five to seven spots (Figure 2). Patients with this test result have adequate negative and positive controls, but the interferon response does not appear sufficiently strong to be labeled as “positive.”

Therefore, indeterminate tests should generally be repeated. If repeated testing continues to be indeterminate, and pretest probability or risk of progression is high, empiric workup of active TB

Table 2: Test characteristics for LTBI in HIV-positive, immunocompromised patients

TEST	LR FOR POSITIVE TEST	LR FOR NEGATIVE TEST	SENSITIVITY (95% CI)	SPECIFICITY (ASSUMED**)
QuantiFERON Gold-in-Tube*	61	0.39	0.61 (0.47–0.75)	0.99
T-Spot	72	0.28	0.72 (0.62–0.81)	0.99
TST	45	0.56	0.45 (0.15-0.75)	0.99

* Reporting QuantiFERON-Gold-in-Tube (rather than Gold-Plus) results
**Most positive tests in HIV-infected individuals should be assumed to be real positives, thus the assumed 99% specificity
CI=Confidence Interval; HIV=human immunodeficiency virus; LR=likelihood ratio; LTBI=latent tuberculosis infection; TST=tuberculin skin test

Table 3: Test characteristics for active TB in immunocompetent hosts

TEST	LR FOR POSITIVE TEST	LR FOR NEGATIVE TEST	SENSITIVITY (95% CI)	SPECIFICITY (95% CI)
QuantiFERON Gold-in-Tube*	3.67	0.29	0.77 (0.75-0.80)	0.79 (0.75–0.82)
T-Spot	2.2	0.17	0.90 (0.86-0.93)	0.59 (0.56–0.62)
TST	3.08	0.31	0.77 (0.71-0.82)	0.75 (0.72–0.78)

* Reporting QuantiFERON-Gold-in-Tube (rather than Gold-Plus) results
CI=Confidence Interval; LR=likelihood ratio; TB=Tuberculosis; TST=tuberculin skin test

Table 4: Test characteristics for active TB in HIV-positive, immunocompromised hosts

TEST	LR FOR POSITIVE TEST	LR FOR NEGATIVE TEST	SENSITIVITY (95% CI)	SPECIFICITY (95% CI)
QuantiFERON Gold-in-Tube*	1.22	0.78	0.61 (0.47–0.75)	0.5 (0.35–0.65)
T-Spot	1.5	0.54	0.72 (0.62–0.81)	0.52 (0.4–0.63)
TST	--	--	0.45 (0.15-0.75)	--

* Reporting QuantiFERON-Gold-in-Tube (rather than Gold-Plus) results
CI=Confidence Interval; HIV=human immunodeficiency virus; LR=likelihood ratio; TB=Tuberculosis; TST=tuberculin skin test

or further monitoring for LTBI should be considered.

Positive results: Among those with a high pretest probability of LTBI or a high risk of progression to active disease, a positive result can be presumed to be a true positive. A positive IGRA result should be followed by the initial evaluation for active TB.³ If symptoms or signs of active TB are present, a full evaluation should be completed. If no concerning findings for active TB are identified, LTBI treatment should be considered.

The approach differs for persons with a lower probability of LTBI and a lower risk for progression to active disease. False-positive results may be frequently seen in populations with low LTBI

prevalence.¹³ Among U.S. health care workers who converted to a positive IGRA during serial testing, more than 70% reverted to a negative six months later in one study.¹⁴ Several reasons account for such a finding. First, a highly specific test in low disease prevalence states will still produce many false positives. When using a test with 95% specificity in a population with 3% disease prevalence, a positive test result will more often be a false positive than a true positive. Second, many IGRA test-processing errors discussed above can either lower or increase the interferon response falsely.¹⁵ Third, the thresholds that define IGRA positivity are somewhat arbitrary. Many positive results may cluster just above the chosen cut

point (i.e., 0.35 IU/mL for QFT-GP) and may revert to negative due to IGRA result variability. Therefore, laboratory-provided quantitative results can aid in qualitative test interpretation. A positive test result demonstrating an interferon response of 10 IU/mL above nil is more likely to be a true positive than a positive result with an interferon response of 0.37 IU/mL above nil (normal <0.35 IU/mL). In a small study evaluating QuantiFERON-TB Gold-in-Tube variability, the majority (80%) of positive samples that reverted to negative had interferon response between 0.35 and 0.80 IU/mL above nil.¹⁶ Routine inclusion of the quantitative IGRA results by laboratories may aid clinicians to make these nuanced decisions.

Diagnosing active TB: Given the occasional difficulty of obtaining lower respiratory samples for active TB testing, studies have examined whether a positive IGRA is predictive of active TB. A meta-analysis found IGRAs to have low specificity and inadequate positive LR; thus, they cannot substitute for a full evaluation for active TB in immunocompetent hosts (Table 3).^{8,11} The LRs for both positive and negative tests for active TB in immunocompromised hosts are close to one (Table 4); thus, the utility of IGRAs in this population is very low.¹⁰ Every effort needs to be made to obtain adequate samples to evaluate for active TB, including induced sputum and flexible bronchoscopy.³ If the probability of active TB is high, empiric anti-tubercular treatment may be started.

Application to the original case: It was appropriate to order the IGRA as part of the initial workup for LTBI for the immunocompromised patient. Given the indeterminate result, the test should be repeated. If the repeat IGRA is positive, evaluation for active TB should be undertaken by symptom assessment and chest imaging, and if appropriate, an active TB workup should be completed. If the repeat test is negative and the risk of progression to active disease is high, the provider may still consider periodic monitoring for active TB symptoms.

Bottom line: Interpret negative or indeterminate results cautiously in immunocompromised patients. Similarly, positive test results in those with a low pretest probability of LTBI should be treated with skepticism and repeated. ■

REFERENCES

1. Jing-Wen Ai, et al. Updates on the risk factors for latent tuberculosis reactivation and their managements. *Emerg Microbes Infect.* 2016;5(2):e10. doi: 10.1038/em.2016.10.
2. Ricks PM, et al. Estimating the burden of tuberculosis among foreign-born persons acquired prior to entering the U.S., 2005-2009. *PLoS One.* 2011;6(11):e27405. doi: 10.1371/journal.pone.0027405.
3. Lewinsohn DM, et al. Official American Thoracic Society/Infectious Diseases Society of America/Centers for Disease Control and Prevention clinical practice guidelines: Diagnosis of tuberculosis in adults and children. *Clin Infect Dis.* 2017;64(2):e1-e33. doi: 10.1093/cid/ciw694.
4. International Union Against Tuberculosis Committee on Prophylaxis. Efficacy of various durations of isoniazid preventive therapy for tuberculosis: five years of follow-up in the IUAT trial. International Union Against Tuberculosis Committee on Prophylaxis. *Bull World Health Organ.* 1982;60(4):555-64.
5. Centers for Disease Control and Prevention. Latent TB Infection in the United States - Published Estimates. CDC website. <https://www.cdc.gov/tb/statistics/tbti.htm>. Updated January 21, 2022. Accessed August 3, 2022.
6. Sosa LE, et al. Tuberculosis screening, testing, and treatment of U.S. health care personnel: Recommendations from the National Tuberculosis Controllers Association

Figure 1: Process and outcomes description for the QuantiFERON Gold-Plus test

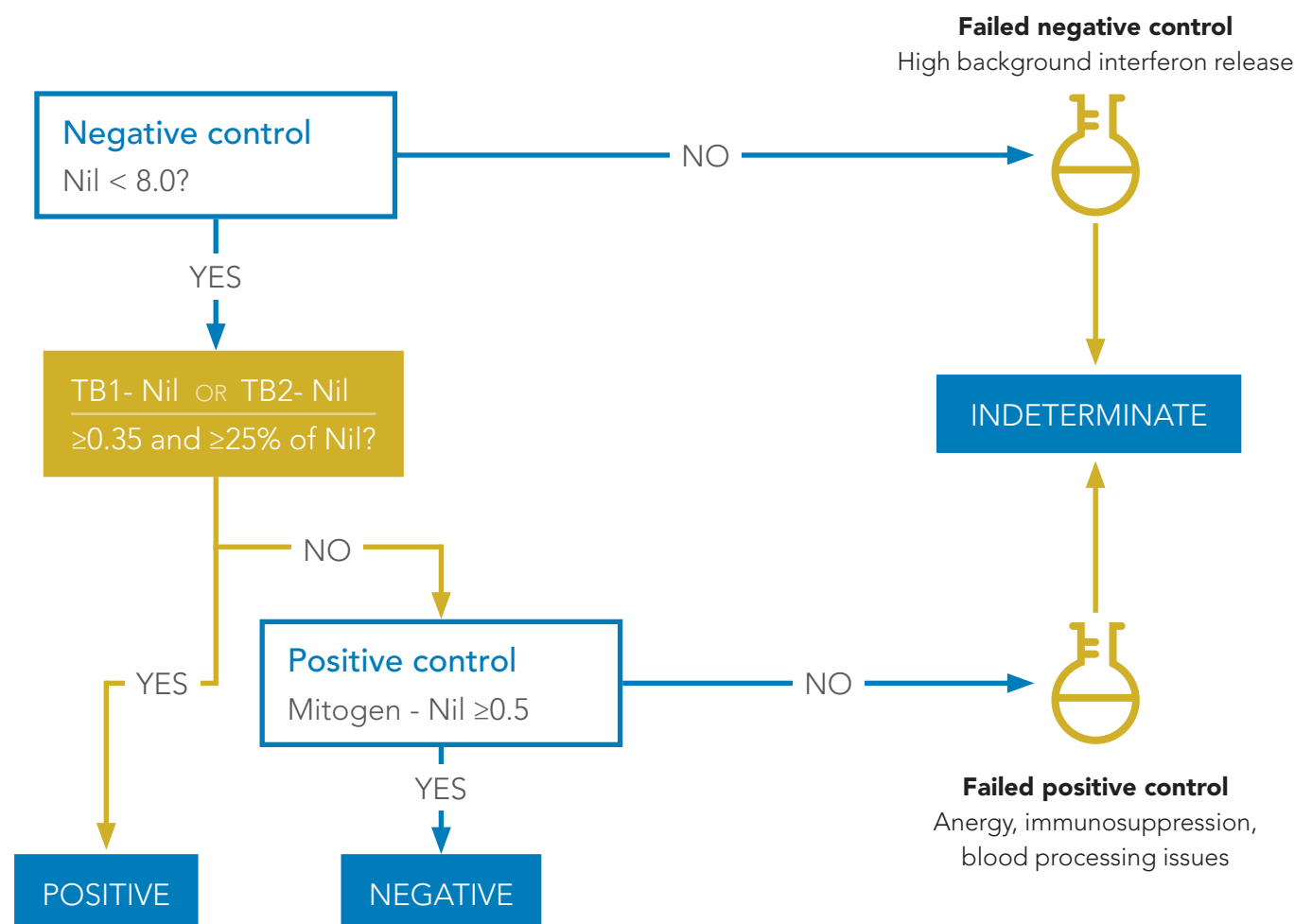
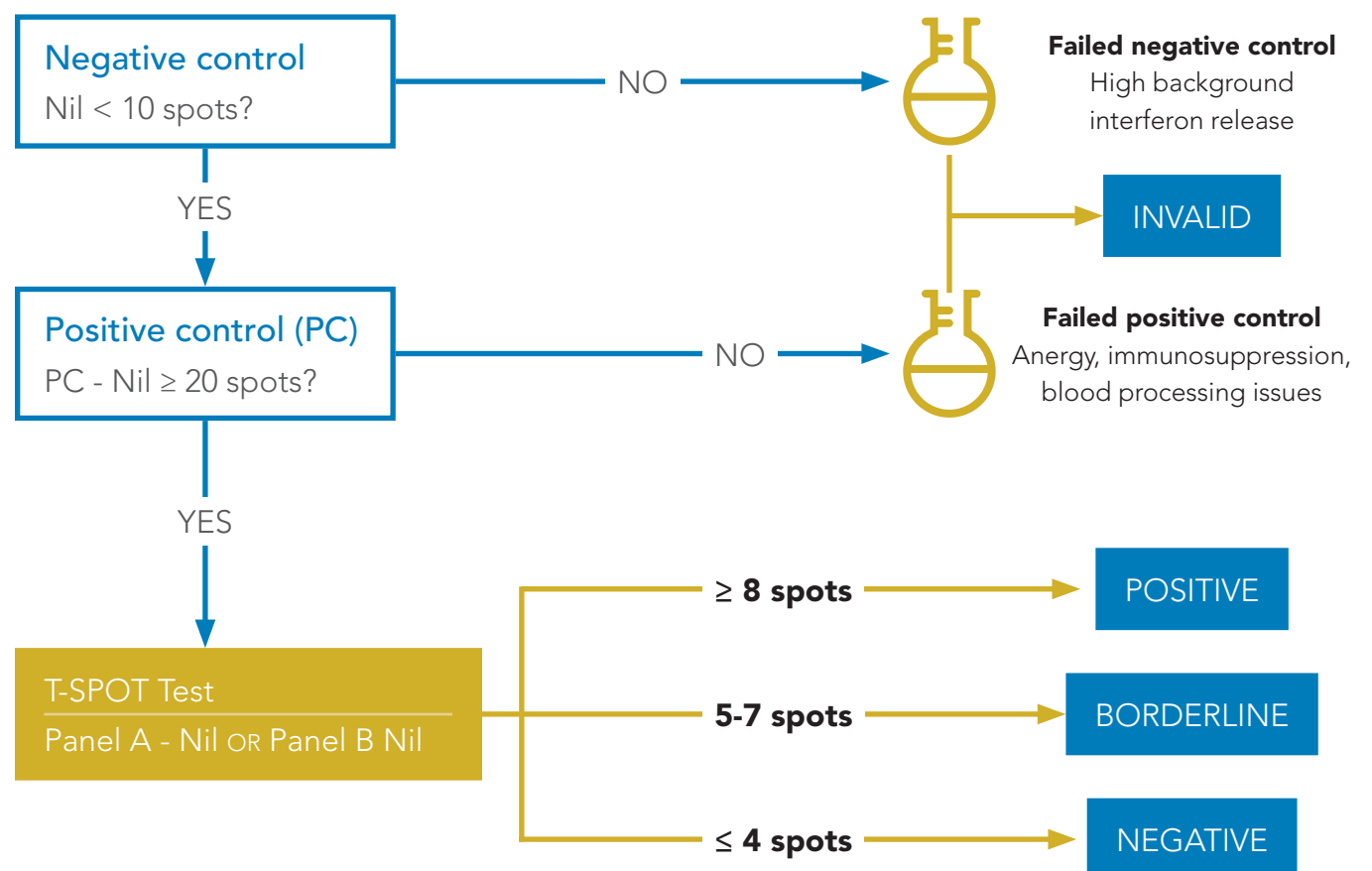


Figure 2: Process and outcomes description for the T-Spot test



- tion and CDC, 2019. *MMWR Morb Mortal Wkly Rep.* 2019;68:439-443. DOI: <http://dx.doi.org/10.15585/mmwr.mm6819a3external icon>.
7. Baduashvili A, et al. ROC anatomy-getting the most out of your diagnostic test. *J Gen Intern Med.* 2019 Sep;34(9):1892-1898. doi: 10.1007/s11606-019-05125-0.
8. Pai M, et al. Systematic review: T-cell-based assays for the diagnosis of latent tuberculosis infection: an update. *Ann Intern Med.* 2008;149(3):177-84. doi: 10.7326/0003-4819-149-3-200808050-00241.
9. Cattamanchi A, et al. Interferon-gamma release assays for the diagnosis of latent tuberculosis infection in HIV-infected individuals: A systematic review and meta-analysis. *J Acquir Immune Defic Syndr.* 2011;56(3):230-8. doi: 10.1097/QAI.0b013e-31820b07ab.
10. Metcalfe JZ, et al. Interferon-gam-

- ma release assays for active pulmonary tuberculosis diagnosis in adults in low- and middle-income countries: Systematic review and meta-analysis. *J Infect Dis.* 2011;204(Suppl 4):S1120-9. doi: 10.1093/infdis/jir410.
11. Sester M, et al. Interferon-gamma release assays for the diagnosis of active tuberculosis: A systematic review and meta-analysis. *Eur Respir J.* 2011 Jan;37(1):100-11. doi: 10.1183/09031936.00114810. Erratum in: *Eur Respir J.* 2012;39(3):793.
12. Theel ES, et al. Comparison of the QuantiFERON-TB Gold Plus and QuantiFERON-TB Gold in-tube interferon gamma release assays in patients at risk for tuberculosis and in health care workers. *J Clin Microbiol.* 2018;56(7):e00614-18. doi: 10.1128/JCM.00614-18.
13. Gamsky TE, et al. Cumulative false-positive QuantiFERON-TB interfer-

- on-gamma release assay results. *Ann Am Thorac Soc.* 2016 May;13(5):660-5. doi: 10.1513/AnnalsATS.201508-532OC.
14. Dorman SE, et al. Interferon-gamma release assays and tuberculin skin testing for diagnosis of latent tuberculosis infection in healthcare workers in the United States. *Am J Respir Crit Care Med.* 2014;189(1):77-87. doi: 10.1164/rccm.201302-0365OC.
15. Banaei N, et al. Interferon gamma release assays for latent tuberculosis: What are the sources of variability? *J Clin Microbiol.* 2016;54(4):845-50. doi: 10.1128/JCM.02803-15.
16. Metcalfe JZ, et al. Test variability of the QuantiFERON-TB gold in-tube assay in clinical practice. *Am J Respir Crit Care Med.* 2013;187(2):206-11. doi: 10.1164/rccm.201203-0430OC.

Celebrating Women in Hospital Medicine

By Karen Appold

September is Women in Medicine Month, a time to inspire, elevate, and recognize women and their roles in medicine. The following SHM members—recommended by members of *The Hospitalist's* editorial board—shared their thoughts on a variety of topics, including challenges they've overcome, inspiring mentors, successes they've attained, advice for the next generation, and what they hope to accomplish next.

Expanding horizons

Building programs and connecting people are the most rewarding parts of being a hospitalist for Rachel E. Thompson, MD, MPH, FACP, SFHM, chief medical officer at Snoqualmie Valley Hospital and Public Health District in Snoqualmie, Wash., and the president of SHM. During her career, Dr. Thompson founded an inpatient consultative medicine program, developed a section of hospital medicine, and convened a division of acute care medicine. She is currently helping to transform a public health district in Washington State.



Dr. Thompson

"The most rewarding part is getting to know people, bringing people together, and making improvements by harnessing the energy that groups create," she said.

At the onset of building a hospital medicine program at the University of Nebraska Medical Center in 2015, 22 clinicians were practicing in four separate groups. When Dr. Thompson left in 2019, they had unified and grown to create a formal section of hospital medicine with 70 clinicians. "The true win is seeing their continued innovations and successes today," Dr. Thompson said.

"For me, a big part of being a hospitalist is looking for opportunities to engage and make health systems better at the local, regional, national, and international levels," Dr. Thompson said. She advises her colleagues to seek out opportunities and get involved in something bigger than just today.

Some pearls of wisdom

Now that she has close to a decade in hospital medicine under her belt, Meghana A. Gadgil, MD, MPH, FACP, assistant professor in the division of hospital medicine at San Francisco General Hospital, has some advice for the next generation of hospitalists. "First of all, it's okay to be unsure about your career path," she said. "In fact, that can actually be good because it sparks curiosity and a drive to explore new things. Use challenges and experiences to discover what you want to do. Figure out which problems you like solving."



Dr. Gadgil

Secondly, "Expand your horizons beyond your field; you're likely to find that you can draw a lot from philosophy, art, history, and so forth which can provide perspective and inspiration," she said.



Getty Images/Stockphoto

Further, "Build a network of friends and mentors who support and advocate for you," Dr. Gadgil said. "Look outside of your own institution; find a way to meet new people who will help you."

Finally, expect moments of intense beauty and wonder, but also some really hard times. "Sometimes bad things happen even when you did everything right," she said. "Remember that difficult times are inevitable and impermanent. Learn from them and know that you will get through them."

Overcoming challenges

Moving from Salt Lake City to New York to become part of a new hospital medicine division in a hospital that didn't have hospitalists previously was one of the biggest challenges that Laura Nell Hodo, MD, a pediatric hospitalist at Icahn School of Medicine at Mount Sinai in New York, faced in her career.



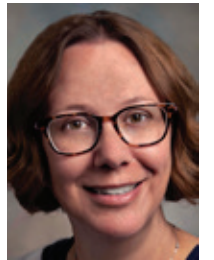
Dr. Hodo

"Starting from scratch, not knowing any of the other physicians, and working in an environment where co-workers in other disciplines and patients weren't really sure what a hospitalist was or did, was difficult," she said. "It took time for people to trust us as individuals and as a group."

"Having patience and approaching people with a listening ear and desire to understand their perspective went a long way," she said. "Putting patients first by working hard to provide the best care, communication, and patient experience helped us to become accepted, trusted, and valued."

Thankful for guidance

Christine Hrach, MD, FAAP, SFHM, medical director of inpatient general pediatric medicine and co-interim pediatric residency program director at Washington University School of Medicine in St. Louis, Mo., owes a lot to her mentor, Douglas Carlson, MD, who was the division chief of pediatric hospital medicine when she started there.



Dr. Hrach

"He has been a terrific mentor and sponsor, both early in my career and currently," she said. "The hospital started a new inpatient service several years after I began working there, and Doug asked me to co-lead this new service. He believed in me to take on a leadership role, which meant a lot to me."

Dr. Carlson also has a knack for getting others involved in national organizations. "I joined the Society of Hospital Medicine because of his advice to get involved in a national organization," Dr. Hrach said. "I have loved my work with SHM."

Feeling gratified

Among her greatest accomplishments, Flora Kisuule, MD, MPH, SFHM, director of the division of hospital medicine at Johns Hopkins Bayview Medical Center in Baltimore, cites building multiple hospital medicine programs internationally. She helped create programs in Saudi Arabia, United Arab Emirates, Panama, and most recently Puerto Rico. "I believe in hospital medicine and how we add to



Dr. Kisuule

the value equation, and I love promoting our specialty beyond our borders,” Dr. Kisuule said.

She is also proud of her work and that of other hospitalists during the pandemic. She estimates that at her medical center, hospitalists cared for about 70% of patients hospitalized with COVID-19. “Beyond clinical care, my team and I led the operations of COVID-19 care, quality initiatives, and partnered in the provision of patient-centered care,” she said.

Further, Dr. Kisuule led the division and efforts to build a fellowship program for physician assistant and advanced practice practitioner (APP) hospitalists as well as multiple service lines that optimize APP clinical practice. “We also helped to develop a tool to assess the readiness of freshly graduating APPs to practice,” she said.

Mentors shape her future

While reflecting on her career in quality improvement and research, Gopi J. Astik, MD, MS, assistant professor of medicine in the division of hospital medicine at Northwestern University Feinberg School of Medicine in Chicago, fondly recalls two instrumental mentors. David Wooldridge, MD, program director of the internal medicine residency at the University of Missouri-Kansas City School of Medicine in Kansas City, Mo., not only inspired her to become an academic hospitalist but also pushed her to leave her hometown.



Dr. Astik

“He encouraged me to gain experience in a different city and larger institution to diversify my skills and grow personally,” she said. “He knew I was motivated and wanted to conquer the world, but I didn’t have a perspective outside of my own bubble.”

Kevin O’Leary, MD, MS, Northwestern’s division chief of hospital medicine, whose passion for working in quality improvement was infectious, sparked Dr. Astik to pursue this field as well. “Doing research has brought me so much joy because I know it is bigger than just me,” she said. “Adding to the literature and studying things to provide better patient care is a great use of my time and efforts.”

Mixing it up

What would be helpful for the next generation of hospitalists to do early on? Maylyn Martinez, MD, MSc, clinical instructor of medicine at the University of Chicago, recommends trying to experience a wide range of ways to work in hospital medicine, early in your career, beyond clinical care, such as quality improvement, medical education, research, and medical decision making.



Dr. Martinez

Currently, Dr. Martinez is focused on studying mobility impairments due to hospitalization and acute medical illness. “This is way too often overlooked but has very serious, long-lasting, and life-changing effects on patients,” she said. “When someone is newly disabled and unable to care for themselves and has to be institutionalized in a nursing home just because we weren’t able to mobilize and rehabilitate them appropriately during their hospitalization, it’s just devastating—especially because it’s preventable.”

Dr. Martinez believes that it’s important to advocate for some formalized guidance for hospitalists on how to recognize, diagnose, and

treat mobility impairments in patients who are hospitalized for acute medical illnesses.

Solving organizational needs

Kris P. Rehm, MD, MMHC, SFHM, associate chief medical officer of Children’s Services in the Department of Pediatrics at Vanderbilt University Medical Center in Nashville, Tenn., believes that hospitalists are in a special position to help solve organizational or institutional needs in order to care for every patient. Although this has its challenges, the successes have been very rewarding.



Dr. Rehm

“One example of a win for our patients and hospital was creating a multidisciplinary team to care for patients admitted to our acute care hospital who were awaiting admission to an inpatient psychiatric facility,” she said. “We started with hospitalists working both in acute care and attending treatment rounds at our inpatient psychiatric facility, and now have a team of psychologists, nurse practitioners, and case managers to help treat these patients.”

Another initiative involved developing individualized, unique partnerships with many hospitals across the region over the last five years. “Each hospital requested help in bringing in high-quality care to their institutions; we modified our models to meet their demands. For those of us in pediatric hospital medicine, this has included inpatient care for children, as well as newborn support or delivery attendance.”

Tackling burnout

As a hospitalist and assistant professor of medicine at Emory Saint Joseph’s Hospital in Atlanta, Shobhna Singh, MD, MPH, said her biggest challenge has been to recognize signs of burnout and muster the courage to remediate it.



Dr. Singh

“As a working mother of three, I was walking a tight-rope balancing work and my personal life,” Dr. Singh said. “As the pandemic slogged on, I started feeling a loss of motivation and decreased satisfaction.”

“To avoid full burnout, I looked for opportunities to grow and excel in areas I’m passionate about,” she said. “I signed up for Emory’s Quality Academy with the belief that learning something I was passionate about would boost my job satisfaction.” The academy aims to provide practical tools and learnings to enable clinicians to develop skills and expertise to lead quality improvement projects independently.

Dr. Singh also decided to modify her work schedule. She takes more time off, alternating seven days on and then seven off.

“This allows me to spend quality time with my family and gives me more time to devote to quality,” she said. “Burnout is real and I implore every frontline worker to recognize and take remedial steps.”

Feeling fulfilled

Lora Sowunmi, MD, a staff physician in the departments of hospital medicine and pediatric hospital medicine at the Cleveland Clinic, considers her greatest successes in hospital medicine to be delivering care and performing clinical medicine.

“I enjoy being there for patients in their most vulnerable times, which is often during a hospitalization,” she said. “I can be empathetic, provide education on their disease process and illness trajectory, and consult with my brilliant colleagues to deliver the best possible care plan. It’s fulfilling to know that even when a cure is not possible, patients will receive the tools and support they need to cope with their illness and move forward in their lives.”



Dr. Sowunmi

Looking ahead, Dr. Sowunmi wants to focus on growing within SHM, including applying for fellowship designation to show her dedication and expertise in the field.

“Being a part of SHM has helped me build relationships with colleagues at other institutions and better understand our shared challenges and successes,” she said. “I think these relationships work to fulfill SHM’s mission of promoting excellent care of hospitalized patients and improving patient care while promoting progress in our specialty.”

Breaking free of cultural norms

The cultural norms for Farzana Hoque MD, MRCP, FACP, and other girls growing up in Bangladesh were to finish school, get married by the time you were 20, and start a family... you get the idea.



Dr. Hoque

Dr. Hoque had other plans.

Plans that took her to the University of Dhaka for medical school. Plans that included studying 16 hours a day to become board certified in the U.S. Plans that included waiting patiently and then waiting patiently even longer for her Green Card. Plans that took her to a one-room apartment on the south side of Chicago where she volunteered at a local hospital waiting for her certification to come through. Plans that included...well, you get the idea.

These days Dr. Hoque is a hospitalist—the first physician in her extended family—who treats adult patients at SSM Health St. Louis University Hospital, St. Louis, Mo. These days her plans are to empower and equip other women to follow her into medicine. Those plans play out every day, mentoring others and sharing on social media what she’s learned—including on her own YouTube channel that helps women back in Bangladesh and across the world who want to become physicians.

“The perception is females don’t want to help each other out, but I just don’t see that,” she said. “We want to be there for each other. We need to be. If I’m able to help one woman make it to where I am, that fulfills me.”

Celebrating women in hospital medicine—and all of health care—is easy. There are thousands of inspiring stories of accomplishment, dedication, resourcefulness, and success. There are also thousands of women in hospital medicine to champion, advocate for, ally for and with, and empower. SHM and *The Hospitalist* recognize the invaluable contributions made every day by women in hospital medicine. ■

Karen Appold is an award-winning journalist based in Lehigh Valley, Pa. She has more than 25 years of editorial experience, including as a newspaper reporter, and newspaper and magazine editor.

Hospitalists Lead the Way for Hospital at Home Programs

Part II of a two-part series

By Larry Beresford

In his plenary address at SHM's Converge Conference in Nashville, Tenn., on April 9, hospital medicine founding father Robert Wachter, MD, MHM, posed the question: What will it take to overcome hospital at home's "Catch-22"?

Everyone knows hospital at home is the right thing to do, Dr. Wachter said. Research has consistently demonstrated lower-cost care, higher patient satisfaction rates, and reduced lengths of stay, readmissions, and complications. "There's no question it should take off."

But even though hospital beds can be expensive, unsafe, and in short supply, after more than two decades¹ the alternative of hospital at home is still not widely accepted or adopted in the U.S., despite a recent pandemic-related flurry of interest. And the regulatory and reimbursement future remains uncertain.

"Who should be setting up these programs?" Dr. Wachter posed in his address. "Who's going to be the doctor for hospital at home? Will it be the hospitalist? I hope so."

Further evolution of the hospitalist model

In last's month's issue of *The Hospitalist*, we described several examples of this new model of acute, hospital-level medical care that's coordinated and delivered to the patient's own home. We looked at who qualifies for this care and

some of the tasks needed to launch such programs. We reviewed the Centers for Medicare and Medicaid Services' pandemic emergency waiver that allows hospital at home services to be covered by Medicare and examined the emergence of new corporate models for delivering it.

Stephanie Murphy, DO, a hospitalist at Atrium Health in Charlotte, N.C., and medical director of its hospital at home program, sees this model as a natural step in the evolution of hospital medicine, which previously expanded into post-acute and long-term care, post-discharge clinics, and other outpatient settings.

"In my case, it was expansion into directing a transition clinic," Dr. Murphy said. "Any time you're trying to evolve a specialty, it can be challenging. In my experience, the forward-thinking approaches hospitalists have demonstrated put us in a good position to be leaders in that evolution."

Hospitalists are getting more involved in the health care system's shift from volume to value, she added, and hospital at home is another example of that trend. But there are some different skills hospitalists need to pick up in order to be well-positioned to provide high-level, acute medical care in the patient's home, outside of the familiar, controlled, sterile environment of the hospital.



Dr. Murphy

"For many programs, that also includes learning how to deliver health care virtually, via telemedicine, for example, how to do a physical examination on a patient virtually using tools like an electronic remote stethoscope or how to recognize pitting edema of the legs on a computer screen." These skills are not necessarily ingrained in medical school, but they can be taught—or developed, she said.

Quality at home

Care at home is about improving the quality of medical care, Dr. Murphy said. Hospital at home is another approach to doing that in new ways. Quality metrics include transfers back to the hospital, defined as care escalation rates. Other metrics include mortality rates, length of stay, patient experience ratings, readmission rates, and others. "Our readmission rate is 6.1%. If I compare our readmission data to the bricks-and-mortar hospital's patients, it's because we're in the home, where we can proactively address issues like social determinants of health."



The patient's home is a dynamic environment, with lots of factors impacting the care. "Hospitalized patients aren't always truthful about their living situations, but in the home, you can see it for yourself and help patients navigate their challenges in different ways," she said.

"The other thing this evolution gives us as hospitalists is the opportunity for greater job flexibility," Dr. Murphy said. "The upcoming generation of hospitalists wants flexibility in their work; they want variety. Hospital at home gives hospitalists an opportunity to participate in ways they never did before. It's different, and it's exciting. I hope our colleagues take to it because there are real possibilities here."

Why would a hospitalist choose to work in this setting? "For me, it's the joy it brings to the patient (who is able to receive acute care in their home), and just being part of something innovative and different, in a safe way, while helping to change the landscape of medicine. That really gets me going—the impact I feel I can make that I couldn't in the hospital," she said.

"We learn things about the patient's social scenario, lifestyle, and care preferences to the point where evidence-based medicine must be matched to the patient's real-world context," said Patrick Kneeland, MD, SFHM, vice president of medical affairs for Denver-based DispatchHealth, which provides hospital at home and other alternate-site services to contracting hospitals and health systems.



Dr. Kneeland

"When we are in the home caring for acute illness, we're also assessing the social environment, how the patient is managing their medications, safe bathing, showering, falls prevention. I have developed a much greater appreciation for how important it can be for a doctor to be in someone's home."

Hospital at home has also encouraged hospitalists to be thought partners with their health systems in figuring out these alternate models of care and how to bring acute care out to the home—whether the health system does it directly, or partners with other entities, Dr. Kneeland said. "Home-based care is a lens to really see patients where they are, to treat not only their illness but their social condition, in a totally different way."

Integration into the planning

Shyam Odetti, MD, MS, FAAFP, MBA, SFHM, chief of hospital medicine for the seven-hospital Carilion Clinic health system based in Roanoke, Va., is part of Carilion's hospital at home steering team. For the past 16 months, this group has been planning a program that was set to initiate hospital at home services out of Carilion's flagship Roanoke Memorial Hospital this summer.



Dr. Odetti

The Steering Team's responsibilities have included identifying, recruiting, and training key partners and stakeholders, including pharmacy, dietary, durable medical equipment, labs, and diagnostic testing, along with a variety of medical specialists who could be called upon for virtual consults when needed for hospital at home patients. Hospital at home will operate much like the hospital when it comes to accessing these specialists, who have gotten comfortable making tele-consults, he said.

A key question for planners is to define what the problems are they want to solve with their hospital at home, Dr. Odetti said. That could include inpatient bed shortages, nursing staff shortages, patient safety concerns, satisfaction scores, or targeted diseases. Each hospital is unique, with its own unique needs. Take, for example, the stressful impact of hospital stays on elderly patients when an alternative site could be just as effective for their care. Or the patients who say, "I'd rather be at home."

More and more, hospitalists are able to identify opportunities to offer alternatives for these patients. "They are steering the hospital at home program, and becoming its champions," he said. "One thing we identified is that it seems natural for the hospitalist to be the provider of care for these patients, functioning as the captain of the ship," he said. "This is what we do day in and day out as hospitalists—providing acute-level medical care."

To establish a successful program, one needs professionals who can visit the patient in person twice a day. "That could be a nurse," he said. Then there's the medical provider, a doctor or advanced practice provider, who performs the medical care virtually, except for the initial, in-person assessment and admission visit. These can be done in the emergency department or on the hospital floor, where the majority of hospital at home pa-

tient referrals typically emanate. "If a change in status demands a home visit by the doctor, we will do that."

Out of the Carilion health system's complement of about 100 hospitalists, "we are picking those who are naturals—who are enthusiastic and who really want to do this kind of care. Then we start to integrate them into the planning meetings and the creation of our care processes, so they can learn as we go. We'll create educational opportunities for them and we'll make site visits together to established hospital at home programs," Dr. Odetti said.

At Carilion, the plan is to have a hospitalist assigned to a full shift for the hospital at home program, even while the caseload remains small in the beginning. Eventually, an advanced practitioner will be recruited and oriented to provide the daily virtual care and twice-daily patient huddles with the team, with a hospitalist assigned to oversee the program and be available for backup. "That's when the program becomes mature and able to start growing. It's not only what you do with patients that is important, but how you coordinate care with everyone else involved," he said.

Dr. Odetti predicted that growth

for this model is inevitable because there is a need and the technology continues to advance. "Hospital at home involves a major cultural shift. It will become embedded in the structure of integrated health systems," he added. Just as with telemedicine, which at first didn't feel natural or familiar to clinicians. "But it took off after the pandemic hit, to the point where people are now used to it, and much more comfortable with virtual encounters."

Ultimately, he said, hospital at home will change the culture of hospital care, reworking its processes. "It will take time; that's to be expected. This is the time you should be investing in program building. As systems become more integrated, they will scale up naturally. You will see the numbers increase and people will become more efficient." ■

Larry Beresford is a freelance medical journalist based in Oakland, Calif., a specialist in hospice and palliative care, and a long-time contributor to The Hospitalist.

Reference

1. Leff B, et al. Home hospital program: A pilot study. *Am Geriatr Soc.* 1999;47:697–702.



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The SHM Board is critical to supporting our organization's mission of empowering the hospital medicine community. We invite you to nominate yourself or a colleague to join the 2023 Board of Directors. Newly elected Board member(s) will serve a three-year term beginning in March 2023.

Submissions due October 31, 2022.

hospitalmedicine.org/boardnominations



Commentary

Gun Violence is a Public Health Crisis and as Hospitalists, It's Time to Step Up

By the Numbers



GUN VIOLENCE STATS IN THE U.S.

321

people shot every day¹

22

Children and teens (ages 1-17) shot every day¹

155%

more people are shot with an assault weapon or high capacity magazine¹

Americans kill each other with guns

25X MORE

than other high-income countries¹

45,222

gun-related deaths in 2020²

MORE AMERICANS DIED FROM GUN-RELATED INJURIES IN 2020

than in any other year on record³

54%

of gun deaths in 2020 were suicides³

48%

of Americans say gun violence is a very big problem¹²

53%

of Americans favor stricter gun laws¹²

1 IN 7

patients discharged after a gun-related injury is readmitted within 6 months⁷

\$32,700

average cost of hospitalization per patient of firearm injury⁷

\$910 MILLION

cost of firearm-related inpatient admissions between 2010 and 2015⁷

By Lauren Gambill, MD, MPA

I did not think that becoming a pediatric hospitalist would require me to become an expert in firearm injury, but here I am. Every day more than 300 people are shot in the United States.^{1,2} That fact alone has forced me and every other hospitalist in the country to learn how to care for individuals with firearm injuries. But learning how to care for these patients is not enough. Firearm injuries are preventable, and we must use our expertise to help create a safer world for our patients and our communities. Gun violence is a public health crisis and we, as hospitalists, are not only qualified to advocate for change, we are obligated.

According to data recently released by the Centers for Disease Control and Prevention (CDC), there were more than 45,222 firearm-related deaths in the United States in 2020. This equates to roughly 124 people being shot and killed every single day.^{1,2} This is the largest number of people killed by firearms in a single year on record. These numbers represent a 14% increase from 2019, and a 43% increase from 2010.² When accounting for the growth in the population, the 2020 death rate was 13.6 per 100,000 people, which is lower than the peak of 16.3 per 100,000 in 1974, but still the highest we have seen since the mid-1990s.^{2,3} And, for the first time ever, firearm injury has surpassed motor vehicle accidents as the number one cause of death in children.⁴

These statistics are horrifying in and of themselves, but they do not begin to reflect the extent of the effect of firearm violence on individuals, communities, or health care systems. That's because even though firearm injuries have a higher fatality rate than other forms of trauma or assault, the majority of gunshot injury victims do survive.⁵ Because of this, hospitalists, and physicians of all kinds, across the United States, have become experts in caring for these survivors.

As we all know, patients who survive the powerful injuries produced by firearms often face a long, complex, and excruciatingly painful physical recovery. Many of the injuries can have lifelong implications. Nearly half of all children who are admitted to the hospital after being shot leave with a physical disability.⁶ Hospitalists care for these patients for weeks or months in the hospital following their initial presenta-

tion. Some, particularly those with more devastating wounds, return time and time again for complications related to their original trauma. While research is limited regarding readmission rates over the course of their lifetimes, a 2019 study found that one in seven patients discharged from the hospital following a firearm-related injury was readmitted within six months. More than half of these patients were readmitted within the first 30 days.⁷

The physical injuries resulting from firearm violence are not the only wounds that need to be healed. Exposure to firearm violence is associated with elevated rates of depression, anxiety, post-traumatic stress disorder, and substance abuse. The "lucky ones" who survive gun violence are also at higher risk of dying by suicide.^{6,8} Because of the shortage of mental health access throughout our country, individuals in crisis end up in our emergency departments over and over again. These individuals also become our patients in the hospital, as they often have no other place to go.

Victims of firearm violence often require lifelong multidisciplinary care, including frequent doctors' appointments, treatments, and therapies. Providing this comprehensive health care is challenging within our current health care system for even the most resourced individuals. For those with additional barriers to care it is a monumental task. When considering that we know firearm violence disproportionately impacts people of color, people living in poverty, and other already marginalized communities, it is clear that firearm violence exacerbates some of the country's worst disparities.⁸

The weight of this public health crisis on our health care system is enormous. While it is difficult to account fully for all the health care costs associated with a firearm injury, one analysis showed that the average cost of hospitalization per patient was \$32,700. This same analysis found that between 2010 and 2015 the U.S. health care system spent more than \$910 million annually on firearm-related inpatient admissions alone.⁷

Every day, as hospitalists, we take care of individuals with medical problems that are difficult, or even impossible, to predict or prevent. Firearm injury is not one of those. Firearm injury is completely preventable. To predict and prevent these injuries, however, we must approach firearm injury as the public health crisis that it is.



Dr. Gambill

Dr. Gambill is a pediatric hospitalist and assistant professor of pediatrics at the University of Texas at Austin Dell Medical School.

This requires hospitalists to step beyond our clinical roles and into the role of advocates.

The CDC recommends a public health approach to firearm violence prevention that includes four critical steps; define and monitor the problem, identify risk and protective factors, develop and test prevention strategies, and assure widespread adoption.⁹ The heart of this approach relies on thorough, accurate, and timely data collection and research aimed at evaluating the effectiveness of injury-prevention efforts.

In 1996 the federal government implemented a funding freeze on injury-prevention research that could "be used to advocate or promote gun control." This effectively cut off financial support for any research in this field.¹⁰ This freeze was finally lifted in the fiscal year 2020 when Congress included \$25 million for gun violence research in a year-end spending bill. While a step in the right direction, we are still decades behind where we should be. Obtaining data on all aspects of this problem, as well as monitoring interventions, is critical and is a potential area for hospitalists to contribute to life-saving research.

The data we do have, however, can and should be used for policy-making. We know that more stringent firearm legislation is associated with fewer deaths.¹¹ According to a Pew Research Center survey, a majority of Americans (53%), believe gun laws should be stricter than they are.¹² Despite this, the United States had not passed federal legislation regarding firearms in nearly 30 years prior to June 25, 2022, when the Bipartisan Safer

Communities Act was signed by President Biden. While this bill represents important progress, it is not the final solution. Much of this bill supports state interventions. Our state legislators need to hear from us to help ensure the implementation of meaningful policy as a result of this bipartisan federal action.

As hospitalists, we are equipped to help our legislators by interpreting existing studies linking policy to outcomes. We are also in the unique position of putting a face to the data. It can be tempting to assume that legislators know how policies affect real humans, but the vast majority of policymakers are not physicians. They do not see the suffering we see. They are not at the bedside day and night comforting patients and their families whose lives will never be the same. They do not hold the heartbreak we hold. This work that we do is a profound privilege, but in doing it day in and day out, it is easy to forget that so few people see what we see. There will always be a divide between our understanding of this

problem and that of policymakers. It is up to us to help bridge that gap.

While the importance of advocacy at the federal and state level cannot be overstated, there are other important ways we can advocate at the bedside as well. Counseling on firearm safety, including safe storage practices and distribution of gun locks, has been shown to influence patient behavior. While most of the studies have taken place in the outpatient setting, those that have looked at the translation of these programs to the inpatient setting have shown promising results.¹³

As hospitalists, we have an incredibly important role to play. We know the awful details of how this public health problem plays out in real people's lives. We understand the data and the potential for relevant, meaningful interventions. While the political climate surrounding this topic can make advocacy intimidating, it does not need to be difficult. We do not need to be policy experts. We do not need to be political. We are experts

in our field, and we simply need to be brave enough to stand up and share that expertise. We have so much power in this conversation, and we need to use it. ■

References

1. Resources: Key Statistics. Brady Campaign to Prevent Gun Violence website. <https://www.bradyunited.org/key-statistics>. Accessed August 1, 2022.
2. WISQARS Data Visualization. Centers for Disease Control and Prevention website. <https://www.cdc.gov/injury/wisqars>. Accessed August 1, 2022.
3. Gramlich J. What the data says about gun deaths in the U.S. Pew Research Center website. <https://www.pewresearch.org/fact-tank/2022/02/03/what-the-data-says-about-gun-deaths-in-the-u-s/>. Published May 16, 2022. Accessed August 1, 2022.
4. Cunningham RM, et al. The major causes of death in children and adolescents in the United States. *N Engl J Med*. 2018;379(25):2468-2475. doi: 10.1056/NEJMsr1804754.
5. Kaufman EJ, et al. Epidemiologic trends in fatal and nonfatal firearm injuries in the US, 2009-2017. *JAMA Intern Med*. 2021;181(2):237-244. doi: 10.1001/jamainternmed.2020.6696.
6. Schaechter, J and Hirsh, MP. Caring for Pediatric Patients After Gun Violence. In: Lee LK, Fleegler EW, eds. *Pediatric Firearm Injuries and Fatalities: The Clinician's Guide to Policies and Approaches to Firearm Harm Prevention*. Switzerland. Springer Nature; 2021: 143-155
7. Spitzer SA, et al. Readmission risk and costs of firearm injuries in the United States, 2010-2015. *PLoS One*. 2019;14(1):e0209896. doi: 10.1371/journal.pone.0209896.
8. Martin R, et al. Racial disparities in child exposure to firearm violence before and during COVID-19. *Am J Prev Med*. 2022;63(2):204-212. doi: 10.1016/j.amepre.2022.02.007.
9. The Public Health Approach to Violence Prevention. Centers for Disease Control and Prevention website. www.cdc.gov/violenceprevention/about/publichealthapproach.html?CDC_AA_refVal=http://www.cdc.gov/violenceprevention/publichealththissue/publichealthapproach.html. Published January 18, 2022. Accessed August 1, 2022.
10. Jamieson C. Gun violence research: History of the federal funding freeze. American Psychological Association website. <https://www.apa.org/science/about/psa/2013/02/gun-violence>. Published February, 2013 (archive). Accessed August 1, 2022.
11. Fleegler EW, et al. Firearm legislation and firearm-related fatalities in the United States. *JAMA Intern Med*. 2013;173(9):732-40. doi: 10.1001/jamainternmed.2013.1286.
12. Schaeffer K. Key facts about Americans and guns. Pew Research Center website. <https://www.pewresearch.org/fact-tank/2021/09/13/key-facts-about-americans-and-guns/>. Published September 13, 2021. Accessed August 1, 2022.
13. Silver AH, et al. Randomized controlled trial for parents of hospitalized children: keeping kids safe from guns. *Hosp Pediatr*. 2021;11(7):691-702. doi: 10.1542/hpeds.2020-001214.

Advocacy

Why Hospitalists Should Vote and How to Help Their Patients with Civic Engagement

By Amith Skandhan, MD, FACP, SFHM

Politics plays a vital role in health care. In Thomas Oliver's article, "The Politics of Public Health Policy,"¹ he emphasizes how political decisions are crucial in how health care policy is structured and implemented. He states, "politics is central in determining how citizens and policymakers recognize and define problems with existing social conditions and policies, in facilitating certain kinds of public health interventions but not others, and in generating a variety of challenges in policy implementation."

Thus, voter participation by health care professionals in local, state, and federal elections is paramount, as choices at the ballot can drastically shape health equity for our patient populations.

Through the years, physicians appear to have evolved regarding engagement in their civic duty. Before 2002, studies show that physicians appeared to have lower adjusted voting rates compared to lawyers or the general population.² However, a recently published cross-sectional study in the *Journal of the American Medical Association* found that physicians were as likely to vote as the gener-

al population in the 2018 midterms and 2020 presidential elections.³ The authors speculate that increased focus on physicians' roles and health care reform policies are likely to have led to increased physician voter turnout during the 2020 election.

How health care policy affects patients and hospitalists

Hospitalists, like all clinicians, are keenly aware of the role social determinants of health play on a patient's disease processes. These social determinants of health are influenced by policies that are constructed and enforced through deliberate actions of legislation.

During a 2021 National Academies Sciences Engineering Medicine workshop on civic engagement, Daniel E. Dawes, health care attorney, author of the book, "Political Determinants of Health," and the executive director of government affairs and health policy at Morehouse School of Medicine in Atlanta said, "For every social determinant of health, there was a preceding legal, regulatory, ordinance, legislative or other policy decision that resulted in that social determinant of health. Those are the political determinants of health." Dawes argues that if we need to address the social deter-

minants of health, we need to connect them to their upstream political roots. These upstream decisions have downstream consequences.⁴

To understand these connections to political roots, we can look at an example fresh in every clinician's mind: the recent COVID-19 pandemic. We've seen exacerbations in health care inequities as evidenced by increased mortality rates and worse outcomes in different patient demographics such as race. A Chicago-based study from April 2020 revealed that even though the African American community comprises only 30% of the city's population, they represented 50% of all COVID-19 cases and 70% of its COVID-19 deaths.⁵

Many minority and underprivileged communities live in neighborhoods that don't have access to high-quality health care. These social drivers of health, such as the neighborhood in which one lives, access to health care, availability of healthy foods, literacy rates, etc. are driven by policies to create the world these communities live in.

As hospitalists, we also see the effects of policies and procedures in our day-to-day clinical work. Recently we've seen an increase in insurance denials for our hospitalized patients, which has been driven in part by variable criteria



Dr. Skandhan

Dr. Skandhan is an academic hospitalist and associate program director for the internal medicine residency program at Southeast Health, Dothan, Ala. He also serves as the director of physician integration for Southeast Health Statera Network. He's a member of The Hospitalist's editorial board and a current scholar for the Leadership in Health Policy Fellowship at the Society of General Internal Medicine.

of insurance payors and a lack of oversight over the denial process.⁶ Similarly, there are policies around reimbursement also affecting our wages.



Therefore, it's important to be a part of or have representation during this decision-making process. Elections are those mechanisms through which we can select representatives to make our voices heard.

Register to vote and plan for election day

A common cause cited in the Journal of the American Medical Association article for physicians not being able to vote was not meeting the voter-registration deadline.³

Every state except North Dakota requires citizens to register if they want to become voters. Depending on your state, the registration deadline could be as much as a month before an election. Consider logging onto www.vote.org to check the status of your voter registration. The website also helps you register and sets reminders to be sent to you for the election.

Health care providers often struggle with balancing their clinical responsibilities and participating in their civic duties, especially on election day. It's important to find out in advance what the policies and practices are when it comes to election day at your institution. These include finding out whether you have protected or paid time to vote. At a departmental and peer level, could you find a colleague to cover for you and carry your pager while you go vote?

Resources for your patients

Low-income populations and marginalized communities tend to vote at lower rates than the general population.² An analysis done by the Washington Center for Equitable Growth on income group-based voting in the 2020 election revealed that despite increased voter turnout in every income group, only about 65% of low-income individuals voted, compared to 88% in the high-income category.⁷

Typically, many lower-income patient populations and uninsured patients, when admitted to the hospital, are taken care of by hospitalists. To vote or register to vote is even more challenging for patients when hospitalized. As clinicians who are acutely aware of the socioeconomic issues our patient populations deal with, it's important to find ways to help them practice their civic duties, especially for marginalized communities.

There are non-partisan organizations that

facilitate connecting health care providers and health systems with civic engagement. The website www.vot-er.org provides training on how to initiate a non-partisan conversation about civic duties with patients. The website www.civichealthalliance.org provides a downloadable toolkit to promote voter registration in the health care setting. Both organizations, on request, can provide badges, flyers, and prescription cards with QR codes to help patients register and provide legal guidance around implementing health-care-based voter registration.

The website www.patientvoting.com is owned by the non-partisan organization of the same name, formed around the 2020 presidential elections to increase voter turnout among registered voters who are unexpectedly hospitalized, using Emergency Absentee Ballots. When patients are hospitalized acutely, these patients may qualify for the option of using an Emergency Absentee Ballot, which should be considered for your hospitalized patients. According to the National Conference of State Legislatures, "requirements to qualify for an emergency ballot vary, but the most common reason that states permit a voter to use this option is due to a medical emergency such as unforeseen illness, confinement to a medical facility, disabilities or accidents resulting in injury."⁸ Clinicians should keep in mind that deadlines and processes for these emergency ballots vary by state.

A call to action

As health care professionals, we know the issues that affect our patients, our health care system, and our profession. The challenges we face in our day-to-day clinical duties are often created through legislation enacted by elected representatives. Civic duty is akin to clinical duty. We know the challenges our patients face—costs of medications, access to care, etc. And we know many of our patients struggle with taking time off to vote, as their financial constraints don't allow them to do so.

Voter registration deadlines and election dates are preset. Consider them as dates for an elective procedure or doctor's appointment. Also, elections happen every few years, but the decisions enacted by legislators can last for generations. With the aid of your colleagues, you can plan to allot a few hours in your schedule to vote. If we don't vote, do we have the right to

Key Points

- Voter participation by hospitalists in local, state, and federal elections is critical—choices made at the ballot shape health equity.
- Previously, studies showed physicians had lower voting rates compared to lawyers and the general population.
- “The Political Determinants of Health” by Daniel E. Dawes is a must-read for hospitalists.
- Health care policies directly affect patients and hospitalists.
- **PatientVoting.com** is a non-partisan group that helps register voters who are hospitalized.
- Visit **Vote.org** to check the status of your voter registration. You can also register to vote and set reminders for election days.
- Review your institution's policy on taking time off to vote; plan your work day accordingly.
- Visit **Vot-er.org** to learn how to have conversations about civic duties with patients.
- **CivicHealthAlliance.org** is a site that provides downloadable tools to promote voter registration in health care settings.
- Non-partisan organizations can provide badges, flyers, and prescription cards with QR codes to help patients register and provide legal guidance around implementing health-care-based voter registration.
- Vote!

sit at the lunch table complaining about insurance and documentation woes, the rising cost of care, and transition-of-care challenges, when we didn't even try to vote for representatives who understood our voices and concerns? As the saying goes, “If you're not at the table, you're on the menu.” ■

Reference

1. Oliver TR. The politics of public health policy. *Annu Rev Public Health*. 2006;27:195-233. doi: 10.1146/annurev.publhealth.25.101802.123126.

2. Grande D, et al. Do doctors vote? *J Gen Intern Med*. 2007;22(5):585-9. doi: 10.1007/s11606-007-0105-8.

3. Ahmed A, et al. Analysis of reported voting behaviors of US physicians, 2000-2020. *JAMA Netw Open*. 2022;5(1):e2142527. doi:10.1001/jamanetworkopen.2021.42527.

4. Dawes D. *The political determinants of health*. Baltimore, MD. Johns Hopkins University Press; 2020.

5. Reyes, C, et al. Chicago's coronavirus disparity: Black Chicagoans are dying at nearly six times the rate of white residents, data show. *Chicago Tribune*. Apr 7, 2020. Available online at: <https://www.chicagotribune.com/coronavirus/ct-coronavirus-chicago-coronavirus-deaths-demographics-lightfoot-20200406-77nlylhiavgjzb2wa4ckivh7mu-story.html>. Accessed August 17, 2022.

6. Singh S, et al. The growing epidemic of insurance denials: A frontline perspective. *J Hosp Med*. 2022;17(2):132-135. doi: 10.1002/jhm.2775

7. Clemens, A, et al. Evidence from the 2020 election shows how to close the income voting divide. Washington Center for Equitable Growth. <https://equitablegrowth.org/evidence-from-the-2020-election-shows-how-to-close-the-income-voting-divide/>. Published July 08, 2021. Accessed August 17, 2022.

8. National Conference of State Legislatures. Absentee voting in case of a personal emergency. National Conference of State Legislatures website. Available at <https://www.ncsl.org/research/elections-and-campaigns/absentee-voting-in-case-of-a-personal-emergency.aspx>. Published October 30, 2020. Accessed August 17, 2022.

Books for the Hospitalist's Soul

By **Ryan E. Nelson, MD, Staci J. Saunders, MD, Emma L. Scott, MD, and Alan M. Hall, MD, SFHM**

Early-career hospitalists must learn to navigate multiple roles—clinician, educator, coach, leader, and colleague, to name a few. Complementary to mentorship and experiential learning, select professional-development books can help early-career hospitalists acquire the necessary skills to fulfill their myriad responsibilities. In this article, we share lessons from four such books that helped us achieve success and satisfaction in early-career practice.

DR. NELSON'S PICK:
*Essentialism*¹ by **Greg McKeown**

TAKE-HOME: Prioritize the few opportunities that are truly important to you; gracefully say no to those unaligned with your goals.

As hospitalists, we're afforded a variety of career opportunities outside our clinical duties. Common advice for an early-career hospitalist is to routinely say yes, so you develop a reputation as a "go-to" person for projects. *Essentialism* argues that you should only say yes to the right opportunities for you.

Essentialism advocates for the transition from the "undisciplined pursuit of more" to the "disciplined pursuit of less." To become Essentialists, we must appreciate our right to choose and recognize the reality of tradeoffs—we cannot do it all. First, we should systematically evaluate a variety of opportunities to help "discern the vital few from the trivial many." This process helps clarify our sense of purpose and define our highest point of contribution. Then, we can begin to eliminate options that are unaligned with our career goals. Lastly, we must be proactive, remove obstacles, celebrate small wins, develop routines, and maintain focus to execute our essential pursuits.

As a second-year hospitalist, I was asked to lead a clinician-wellness task force. This position was unfunded and would require weekly meetings in person across multiple hospitals. Having explored multiple opportunities in my first year, I knew this role would detract from my passion for medical-education projects. *Essentialism* equipped me with the confidence to say no gracefully and protect my essential pursuit.

DR. SAUNDERS' PICK:
*Make It Stick*² by **Peter Brown, Henry Roediger III, and Mark McDaniel**

TAKE-HOME: Meaningful learning is hard; however, we can use skills derived from cognitive learning theory to help us durably learn as well as teach others.

In hospital medicine, lifelong learning is essential given the wide breadth of knowledge needed in our daily lives. At times, we use study habits that create a false sense

of learning such as cramming, highlighting, or re-reading. *Make It Stick* draws on cognitive psychology to offer concrete ways to enhance durable, long-lasting learning.

To start, one needs to "Embrace the fact that significant learning is often, or even usually, somewhat difficult. You will experience setbacks. These are signs of effort, not of failure. Setbacks come with striving and striving builds expertise...knowing this is so makes the difficulties worth tackling." The authors offer three key study strategies that can enhance our learning: retrieval practice (self-quizzing), spaced practice (studying information during multiple periods), and interleaving (studying more than one concept at a time).

As hospitalists, our job also includes teaching others—our peers, residents, medical students, multidisciplinary colleagues, and patients. *Make It Stick* provides recommendations for improving our teaching such as creating desirable difficulties and acknowledging the rationale for these challenges.

My lesson from *Make It Stick* is that meaningful and durable learning can be hard. However, there are techniques we can use not only to augment our own lifelong learning but also to enhance our teaching of others—skills that are fundamental to hospitalists.

DR. SCOTT'S PICK:
*Crucial Accountability*³ by **Kerry Patterson, Joseph Grenny, Ron McMillan, Al Switzler, and David Maxfield**

TAKE-HOME: When unmet expectations occur, we should be curious and not judgmental as we work together to assess and solve the problem.

When I became a teaching attending, one piece of advice prevailed, "Set clear expectations." I want to suggest an addendum, "And then talk about unmet expectations."

Crucial Accountability provides the "tools for resolving violated expectations, broken commitments, and bad behavior." The authors challenge the idea that these subjects are taboo. Instead, they claim that skillfully addressing unmet expectations leads to higher team efficiency and overall well-being. *Crucial Accountability* provides three steps for addressing unmet expectations: assume the best, reflect on mutual purpose, and then start talking.

When a patient-care task was missed on wards, I decided it was time to practice. First, I assumed the best—why would a considerate, competent resident fail to do this task? Maybe I was unclear about the importance, maybe the resident was busy with an acutely ill patient, or maybe the resident lacked an organized system for tasks. Then, I identified our mutual purpose—to provide high-quality patient care and avoid attending over-reach (for the benefit of us both!). Now, it was time to talk. Almost immediately, the small misunderstanding became clear and was an easy fix. My resident appreciated the chance to discuss the lapse, and I trusted my resident more at the end of the conversation than before.

Crucial Accountability provided me the skills to address unmet expectations, trading my internal one-sided narrative for a two-person conversa-

tion of mutual understanding and growth.

DR. HALL'S PICK:
*Grit*⁴ by **Angela Duckworth**

TAKE-HOME: No matter how challenging our work can be and how many times we get knocked down, grit can help us get back up.

Grit is a combination of perseverance and passion. It can seem like an innate skill for a hospitalist, but it is helpful to give it deliberate thought. In *Grit*, Angela Duckworth uses countless examples to explain the importance of grit. As she says, "At various points, in big ways and small, we get knocked down. If we stay down, grit loses. If we get up, grit prevails."

In hospital medicine, we use grit when we get knocked down by an upset patient and quickly get up to apologize sincerely because we can commiserate with the delayed procedure. We use grit when we get knocked down by a family member not believing in the very disease afflicting our patient, but we quickly get up to care for that patient as well as we care for anyone.

We get knocked down when a patient's goals of care do not seem aligned with their terrible disease, but we use grit to keep following up to hear and understand, and to ensure that we are addressing them as a human and not just as a disease. We use grit when we keep submitting a manuscript to other journals after getting knocked down by rejections. We may get off-balance when we encounter a struggling learner, but we use grit to approach them with patience to help them make gradual steps to improve.

My lesson from *Grit* is that grit is how we succeed in helping our patients, our learners, and ourselves.

We hope these books will help you prioritize the right career opportunities, pursue durable lifelong learning, manage unmet expectations, and persevere through clinical challenges.

Dr. Nelson is an instructor of medicine at Harvard Medical School/Beth Israel Deaconess Medical Center, Boston. Dr. Saunders is an instructor of medicine at Harvard Medical School/Beth Israel Deaconess Medical Center, Boston. Dr. Scott is a hospitalist physician at Baptist Health Hospital, Lexington, Ky. Dr. Hall is an associate professor of medicine and pediatrics at the University of Kentucky College of Medicine, Lexington, Ky. ■

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References

1. McKeown G. *Essentialism: The Disciplined Pursuit of Less*. London: Virgin Books, 2014.
2. Brown P, Roediger H, McDaniel M. *Make It Stick: The Science of Successful Learning*. Cambridge, Mass: Belknap Press, 2014.
3. Patterson K, Grenny J, McMillan R, Switzler A, Maxfield D. *Crucial Accountability: Tools for Resolving Violated Expectations, Broken Commitments, and Bad Behavior*. 2nd ed. New York: McGraw-Hill Education, 2013.
4. Duckworth A. *Grit: The Power of Passion and Perseverance*. New York: Scribner, 2018.



Dr. Nelson



Dr. Scott



Dr. Saunders



Dr. Hall

How We Improved MOLST Documentation

By Juan Carlos Fuentes-Rosales, MD, JD, MPH, LLM(c), FACP, FASAM, FHM, Tanveer Mir, MD, Louis Martinucci, MD, Phanthira Christina Tamsukhin, MD, Klaas E. A. Max, MSc, PhD

What: Increasing the documentation of end-of-life care preferences (advance directives) during hospital admission for patients with advanced comorbidities admitted to the telemetry/stroke unit.

Where: Telemetry/Stroke unit at Wyckoff Heights Medical Center, a small community hospital in Brooklyn, N.Y.

Background: As physicians, one of the main principles we follow is to do no harm to our patients. End-of-life care is a complex area of medical practice, where the principle of not doing harm to patients also depends on the patients’ perspectives, personal wishes, and preferences. While physicians always try to act in their patients’ best interest, respecting their wishes can sometimes be challenging, especially when they require immediate interventions to survive. This concern is even more pressing for our patients with advanced diseases, where advance directives have not always been expressed clearly.

By simply filling out a MOLST form—medical orders for life-sustaining treatment—which establishes advance directives, patients’ end-of-life preferences are recorded in a standardized fashion that’s easy to follow and legally binding for any physician at any health care institution within New York. This document guarantees that end-of-life care preferences are respected and no measures are taken that the patient disapproved of.

We decided to investigate how this affected our patient population by looking at MOLST documentation completed on our telemetry/stroke unit over three months, from October 2020 to December 2020.

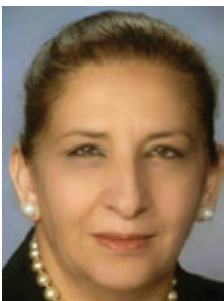
At a baseline, we found that, on average, approximately seven MOLST forms were completed for patients per average of 265 monthly admissions to the unit. From these findings, it was apparent this was a problem our patient population was facing. We felt we had the means to correct it by finding a cost-effective way to increase MOLST documentation when patients were admitted to the telemetry/stroke unit.

Takeaways

- It’s recommended that discussion of advance directives is conducted at the time of admission, and a MOLST form is completed reflecting patients’ wishes.
- It’s essential to involve the patient’s family, particularly when patients have advanced age and diseases.
- Raising awareness and educating health care providers on how to discuss advance directives and MOLST forms with patients and families can increase the completion of MOLST forms during admission in the inpatient setting.



Dr. Fuentes-Rosales



Dr. Mir



Dr. Martinucci



Dr. Tamsukhin



Dr. Max

Dr. Fuentes-Rosales is a hospitalist in the department of medicine at Wyckoff Heights Medical Center, Brooklyn, N.Y. Dr. Mir is a hospitalist in the department of medicine at Wyckoff Heights Medical Center, Brooklyn, N.Y. Dr. Martinucci is a hospitalist in the department of medicine at Wyckoff Heights Medical Center, Brooklyn, N.Y. Dr. Tamsukhin is a hospitalist in the department of medicine at Wyckoff Heights Medical Center, Brooklyn, N.Y. Dr. Max is a research associate at the Laboratory for RNA Molecular Biology at The Rockefeller University, New York.

How it works: With the support from the hospitalist service and the geriatric division from the department of medicine at Wyckoff Heights Medical Center in Brooklyn, N.Y., led by Dr. Fuentes and Dr. Mir, respectively, a multidisciplinary team was created, composed of hospitalists, residents, nurses, social workers, and case managers. Several educational initiatives were put in place.

The main objectives were increasing awareness about advance directives, emphasizing the importance of advance directive discussion, and educating on how to discuss end-of-life care preferences with patients and their family members. These objectives were achieved in various ways. The first activity conducted was a virtual presentation for all attending physicians, internal medicine residents, nursing staff, social workers, case managers, and patient care managers in the telemetry/stroke unit of the hospital. The lecture highlighted the objectives noted above and provided the foundation for the quality improvement project. The second activity implemented was a re-emphasis on the importance of MOLST documentation for all residents rotating through the geriatric/palliative service. Residents were encouraged to initiate advance directive discussions with patients and family members during hospital admission and to assist in completing MOLST documentation for admitted patients. The third intervention implemented was increased discussion of MOLST documentation during daily interdisciplinary rounds (IDRs) and teaching rounds between attending physicians and residents. Attending physicians would help identify patients with advanced comorbidities that would benefit from MOLST documentation. Residents would ensure this was enacted in the patient’s care plan for the day.

We implemented these interventions to optimize the communication of advance directives with patients. In addition to this primary goal, we intended to increase the number of completed MOLST documentation at admission and discharge as secondary goals. Furthermore, we wanted to improve conversations about advance directives that physicians were having with patients and their family members to increase the overall quality of patient care.

The project was carried out from January 2021 to May 2021. MOLST documentation was tracked by staff and charted in the patient’s electronic medical records. Later, data from these records was used to evaluate the project’s effect on MOLST documentation completion during hospital admission.

ect’s effect on MOLST documentation completion during hospital admission.

Results: From January 2021 to May 2021, the telemetry/stroke unit saw a significant increase in MOLST documentation completion during patient admission and MOLST documentation completion by the time the patient was discharged from the hospital. The average MOLST documentation for the telemetry/stroke unit increased from approximately seven MOLST forms completed per month to about 40 MOLST forms completed per month. A statistical analysis review suggests that the project’s interventions had their greatest effect on MOLST documentations which showed a statistically significant 5.9-fold increase, while MOLST documentations completed by the time of hospital discharge showed a statistically significant 3.9-fold increase.

In addition to positively impacting the number of MOLST documentations completed during hospital admission for eligible patients, our intervention improved the quality of conversations revolving around advance directives. By reducing the harm and suffering that our patients encounter due to unnecessary interventions resulting from not having indicated end-of-life care goals, we expect this intervention has an important and noticeable impact on the overall quality of patient care. We also saw improvements in resident training, since our residents now implement end-of-life care considerations in their daily routine, which may not only benefit the patients in our community and our hospital’s workflow, but also the communities of our residents’ future sites of employment.

Moving forward: The most evident conclusion we drew from the project was that simple, cost-effective, and straightforward solutions can effectively improve MOLST documentation for eligible patients during their hospital stay. Discussing advance directives with eligible patients is a necessary skill for all hospitalists. Our simple intervention can be implemented in a variety of health care institutions and settings to help facilitate this even further and promote and foster a more collaborative teamwork approach to patient care. As we move forward, we plan to expand this pilot program to other units of our hospital and make this practice an integral part of the care we provide to our patients. Ultimately, our cardinal goal is to ensure our patients do not undergo harm and receive a higher quality of care. ■



SIG Spotlight: NPs/PAs

By Richard Quinn

Shared learning. Bidirectional mentorship. Professional leverage.

Buzzwords to some, but to the leadership of SHM's Special Interest Group (SIG) for nurse practitioners (NPs) and physician assistants (PAs), the lofty ideals are goalposts and a *raison d'être*.

"It provides a fantastic opportunity for NPs and PAs and those in hospital medicine who work with them to come together in a creative space to think about how we might be able to first listen and understand all the different amazing programs across our country," said Margaret Cecil, APRN, MSN, ANP-C, system director of Advanced Practice Acute Care Operations at CommonSpirit Health's national health system and immediate past chair of the SIG. "And then take that shared learning and translate it, when appropriate, into our own individual organizations."

SHM has more than 25 SIGs whose aim is to "create communities of hospitalists around topics of interest, practice areas and/or care models." The NPs and PAs SIG by nature may be among the most collaborative of the special interest groups, as it's a home for both those practitioners and anyone else in the HM universe who

works with them. That might help explain its membership, which numbered 4,374 as of June 20.

In fact, current SIG chair Kristin Lindaman, PA-C, said the group can achieve a broader impact with buy-in from those who aren't NPs and PAs.

"Collaboration is necessary to be successful," said Ms. Lindaman, associate program director for the Wake Forest School of Medicine PA program in Winston-Salem, N.C.

Ms. Lindaman said she sees informal connections all the time.

"There are times when somebody brings up a specific challenge or a project they're interested in, and having those informal connections allows us to help connect that person with others having similar challenges or with similar interests," she said. "This helps other people make those informal connections and build their network."

Bridget McGrath, PA-C, FHM, director of NP/PA hospitalist services and interprofessional education co-lead for the section of hospital medicine at the University of Chicago Medicine and a former SIG chair, said that today's health care world is seeing increasing NP and PA utilization, making it incumbent for "optimal inter-professional communication."

"We have to understand the NP/PA professions have had exponen-

tial growth over this past decade, with an increase in new clinicians entering the field," she said. "Developing bi-directional mentorship, among APNs [advanced practice nurses], PAs, and our physician colleagues creates optimal team care, which allows us to tackle some of health care's evolving issues."

Ms. Cecil couldn't agree more.

"One of the things we talk about on a regular basis is that hospital medicine is a team sport," Ms. Cecil said. "Whether we're talking about physicians and NPs/PAs, or nursing colleagues, or respiratory therapists, or physical therapists, or everybody in between who takes care of patients in the hospital setting, there is a connection because we all have to work together to achieve the best outcomes for our patients. In alignment with SHM's Big Tent thought processes, it's really important for us as an NP/PA SIG to certainly focus on things that are associated with NPs and PAs, but not to do so in a silo."

The value of connection—during the COVID-19 pandemic particularly—was not always the formal networking that occurred at in-person or remote events.

"I would share that we have seen informal relationships in action in supporting individuals," Ms. Cecil said. "Being able to have those informal connections where you have their email address and you have their cell phone number, and you can reach out on numerous topics that might be able to help create a solution that you might not have thought of before has been very beneficial for many

members of the NP/PA SIG."

Ms. Lindaman said she sees that all the time.

"Somebody might say 'This is a challenge,' or 'This is something I'm working through right now,' or there's a project they're interested in...and by having those informal connections there are a lot of times I'm able to tell them, 'I know somebody who is working on something similar, let me put you in touch with them,'" she said. "This is how you help other people make those informal connections and build their network."

Ms. McGrath believes the pandemic has made this SIG—and others like it—even more invaluable as those in the health care industry are looking for varied viewpoints during the past few years of upheaval.

For example, she said there were many conversations at this year's SHM Converge about the future of hospital medicine and it's important that NPs and PAs are at the forefront of that conversation.

"At SHM Converge, we heard many discussions on where we as a health care community go from here, as the pandemic continues to linger," she said. "We have an opportunity to reflect on what we have learned over the past couple of years. I think one lesson is that collaboration and innovation is a strong suit for hospitalists, and NPs and PAs can be a part of that. We have the opportunity to be part of the discussion for how health care develops in the next phase." ■

Richard Quinn is a freelance writer in New Jersey.



Ms. Cecil



Ms. McGrath



Chapter Spotlight: Minnesota

By Richard Quinn

Diversity can mean a lot of things to a lot of people. To SHM Minnesota chapter president Nichole Cummings, MD, it means a statewide chapter that truly feels open to everyone. That means community and academic hospitalists, white hospitalists, Black hospitalists, early-career docs, and later-career nurse practitioners and physician assistants.



Dr. Cummings

“Diversity is so important,” said Dr. Cummings, a hospitalist for CentraCare in the Minneapolis suburb of St. Cloud. “We have a lot of similar needs as hospitalists, but a lot of really different needs as hospitalists, too.”

Dr. Cummings, a nearly 10-year SHM member who is in her second year as chapter president, said growing the group’s leadership from three members to nine members was an important way to wrap in hospitalists from regions outside the Twin Cities, Minnesota’s most populated area.

“We’ve really tried to get leaders from different institutions, so we are representing different types of hospitalist groups,” she said.

The Minnesota chapter was established in 2013 and has 497 members.

Perhaps no year was more challenging for the group—and its state—than 2020, when hospitalists and the community dealt with both the COVID-19 pandemic and the fallout from the death of George Floyd at the hands of police.

That year, the chapter held its first diversity and equity event, with the title of “Working Through Two Pandemics.”

“It was about the pandemic of COVID-19, but then also the pandemic of health disparities, and how social disparities affect our patients and our physicians and patient care, and how we provide care for different groups,” Dr. Cummings said.

That event—as well as the chapter’s other efforts—led to the group winning the 2021 SHM Resiliency Award. In a press release announcing the award, SHM specifically honored the chapter’s “ability to withstand and rise above hardships as well as to successfully adapt and thrive.”

Dr. Cummings takes immense pride in that award, which noted both the chapter’s second annual diversity and equity event—“Deconstructing Race and Dismantling Race-Based Medicine”—and a poster competition that saw a 175% participation increase over the prior event.

“We were able to add a couple more events, and actually had several more events in 2021 that we weren’t able to do in 2020,” Dr. Cummings said. “Despite still having COVID-19 surges and being in the midst of the pandemic, we were able to get together as a leadership team and as a state to continue to provide different events and support to everyone in our state.”

Dr. Cummings said that, as valuable as the state chapter was during COVID-19 for clinical advice and tips on best practices, she tried to remain focused on non-clinical topics such as burnout, research, and quality initiatives.

“It’s so easy to focus just on COVID-19 and just what it’s doing to our patients and our medical systems, that it’s easier to forget that we’re still treating patients as a whole,” She said, “We still have issues with diversity and equity. We still have residents and learners who are coming up and need to learn about all different types of cases and all different types of research. We thought it was very important to try to continue to look at medicine broadly instead of through a very focused lens of COVID-19.”

Dr. Cummings said that a major part of the chapter is also the social networking that comes from events, particularly as in-person gatherings have become safer over the past few months.

“It gives people a mental break,

and to be with other people we know had similar experience,” she said. “Though they might work at a different institution with a slightly different population of patients, they went through similar stressors and were able to talk about that, kind of decompress about that.”

“Also, we found that people make really good connections at social-networking events that they were able to use during COVID-19 when people could bounce ideas off each other. ‘Hey, we met at this SHM event, and we’re struggling with this part of the pandemic care. What are you guys doing?’”

Moving forward, Dr. Cummings wants to continue growing the membership of the chapter.

And, you guessed it, she thinks that diversity is the key.

“We’d like to continue focusing on reaching out to different groups in outstate Minnesota, groups that maybe aren’t in the Twin Cities area, to make sure we’re trying to represent as much of the state as we can,” Dr. Cummings said. “And we also want to begin reaching out to different groups such as our advanced practice providers, our residents, and our medical students. We just try to have as diverse a number of jobs and locations that we can.”

Told you diversity was important here! ■

Richard Quinn is a freelance writer in New Jersey.

Commentary

The Power of Pictures at the Bedside

By Cynthia Cooper, MD

The COVID-19 epidemic provided a stark opportunity to learn what the hospital experience was like with no visitors. Disconnection and loneliness in the hospital, however, long predate the COVID-19 epidemic and will outlast it. Rates of family estrangement are high.¹ Social isolation among Americans aged 65 and older has become more common.²

Most hospitalized patients are now cared for by clinicians with whom they have no prior relationship.³ Unlike a primary care physician, who often has an established understanding of a patient's baseline, a hospital physician must rely on multiple sources to forge their patient-clinician relationship. Review of prior records and discussion with outside physicians are key aspects of this process, but the patient interview and daily interactions on rounds are essential to relationship-building.

Unfortunately, these therapeutic relationships are difficult to establish when hospitalists have limited time to spend with patients or when patients are either delirious or unable to provide a cogent history and have no family or friends at the bedside to fill in the missing details. Patient photographs at the bedside can make a difference in caregivers and the care provided.

A patient's photograph is a point of connection and humanization. It tells a story of a life before the current hospitalization, potentially before the current illness. It may show connections to family and friends. It provides a window into the life before now.

Studies in intensive care units (ICUs) have shown that posting photographs of patients before their critical illness increased the sense of connection nurses had to unconscious patients. These studies found that photographs brought clinicians "closer to seeing the person" and provided "a landmark bringing hope."⁴ Photographs are "reminders of a patient's pre-illness state that can enhance the empathetic bond between caregivers and patients."⁵

The hospitalized patient is not necessarily in the Intensive Care Unit, but there are similarities. Generic hospital clothing and loss of privacy and dignity strip a patient of their unique humanity. Photographs that show the patient when they were well can provide a unique window into a patient's life as well as serve clinical purposes. Photographs marking historic life events, e.g., weddings, birthdays, and holidays, can help clinicians



gauge the effect and pace of illness.

The healing effect of photographs, however, extends beyond their effect on clinicians. Family pictures are a form of art,⁶ even if they don't seem that way. Photographs at the bedside can bring patients a comforting and healing view, more appealing than sterile walls and drapes or room televisions stuck on a loop of news.

For some patients, photographs may be art enough, but bedside views can extend to favorite pieces of art. Both viewing and making art have therapeutic effects for patients, engaging functions of the brain⁷ such as creativity, curiosity, and wonder, in ways that may help with self-management of one's illness. Art therapy⁸ has long been a feature of pediatric and psychiatric units but the beneficial effect of art on adult patients' psychological health and well-being calls for expansion both to "regular" medical units and to common hospital spaces.⁹ Art serves to ground our shared experience in the hospital, whether it be a photograph at the bedside or a musical serenade from the hall.¹⁰

Physicians and nurses are trained to give quality care to each patient, no matter their condition, treating those who can't communicate well with the same meticulous and empathic care as patients who are jovial and talkative.

With burnout at crisis levels, hospitals need a cost-effective way to motivate caregivers and bring them a second wind. Researchers have theorized that the better a physician knows a patient, the more likely the physician is to make decisions that are ultimately in the patient's best interest.¹¹ If we want the best care possible from our physicians for ourselves and our loved ones, we must find ways to strengthen the connec-

tions between patients and their clinicians—the more connections we can make, the better.

The process of bringing photographs to the bedside need not add to the expense and work of caring for patients in the hospital.¹² As patient communication boards evolve beyond markers on a whiteboard, hospitals should capitalize on new technology, including digital whiteboards.¹³ Digital boards allow family and friends, with the use of a code and login, to personalize a patient's space, uploading photos and art without adding to the work of weary clinicians. In the face of an ongoing pandemic, social isolation, and family estrangement, photographs and art at the bedside can bring both hope and healing to patients and caregivers. They are necessary investments in health. ■

References

1. Atlas, G. Op-Ed: 1 in 4 adults are estranged from family and paying a psychological price. *Los Angeles Times*. <https://www.latimes.com/opinion/story/2021-11-28/1-in-4-adults-is-estranged-from-family-and-paying-a-psychological-price>. Published November 28, 2021. Accessed August 14, 2022.
2. National Academies of Sciences, Engineering, and Medicine; Division of Behavioral and Social Sciences and Education; Health and Medicine Division; Board on Behavioral, Cognitive, and Sensory Sciences; Board on Health Sciences Policy; Committee on the Health and Medical Dimensions of Social Isolation and Loneliness in Older Adults. *Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System*. Washington, DC: National Academies Press; February 27, 2020. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK557974/>. Accessed August 14, 2022.
3. Gesensway, D. Could you drag PCPs back to the hospital? And would you even want to? *Today's Hospitalist*. April, 2015. Available at <https://www.todayshospitalist.com/could-you-drag-pcps-back-to-the-hospital-and-would-you-even-want-to/>. Accessed August 14, 2022.
4. Andersson M, et al. Patient photographs—a landmark for the ICU staff: a descriptive study. *Intensive Crit Care*
5. Nurs. 2013;29(4):193-201. doi: 10.1016/j.iccn.2013.04.002.
6. Neto C, et al. Critical care nurses' responses to patient photographs displayed at the bedside. *Heart Lung*. 2006;35(3):198-204. doi: 10.1016/j.hrtlng.2005.11.004.
6. Schwendener, M. Blood unsimple: the ties that bind, in all their complexity. *The New York Times*. February 20, 2007. Available at <https://www.nytimes.com/2007/02/20/arts/design/20port.html>. Accessed August 14, 2022.
7. Pupánová, B. A neuroscientist reveals the profound real-world benefits art has on our brains. *Eduart Experience*. <https://www.eduartexperience.com/en/art-stories/art-world/a-neuroscientist-reveals-the-profound-real-world-benefits-art-has-on-our-brains/>. Published March 6, 2021. Accessed August 14, 2022.
8. Kaimal, G. How art can heal. *American Scientist*. 2020;108(4):228. doi: 10.1511/2020.108.4.228
9. Wecker, Menachem. 'Fine art is good medicine': how hospitals around the world are experimenting with the healing power of art. *Artnet*. <https://news.artnet.com/art-world/how-hospitals-heal-with-art-1606699>. July 29, 2019. Accessed August 14, 2022.
10. McCarthy, C. Mass General's 'virtual bedside concerts' bring healing power of music to isolated patients. *Boston 25 News*. <https://www.boston25news.com/news/health/mass-generals-virtual-bedside-concerts-bring-healing-power-music-isolated-patients/PQSFVYP3F5DJBOP-GYVLDE2BTAE/>. Published December 2, 2020. Accessed August 14, 2022.
11. Stevens JP, et al. Comparison of hospital resource use and outcomes among hospitalists, primary care physicians, and other generalists. *JAMA Intern Med*. 2017;177(12):1781-1787. doi:10.1001/jamainternmed.2017.5824.
12. McCarthy, C. Local nurse prints family photos for patients' bedsides during coronavirus no-visitor policy. *Boston 25 News*. <https://www.boston25news.com/news/health/local-nurse-prints-family-photos-patients-bedsides-during-coronavirus-no-visitor-policy/74KCE72SVJGRH-FQDRWGTCK2Q34/>. Published April 17, 2020. Accessed August 14, 2022.
13. Winberg, A. Guest column: Digital whiteboards now outshine marker boards in all areas including costs. *Health IT Outcomes*. <https://www.healthitoutcomes.com/doc/digital-whiteboards-now-outshine-marker-boards-in-all-areas-including-costs-0001/>. February 19, 2019. Accessed August 14, 2022.



Dr. Cooper

Dr. Cooper is a member of the core educator faculty for the department of medicine at Massachusetts General Hospital and an assistant professor of medicine at Harvard Medical School in Boston.



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Photo was taken before March 2020 when COVID-19 precautionary measures were not in place.

