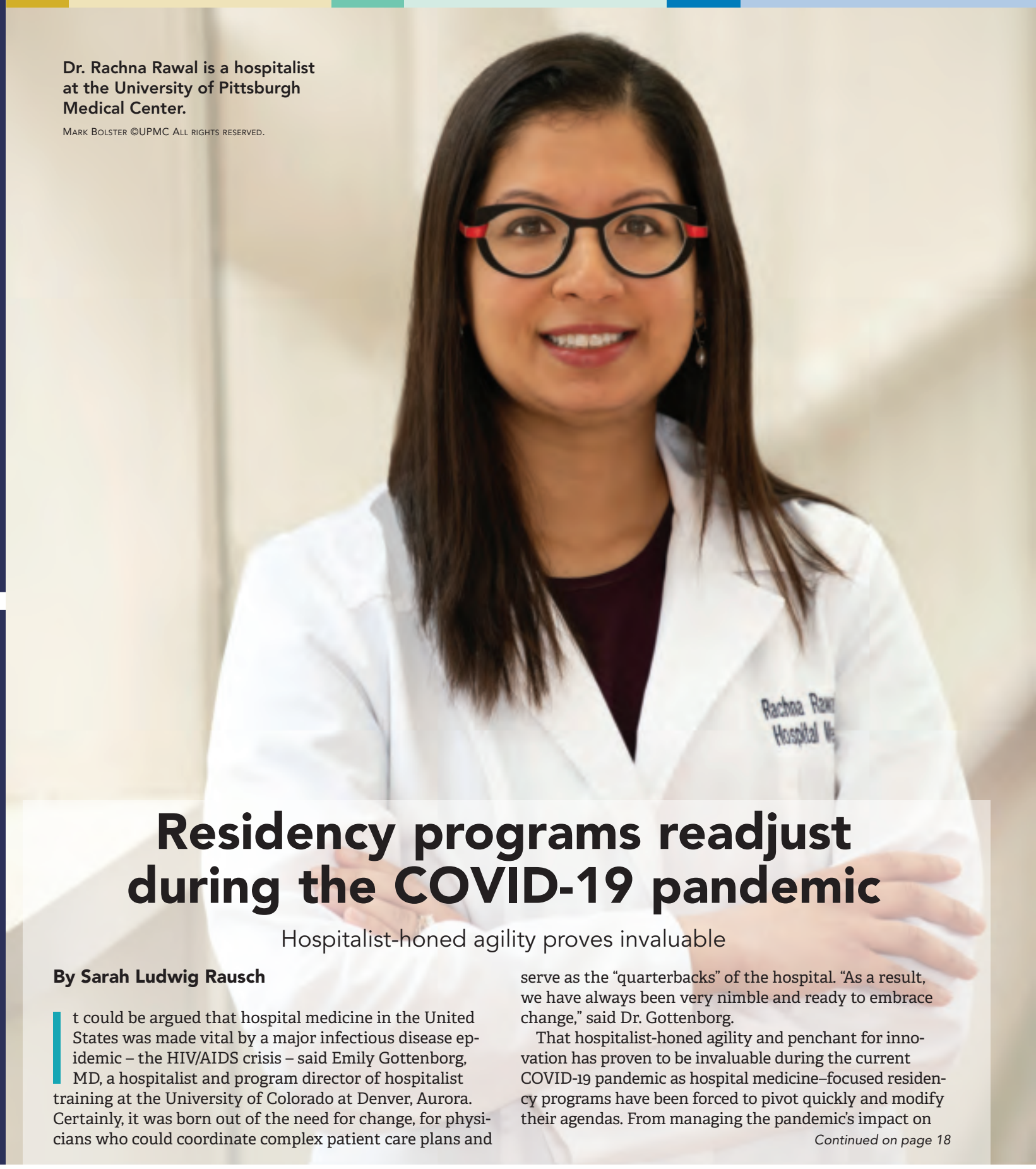
December 2021
Volume 25 | No. 12

The Hospitalist®

shm
the-hospitalist.org



Dr. Rachna Rawal is a hospitalist at the University of Pittsburgh Medical Center.

Residency programs readjust during the COVID-19 pandemic

Hospitalist-honed agility proves invaluable

By Sarah Ludwig Rausch

It could be argued that hospital medicine in the United States was made vital by a major infectious disease epidemic – the HIV/AIDS crisis – said Emily Gottenborg, MD, a hospitalist and program director of hospitalist training at the University of Colorado at Denver, Aurora. Certainly, it was born out of the need for change, for physicians who could coordinate complex patient care plans and serve as the "quarterbacks" of the hospital. "As a result, we have always been very nimble and ready to embrace change," said Dr. Gottenborg.

That hospitalist-honed agility and penchant for innovation has proven to be invaluable during the current COVID-19 pandemic as hospital medicine–focused residency programs have been forced to pivot quickly and modify their agendas. From managing the pandemic's impact on

Continued on page 18

PRSRT STD
U.S. POSTAGE
PAID
HARRISBURG PA
PERMIT 500

CHANGE SERVICE REQUESTED

THE HOSPITALIST
P.O. Box 3000,
Denville, NJ 07834-3000

Sepsis multiplies in-hospital mortality risk in COPD

By Neil Osterweil

Although slightly fewer than 1% of hospitalizations for chronic obstructive pulmonary disease (COPD) are complicated by sepsis, this complication increases the risk for in-hospital mortality fivefold, investigators who studied a representative national sample found.

Among nearly 7 million hospitalizations in which the primary diagnosis was COPD, nearly 65,000 (0.93%) patients experienced sepsis as a complication. In all, 31% of patients with COPD and sepsis were discharged from the hospital to another care facility, and 19% of patients died in hospital, report Harshil Shah, MD, from Guthrie Corning (N.Y.) Hospital and colleagues.

"Our study highlights the need for better risk stratification in patients with COPD developing sepsis to improve the outcomes. Further studies are warranted to consider factoring some of the modifiable factors into account and to ameliorate the outcomes of sepsis during COPD hospitalizations," Dr. Shah and colleagues wrote in a poster presented at the annual meeting of the American College of Chest Physicians, held virtually this year.

COPD has been associated with increased risk for sepsis because of the use of corticosteroids, underlying comorbidities, and, potentially, because of impaired barrier function, the authors note.

To determine the effects of sepsis and predictors of poor outcomes among patients hospitalized for COPD, the investigators used standard diagnostic codes to identify patients with a primary diagnosis of COPD from the Nationwide Inpatient Sample for the period 2007-2018 and sepsis from codes in secondary fields in the International Classification of Diseases (9th/10th Editions) Clinical Modification.

They identified 6,940,615 hospitalizations in which the primary diagnosis was COPD; in 64,748 of those cases, sepsis was a complication.

As noted, the in-hospital death rate, one of two primary outcomes, was 19% for patients with COPD and sepsis, and the rate of discharge to other facilities was 31%.

In analysis adjusted for confounding factors, sepsis was associated with an odds ratio for mortality of 4.9 ($P < .01$) and an OR for discharge to a facility of 2.2 ($P < .01$).

With regard to trends, the investigators saw that, although the adjusted odds for in-hospital mortality remained stable over time, discharge to facilities increased significantly. In 2007, the adjusted OR was 2.2, whereas in 2018, it was 2.6 (P for trend = .02).

Predictors of in-hospital mortality among patients with sepsis included increasing age (OR, not shown), White ethnicity (OR, 1.2), treatment in the Northeast region (OR, 1.4), disseminated intravascular coagulation (OR, 3.7), pneumococcal infection (OR, 1.2), congestive heart failure (OR, 1.2), and renal failure (OR, 1.4; $P < .01$ for all comparisons).

Mortality risk for many patients

A COPD specialist who was not involved in the study said that sepsis is an uncommon but serious complication, not just for patients with COPD but also for those with other severe illnesses.

"Sepsis has a high risk for mortality whether a person has COPD or not," commented David M. Mannino III, MD, FCCP, FERS, professor of medicine at the University of Kentucky, Lexington, and a cofounder and co–medical director of the COPD Foundation.

"It's not surprising that sepsis is lethal in this population; the question is, if you have COPD, are you more likely to have sepsis? And I think the answer is probably yes. The connection there is that people with COPD have a higher risk for pneumonia, and pneumonia itself is probably one of the biggest risk factors, or certainly an important risk factor, for the development of sepsis," he said in an interview.

It would be interesting to see the relationship between sepsis and in-hospital mortality for patients with other chronic diseases or people without COPD, he said, and he would have liked to have seen more detailed information about trends over time than Dr. Shah and colleagues provided.

THE Hospitalist®

December 2021
Volume 25 | No. 12

THE HOSPITALIST is the official newspaper of the Society of Hospital Medicine, reporting on issues and trends in hospital medicine. THE HOSPITALIST reaches more than 35,000 hospitalists, physician assistants, nurse practitioners, medical residents, and health care administrators interested in the practice and business of hospital medicine. Content for THE HOSPITALIST is provided by Frontline Medical Communications. Content for the Society Pages is provided by the Society of Hospital Medicine.

Letters to the Editor: rpizzi@mdedge.com

The Society of Hospital Medicine's headquarters is located at 1500 Spring Garden, Suite 501, Philadelphia, PA 19130.

Editorial Offices: 2275 Research Blvd, Suite 400, Rockville, MD 20850, 973-206-3434, fax 240-221-2548

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

Individual: *Domestic* – $195 (One Year), $360 (Two Years), $520 (Three Years), *Canada/Mexico* – $285 (One Year), $525 (Two Years), $790 (Three Years), *Other Nations* - Surface – $350 (One Year), $680 (Two Years), $995 (Three Years), *Other Nations* - Air – $450 (One Year), $875 (Two Years), $1,325 (Three Years)

Institution: United States – $400; Canada/Mexico – $485 All Other Nations – $565

Student/Resident: $55

Single Issue: Current – $35 (US), $45 (Canada/Mexico), $60 (All Other Nations) Back Issue – $45 (US), $60 (Canada/Mexico), $70 (All Other Nations)

POSTMASTER: Send changes of address (with old mailing label) to THE HOSPITALIST, Subscription Services, P.O. Box 3000, Denville, NJ 07834-3000.

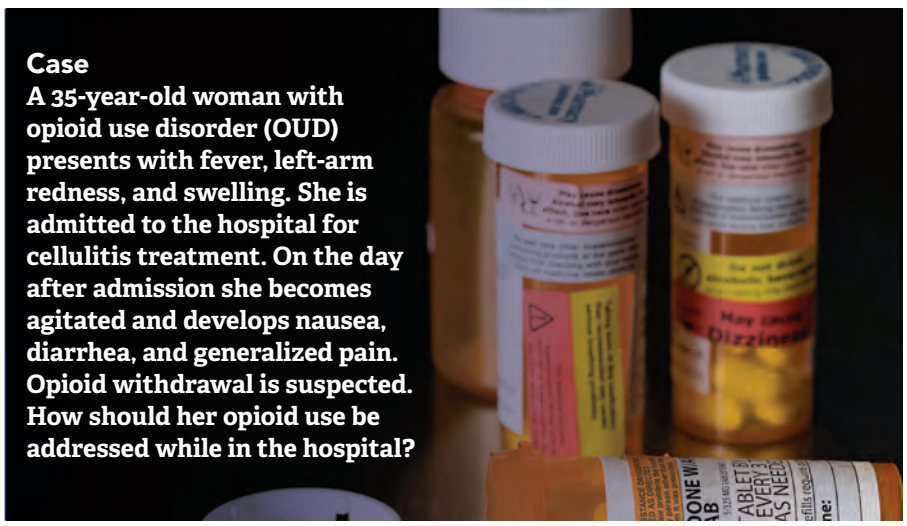
RECIPIENT: To subscribe, change your address, purchase a single issue, file a missing issue claim, or have any questions or changes related to your subscription, call Subscription Services at 1-833-836-2705 or e-mail custsvc.hosp@fulcoinc.com.

Key Clinical Question

Treatment of opioid use disorder in hospitalized patients

An opportunity for impact

By Anne Linker, MD; Leeza Hirt; Matthew Fine; Dillan Villasanivis; Linda Wang, MD; Michael Herscher, MD



Case
A 35-year-old woman with opioid use disorder (OUD) presents with fever, left-arm redness, and swelling. She is admitted to the hospital for cellulitis treatment. On the day after admission she becomes agitated and develops nausea, diarrhea, and generalized pain. Opioid withdrawal is suspected. How should her opioid use be addressed while in the hospital?

YODIYIM/GETTY IMAGES

Dr. Linker

Dr. Herscher

Dr. Linker is assistant professor in the division of hospital medicine, Icahn School of Medicine at Mount Sinai, New York. Ms. Hirt, Mr. Fine, and Mr. Villasanivis are medical students at the Icahn School of Medicine at Mount Sinai. Dr. Wang is assistant professor in the division of general internal medicine, Icahn School of Medicine at Mount Sinai. Dr. Herscher is assistant professor in the division of hospital medicine, Icahn School of Medicine at Mount Sinai.

Brief overview of the issue

Since 1999, there have been more than 800,000 deaths related to drug overdose in the United States, and in 2019 more than 70% of drug overdose deaths involved an opioid.[1,2] Although effective treatments for OUD exist, less than 20% of those with OUD are engaged in treatment.[3]

In America, 4%-11% of hospitalized patients have OUD. Hospitalized patients with OUD often experience stigma surrounding their disease, and many inpatient clinicians lack knowledge regarding the care of patients with OUD. As a result, withdrawal symptoms may go untreated, which can erode trust in the medical system and contribute to patients' leaving the hospital before their primary medical issue is fully addressed. Therefore, it is essential that inpatient clinicians be familiar with the management of this complex and vulnerable patient population. Initiating treatment for OUD in the hospital setting is feasible and effective, and can lead to increased engagement in OUD treatment even after the hospital stay.

Key points

- Most patients with OUD are not engaged in evidence-based treatment. Clinicians have an opportunity to utilize the inpatient stay as a "reachable moment" to engage patients with OUD in evidence-based treatment.
- Buprenorphine and methadone are effective opioid agonist medications used to treat OUD, and clinicians with the appropriate knowledge base can initiate either during the inpatient encounter, and link the patient to OUD treatment after the hospital stay.

Overview of the data

Assessing patients with suspected OUD

Assessment for OUD starts with an in-depth opioid use history including frequency, amount, and method of administration. Clinicians should gather information regarding use of other substances or nonprescribed medications, and take thorough psychiatric and social histories. A formal diagnosis of OUD can be made using the Fifth Edition Diagnostic and Statistical Manual for Mental Disorders (DSM-5) diagnostic criteria.

Recognizing and managing opioid withdrawal

OUD in hospitalized patients often becomes apparent when patients develop signs and symptoms of withdrawal. Decreasing physical discomfort related to withdrawal can allow inpatient clinicians to address the condition for which the patient was hospitalized, help to strengthen the patient-clinician relationship, and provide an opportunity to discuss long-term OUD treatment.

Signs and symptoms of opioid withdrawal include anxiety, restlessness, irritability, generalized pain, rhinorrhea, yawning, lacrimation, piloerection, anorexia, and nausea. Withdrawal can last days to weeks, depending on the half-life of the opioid that was used. Opioids with shorter half-lives, such as heroin or oxycodone, cause withdrawal with earlier onset and shorter duration than do opioids with longer half-lives, such as methadone. The degree of withdrawal can be quantified with validated tools, such as the Clinical Opiate Withdrawal Scale (COWS).

Treatment of opioid withdrawal should generally include the use of an opioid agonist such as methadone or buprenorphine. A 2017 Cochrane meta-analysis found methadone or buprenorphine to be more effective than clonidine in alleviating symptoms of withdrawal and in retaining patients in treatment.[4] Clonidine, an alpha$_2$-adrenergic agonist that binds to receptors in the locus coeruleus, does not alleviate opioid cravings, but may be used as an adjunctive treatment for associated autonomic withdrawal symptoms. Other adjunctive medications include analgesics, antiemetics, antidiarrheals, and antihistamines.

Opioid agonist treatment for opioid use disorder

Opioid agonist treatment (OAT) with methadone or buprenorphine is associated with decreased mortality, opioid use, and infectious complications, but remains underutilized.[5] Hospitalized patients with OUD are frequently managed with a rapid opioid detoxification and then discharged without continued OUD treatment. Detoxification alone can lead to a relapse rate as high as 90%.[6] Patients are at increased risk for overdose after withdrawal due to loss of tolerance. Inpatient clinicians can close this OUD treatment gap by familiarizing themselves with OAT and offering to initiate OAT for maintenance treatment in interested patients. In one study, patients started on buprenorphine while hospitalized were more likely to be engaged in treatment and less likely to report drug use at follow-up, compared to patients who were referred without starting the medication.[7]

Buprenorphine

Buprenorphine is a partial agonist at the mu opioid receptor that can be ordered in the inpatient setting by any clinician. In the outpatient setting only DATA 2000–waivered clinicians can prescribe buprenorphine.[8] Buprenorphine is most commonly coformulated with naloxone, an opioid antagonist, and is available in sublingual films or tablets. The naloxone component is not bioavailable when taken sublingually but becomes bioavailable if the drug is injected intravenously, leading to acute withdrawal.

Buprenorphine has a higher affinity for the mu opioid receptor than most opioids. If administered

Continued on following page

Continued from previous page
while other opioids are still present, it will displace the other opioid from the receptor but only partially stimulate the receptor, which can cause precipitated withdrawal. Buprenorphine initiation can start when the COWS score reflects moderate withdrawal. Many institutions use a threshold of 8-12 on COWS. Typical dosing is 2-4 mg of buprenorphine at intervals of 1-2 hours as needed until the COWS score is less than 8, up to a maximum of 16 mg on day 1. The total dose from day 1 may be given as a daily dose beginning on day 2, up to a maximum total daily dose of 24 mg.

In recent years, a method of initiating buprenorphine called "micro-dosing" has gained traction. Very small doses of buprenorphine are given while a patient is receiving other opioids, thereby reducing the risk of precipitated withdrawal. This method can be helpful for patients who cannot tolerate withdrawal or who have recently taken long-acting opioids such as methadone. Such protocols should be utilized only at centers where consultation with an addiction specialist or experienced clinician is possible.

Despite evidence of buprenorphine's efficacy, there are barriers to prescribing it. Physicians and advanced practitioners must be granted a waiver from the Drug Enforcement Administration to prescribe buprenorphine to outpatients. As of 2017, less than 10% of primary care physicians had obtained waivers.[9] However, inpatient clinicians without a waiver can order buprenorphine and initiate treatment. Best practice is to do so with a specific plan for continuation at discharge. We encourage inpatient clinicians to obtain a waiver, so that a prescription can be given at discharge to bridge the patient to a first appointment with a community clinician who can continue treatment. As of April 27, 2021, providers treating fewer than 30 patients with OUD at one time may obtain a waiver without additional training.[10]

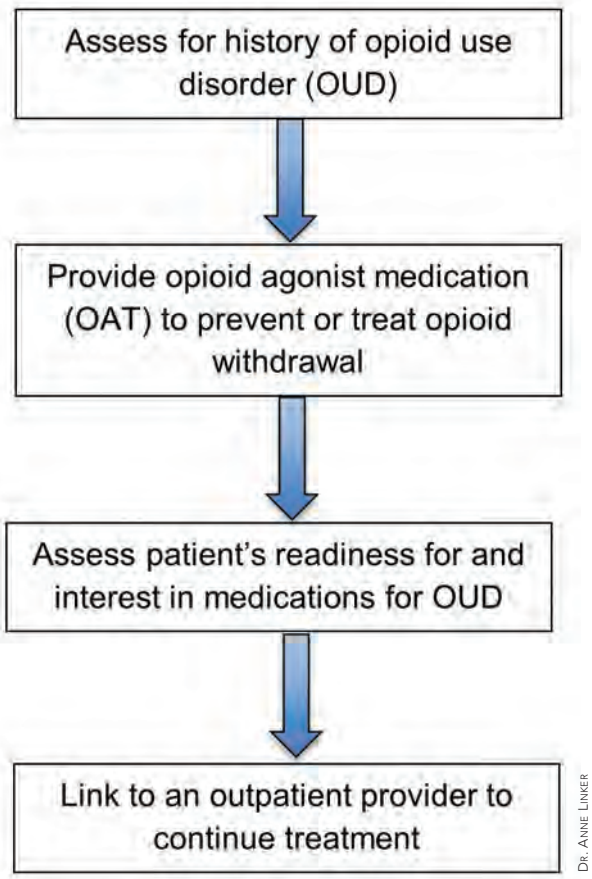


Figure 1. Steps in addressing opioid use disorder in the inpatient setting

Methadone

Methadone is a full agonist at the mu opioid receptor. In the hospital setting, methadone can be ordered by any clinician to prevent and treat withdrawal. Commonly, doses of 10 mg can be given using the COWS score to guide the need for additional dosing. The patient can be reassessed every 1-2 hours to ensure that symptoms are improving, and that there is no sign of oversedation before giving additional methadone. For most patients, withdrawal can be managed with 20-40 mg of methadone daily.

In contrast to buprenorphine, methadone will not precipitate withdrawal and can be initiated even when patients are not yet showing withdrawal symptoms. Outpatient methadone treatment for OUD is federally regulated and can be delivered only in opioid treatment programs (OTPs).

Choosing methadone or buprenorphine in the inpatient setting

The choice between buprenorphine and methadone should take into consideration several factors, including patient preference, treatment history, and available outpatient treatment programs, which may vary widely by geographic region. Some patients benefit from the higher level of support and counseling available at OTPs. Methadone is available at all OTPs, and the availability of buprenorphine in this setting is increasing. Other patients may prefer the convenience and flexibility of buprenorphine treatment in an outpatient office setting.

Some patients have prior negative experiences with OAT. These can include prior precipitated withdrawal with buprenorphine induction, or negative experiences with the structure of OTPs. Clinicians are encouraged to provide counseling if patients have a history of precipitated withdrawal to assure them that this can be avoided with proper dosing. Clinicians should be familiar

Quiz

Most patients with OUD are not engaged in effective treatment. Hospitalization can be a "reachable moment" to engage patients with OUD in evidence-based treatment.

1. Which is an effective and evidence-based medication for treating opioid withdrawal *and* OUD?
a) Naltrexone.
b) Buprenorphine.
c) Opioid detoxification.
d) Clonidine.
Explanation: Buprenorphine is effective for alleviating symptoms of withdrawal as well as for the long-term treatment of OUD. While naltrexone is also used to treat OUD, it is not useful for treating withdrawal. Clonidine can be a useful adjunctive medication for treating withdrawal but is not a long-term treatment for OUD. Nonpharmacologic detoxification is not an effective treatment for OUD and is associated with high relapse rates.

2. What scale can be used during a hospital stay to monitor patients with OUD at risk of opioid withdrawal, and to aid in buprenorphine initiation?
a) CIWA score.
b) PADUA score.
c) COWS score.
d) 4T score.
Explanation: COWS is the "clinical opiate withdrawal scale." The COWS score should be calculated by a trained provider, and includes objective parameters (such as pulse) and subjective symptoms (such as GI upset, bone/joint aches.) It is recommended that agonist therapy be started when the COWS score is consistent with moderate withdrawal.

3. How can clinicians reliably find out if there are outpatient resources/clinics for patients with OUD in their area?
a) No way to find this out without personal knowledge.
b) Hospital providers and patients can visit www.samhsa.gov/find-help/national-helpline or call 1-800-662-HELP (4357) to find options for treatment for substance use disorders in their areas.
c) Dial "0" on any phone and ask.
d) Ask around at your hospital.
Explanation: The Substance Abuse and Mental Health Services Administration is an agency in the U.S. Department of Health & Human Services that is engaged in public health efforts to reduce the impact of substance abuse and mental illness on local communities. The agency's website has helpful information about resources for substance use treatment.

4. Patients with OUD should be prescribed and given training about what medication that can be lifesaving when given during an opioid overdose?
a) Aspirin.
b) Naloxone.
c) Naltrexone.
d) Clonidine.
Explanation: Naloxone can be life-saving in the setting of an overdose. Best practice is to provide naloxone and training to patients with OUD.

5. When patients take buprenorphine soon after taking other opioids, there is concern for the development of which reaction:
a) Precipitated withdrawal.
b) Opioid overdose.
c) Allergic reaction.
d) Intoxication.
Explanation: Administering buprenorphine soon after taking other opioids can cause precipitated withdrawal, as buprenorphine binds with higher affinity to the mu receptor than many opioids. Precipitated withdrawal causes severe discomfort and can be dangerous for patients.

with available treatment options in their community and can refer to the Substance Abuse and Mental Health Services Administration website to locate OTPs and buprenorphine prescribers.

Polypharmacy and safety
If combined with benzodiazepines, alcohol, or other sedating agents, methadone or buprenorphine can increase risk of overdose. However, OUD treatment should not be withheld because of other substance use. Clinicians initiating treatment should counsel patients on the risk of concomitant substance use and provide overdose prevention education.

A brief note on naltrexone
Naltrexone, an opioid antagonist, is used more commonly in outpatient addiction treatment than in the inpatient setting, but inpatient clinicians should be aware of its use. It is available in oral and long-acting injectable formulations. Its utility in the inpatient setting may be limited as safe administration requires 7-10 days of opioid abstinence.

Discharge planning
Patients with OUD or who are started on OAT during a hospitalization should be linked to continued outpatient treatment. Before discharge it is best to ensure vaccinations for hepatitis A virus, hepatitis B virus, pneumococcus, and tetanus are up to date, and perform screening for HIV, hepatitis C, tuberculosis, and sexually transmitted infections if appropriate. All patients with OUD should be prescribed or provided with take-home naloxone for overdose reversal. Patients can also be referred to syringe service programs for additional harm-reduction counseling and services.

Application of the data to our patient

For our patient, either methadone or buprenorphine could be used to treat her withdrawal. The COWS score should be used to assess withdrawal severity, and to guide appropriate timing of medication initiation. If she wishes to continue OAT after discharge, she should be linked to a clinician who can engage her in ongoing medical care. Prior to discharge she should also receive relevant vaccines and screening for infectious diseases as outlined above, as well as take-home naloxone (or a prescription).

Bottom line

Inpatient clinicians can play a pivotal role in patients' lives by ensuring that patients with OUD receive OAT and are connected to outpatient care at discharge.

	Buprenorphine	Methadone
Mechanism	Semisynthetic opioid, partial agonist at the mu opioid receptor	Synthetic full opioid agonist
Half-life	Variable, average 24-48 hours	Variable, average 24-36 hours
Administration forms	• Sublingual tablets or films • Co-formulation with naloxone in 4:1 ratio	Liquid or tablet form (PO or IV)
Efficacy	Similar	Similar
Risk of overdose/Safety profile	Ceiling effect on respiratory depression, euphoria, and analgesia (partial agonist at mu receptor)	• Increased risk of overdose during initial dosing and dose escalation • Metabolism by liver – monitor closely in patients with severe liver impairment
Adverse effects	Due to high affinity for mu receptor, will displace other opioids – patient must be in moderate withdrawal before initiating (COWS 10 or higher)	• QT prolongation • Constipation • Respiratory depression
Typical initial dosing	• 2-4mg at intervals of 1-2 hours until patient's symptoms improve or until COWS<8 → Convert to daily dosing • Typically, do not exceed 24 mg/day	• Outpatient dose (confirm with outpatient provider) • Initial dose 10-30mg, using COWS assessment to guide further dosing
Clinical considerations	• Daily visits not required in outpatient setting • Prescriber must have an X waiver to provide post-discharge supply	If start and plan to continue at discharge patient needs to be connected to an OTP for daily dosing

Source: Herscher, M et al. Diagnosis and Management of Opioid Use Disorder in Hospitalized Patients. Med Clin North Am. 2020 Jul;104(4):695-708. doi: 10.1016/j.mcna.2020.03.003.

Table 1. Comparison of buprenorphine and methadone

1. Wide-ranging online data for epidemiologic research (WONDER). Atlanta: CDC, National Center for Health Statistics; 2020. Available at http://wonder.cdc.gov.

2. Mattson CL et al. Trends and geographic patterns in drug and synthetic opioid overdose deaths – United States, 2013-2019. MMWR Morb Mortal Wkly Rep. 2021;70:202-7. doi: 10.15585/mmwr.mm7006a4.

3. Wakeman SE et al. Comparative effectiveness of different treatment pathways for opioid use disorder. JAMA Netw Open. 2020 Feb 5;3(2):e1920622. doi: 10.1001/jamanetworkopen.2019.20622.

4. Gowing L et al. Buprenorphine for managing opioid withdrawal. Cochrane Database Syst Rev. 2017 Feb;2017(2):CD002025. doi: 10.1002/14651858.CD002025.pub5.

5. Sordo L et al. Mortality risk during and after opioid substitution treatment: Systematic review and meta-analysis of cohort studies. BMJ. 2017 Apr 26;357:j1550. doi: 10.1136/bmj.j1550.

6. Smyth BP et al. Lapse and relapse following inpatient treatment of opiate dependence. Ir Med J. 2010 Jun;103(6):176-9. Available at www.drugsandalcohol.ie/13405.

7. Liebschutz JM. Buprenorphine treatment for hospitalized, opioid-dependent patients: A randomized clinical trial. JAMA Intern Med. 2014 Aug;174(8):1369-76. doi: 10.1001/jamainternmed.2014.2556.

8. Substance Abuse and Mental Health Services Administration. (2020 Aug 20) Statutes, Regulations, and Guidelines. Available at www.samhsa.gov/medication-assisted-treatment/statutes-regulations-guidelines.

9. McBain RK et al. Growth and distribution of buprenorphine-waivered providers in the United States, 2007-2017. Ann Intern Med. 2020;172(7):504-6. doi: 10.7326/M19-2403.

10. HHS releases new buprenorphine practice guidelines, expanding access to treatment for opioid use disorder. 2021 Apr 27. Available at https://tinyurl.com/9s2d6nee.

11. Herscher M et al. Diagnosis and management of opioid use disorder in hospitalized patients. Med Clin North Am. 2020 Jul;104(4):695-708. doi: 10.1016/j.mcna.2020.03.003.

Additional reading

Donroe JH. Caring for patients with opioid use disorder in the hospital. Can Med Assoc J. 2016 Dec 6;188(17-18):1232-9. doi: 10.1503/cmaj.160290.

Herscher M et al. Diagnosis and management of opioid use disorder in hospitalized patients. Med Clin North Am. 2020 Jul;104(4):695-708. doi: 10.1016/j.mcna.2020.03.003.

Winetsky D. Expanding treatment opportunities for hospitalized patients with opioid use disorders. J Hosp Med. 2018 Jan;13(1):62-4. doi: 10.12788/jhm.2861.

The importance of self-compassion for hospitalists

A mindful way to relate to ourselves

By Gwendolyn Williams, MD

Physicians, clinicians, providers, healers, and now heroes, are some of the names we have been given throughout history. These titles bring together a universal concept in medicine that all human beings deserve compassion, understanding, and care. However, as health care providers we forget to show ourselves the same compassion we bestow upon others.

Self-compassion is a new way of relating to ourselves. As clinicians, we are trained investigators, delving deeper into what our patient is thinking and feeling. "Tell me more about that. How does that make you feel? That must have been (very painful/scary/frustrating)." These are a few statements we learned in patient interviewing to actively engage with patients, build rapport, solidify trust, validate their concerns, and ultimately obtain the information needed to diagnose and heal.

We know the importance of looking beyond the surface, as more often than not a deeper inspection reveals more to the story. We have uncovered cracks in the foundation, erosion of the roof, worn out siding, and a glimpse into the complexities that make up each individual. We look at our patients, loved ones, and the world with night-vision lenses to uncover what is deeper.

Clinicians are good at directing compassion toward others, but not as good at giving it to themselves.[1] Many health care providers may see self-compassion as soft, weak, selfish, or unnecessary. However, mindful self-compassion is a positive practice that opens a pathway for healing, personal growth, and protection against the negative consequences of self-judgment, isolation, anxiety, burnout, and depression.

What is self-compassion?

Kristin Neff, PhD, an associate professor in educational psychology at the University of Texas at Austin, was the first to academically define self-compassion. Self-compassion brings together three core elements – kindness, humanity, and mindfulness.[2] Self-compassion involves acting the same way toward yourself when you are having a difficult time as you would toward another person. Instead of mercilessly judging and criticizing yourself for self-perceived inadequacies or shortcomings, self-compassion allows you to ask yourself: "How can I give myself comfort and care in this moment?"

Mindfulness acknowledges a painful experience without resistance or judgment, while being present in the moment with things as they are. Self-compassion provides the emotional safety needed to mindfully open to our pain, disappointments, and defeats. Mindfulness and self-compassion both allow us to live with more acceptance toward ourselves and our lives. Mindfulness asks: "What am I experiencing right now?" Self-compassion asks: "What do I need right now?" When you feel compassion for yourself or another, you recognize that suffering, failure, and imperfection are all part of the shared human experience.

The physiology of self-compassion

When we practice self-compassion, we feel safe and cared for because there is a physiological pathway that explains this response. Self-compassion helps down-regulate the stress response (fight-flight-freeze). When we are triggered by a threat to our self-concept, we are likely to do one, two, or all of three things: We fight ourselves (self-criticism – often our first reaction when things go wrong), we flee from others (isolation), or we freeze (rumination).

> *"Feeling threatened puts stress on the mind and body, and chronic stress leads to anxiety and depression, which hinder emotional and physical well-being."*

Feeling threatened puts stress on the mind and body, and chronic stress leads to anxiety and depression, which hinder emotional and physical well-being. With self-criticism, we are both the attacker and the attacked. When we practice self-compassion, we are deactivating the threat-defense system and activating the care system, releasing oxytocin and endorphins, which reduce stress and increase feelings of safety and security.[3]

Why is self-compassion important to provider well-being?

Research has shown that individuals who are more self-compassionate tend to have greater happiness, life satisfaction, and motivation; better relationships and physical health; and less anxiety and depression. They also have the resilience needed to cope with stressful life events. The more we practice being kind and compassionate with ourselves, the more we'll increase the habit of self-compassion, and extend compassion to our patients and loved ones in daily life.[4]

Why is self-compassion important? When we experience a setback at work or in life, we can become defensive, accuse others, or blame ourselves, especially when we are already under immense stress. These responses are not helpful, productive, or effective to the situation or our personal well-being. Although in the moment it may feel good to be reactive, it is a short-lived feeling that we trade for the longer-lasting effects of learning, resilience, and personal growth. Self-compassion teaches us to connect with our inner imperfections, and what makes us human, as *to err is human*.

To cultivate a habit of self-compassion itself, we should understand that self-compassion is a practice of goodwill, not good feelings. Self-compassion is aimed at the alleviation of suffering, but it does not erase any pain and suffering that does exist. The truth is, we can't always control external forces – the events of 2020-2021 are a perfect example of this. As a result, we cannot utilize self-compassion as a practice to make our pain disappear or suppress strong emotions.

Instead, self-compassion helps us cultivate the resilience needed to mindfully acknowledge and accept a painful moment or experience, while reminding us to embrace ourselves with kindness and care in response. This builds our internal foundation with support, love, and self-care, while providing the optimal conditions for growth, resilience, and transformation.

Self-compassion and the backdraft phenomenon

When you start the practice of self-compassion, you may experience *backdraft*, a phenomenon in which pain initially increases.[5] Backdraft is similar to the stages of grief or when the flames of a burning house become larger when a door is opened and oxygen surges in. Practicing self-compassion may cause a tidal wave of emotions to come to the forefront, but it is likely that, if this happens, it needs to happen.

Dr. Williams is vice president of the Hampton Roads chapter of the Society of Hospital Medicine. She is a hospitalist at Sentara Careplex Hospital in Hampton, Va., where she also serves as vice president of the medical executive committee.

Imagine yourself in a room with two versions of yourself. To the left is your best self that you present to the world, standing tall, organized, well kept, and without any noticeable imperfections. To the right, is the deepest part of your being, laying on the floor, filled with raw emotions – sadness, fear, anger, and love. This version of yourself is vulnerable, open, honest, and imperfect. When looking at each version of yourself, ask which one is the real you? The right? The left? Maybe it's both?

Imagine what would happen if you walked over to the version of yourself on the right, sat down, and provided it comfort, and embraced yourself with love and kindness. What would happen if you gave that version of yourself a hug? Seeing your true self, with all the layers peeled away, at the very core of your being, vulnerable, and possibly broken, is a powerful and gut-wrenching experience. It may hurt at first, but once we embrace

Continued on page 8

Season's Greetings Members and Fellow Hospitalists,

In 2021, we were once again pushed to our limits. It was another exhausting year of overcrowded hospitals, inadequate resources, and understaffed teams. On top of our daily responsibilities, we are facing unprecedented reluctance from the public and media. We are burned out and frustrated. We all feel it. However…

I have never been prouder to be a hospitalist.

Of course, this is a pride that often follows hardship. And as a community, we have seen our fair share in recent years. So, stand tall and accept my personal gratitude for all you've done in 2021 to combat the spread of COVID-19 and in support of countless more life-saving efforts. Hospitalists are more vital today than ever before.

Star Trek's Jean-Luc Picard says, "There is a way out of every box, a solution to every puzzle; it's just a matter of finding it." As we look ahead to the future of hospital medicine, we need leaders that look beyond our current limitations. We need leaders to set ambitious goals that stretch our capabilities, grow our impact, and produce miraculous outcomes. Although mRNA vaccine research began decades ago, the development, distribution, and success of the COVID-19 vaccines is a result created by leaders and innovators who prioritize hope above odds. Thanks to hospitalists, we are light-years ahead of what was thought not possible just two years ago.

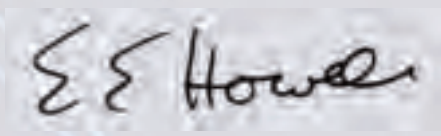
Although the grateful sounds of banging pots and pans may no longer echo in every neighborhood, the work we do is just as heroic as it was a year ago. Hospitalists are, and will always be, the front line of public health. It's an incredible responsibility — one that I am honored to share with each of you. We have seen more than 3.2 million COVID-19 hospitalizations, according to the CDC, with numerous state dashboards showing three-quarters of those are cared for on general medical wards, the domain of hospitalists. You are irreplaceable.

Hospitalists don't get enough credit. It goes without saying, but I'll continue to shout it from the rooftops. At SHM, everything we do advocates for the good of our members and their patients. Communication, education, and collaboration are at the center of any thriving community. Today, that open exchange of ideas and information is more vital than ever. Even socially distant, your engagement in our programs, mentorships, and networking events strengthens our common knowledge and bolsters our ability to empathize with our patients.

2021 was another historic year for hospital medicine and SHM. And we're just getting started. January marks the beginning of my second year as CEO at SHM and our society's 25th anniversary. Although it's a time of reflection, what really excites me is the future we're building together. We are at a pivotal time in the history of hospital medicine. No matter where you are in your career, if you're willing to dream, you can build a legacy all your own. As 2021 comes to a close, I encourage you to set ambitious goals for 2022 and beyond.

Be fearless. What you achieve will help to shape the future for all of us.

Thank you, from the bottom of my heart, for your support. Hospital medicine means the world to me, and your shared investment in our industry gives me hope that we can beat any odds stacked against us. I encourage you to read my column to see how we are supporting hospitalists, providing meaningful education, and elevating careers — and how you can continue to be a part of our vibrant community.



Eric Howell, MD, MHM
CEO, Society of Hospital Medicine

shm®
Society of Hospital Medicine

Continued from page 6

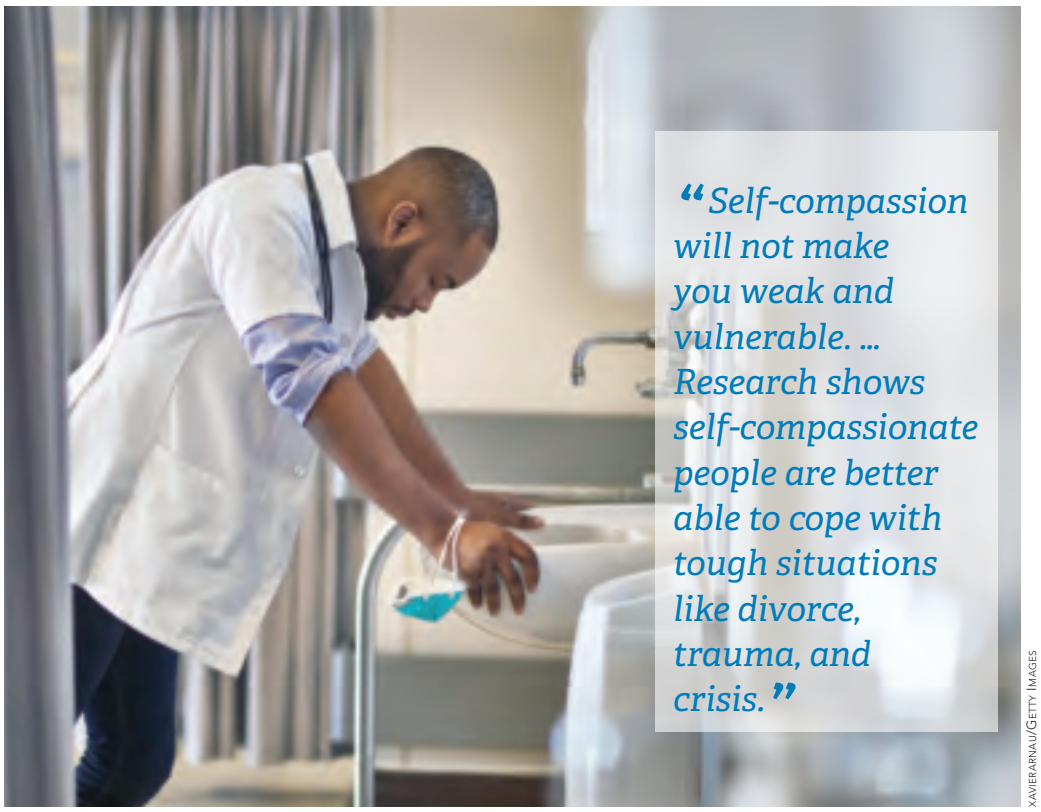
our own pain and suffering, that is where mindfulness and self-compassion intersect to begin the path to healing. It takes more strength and courage to be the version of ourselves on the right than the version on the left.

What is not self-compassion?

Self-compassion is not self-pity, weakness, self-esteem, or selfishness. When individuals feel self-pity, they become immersed in their own problems and feel that they are the only ones in the world who are suffering. Self-compassion makes us more willing to accept, experience, and acknowledge difficult feelings with kindness. This paradoxically helps us process and let go of these feelings without long-term negative consequences, and with a better ability to recognize the suffering of others.

Self-compassion allows us to be our own inner ally and strengthens our ability to cope successfully when life gets hard. Self-compassion will not make you weak and vulnerable. It is a reliable source of inner strength that enhances resilience when faced with difficulties. Research shows self-compassionate people are better able to cope with tough situations like divorce, trauma, and crisis.

Self-compassion and self-esteem are important to well-being; however, they are not the same. Self-esteem refers to a judgment or evaluation of our sense of self-worth, perceived value, or how much we like ourselves. While self-compassion relates to the changing landscape of who we are with kindness and acceptance – especially in times when we feel useless, inadequate, or hopeless – self-esteem allows for greater self-clarity, independent of external circumstances, and acknowledges that all human beings deserve compassion and understanding, not because they possess certain traits or have a certain perceive valued, but because we share the human experience and the human condition of imperfection. Finally, self-compassion is not selfish, as practicing it helps people sustain the act of caring for others and decrease caregiver burnout.[6,7]



"Self-compassion will not make you weak and vulnerable. ... Research shows self-compassionate people are better able to cope with tough situations like divorce, trauma, and crisis."

XAVIERARNAU/GETTY IMAGES

Strategies to practice self-compassion

There are many ways to practice self-compassion. Here are a few experiences created by Dr. Neff, a leader in the field.[8]

Experience 1:
How would you treat a friend?

How do you think things might change if you responded to yourself in the same way you typically respond to a close friend when he or she is suffering? Why not try treating yourself like a good friend and see what happens.

Take out a sheet of paper and write down your answer to the following questions:

- First, think about times when a close friend feels really bad about him or herself or is really struggling in some way. How would you respond to your friend in this situation (especially when you're at your best)? Write down what you typically do and say and note the tone in which you typically talk to your friends.
- Second, think about times when you feel bad about yourself or are struggling. How do you typically respond to yourself in these situations? Write down what you typically do and say, and note the tone in which you typically talk to your friends.
- Did you notice a difference? If so, ask yourself why. What factors or fears come into play that lead you to treat yourself and others so differently?
- Please write down how you think things might change if you responded to yourself in the same way you typically respond to a close friend when you're suffering.

Experience 2:
Take a self-compassion break

This practice can be used any time of day or night, with others or alone. It will help you remember to evoke the three aspects of self-compassion when you need it most.

Think of a situation in your life that is difficult, that is causing you stress. Call the situation to mind, and if you feel comfortable, allow yourself to experience these feelings and emotions, without judgment and without altering them to what you think they should be.

- Say to yourself one of the following: "This is a difficult moment," "This is a moment of suffering," "This is stress," "This hurts," or "Ouch." Doing this step is "mindfulness": A willingness to observe negative thoughts and emotions with openness and clarity, so that they are held in mindful awareness, without judgment.
- Find your equilibrium of observation with thoughts and feelings. Try not to suppress or deny them and try not to get caught up and swept away by them.
- Remind yourself of the shared human experience. Recognize that suffering and personal difficulty is something that we all go through rather than being something that happens to "me" alone. Remind yourself that "other people feel this way," "I'm not alone," and "we all have struggles in life."
- Be kind to yourself and ask: "What do I need to hear right now to express kindness to myself?" Is there a phrase that speaks to you in your particular situation? For example: "May I give myself the compassion that I need; may I learn to accept myself as I am; may I forgive myself; may I be strong; may I be patient." There is no wrong answer.

Exercise 3:
Explore self-compassion through writing

Everybody has something about themselves that they don't like; something that causes them to feel shame, to feel insecure, or not "good enough." This exercise will help you write a letter to yourself about this issue from a place of acceptance and compassion. It can feel uncomfortable at first, but it gets easier with practice.

- Write about an issue you have that makes you feel inadequate or bad about yourself (physical appearance, work, or relationship issue). What emotions do you experience when you think about this aspect of yourself? Try to feel your emotions exactly as they are – no more, no less – and then write about them.
- Write a letter as if you were talking to a dearly beloved friend who was struggling with the same concerns as you and has the same strengths and weaknesses as you. How would you convey deep compassion, especially for the pain you feel when they judge themselves so harshly? What would you write to your friend to remind them that they are only human, that all people have both strengths and weaknesses? As you write, try to infuse your letter with a strong sense of acceptance, kindness, caring, and desire for their health and happiness.
- After writing the letter, put it aside for a little while. Then come back and read it again, really letting the words sink in. Feel the compassion as it pours into you, soothing and comforting you. Love, connection, and acceptance are a part of your human right. To claim them you need look only within yourself.

Experience 4:
Taking care of the caregiver

We work in the very stressful time of the COVID pandemic. As medical providers, we are caregivers to our patients and our families. Yet, we do not give ourselves time to rest, recover, and recharge. Remember, to care for others, you cannot pour from an empty cup.

- Give yourself permission to meet your own needs, recognizing that

this will not only enhance your quality of life, it will also enhance your ability to be there for those that rely on you. Our time is limited but self-care can occur both at work and outside of work.

- When you are "off the clock," be off the clock! Turn off notifications, don't check email, and be present in your personal lives. If you are constantly answering patient calls or nursing questions until 10 p.m., that means your health care system is in need of an upgrade, as you need the appropriate coverage to give you time to care for yourself, just as well as you care for your patients.
- While at work you can practice self-care. Take 2 minutes to practice relaxation breathing. Take 1 minute to show yourself or another person gratitude. Take 5 minutes before you start writing your notes for the day to listen to relaxing music or a mindful podcast. Take 3 minutes to share three good things that happened in the day with your family or colleagues. Take 5-10 minutes to do chair yoga. Take a self-compassion break.
- Implement a 5-minute wellness break into your group's daily function with some of the previous mentioned examples. This will allow you to care for and nurture yourself, while also caring for and nurturing others in an environment that cultivates your wellness goals.

As a hospitalist, I can attest that I did not show myself self-compassion nearly as often as I showed compassion to others. I am my own worst critic and my training taught me to suffer in silence, and not seek out others who are experiencing the same thing for fear of being perceived as weak, inadequate, or flawed.

"As medical providers, we are caregivers to our patients and our families. Yet, we do not give ourselves time to rest, recover, and recharge."

This false notion that we need to always be tough, strong, and without emotion in order to be taken seriously, to advance, or to be held in high regard is rubbish and only perpetuated by accepting it. In order to change the culture of medicine, we have to change the way we think and behave. I have practiced self-compassion exercises and it has enhanced my perspective to see that many of us are going through varying degrees of the same thing. It has shown me the positive effects on my inner being and my life. If you are ready to try something new that will benefit your psychological and emotional well-being, and help you through pain, suffering, struggles, and crisis, you have nothing to lose. Be the change, and show yourself self-compassion.

In summary, self-compassion is an attitude of warmth, curiosity, connection, and care. Learning to become more self-compassionate is a process of moving from striving to change our experience and ourselves toward embracing who we are already.[9] The practice of self-compassion is giving ourselves what we need in the moment. Even if we are not ready, or it is too painful to fully accept or embrace, we can still plant the seeds that will, with time and patience, grow and bloom.

When we are mindful of our struggles, when we respond to ourselves with compassion, kindness, and give ourselves support in times of difficulty, we learn to embrace ourselves and our lives, our inner and outer imperfections, and provide ourselves with the strength needed to thrive in the most precarious and difficult situations. With self-compassion, we give the world the best of us, instead of what is left of us.

References

1. Sanchez-Reilly S et al. Caring for oneself to care for others: Physicians and their self-care. J Community Support Oncol. 2013;11(2):75-81. doi: 10.12788/j.suponc.0003.

2. Neff K. Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. Self Identity. 2010;2(2):85-101. doi: 10.1080/15298860309032.

3. Neff K et al. The forest and the trees: Examining the association of self-compassion and its positive and negative components with psychological functioning. Self Identity. 2018;17(6):627-45. doi: 10.1080/15298868.2018.1436587.

4. Zessin U et al. The relationship between self-compassion and well-being: A meta-analysis. Appl Psychol Health Well-Being. 2015;7(3):340-64. doi: 10.1111/aphw.12051.

5. Warren R et al. Self-criticism and self-compassion: Risk and resilience. Current Psychiatry. 2016 Dec;15(12):18-21,24-8,32.

6. Neff K. The five myths of self-compassion. Greater Good Magazine. 2015 Sep 30. https://greatergood.berkeley.edu/article/item/the_five_myths_of_self_compassion.

7. Neff KD and Germer CK. A pilot study and randomized controlled trial of the mindful self-compassion program. J Clin Psychol. 2013 Jan;69(1):28-44. doi: 10.1002/jclp.21923.

8. Neff K. Self-compassion guided meditations and exercises. https://self-compassion.org/category/exercises/#exercises.

9. Germer C and Neff KD. Mindful self-compassion (MSC), in "The Handbook of Mindfulness-Based Programs." (London: Routledge, 2019), pp. 357-67.

Age, CRP predict COVID-19 diabetes outcomes

By Miriam E. Tucker

Both high C-reactive protein (CRP) and older age predict mortality from COVID-19 in patients with diabetes, new research suggests.

The data, from the retrospective ACCREDIT cohort study, were presented at the virtual annual meeting of the European Association for the Study of Diabetes by Daniel Kevin Llanera, MD.

The combination of older age and high levels of the inflammatory marker CRP were linked to a tripled risk for death by day 7 after hospitalization for COVID-19 among people with diabetes. But, in contrast to other studies, recent A1c and body mass index did not predict COVID-19 outcomes.

"Both of these variables are easily available upon admission to hospital," Dr. Llanera, who now works at Imperial College, London, said in an EASD press release.

"This means we can easily identify patients early on in their hospital stay who will likely require more aggressive interventions to try and improve survival."

"It makes sense that CRP and age are important," said Simon Heller, MB BChir, DM, of the University of Sheffield (England). "It may be that diabetes alone overwhelmed the additional effects of obesity and A1c.

"Certainly in other studies, age was the overwhelming bad prognostic sign among people with diabetes, and perhaps long-term diabetes has effects on the immune system which we haven't yet identified."

Kidney disease in younger patients also linked to poorer outcomes

The study, conducted when Dr. Llanera worked for the Countess of Chester NHS Foundation Trust, involved 1,004 patients with diabetes admitted with COVID-19 to seven hospitals in northwest England from Jan. 1 through June 30, 2020. The patients were a mean age of 74.1 years, 60.7% were male, and 45% were in the most deprived quintile based on the U.K. government deprivation index. Overall, 56.2% had macrovascular complications and 49.6% had microvascular complications.

They had a median BMI of 27.6 kg/m^2, which is lower than that reported in previous studies and might explain the difference, Dr. Llanera noted.

The primary outcome, death within 7 days of admission, occurred in 24%. By day 30, 33% had died. These rates are higher than the rate found in previous studies, possibly because of greater socioeconomic deprivation and older age of the population, Dr. Llanera speculated.

A total of 7.5% of patients received intensive care by day 7 and 9.8% required intravenous insulin infusions.

On univariate analysis, insulin infusion was found to be protective, with those receiving it half as likely to die as those who didn't need IV insulin (odds ratio, 0.5).

In contrast, chronic kidney disease in people younger than 70 years increased the risk of death more than twofold (OR, 2.74), as did type 2 diabetes compared with other diabetes types (OR, 2.52).

As in previous studies, use of angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers were not associated with COVID-19 outcomes, nor was the presence of diabetes-related complications.

In multivariate analysis, CRP and age emerged as the most significant predictors of the primary outcome, with those deemed high risk by a logistic regression model having an OR of 3.44 for death by day 7 compared with those at lower risk based on the two factors.

Data for glycemic control during the time of hospitalization weren't available for this study, Dr. Llanera said in response to a question.

"We didn't look into glycemic control during admission, just at entry, so I can't answer whether strict glucose control is of benefit," he said. "I think it's worth exploring further whether the use of IV insulin may be of benefit."

Antidepressant may cut COVID-19–related hospitalization, mortality

By Esther Landhuis

The antidepressant fluvoxamine (Luvox) may prevent hospitalization and death in patients with COVID-19, new research suggests.

Results from the placebo-controlled, multisite, phase 3 TOGETHER trial showed that, in COVID-19 outpatients at high risk for complications, hospitalizations were cut by 66% and deaths were reduced by 91% in those who tolerated fluvoxamine.

"Our trial has found that fluvoxamine, an inexpensive existing drug, reduces the need for advanced disease care in this high-risk population," wrote the investigators, led by Gilmar Reis, MD, PhD, research division, Cardresearch, Belo Horizonte, Brazil.

The findings were published online Oct. 27 in The Lancet Global Health (2021. doi: 10.1016/S2214-109X[21]00448-4.

Alternative mechanisms

Fluvoxamine, a selective serotonin reuptake inhibitor (SSRI), is an antidepressant commonly prescribed for obsessive-compulsive disorder.

Besides its known effects on serotonin, the drug acts in other molecular pathways to dampen the production of inflammatory cytokines. Those alternative mechanisms are the ones believed to help patients with COVID-19, said coinvestigator Angela Reiersen, MD, child psychiatrist at Washington University, St. Louis.

Based on cell culture and mouse studies showing effects of the molecule's binding to the sigma-1 receptor in the endoplasmic reticulum, Dr. Reiersen came up with the idea of testing if fluvoxamine could keep COVID-19 from progressing in newly infected patients.

Dr. Reiersen and psychiatrist Eric Lenze, MD, also from Washington University, led the phase 2 trial that initially suggested fluvoxamine's promise as an outpatient medication (JAMA. 2020;324[22]:2292-300). They are coinvestigators on the new phase 3 adaptive platform trial called TOGETHER, which was conducted by an international team of investigators in Brazil, Canada, and the United States.

For this latest study, researchers at McMaster University, Hamilton, Ont., partnered with the research clinic Cardresearch in Brazil to recruit unvaccinated, high-risk adults within 7 days of developing flu-like symptoms from COVID-19. They analyzed 1,497 newly symptomatic COVID-19 patients at 11 clinical sites in Brazil.

Patients entered the trial between January and August 2021 and were assigned to receive 100 mg fluvoxamine or placebo pills twice a day for 10 days. Investigators monitored participants through 28 days post treatment, noting whether complications developed requiring hospitalization or more than 6 hours of emergency care.

Some experts are recommending fluvoxamine for COVID-19 patients at high risk for morbidity and mortality.

In the placebo group, 119 of 756 patients (15.7%) worsened to this extent. In comparison, 79 of 741 (10.7%) fluvoxamine-treated patients met these primary criteria. This represented a 32% reduction in hospitalizations and emergency visits.

Additional analysis requested

As The Lancet Global Health reviewed these findings from the submitted manuscript, journal reviewers requested an additional "pre-protocol analysis" that was not specified in the trial's original protocol. The request was to examine the subgroup of patients with good adherence (74% of treated group, 82% of placebo group).

Among these three-quarters of patients who took at least 80% of their doses, benefits were better.

Fluvoxamine cut serious complications in this group by 66% and reduced mortality by 91%. In the placebo group, 12 people died compared with 1 who received the study drug.

Based on accumulating data, Dr. Reiersen said, some experts are recommending fluvoxamine for COVID-19 patients at high risk for morbidity and mortality from complications of the infection.

However, clinicians should note that the drug can cause side effects such as nausea, dizziness, and insomnia, she added. In addition, because it prevents the body from metabolizing caffeine, patients should limit their daily intake to half of a small cup of coffee or one can of soda or one tea while taking the drug.

Previous research has shown that fluvoxamine affects the metabolism of some drugs, such as theophylline, clozapine, olanzapine, and tizanidine.

Despite huge challenges with studying generic drugs as early COVID-19 treatment, the TOGETHER trial shows it is possible to produce quality evidence during a pandemic on a shoestring budget, noted co–principal investigator Edward Mills, PhD, professor in the department of health research methods, evidence, and impact at McMaster University.

To screen more than 12,000 patients and enroll 4,000 to test nine interventions, "our total budget was less than $8 million," Dr. Mills said. The trial was funded by Fast Grants and the Rainwater Charitable Foundation.

'A $10 medicine'

Commenting on the findings, David Boulware, MD, MPH, an infectious disease physician-researcher at the University of Minnesota in Minneapolis, noted fluvoxamine is "a $10 medicine that's available and has a very good safety record."

By comparison, a 5-day course of Merck's antiviral molnupiravir, another oral drug that the company says can cut hospitalizations in COVID-19 outpatients, costs $700. However, the data have not been peer reviewed – and molnupiravir is not currently available and has unknown long-term safety implications, Dr. Boulware said.

Pharmaceutical companies typically spend tens of thousands of dollars on a trial evaluating a single drug, he noted.

In addition, the National Institutes of Health's ACTIV-6 study, a nationwide trial on the effect of fluvoxamine and other repurposed generic drugs on thousands of COVID-19 outpatients, is a $110 million effort, according to Dr. Boulware, who co-chairs its steering committee.

ACTIV-6 is currently enrolling outpatients with COVID-19 to test a lower dose of fluvoxamine, at 50 mg twice daily instead of the 100-mg dose used in the TOGETHER trial, as well as ivermectin and inhaled fluticasone. The COVID-OUT trial is also recruiting newly diagnosed COVID-19 patients to test various combinations of fluvoxamine, ivermectin, and the diabetes drug metformin.

Unanswered safety, efficacy questions

In an accompanying editorial in The Lancet Global Health, Otavio Berwanger, MD, cardiologist and clinical trialist, Academic Research Organization, Hospital Israelita Albert Einstein, São Paulo, commends the investigators for rapidly generating evidence during the COVID-19 pandemic.

However, despite the important findings, "some questions related to efficacy and safety of fluvoxamine for patients with COVID-19 remain open," Dr. Berwanger wrote.

The effects of the drug on reducing mortality and hospitalizations also "still need addressing," he noted.

"In addition, it remains to be established whether fluvoxamine has an additive effect to other therapies such as monoclonal antibodies and budesonide, and what is the optimal fluvoxamine therapeutic scheme," wrote Dr. Berwanger.

In an interview, he noted that 74% of the Brazil population have currently received at least one dose of a COVID-19 vaccine and 52% have received two doses. In addition, deaths have gone down from 4,000 per day during the March-April second wave to about 400 per day. "That is still unfortunate and far from ideal," he said. In total, they have had about 600,000 deaths because of COVID-19.

Asked whether public health authorities are now recommending fluvoxamine as an early treatment for COVID-19 based on the TOGETHER trial data, Dr. Berwanger answered, "Not yet.

"I believe medical and scientific societies will need to critically appraise the manuscript in order to inform their decisions and recommendations. This interesting trial adds another important piece of information in this regard," he said.

New transmission information should motivate hospitals to re-examine aerosol procedures

By Dawn O'Shea

Two studies published in Thorax have found that the use of continuous positive airways pressure (CPAP) or high-flow nasal oxygen (HFNO) to treat moderate to severe COVID-19 is not linked to a heightened risk of infection, as currently thought. Researchers say hospitals should use this information to re-examine aerosol procedures in regard to risk of transmission of SARS-CoV-2.

CPAP and HFNO have been thought to generate virus particles capable of contaminating the air and surfaces, necessitating additional infection control precautions such as segregating patients. However, this research demonstrates that both methods produced little measurable air or surface viral contamination. The amount of contamination was no more than with the use of supplemental oxygen and less than that produced when breathing, speaking, or coughing.

In one study, led by a team from the North Bristol NHS Trust in England, 25 healthy volunteers and 8 hospitalized patients with COVID-19 were recruited and asked to breathe, speak, and cough in ultra-clean, laminar flow theaters followed by use of CPAP and HFNO (Thorax. 2021 Nov 4. doi: 10.1136/thoraxjnl-2021-217577). Aerosol emission was measured via two methodologies, simultaneously. Hospitalized patients with COVID-19 had cough recorded via the same methodology on the infectious diseases ward.

CPAP (with exhalation port filter) was found to produce less aerosol than breathing, speaking, and coughing, even with large >50 L/min face mask leaks. Coughing was associated with the highest aerosol emissions of any recorded activity.

HFNO was associated with aerosol emission from the machine. Generated particles were small (<1 mcm), passing from the machine through the patient and to the detector without coalescence with respiratory aerosol, and, consequently, would be unlikely to carry viral particles.

More aerosol was generated in cough from patients with COVID-19 (n = 8) than from volunteers.

In the second study, 30 hospitalized patients with COVID-19 requiring supplemental oxygen were prospectively enrolled (Thorax. 2021 Nov 4. doi: 10.1136/thoraxjnl-2021-218035). In this observational environmental sampling study, participants received either supplemental oxygen, CPAP, or HFNO (n = 10 in each group). A nasopharyngeal swab, three air, and three surface samples were collected from each participant and the clinical environment.

Overall, 21 of the 30 participants tested positive for SARS-CoV-2 RNA in the nasopharynx. In contrast, 4 out of 90 air samples and 6 of 90 surface samples tested positive for viral RNA, although there were an additional 10 suspected-positive samples in both air and surfaces samples.

Neither the use of CPAP nor HFNO nor coughing were associated with significantly more environmental contamination than supplemental oxygen use. Of the total positive or suspected-positive samples by viral polymerase chain reaction detection, only one nasopharynx sample from an HFNO patient was biologically viable in cell culture assay.

"Our findings show that the noninvasive breathing support methods do not pose a higher risk of transmitting infection, which has significant implications for the management of the patients," said coauthor Danny McAuley, MD. "If there isn't a higher risk of infection transmission, current practices may be overcautious measures for certain settings."

Although both studies are small, the results do suggest that there is a need for an evidence-based reassessment of infection prevention and control measures for noninvasive respiratory support treatments that are currently considered aerosol-generating procedures.

Does morning discharge really improve hospital throughput?

Perennial debate likely to be reignited

By Larry Beresford

A recent study published in the Journal of Hospital Medicine examined patient discharges from hospitals in Ontario, to determine if morning discharges were associated with positive outcomes. Some hospitalist programs have embraced discharge before noon (DBN) initiatives like those studied in the article.[1] Unfortunately, the researchers concluded that the Canadian DBNs did not positively impact hospital length of stay, readmissions, or mortality rates.

DBN has been a quality improvement target for hospitals hoping to improve throughput and free up scarce beds, while promoting patient safety by encouraging discharge as soon as patients are ready to leave. Yet other researchers have questioned its actual impact on quality metrics. One author called DBN's purported impact an "urban legend,"[2] while a JHM editorial accompanying the Ontario study noted, "Hospitals are delicate organisms; a singular focus on one metric will undoubtedly impact others."[3]

Might DBN be an artificial target that doesn't actually enhance throughput, but leads instead to unintended consequences, such as patients being held over for an additional night in the hospital, rather than being discharged when they are ready to go on the afternoon before, in order to boost DBN rates? A perennial debate in hospital medicine is likely to be reignited by the new findings.

'No significant overall association'

Quality improvement initiatives targeting morning discharges have included stakeholder meetings, incentives programs, discharge-centered breakfast programs, and creation of deadlines for discharge orders, the new study's authors noted. Although these initiatives have gained support, critics have suggested that their supporting evidence is not robust.

The Canadian researchers retrospectively reviewed all patient admissions to general internal medicine services (GIMs) – largely similar to hospital medicine services in the United States – at seven hospitals in Toronto and Mississauga over a 7-year period ending Oct. 31, 2017, counting all of these patients who were discharged alive between 8 a.m. and noon. DBN averaged 19% of total live discharges across the diverse hospitals, with their diverse discharge practices.

But they found no significant overall association between morning discharge and hospital or emergency department length of stay. "Our findings suggest that increasing the number of morning discharges alone is unlikely to substantially improve patient throughput in GIM, but further research is needed to determine the effectiveness of specific interventions," they concluded.

"We used a very narrow lens, looking specifically at throughput for the hospitals and emergency departments and whether DBN makes it more efficient," said corresponding author Amol Verma, MD, MPhil, FRCPC, clinician-scientist at St. Michael's Hospital, University of Toronto, in a recent interview. "What we found was that, on days when more patients are discharged in the morning, patients do not flow more quickly through the hospital. That suggests that increasing morning discharges is unlikely to make a difference."

What does DBN really mean?

The semantics of DBN deserve further exploration. Is DBN about the actual hour of discharge, or the time when the hospitalist signs a discharge order – which may be well before the patient actually gets a wheelchair ride down to the hospital's front doors? And if DBN is an organized program promoting morning discharges, how is it incentivized or otherwise rewarded?

Other factors, such as arrival of medications from the pharmacy or results from clinical tests, access to an ambulance if needed, transport to the front door, and bed cleaning will impact how quickly a doctor's discharge orders get acted upon – and how quickly the newly emptied bed is available for the next occupant.

The clinician's views on discharge practices may diverge from hospital administrator or health system perspectives, with its imperatives for efficient throughput in order to bring in more patients, Dr. Verma said. The hospitalist is also concerned about whether the patient feels ready to go home. "We can all agree that patients should leave the hospital as soon as they are medically able to do so," he said. Longer hospital stays are associated with increased rates of hospital-acquired infections and other iatrogenic complications.

Dr. Verma

But there is not agreement on the components of a safe discharge – or on the other dimensions of effective patient flow and transitions of care. How do we optimize treatments initiated in the hospital? Does the patient need one more CAT scan? And what about the concerns of patient-centered care? Does the patient have a caregiver able to help them when they get home? There is a lot of uncertainty, Dr. Verma said. "These kinds of decisions have to get made many times every day by hospitalists," he noted.

"We find ourselves trying to mirror the ebbs and flows of the emergency department with what's happening in the hospital," said Venkat Gundareddy, MBBS, MPH, associate director of the division of hospital medicine at Johns Hopkins Medicine in Baltimore. "The majority of hospital discharges happen during business hours, but the emergency department doesn't stop admitting overnight, thus creating a throughput challenge." Discharges are also based on clinical outcomes and on patients transferring to other facilities that prefer patients to arrive earlier in the day.

"Hospitalists may not fully appreciate these dynamics, because we're siloed on our units," Dr. Gundareddy said. "There is a subset of patients who would fit the bill for early discharge, but other patients come into the hospital with greater complexities, and a need for more coordination. Their discharges are harder to predict, although it gets clearer as their care progresses."

The hospitals included in the Ontario study are at 90%-100% capacity, so their flexibility is constrained and throughput is a critical issue, Dr. Verma said. "But if you start with the target of more efficient throughput, there is no logical or practical reason to assume that discharge before noon would help. If we believe someone is ready for discharge based on physiologic changes, their response to treatment, and the conclusion of medical investigations, none of these conform to the clock. It's equally likely the patient achieves them in the afternoon or evening."

Other views on morning discharge

An alternative perspective comes from New York University's Langone Medical Center, which has published positive results, including earlier subsequent arrivals to the inpatient unit from the emergency department, from increasing its hospital's DBN rate.[4]

The hospital has continued to encourage morning discharges, which have consistently run 35%-40% or more of total discharges on two acute inpatient units at Langone's Tisch Hospital. A previous study described the multidisciplinary intervention that resulted in a statistically significant increase in DBN – from 11% to 38% in the first 13 months – while significantly reducing high-frequency admission peaks.[5]

"We've been doing DBN for a number of years," said Benjamin Wertheimer, MD, a hospitalist at Langone Medical Center and one of the studies' authors. It is an achievable – and sustainable – goal. "Many hospitals around the country have problems with the flow of patients. Many hospitals are full – even before accounting for the COVID pandemic." There is good evidence that, for a patient who no longer requires hospitalization, getting them out as

early as possible, with a safe plan for their discharge, is a good thing, he said. "We see DBN as an important operational metric."

If the necessary work is done correctly on the afternoon before the discharge, then a DBN approach can push communication, coordination, and advance planning, Dr. Wertheimer said. Otherwise, essential discharge tasks may lag until the last minute. "We try to put the pieces in place the day before through a better planned process. But it should never be that DBN takes precedence over when the patient is safely ready to go," he said.

"Our true measure of success would be how well we are preparing, communicating, putting safe plans into place," he added. "DBN does not in and of itself answer all the safety and quality concerns. We set priorities around specific quality targets. DBN is just one of our operational and safety measures."

The DBN intervention at Langone started with a multidisciplinary kickoff event in which all team members received education on its importance, a clear description of roles in the DBN process, and a corresponding checklist of daily responsibilities. The checklist was utilized at newly implemented afternoon interdisciplinary rounds, scripted to identify next-day DBNs, and make sure everything is in place for them, he explained.

"We provide daily feedback to floor staff on the DBN percentage, celebrate success, and offer real-time opportunities for case review," Dr. Wertheimer said. "We have been careful about how we message this goal. Quality and safety come first, and we want to be prepared for discharge in advance of when the patient is ready."

A boost for discharges

Mark Williams, MD, MHM, recently appointed chief of hospital medicine at Washington University School of Medicine in St. Louis, and a principal investigator for Project BOOST (Better Outcomes by Optimizing Safe Transitions), SHM's quality improvement mentoring initiative aimed at helping hospitals improve care transitions, said that debates about DBN have gone on for a long time in hospital medicine.

"Around 2002, consultants told the CEO of a community hospital affiliated with Emory Healthcare that if our hospitalists could discharge patients before noon it would improve throughput," he recalled. The consultants came from the hospitality industry, where

Dr. Williams

DBN is easier to achieve.

But in hospital medicine, he said, "We use the whole day of the discharge in delivering care. I said to the CEO, 'I can get you 100% discharge before noon – I'll just hold the patients overnight,'" he explained. "In our initial experience, we pushed DBN up to about 10% -15%, and it opened up a few beds, which rapidly filled."

Project BOOST encouraged the goal of getting patients ready to go out as soon as they were clinically ready, but did not advocate specifically for DBN, Dr. Williams said. "The problem is that hospital throughput starts to gum up when occupancy goes over 80% or 90%, and many academic medical centers regularly reach occupancy rates greater than 100%, particularly in the afternoon." The deluge of patients includes transfers from other hospitals, postsurgical patients, and admissions from the emergency department.

"Boarding in the ED is a real issue," he said. "Right now, it's a crisis of overoccupancy, and the problem is that the pipeline is pouring patients into the system faster than they can be discharged."

Dr. Williams believes there needs to be bigger thinking about these issues. Could hospitals, health systems, and hospitalists practice more preventive medicine so that some of these patients don't need to come to the hospital? "Can you better address high blood pressure to prevent strokes and make sure patients with heart disease risk factors are enrolled in exercise and nutrition programs? What about access to healthy foods and the other social determinants of health? What if we provided adequate, consistent housing and transportation to medical visits?" he wondered.

Hospital-at-home programs may also offer some relief, he said. "If suddenly there weren't so many emergency room visits by patients who need to get admitted, we'd have enough beds in the hospital."

A more holistic view

John Nelson, MD, MHM, hospital medicine pioneer and management consultant, has been studying hospital throughput and policies to improve it for a long time. His 2010 column in *The Hospitalist*, "The Earlier the Better," said attaching a financial incentive for hospitalists to discharge patients by a preset hour has produced mixed results.[6] But Dr. Nelson offered some easy steps hospitalists can take to maximize earlier discharges, including to write "probable discharge tomorrow" as an order in the patient's medical record.

The afternoon before a planned discharge, the hospitalist could talk to a patient's family members about the discharge plan and order any outstanding tests to be done that evening to be ready for morning rounds – which he suggested should start by 7:00 a.m. The hospitalist could dictate the discharge summary the afternoon before. Even if a

Dr. Nelson

discharge can't proceed as planned, the time isn't necessarily wasted.

In a recent interview, Dr. Nelson noted that the movement to reduce average length of stay in the hospital has complicated the discharge picture by reducing a hospital's flexibility. But he added that it's still worth tracking and collecting data on discharge times, and to keep the conversation going. "Just don't lose sight of the real goal, which is not DBN but optimal length-of-stay management," he said.

Dr. Gundareddy said that, as his group has dealt with these issues, some steps have emerged to help manage discharges and throughput. "We didn't have case management and social work services over the weekend, but when we added that support, it changed how our Mondays went."

He encourages hospitalists to focus on the actual processes that create bottlenecks preventing throughput. "A good example of effective restructuring is lab testing. It's amazing to think that you could have lab test results available for 7:00 a.m. rounds. There are areas that deserve more attention and more research regarding DBN. What is the impact of discharge before noon programs on the patients who aren't being planned for discharge that day? Do they get neglected? I feel that happens sometimes."

The COVID pandemic has further complicated these questions, Dr. Gundareddy said. "Early on in the pandemic, we were unsure how things were going with discharges, since all of the focus was on the COVID crisis. A lot of outpatient and surgical services came to a standstill, and there weren't enough of the right kinds of beds for COVID patients. It was hard to align staff appropriately with the new clinical goals and to train them during the crisis." Now, patients who delayed care during the pandemic are turning up at the hospital with greater acuity.

As with all incentives, DBN can have unintended consequences – especially if you monetize the practice, Dr. Verma said. "Most hospitalists are already working so hard – making so many decisions every day. These incentives could push decisions that aren't in anybody's best interests."

Various groups have created comprehensive packages of protocols for improving transitions of care, he said. Organized programs to maximize efficiency of transitions and patient flow, including Project BOOST and Project RED (Re-Engineered Discharge) at Boston University Medical Center, are important sources of tools and resources. "But we should stop flogging hospitalists to discharge patients before noon," Dr. Verma said, "Discharge is more complex than that. Instead, we should work to improve discharges in more holistic ways."

References

1. Kirubarajan A et al. Morning discharges and patient length of stay in inpatient general internal medicine. J Hosp Med. 2021 Jun;16(6):333-8. doi: 10.12788/jhm.3605.

2. Shine D. Discharge before noon: An urban legend. Am J Med. 2015 May;128(5):445-6. doi: 10.1016/j.amjmed.2014.12.011.

3. Zorian A et al. Discharge by noon: Toward a better understanding of benefits and costs. J Hosp Med. 2021 Jun;16(6):384. doi: 10.12788/jhm.3613.

4. Wertheimer B et al. Discharge before noon: Effect on throughput and sustainability. J Hosp Med. 2015 Oct;10(10):664-9. doi: 10.1002/jhm.2412.

5. Wertheimer B et al. Discharge before noon: An achievable hospital goal. J Hosp Med. 2014 Apr;9(4):210-4. doi: 10.1002/jhm.2154.

6. Nelson J. The earlier, the better. The Hospitalist. 2010 May.

Refined heart rate cutoffs may improve prognostic value of acute PE scoring systems

By Andrew D. Bowser
MDedge News

In patients with acute pulmonary embolism, using cutoff values other than 110 beats per minute might improve the prognostic value of heart rate at admission, a recent observational study suggests.

For identifying low-risk patients, a cutoff of 80 bpm increased the sensitivity of the simplified Pulmonary Embolism Severity Index (sPESI) from about 94% to nearly 99% among nonhypotensive patients with acute symptomatic pulmonary embolism (PE), according to results of the large, registry-based study.

Similarly, using a 140-bpm cutoff increased the specificity of the Bova score for identifying intermediate-high–risk patients from about 93% to 98% in the study, which was recently published in the journal CHEST (2021. doi: 10.1016/j.chest.2021.08.059).

"Although standard dichotomization of HR [i.e., heart rate less than 110 vs. greater than 110 bpm] may be useful for guideline recommendations, our results will allow for more accuracy regarding clinical decision-making," wrote lead author Ana Jaureguízar, MD, of the University of Alcalá in Madrid, on behalf of the RIETE (Registro Informatizado de la Enfermedad TromboEmbólica) investigators.

Findings inform future research

These observational findings are intuitive and do at least have the potential to inform the design of future randomized clinical trials, according to Albert J. Polito, MD, chief of the division of pulmonary medicine and medical director for the lung center at Mercy Medical Center in Baltimore.

"In medicine, there is a spectrum of risk," Dr. Polito said in an interview. "While we love our cutoffs, which in this case has traditionally always been that 110 beats per minute for heart rate, it makes sense that there would be some range of risks of bad outcomes."

Building on the observations of the present study, subsequent prospective randomized studies could potentially aim to determine, for example, when thrombolytic therapy should be considered in nonhypotensive patients with acute PE and higher heart rates.

"It would not be easy to design, but it's a straightforward question to ask whether patients with the highest heart rates are the ones who potentially might benefit the most from thrombolytic therapy," Dr. Polito said.


Dr. Polito

Value of alternative HR cutoffs

Heart rate is a simple and easily available vital sign that is clearly linked to prognosis in patients with pulmonary embolism, authors of the RIETE registry study say in their report. Accordingly, a heart rate threshold of 110 bpm has made its way into scoring systems that seek to identify low-risk patients, such as the sPESI, and those focused on identifying higher-risk patients, such as the Bova score.

However, it has not been clear whether alternative HR cutoffs would improve upon the 110-bpm threshold. At the low-risk end, more accurate scoring systems could optimize selection of patients for home treatment, while at the intermediate-high–risk end, they could better select patients for close monitoring or advanced PE treatments.

Granularity on heart rate risks

To better define the prognostic value of different heart rate thresholds, investigators analyzed data from RIETE, a large, ongoing, multinational prospective registry including patients with objectively confirmed acute venous thromboembolism.

For 44,331 consecutive nonhypotensive symptomatic PEs, the overall rate of 30-day all-cause mortality was 5.1%, and the 30-day PE-related mortality was 1.9%, the authors report.

Significantly poorer outcomes were seen in patients with higher heart rates as compared to patients in the 80- to 99-bpm range. As compared to that reference range, odds ratios for 30-day all-cause death ranged from 1.5 for heart rates of 100-109, up to 2.4 for those with heart rates of 140 bpm or greater.

Likewise, patients with higher heart rates had a 1.7- to 2.4-fold greater risk of 30-day PE-related death as compared to the 80- to 99-bpm reference range, while patients with lower heart rates had lesser risk, the published data show.

Prognostic scoring

Next, investigators sought to refine the prognostic scoring systems for low-risk PE (sPESI) and intermediate-high–risk PE (Bova).

For sPESI, they found that dropping the cutoff value from 110 to 100 bpm increased the sensitivity of the score from 93.4% to 95.3%. Going down even further to 80 bpm increased sensitivity to 98.8%, according to the report.

By going down from 110 to 80 bpm, the proportion of patients defined as low-risk dropped from 35% to 12%, investigators found.

For the Bova score, increasing the cutoff value from 110 to 120 bpm likewise increased specificity from 93.2% to 95%, while going up even further to 140 bpm increased specificity to 98.0%, the report shows.

In sensitivity analyses, the findings were not impacted by excluding younger patients, those who received reperfusion therapies, or those with atrial fibrillation, according to the study findings.

Implications for clinical practice

Taken together, these findings could serve as a resource to inform discussions regarding PE management that include whether home therapy or use of thrombolytic therapy is appropriate, investigators said in their report.

"For instance, among low-risk sPESI patients, those with borderline tachycardia [i.e., a heart rate between 100-109 bpm] might benefit from initial hospital observation for trending," they wrote.

Dr. Jaureguízar reported no disclosures. One coinvestigator reported funding support from the Institute of Health Carlos III and the European Development Regional Fund. One coinvestigator reported consulting in litigation involving two models of inferior vena cava filters.

Dr. Polito reported no disclosures.

Hospital Pediatrics

The top pediatric hospital medicine articles of 2020

By Maura A. Steed, MD; Rachel Danielle Fisher, MD; Nathan M. Money, DO

The year 2020 was unlike any in recent history, particularly for those working in health care. With the onset of the SARS-CoV-2 pandemic, many physicians were met with increasing clinical demands, and hospitalists served an instrumental role in providing medical care as the world faced an unprecedented need for health care resources.

In addition, 2020 was a year in which many of us reflected on inequities both inside and outside of medicine. Many in health care witnessed the disproportionate burden that the SARS-CoV-2 pandemic placed on communities of color and inequities pertaining to vaccine distribution.

In spite of the challenges of 2020, the field of pediatric hospital medicine (PHM) has continued to grow and evolve, with an incredible amount of new literature published in 2020.

In this article, we identify the top 10 articles published in 2020, 5 of which are summarized below. These articles were presented at the Pediatric Update at SHM Converge 2021.


Dr. Steed


Dr. Fisher


Dr. Money

Dr. Steed is an internal medicine and pediatrics hospitalist at Northwestern Memorial Hospital and Ann and Robert H. Lurie's Children's Hospital of Chicago. Dr. Fisher is a current fellow in hospice and palliative medicine and a clinical assistant professor at Michigan State University, East Lansign. Dr. Money is an assistant professor of pediatrics at the University of Utah and a fellowship-trained pediatric hospitalist at Utah Valley Hospital and Primary Children's Hospital, Salt Lake City.

The top 5 articles

Association between parent comfort with English and adverse events among hospitalized children

Khan A et al. JAMA Pediatrics. December 2020.[1]

Background: Hospitalized children experience similar rates of medical errors compared to adult patients, but higher rates in areas that could cause harm.[1] A major contributor to medical errors is communication failure, which language barriers frequently contribute to. Single-center data suggest that pediatric patients of families with limited comfort with English experience increased adverse events,[2] but multicenter data are lacking.

Findings: This prospective cohort study observed adverse-event rates among 2,148 patients from seven teaching hospitals from December 2014 to January 2017. Survey data revealed 147 of 1,666 (9%) parents of patient families expressed limited comfort in English, and Spanish was the predominant language in this group (71%). There were 217 adverse events reported, 142 (65%) of which were deemed preventable by study personnel. Nearly twice as many children of parents with limited comfort with English experienced an adverse event when compared to their English-speaking counterparts (26 of 147 [17.7%] vs. 146 of 1,519 [9.6%]; adjusted odds ratio, 2.1; 95% confidence interval, 1.2-3.7). Interpreter use was not measured.

Impact to practice: Children of parents with limited comfort with English are nearly twice as likely to experience adverse events when hospitalized. Hospitals should reflect on current practice and make efforts to improve their ability to identify and communicate with this vulnerable cohort.

Saline-lock versus continuous infusion: Maintaining peripheral intravenous catheter access in children

Yeung F et al. Hospital Pediatrics. December 2020.[3]

Background: Peripheral intravenous catheter (PIV) insertion is performed on most hospitalized children. Unfortunately, PIVs frequently fail and need to be replaced. There is a widespread perception that infusing a crystalloid solution at a low rate through a PIV, a strategy known as "to keep vein open" (TKO) prolongs the patency of PIVs; however, there is a lack of evidence to support this practice.[4]

Findings: In this prospective, time-allocated study, 172 children were allocated to either a TKO strategy or a saline-lock strategy with a primary outcome of duration of PIV patency.[3] Secondary outcomes included PIV-related complication rates and patient and caregiver satisfaction. The mean duration of PIV patency was 41.68 hours in the TKO group and 44.05 hours in the saline-lock group, which did not meet the prespecified definition of a clinically significant difference. There was no significant difference in prevalence of PIV-associated complications and patient satisfaction was similar between the two groups.

Impact to practice: Running fluid "to keep vein open" does not increase the duration of PIV patency compared to intermittent saline locks. Given that a TKO strategy limits a patient's mobility, this low-value practice can be discontinued without increasing the risk of PIV failure.

Intensive care unit utilization after adoption of a ward-based high-flow nasal cannula protocol

Coon ER et al. Journal of Hospital Medicine. June 2020.[5]

Background: High-Flow Nasal Cannula (HFNC) has been widely adopted for escalation of respiratory support in patients with bronchiolitis; however, its use is dictated by highly variant local protocols.[6] Small-scale randomized control trials and systematic reviews show that early HFNC initiation in mild to moderate disease does not change patient outcomes.[7]

Findings: In this retrospective cohort study of ward-based HFNC, the authors used the Pediatric Health Information System database to identify 12 hospitals that had adopted ward-based HFNC protocols. The study used an interrupted time series analysis to compare outcomes for patients ages 3-24 months hospitalized with bronchiolitis (n = 32,809) in the three seasons before and after protocol adoption. Ward-based HFNC adoption paradoxically increased ICU admission (absolute increase, 3.1%; 95% confidence interval, 2.8-3.4%) and ICU length of stay (absolute difference, 9.1 days/100 patients; 95% CI, 5.1-13.2). Total length of stay and rates of mechanical ventilation were similar between groups.[5]

Impact to practice: Ward-based HFNC protocols are associated with increased ICU utilization. As bronchiolitis is the leading diagnosis in pediatrics, pediatric hospitals can lead ward-based quality efforts to decrease HFNC overutilization focused on decreased initiation or deimplementation.

Lower versus traditional treatment threshold for neonatal hypoglycemia

Van Kempen AAMW et al. New England Journal of Medicine. February 2020.[8]

Background: Hypoglycemia is the most common metabolic abnormality in newborns, and up to 30% of newborns are routinely monitored for hypoglycemia. There is no consensus regarding the appropriate threshold at which hypoglycemia should be treated in order to prevent neurologic injury. Prior studies of neonatal hypoglycemia have largely been observation and have yielded conflicting results.[8]

Findings: In this multicenter, randomized, noninferiority trial, 689 infants born at 35 weeks gestational age or later with risk factors for hypoglycemia and a measured blood glucose of 36-46 mg/dL were randomized to either a lower glucose treatment threshold (36 mg/dL) or traditional glucose treatment threshold (47 mg/dL). The primary outcome was psychomotor development at 18 months, assessed via the Bayley Scale of Infant and Toddler Development, third edition. There was no significant difference in cognitive or motor scores at 18 months. The lower treatment threshold group had a higher frequency of severe hypoglycemia (<36 mg/dL) and

Continued on following page

Case reports underscore risk of cerebral edema, AFCE in children with COVID-19

By Randy Dotinga
MDedge News

An 8-year-old girl who was infected with SARS-CoV-2 died after developing an extremely rare condition known as acute fulminant cerebral edema (AFCE), according to pediatric neurologists who are urging colleagues to watch out for similar cases.

At least one other child in the United States has died after becoming infected with the virus and developing cerebral edema. "The rapid and devastating clinical course in both of these cases highlights the need for early recognition of a cerebral edema and AFCE as potential complications of COVID-19 in pediatric patients," the neurologists wrote.

The case was highlighted in a poster presented at the annual meeting of the Child Neurology Society and in a report published earlier this year in Child Neurology Open (2021 Jan. doi: 10.1177/2329048X211022532).

According to pediatric neurologist Timothy Gershon, MD, PhD, of the University of North Carolina at Chapel Hill, the child appeared in clinic in July 2020. She had been healthy but was suffering from 1 day of fever, seizure-like activity (generalized convulsions and drooling), anorexia, and lethargy.

The girl, who was subsequently diagnosed with COVID-19, deteriorated in the hospital. "She received IV dexamethasone in attempts to reduce cerebral edema," the neurologists wrote. "Regarding immunomodulatory therapy, she received intravenous immunoglobulin (2 g/kg), anakinra, and hydrocortisone; despite approval for remdesivir and COVID-19 convalescent plasma, these were ultimately withheld due to poor prognosis."

Brain death examinations at 24 and 48 hours after cardiac arrest were consistent with brain death, they reported.

Neurologists believe the patient suffered from AFCE, "an often fatal pediatric clinical entity consisting of fever, encephalopathy, and new-onset seizures followed by rapid, diffuse, and medically-refractory cerebral edema." They add that "AFCE occurs as a rare complication of a variety of common pediatric infections, and a CNS [central nervous system] pathogen is identified in only a minority of cases, suggesting a para-infectious mechanism of edema."

"This was an extremely rare rapid progression to cerebral edema. I think it was related to the patient's COVID infection, but why this patient got it and others don't is unknown," Dr. Gershon said in an interview. "We didn't know, and still don't know, what the causative links are between COVID and suddenly having seizures and brain swelling."

Continued from previous page

were more likely to have four or more episodes of hypoglycemia. The traditional treatment threshold group had more supplemental feeding and more IV glucose administration. Length of stay for the mother and baby did not differ between groups.[8]

Impact to practice: This prospective, randomized study suggests that reducing the treatment threshold for neonatal hypoglycemia did not affect neurodevelopmental at 18 months of age. In contrast, a recent meta-analysis by Shah et al. suggested that neonatal hypoglycemia was not associated with adverse neurodevelopmental outcomes in early childhood; however, differences in rates of neurodevelopmental impairment, low literacy, and low numeracy were detectable by age 5 years.[9]

Factors associated with family experience in pediatric inpatient care
Feng JY et al. Pediatrics. March 2020.[10]

Background: Positive patient experience is associated with better health care outcomes and reduced health care use.[11] Consequently, patient experience surveys have played a larger role in public reporting, financial risk sharing arrangements, and pay-for-performance programs. While adult studies have examined the importance of specific care dimensions for patient experience, data are lacking for inpatient pediatric populations.

Findings: A retrospective study collected Hospital Consumer Assessment of Healthcare Providers and Systems surveys from 17,727 patients in 69 hospitals within the United States over a 14-month period.[10] Of the 10 care dimensions analyzed, child comfort (adjusted odds ratio, 1.50; 95% CI, 1.41-1.60) and nurse-parent communication (aOR, 1.50; 95% CI, 1.42-1.58) were most strongly associated with a family's willingness to recommend a hospital. Additional associated indices included preparing to leave the hospital (aOR, 1.34; 95% CI, 1.27-1.41), doctor-parent communication (aOR, 1.28; 95% CI, 1.21-1.35), and keeping parents informed (aOR, 1.25; 95% CI, 1.18-1.33). Privacy and quietness, which are associated with positive patient experience in adult studies, were not significantly associated with willingness to recommend in this cohort.

Impact to practice: Hospitals seeking to improve patient experience will benefit most by focusing on improving patient comfort and nurse-parent communication. Factors that increase adult patient satisfaction may not be as important to the pediatric population and their families.

The other five articles comprising the top 10 are listed below:

Comparison of as-needed and scheduled post-hospitalization follow-up for children hospitalized for bronchiolitis
Coon ER et al. JAMA Pediatrics. September 2020.[12]

Clinical prediction rule for distinguishing bacterial from aseptic meningitis
Mintegi S et al. Pediatrics. September 2020.[13]

The Michigan Appropriateness Guide for Intravenous Catheters in Pediatrics: miniMAGIC
Ullman AJ et al. Pediatrics. June 2020.[14]

A structured neonatal parenting elective: An approach for parenting leave during residency
Cree-Green M et al. Academic Pediatrics. August 2020.[15]

The KidzMed project: Teaching children to swallow tablet medication
Tse Y et al. Archives of Disease in Childhood. November 2020.[16]

References

1. Khan A et al. Association between parent comfort with English and adverse events among hospitalized children. JAMA Pediatr. 2020 Dec 1;174(12):e203215. doi: 10.1001/jamapediatrics.2020.3215.

2. Wasserman M et al. Identifying and preventing medical errors in patients with limited English proficiency: Key findings and tools for the field. J Healthc Qual. May-Jun 2014;36(3):5-16. doi: 10.1111/jhq.12065.

3. Yeung F et al. Saline-lock versus continuous infusion: Maintaining peripheral intravenous catheter access in children. Hosp Pediatr. 2020 Dec;10(12):1038-43. doi: 10.1542/hpeds.2020-0137.

4. Mok E et al. A randomized controlled trial for maintaining peripheral intravenous lock in children. Int J Nurs Pract. 2007 Feb;13(1):33-45. doi: 10.1111/j.1440-172X.2006.00607.x.

5. Coon ER et al. Intensive care unit utilization after adoption of a ward-based high-flow nasal cannula protocol. J Hosp Med. 2020 Jun;15(6):325-30. doi: 10.12788/jhm.3417.

6. Kalburgi S and Halley T. High-flow nasal cannula use outside of the ICU setting. Pediatrics. 2020;146(5):e20194083. doi: 10.1542/peds.2019-4083.

7. Leyenaar JK and Ralston SL. Widespread adoption of low-value therapy: The case of bronchiolitis and high-flow oxygen. Pediatrics. 2020 Nov;146(5):e2020021188. doi: 10.1542/peds.2020-021188.

8. Van Kempen AAMW et al. Lower versus traditional treatment threshold for neonatal hypoglycemia. N Engl J Med. 2020 Feb 6;382(6):534-44. doi: 10.1056/NEJMoa1905593.

9. Shah R et al. Neonatal glycaemia and neurodevelopmental outcomes: A systematic review and meta-analysis. Neonatology. 2019;115(2):116-26. doi: 10.1159/000492859.

10. Feng JY et al. Factors associated with family experience in pediatric inpatient care. Pediatrics. 2020 Mar;145(3):e20191264. doi: 10.1542/peds.2019-1264.

11. Anhang Price R et al. Examining the role of patient experience surveys in measuring health care quality. Med Care Res Rev. 2014 Oct;71(5):522-54. doi: 10.1177/1077558714541480.

12. Coon ER et al. Comparison of as-needed and scheduled post-hospitalization follow-up for children hospitalized for bronchiolitis: The Bronchiolitis Follow-up Intervention Trial (BeneFIT) randomized clinical trial. JAMA Pediatr. 2020 Sep 1;174(9):e201937. doi: 10.1001/jamapediatrics.2020.1937.

13. Mintegi S et al. Clinical prediction rule for distinguishing bacterial from aseptic meningitis. Pediatrics. 2020 Sept;146(3):e20201126. doi: 10.1542/peds.2020-1126.

14. Ullman AJ et al. The Michigan Appropriateness Guide for Intravenous Catheters in pediatrics: miniMAGIC. Pediatrics. 2020 Jun;145(Suppl 3):S269-S284. doi: 10.1542/peds.2019-3474I.

15. Cree-Green M et al. A structured neonatal parenting elective: An approach for parenting leave during residency. Acad Pediatr. 2021 Jan-Feb;21(1):16-8. doi: 10.1016/j.acap.2020.02.008.

16. Tse Y et al. The KidzMed project: Teaching children to swallow tablet medication. Arch Dis Child. 2020 Nov;105(11):1105-7. doi: 10.1136/archdischild-2019-317512.

Expected spike in acute flaccid myelitis did not occur in 2020

By Richard Franki
MDedge News

The anticipated biennial peak in acute flaccid myelitis cases did not occur in 2020, possibly because of "nonpharmaceutical interventions implemented during the COVID-19 pandemic," suggested researchers at the Centers for Disease Control and Prevention.

Acute flaccid myelitis (AFM) is an uncommon but serious complication of some viral infections, including West Nile virus and nonpolio enteroviruses. It is "characterized by sudden onset of limb weakness and lesions in the gray matter of the spinal cord," they said, and more than 90% of cases occur in young children.

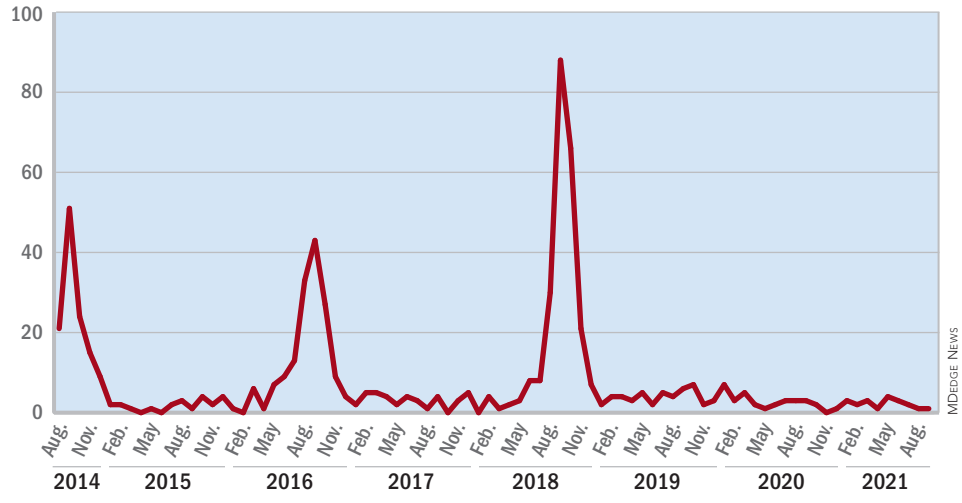
Cases of AFM, which can lead to respiratory insufficiency and permanent paralysis, spiked during the late summer and early fall in 2014, 2016, and 2018 and were expected to do so again in 2020, Sarah Kidd, MD, and associates at the division of viral diseases at the CDC's National Center for Immunization and Respiratory Diseases, Atlanta, said in the Morbidity and Mortality Weekly Report (2021 Nov 5;70[44]:1534-8).

Monthly peaks in those previous years – each occurring in September – reached 51 cases in 2014, 43 cases in 2016, and 88 cases in 2018, but in 2020 there was only 1 case reported in September, with a high of 4 coming in May, CDC data show. The total number of cases for 2020 (32) was, in fact, lower than in 2019, when 47 were reported.

The investigators' main objective was to see if there were any differences between the 2018 and 2019-2020 cases. Reports from state health departments to the CDC showed that, in 2019-2020, "patients were older; more likely to have lower limb involvement; and less likely to have upper limb involvement, prodromal illness, [cerebrospinal fluid] pleocytosis, or specimens that tested positive for EV [enterovirus]-D68" than patients from 2018, Dr. Kidd and associates said.

Mask wearing and reduced in-school attendance may have decreased circulation of EV-D68, as was seen with other respiratory viruses, such as influenza and respiratory syncytial virus, in 2020. Previous studies have suggested that EV-D68 drives the increases in cases during peak years, researchers noted.

Number of confirmed cases of acute flaccid myelitis by month



Note: Health departments report cases meeting clinical criterion (acute flaccid limb weakness) to the CDC.

Source: National Center for Immunization and Respiratory Diseases

Residency

Continued from page 1

residents' day-to-day experiences, to carefully balancing educational needs and goals, program leaders have worked tirelessly to ensure that residents continue to receive excellent training.

The overarching theme across U.S.-based residency programs is that the educational changes and challenges during the COVID-19 pandemic have often been one and the same.

Service versus education

At the beginning of the pandemic, trainees at the University of Pittsburgh Medical Center were limited in seeing COVID patients in order to curb exposure. But now that COVID appears to be the new normal, "I think the question becomes: 'How do we incorporate our trainees to take care of COVID patients since it seems it will be staying around for a while?'" said Rachna Rawal, MD, a hospitalist and clinical assistant professor of medicine at UPMC.

This dilemma highlights the conflict between service and education. Residents have been motivated and eager to help, which has been beneficial whenever there is a surge. "At the same time, you want to preserve their education, and it's a very difficult balance at times," said Dr. Rawal. It's also challenging to figure out the safest way for residents to see patients, as well as how to include medical students, since interns and residents serve as important educational resources for them.

Keeping trainees involved with daily virtual conferences rather than in-person interactions raises the question of whether or not the engagement is equivalent. "It's harder to keep them accountable when they're not in person, but it's also not worth the risk given the COVID numbers at times," Dr. Rawal said. The goal has become to make sure residents stay safe while still feeling that they are getting a good education.

Dr. Ricotta

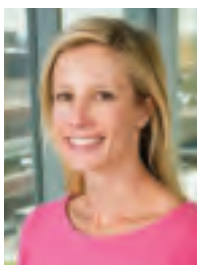
A balancing act

"I think early on, there was a lot of pride in what we were doing, that we were on the front line managing this thing that was emerging," said Daniel Ricotta, MD, a hospitalist and associate program director of the internal medicine residency at Beth Israel Deaconess Medical Center and assistant professor of medicine at Harvard Medical School, both in Boston. "And now I think people are starting to feel a little bit weary."

It has been demanding trying to manage ongoing educational needs through this time. "At the end of the day, residents are still trainees and have to be trained and educated. They're not just worker bees taking care of patients," Dr. Ricotta said. Residents need a well-rounded clinical experience – "they can't just take care of COVID patients and then be able to graduate as general internists," he said – but that becomes onerous when the hospital is full of patients with COVID.

Along with balancing residents' clinical immersion, Dr. Ricotta said there has been the challenge of doing "the content-based teaching from didactics that occur in the context of clinical work, but are somewhat separated when you need to limit the number of people in the rooms and try to keep as many people at home as possible when they're not taking care of patients in order to limit their level of risk." Adjusting, and readjusting, both of these aspects has had a major impact on residents' day-to-day education.

"A big part of residency is community," noted Dr. Ricotta, but the sense of community has been disrupted because some of the bonding experiences residents used to do outside the hospital to build that community have necessarily gone by the wayside. This particularly affects interns from around the country who are meeting each other for the first time. "We actually had a normal intern orientation this year, but last year, when everything was virtual, we were trying to find ways to bridge relationships in a way that was safe and socially distanced," he said.



Dr. Gottenborg

Improving quality

UC Denver is unique in that they have a 3-year program specifically for hospital medicine residents, said Dr. Gottenborg. Right away, "our residents rose to the challenge and wanted to be part of the workforce that helps care for this critical population of [COVID] patients." The residents were able to run the ICUs and take care of COVID patients, but in exchange, they had to give up some of their elective rotation time.

One aspect of the UC Denver hospital medicine residency program is participation in projects that focus on how to improve the health care system. Over the past year, the residents worked on one project in particular that focused on restructuring the guidelines for consulting physical therapists. Since many patients end up needing a physical therapist for a variety of reasons, a full hospital puts increased strain on their workload, making their time more precious.

"[The project] forced us to think about the right criteria to consult them," explained Dr. Gottenborg. "We cut down essentially all the inappropriate consults to PT, opening their time. That project was driven by how the residents were experiencing the pandemic in the hospital."

Learning to adapt

"The training environment during this pandemic has been tumultuous for both our residents and medical students," said Alan M. Hall, MD, associate professor of internal medicine and pediatrics and assistant dean of curriculum integration at the University of Kentucky, Lexington. Along with treating patients with COVID-19, he said trainees have also had to cope with anxiety about getting the virus themselves or inadvertently bringing it home to their families.

Like most medical schools, University of Kentucky students were shifted away from clinical rotations and into alternative and online education for a time. When they returned to in-person education, the students were initially restricted from seeing patients with confirmed or suspected COVID-19 in order to reduce their personal risk and to conserve personal protective equipment.

This especially impacted certain rotations, such as pediatrics. Because respiratory symptoms are common in this population, students were greatly limited in the number of new patients they could see. Now they are given the option to see patients with COVID-19 if they want to.

Dr. Hall

"Our residents have had to adapt to seemingly endless changes during this pandemic," Dr. Hall said. For example, at the beginning of the surge, the internal medicine residents trained for a completely new clinical model, though this ultimately never needed to be implemented. Then they had to adjust to extremely high census numbers that continue to have an effect on almost all of their rotations.

Conversely, the pediatrics residents saw far fewer inpatients last winter than they typically would. This made it more difficult for them to feel comfortable when census numbers increased with common diagnoses like bronchiolitis. "However, those respiratory viruses that were hibernating last winter caused an unusual and challenging summer surge," Dr. Hall said.

The biggest challenge though "is knowing that there is not a perfect solution for this global pandemic's effect on medical education," said Dr. Hall. "We can't possibly perfectly balance the safety of our learners and their families with the dangers of COVID-19."

Leadership discussions

As a residency program leader, Dr. Ricotta said there are conversations about multiple topics, including maintaining a safe learning environment; providing important aspects of residency training; deciding whether to go back to full in-person teaching, keep doing virtual teaching, or implement a hybrid model; and helping residents understand the balance between their personal and professional lives, especially in terms of safety.

"They have to their lives outside of the hospital, but we also are trying to instill ... what their responsibility is to society, to their patients, and to each other," said Dr. Ricotta.

A more recent discussion has been about how to manage the COVID vaccine boosters. "We can't have everyone getting vaccines at the same time because they might have symptoms afterward, and then be out sick – you're missing half your workforce," Dr. Ricotta said. But staggering residents' booster shots created yet another dilemma around deciding who received the booster sooner rather than later.

The biggest consideration for Dr. Gottenborg's leadership team was deciding whether to use their residents to help with the COVID surges or keep them in a traditional residency experience. While the residents wanted to be part of the pandemic response, there were many factors to consider. Ultimately, they came up with a balance

Continued on following page

Continued from previous page
between the amount of time residents should spend taking care of COVID patients while also ensuring that they leave the program with all the skills and experiences they need.

Though Dr. Hall works more closely with medical students than residents, he sees the challenges and effects as being similar. Creating harmony between a safe learning environment and students' educational goals has been the topic of endless discussions. This includes decisions as to whether or not students should be involved in person in certain activities such as large classroom didactics, written exams, clinical experiences, and small-group discussions.

Recruitment effects

When it comes to recruiting during a global pandemic, the experiences and predictions are mixed. Dr. Hall believes virtual interviews are making recruitment easier, but in turn, the fact that they are virtual also makes it harder for the applicant to get a good feel for the program and the people involved in it.

Dr. Ricotta reported that recruitment numbers have been fairly steady at Beth Israel Deaconess over the last few years. "In addition to the critical care physicians, hospital medicine was really the front line of this pandemic and so in some ways, we gained some recognition that we may not have had otherwise," said Dr. Ricotta. He believes this has the benefit of attracting some residents, but at the same time, it could potentially scare others away from what they perceive as a demanding, grueling job. "I think it has been mixed. It's dependent on the person."

At UC Denver, Dr. Gottenborg said they are seeing a rapid rise in the number of applications and interest in their programs. Still, "I think this could go both ways," she acknowledged. With the focus on hospital medicine in the media, medical students are more aware of the specialty and what it involves. "I think the sense of mission is really exemplified and everyone is talking about it," she said. This is evident in the arrival this summer of the first new class of interns since the pandemic. "They're incredibly passionate about the work," said Dr. Gottenborg.

However, there is also the notable increase in physician burnout since the pandemic started. That this has been regularly featured in the media leaves Dr. Gottenborg to wonder if prospective residents will shy away from hospital medicine because they believe it is an area that leads to burnout. "I hope that's not the case," she said.

"I would actually argue [recruitment] is easier," said Dr. Rawal. Like Dr. Hall, she sees virtual interviews as a big benefit to prospective trainees because they don't have to spend a large amount of money on travel, food, and other expenses like they did before, a welcome relief for residents with significant debt. "I think that is one very big positive from the pandemic," she said. Her trainees were advised to make a final list and consider going to see the top 2 or 3 in person, but "at this point, there's really no expectation to go see all 15 places that you look into."

Dr. Rawal also pointed out that recruitment is affected by whether or not trainees are expected to see COVID patients. "I know in some places they aren't and in some places they are, so it just depends on where you are and what you're looking for," she said.

Shifts in education

It remains to be seen if all the educational changes will be permanent, though it appears that many will remain. Dr. Hall hopes that virtual visits to provide care to patients who have difficulty getting to physical clinics will continue to be a focus for hospital medicine trainees. "For medical students, I think this will allow us to better assess what content can best be delivered in person, synchronously online, or asynchronously through recorded content," he said.

Dr. Ricotta predicts that virtual conferences will become more pervasive as academic hospitals continue to acquire more community hospitals, especially for grand rounds. "The virtual teaching that occurred in the residency program because it's required by the [Accreditation Council for Graduate Medical Education] has, I think, informed how academic centers do ongoing faculty development, professional development, and obviously education for the residents," Dr. Ricotta said. "I think virtual teaching is here to stay." This includes telehealth training, which had not been a widespread part of residency education before now.

Trainees have been given tools to handle high patient censuses and learned a whole new set of communication skills, thanks to the pandemic, said Dr. Rawal. There has been a focus on learning how to advocate for the vaccine, along with education on situations like how to have conversations with patients who don't believe they have COVID, even when their tests are positive. "Learning to handle these situations and still be a physician and provide appropriate care regardless of the patient's views is very important. This is not something I learned in my training because it never came up," she said.

Dr. Gottenborg has been impressed by the resident workforce's response across all specialties throughout these difficult days. "They were universally ready to dive in and work long hours and care for these very sick patients and ultimately share their experiences so that we could do it better as these patients continue to flow through our systems," she said. "It has been very invigorating."

The pandemic has also put a spotlight on the importance of being flexible, as well as various problems with how health care systems operate, "which, for people in our field, gets us both excited and gives us a lot of work to do," said Dr. Gottenborg. "Our residents see that and feel that and will hopefully continue to hold that torch in hospital medicine."

In spite of everything, Dr. Rawal believes this is an exhilarating time to be a trainee. "They're getting an opportunity that none of us got. Usually, when policies are made, we really don't see the immediate impact." But with recent mandates like masks and social distancing, "the rate of change that they get to see things happen is exciting. They're going to be a very exciting group of physicians."

COVID-19 hospitalization 80% more likely for smokers

By Tim Locke

Smokers are 80% more likely to be admitted to the hospital with COVID-19 than nonsmokers, according to an Oxford (England) University–led study.

Observational data were analyzed alongside hospital coronavirus test data and UK Biobank genetic information for the first time, and the findings are published in Thorax (2021 Sep 27. doi: 10.1136/thoraxjnl-2021-217080).

The data cover 421,469 people overall. Of these, 3.2% took a polymerase chain reaction swab test, 0.4% of these tested positive, 0.2% of them required hospitalization for COVID-19, and 0.1% of them died because of COVID-19.

When it came to smoking status, 59% had never smoked, 37% were ex-smokers, and 3% were current smokers.

Current smokers were 80% more likely to be admitted to hospital, and significantly more likely to die from COVID-19, than nonsmokers.

Heavy smokers who smoked more than 20 cigarettes per day were 6.11 times more likely to die from COVID-19 than people who had never smoked.

Analysis also showed those with a genetic predisposition to being smokers had a 45% higher infection risk, and 60% higher hospitalization risk.

The authors wrote: "Overall, the congruence of observational analyses indicating associations with recent smoking behaviors and [Mendelian randomization] analyses indicating associations with lifelong predisposition to smoking and smoking heaviness support a causal effect of smoking on COVID-19 severity."

"Our results strongly suggest that smoking is related to your risk of getting severe COVID, and just as smoking affects your risk of heart disease, different cancers, and all those other conditions we know smoking is linked to, it appears that it's the same for COVID," said lead researcher Ashley K. Clift, MBBS, MA.

These results contrast with previous studies that have suggested a protective effect of smoking against COVID-19. In a linked editorial (2021 Sep 27. doi: 10.1136/thoraxjnl-2021-217685), Anthony Laverty, PhD, and Christopher Millet, PhD, Imperial College London, wrote: "The idea that tobacco smoking may protect against COVID-19 was always an improbable one."

Hospitalist Insight

Pandemic innovations that will outlast COVID

Editor's note: *Hospitalists told us about process changes that their teams have implemented during the COVID-19 pandemic.*

Shyam Odeti, MD, SFHM
Ballad Health (Bristol, Tenn.)
(Dr. Odeti was a hospitalist at Ballad Health during the period he describes below. He is currently chief of hospital medicine at Carilion Clinic, Roanoke, Va.)

Ballad Health is a 21-hospital health system serving 1.2 million population in 21 counties of rural Appalachia (northeast Tennessee, southwest Virginia, western North Carolina, and Kentucky). We saw a significant spike in COVID-19 numbers beginning in October 2020. We were at a 7.9% test-positivity rate and 89 COVID-19 hospitalizations on Oct. 1, which rapidly increased to over 18% positivity rate and over 250 hospitalizations by mid-November. This alarming trend created concerns about handling the future inpatient volumes in an already strained health system.

There were some unique challenges to this region that were contributing to the increased hospitalizations. A significant part of the population we serve in this region has low health literacy, low socioeconomic status, and problems with transportation. Telehealth in an outpatient setting was rudimentary in parts of this region.


Dr. Odeti

Ballad Health developed Safe At Home to identify lower-acuity COVID-19 patients and transition them to the home setting safely. This in turn would prevent their readmissions or return visits to the ED by implementing comprehensive oversight to their disease course. We achieved this through a collaborative approach of the existing teams, case management, telenurse team, primary care providers, and hospitalist-led transitional care. We leveraged the newly implemented EHR Epic and telehealth under the leadership of Ballad Health's chief medical information officer, Mark Wilkinson, MD.

Among the patients diagnosed with COVID-19 in ED and urgent care, low-acuity cases were identified and enrolled into Safe At Home. Patients were provided with a pulse oximeter, thermometer, and incentive spirometer. They received phone calls the next 2 days from the telenurse team for a comprehensive interview, followed by daily phone calls during the first week. If no concerns were raised initially, then calls were spaced to every 3 days after that for up to 2 weeks. Any complaints or alarming symptoms would trigger a telehealth visit with primary care physicians, transitional care clinics, or a hospitalist.

The Safe At Home program was highly successful – in the past 5 months, over 1,500 patients were enrolled and hundreds of admissions were likely avoided. As we feared, the positivity rate in our region went close to 35% and inpatient COVID-19 census was over 350, with ICU utilization over 92%. If not for our innovative solution, this pandemic could have easily paralyzed health care in our region. Our patients also felt safe, as they were monitored daily and had help one call away, 24/7.

This innovation has brought solutions through technological advancements and process improvement. Safe At Home was also instrumental in breaking down silos and developing a culture of collaboration and cohesiveness among the inpatient, outpatient, and virtual teams of the health system. Lessons learned from this initiative can be easily replicated in the management of several chronic diseases to provide safe and affordable care to our patients in the comfort of their homes.

Vasundara Singh, MBBS
Mount Sinai West (New York)

At the onset of the pandemic in New York, our medium-sized midtown hospital used personal protective equipment briskly. One reason identified was the failure to cohort COVID-19 patients on a single floor. The other more important cause was that medicine teams in our hospital have patients scattered throughout the hospital in a nongeographic model across four different floors. Within 2 weeks, administration and hospital medicine leadership developed a geographic model. We started cohorting all COVID-19–positive patients on separate floors from negative patients. A geographic physician team model was also developed, which allowed physicians and nurses to don and doff at the entry and exit of each COVID-19 unit.

After the pandemic surge, hospital medicine and internal medicine residency program leadership made the collective decision to continue the geographic model for inpatient care. Care providers enjoyed working in a unit-based model, and noted increases in efficiency while rounding. Each of our four medicine floors has 36-40 beds, with variable occupancy. We restructured our resident teams and physician assistant teams by geography. Our outgoing chief residents led the change in May, designing a resident schedule to accommodate for a resident on each team to be available to admit and provide coverage until 8 p.m. each evening on their respective floors.

The hospital medicine leadership put together a committee comprising representation of all stakeholders in this large transition of systems: attending hospitalists, physician assistants, chief residents, nurse managers, bed assignment, and administration. Since the transition and resumption of normal inpatient activity, we have encountered and addressed multiple concerns. Some notable hurdles in this transition included the high throughput on our telemetry team, movement of patients by bed board or nursing without involving the physicians in the decision, and variable nursing staffing that impacts teaching team caps because of geographic model.

This transition is very much still a work in progress, yet some benefits are already obvious. It has made bedside rounding more appealing and uncomplicated. Physicians in training learn very well at the bedside by role modeling. Greater acceptance of bedside rounding also affords the opportunity to teach physical exam skills, a dying art amongst newer generations of

doctors. Another large gain is being able to involve nursing in bedside rounds, decision-making, and discussions. Finally, coordination with ancillary staff including social work and case management has become seamless as a result of having an entire floor to ourselves.

The silver lining of this pernicious pandemic at our hospital has been a transition to a geographic model for inpatient care. This is considered to be the gold standard for inpatient care across multiple health systems, and we hope to continue to refine this geographic model of care. Next steps would involve developing capabilities with flex acuity beds on each unit so that no matter what the patients need they can stay in one place.

Marina Farah, MD, MHA

Sound Physicians (Tacoma, Wash.)

With hospital programs in over 40 states, Sound Physicians has played an important role in the COVID-19 pandemic, treating approximately 6% of all COVID hospitalizations nationwide. To meet the needs of the crisis, Sound relied on innovation to expand coverage and improve outcomes at facilities across the country.


Dr. Farah

Of one particular note, Sound Telemedicine partnered with the University of Maryland Medical System to open the state's first COVID-only hospital. In March 2020, the UMMS needed to care for an emerging cohort of COVID-19 patients while maintaining high-quality care and minimizing exposure for non-COVID patients.

Sound collaborated with UMMS to rapidly reopen the University of Maryland Laurel Medical Center for COVID-only care, staffing the hospital with Sound's telehospitalists. A model based on daily rounding delivered 100% by telemedicine providers and flexible staffing available 24/7 would let the program scale up or down to meet volume demands. Onsite physician support would be limited to one admitting doctor and a nocturnist. The COVID-only facility allowed a small group of doctors, nurses, and technicians to focus exclusively on an emerging disease, honing critical skills for treating COVID-19 patients.

UMLMC's capacity allowed UMMS to funnel COVID patients into fewer of their regional hospitals, limiting the risk of exposure. Rapid deployment got UMMS ahead of the surge, taking stress off other hospitals in the system and 24/7 telehospitalist coverage proved to be a successful long-term staffing strategy for UMLMC. Sound's staffing model and clinical processes significantly improved quality of care. Mortality rates dropped from 18% to 9% during the initial 60 days of the program.

Emory Healthcare (Atlanta)

(Comments compiled by James Kim, MD, assistant professor in the division of hospital medicine)

Ingrid Pinzon, MD, FACP
Emory Johns Creek (Ga.) Hospital

When COVID-19 started, one of the things called to my attention was the disparity in education for the Hispanic population. Unfortunately, COVID showed how in our hospitals there is a lack of instructions and education in Spanish.


Dr. Pinzon

We started educating our Hispanic community with Facebook Live via the Latin American Association. I was invited to the different Spanish news stations (Telemundo and Univision), and educated the community through food drives, where I taught about the use of face masks, social distancing, and hand hygiene.

Reena Hemrajani, MD
Grady Memorial Hospital, Atlanta

At Grady, we transitioned our weekly educational conferences into virtual events, and this has increased our attendance, as more off-service people are likely to attend when they can log on remotely. This has also allowed us to record these sessions for later viewing by those were unable to make it in real time.

Yelena Burklin, MD, FHM
Emory University Hospital Midtown

In our Midtown group, we have started a few initiatives that we will continue post COVID. Hybrid didactic lectures have had great success with excellent attendance when our didactic sessions (lunch and learns, journal clubs, core lectures for step-down unit refresher series) have been conducted virtually.

During the pandemic's height, when all resources were dedicated to COVID-19 patient care, there was a particular need to cognitively separate from "all things COVID" and provide additional topics to learn about, such as review of the management of different types of shock, chronic obstructive pulmonary disorder, sepsis, liver cirrhosis, etc. Attendance at these non–COVID-19 sessions was just as high.


Dr. Burklin

We had a number of stressful experiences that tested our resilience and overall wellness. These reflections prompted us to invite psychiatrists to one of the in-person–only sessions so that an informal conversation could be afforded in a safe space. Those hospitalists who felt the need to discuss their issues further received additional support and instructions from a subspecialist.

Sara Millwee, DNP, APRN, FNP-BC
Chief, Emory APPs

To help reduce exposure to COVID, our advanced practice providers (APPs) admitted patients from the ED (as they did pre-COVID) to the hospital medicine service, but the physicians administratively signed the note/orders. Emory Healthcare bylaws specify that patients are seen by a physician within 24 hours of admission. During the pandemic, at the time of admission, the APP discussed plan of care with the physician, but the patient was seenonly by the APP upon initial evaluation/admission, as opposed to the physician and APP pre-COVID. This improved productivity, and facilitated communication and collaboration between APPs and physicians. This also fostered an environment where APPs were practicing at the top of their licenses and improved job satisfaction.

Additionally, across the hospital medicine division, several APPs were utilized from other divisions to assist with admissions and cross cover. As the volume was at incredibly high levels, this improved the workload and burden of the hospital medicine providers. The displaced APPs were utilized at several facilities and worked under the guidance and supervision of hospital medicine providers. This has prompted leadership to look at utilizing APPs from other divisions as "PRN" providers as well.

In the Literature

Clinician reviews of HM-centric research

By Jacob Imber, MD; Beulah Koduru, MD; Anthony Nguyen, MD; Suman Pal, MD; Abu Baker Sheikh, MD; Karl Stoltze, MD

Department of Internal Medicine, University of New Mexico, Albuquerque

IN THIS ISSUE

By Jacob Imber, MD

1 Physician triage needed in the inpatient handoff process

CLINICAL QUESTION: Does inpatient handoff impact mortality among hospitalized Medicare patients?

BACKGROUND: Inpatient handoffs have been associated with increased adverse events and preventable medical errors. Studies have primarily focused on adverse events and errors in the trainee setting. This study examined data on Medicare beneficiaries hospitalized with a general medical condition and treated by a hospitalist to evaluate the association between physician handoff and patient 30-day mortality.

Dr. Imber

STUDY DESIGN: Retrospective, cross-sectional study.

SETTING: Medicare beneficiaries, random sampling.

SYNOPSIS: A total of 1,074,000 patients were studied. There was no overall association between adjusted 30-day mortality and patient handoff. In an exploratory subgroup analysis, physician handoff was associated with a slightly greater mortality among patients with high illness severity. While no causal relationship can be assumed from these results, they underscore the need for physician triage in the handoff process.

BOTTOM LINE: While handoffs are not directly associated with 30-day mortality, hospitalists should consider triaging patients by illness severity and focusing handoff on higher-acuity patients.

CITATION: Farid M et al. Assessment of care handoffs among hospitalist physicians and 30-day mortality in hospitalized Medicare beneficiaries. JAMA Netw Open. 2021 Mar 1;4(3):e213040. doi: 10.1001/jamanetworkopen.2021.3040.

2 Bedside presentations do not improve patients' medical knowledge

CLINICAL QUESTION: Does presenting to a patient at the bedside increase patient knowledge about their medical care?

BACKGROUND: Both bedside and outside-the-room patient presentations occur at training hospitals throughout the world. Bedside presentations contribute to active patient participation in medical discussions, but it is unknown whether they result in improved patient knowledge of their medical care.

STUDY DESIGN: Randomized, controlled, parallel-group trial.

SETTING: Three Swiss teaching hospitals.

SYNOPSIS: Although only 919 completed the study, 1,092 patients were randomly assigned to either bedside or outside-the-room presentations. (Exclusions occurred when patients were not present, withdrew consult, or deteriorated.) A validated questionnaire was used to evaluate patient understanding of disease, therapeutic approach, and further plans of care. No difference in medical knowledge was found between the two groups. It was noted in subgroup analyses that bedside patients noted higher levels of confusion caused by medical jargon and decreased comfort level of the medical team when they were addressing sensitive topics (such as substance misuse).

BOTTOM LINE: Bedside presentations did not improve patients' medical knowledge and may have contributed to confusion in the patients resulting from medical jargon and decreased willingness of the medical team to discuss sensitive issues.

CITATION: Becker C et al. Effect of bedside compared with outside the room patient case presentation on patients' knowledge about their medical care: A randomized, controlled, multicenter trial. Ann Intern Med. 2021 Sep;174(9):1282-92. doi: 10.7326/M21-0909.

3 Midodrine for the prevention of vasovagal syncope

CLINICAL QUESTION: Can the addition of midodrine prevent vasovagal syncope in otherwise healthy patients without adverse side effects?

BACKGROUND: Recurrent vasovagal syncope is common, associated with decreased quality of life, and challenging to treat. Midodrine has been demonstrated to decrease hypotension and syncope during tilt tests.

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

SETTING: Twenty-five university hospitals in multiple countries.

SYNOPSIS: Of patients, 138 were randomly assigned to take midodrine or placebo and were followed for 1 year after the final study participant was enrolled. The median dose of midodrine used was 7.5 mg. While most patients completed the study, 21 patients were followed for less than a year and 27 patients stopped taking their medication. Adverse effects occurred in 29 patients in the midodrine group and 25 in the placebo group. In an intention-to-treat analysis, midodrine was associated with a lower likelihood of recurrent syncope (42% vs. 61%; 95% confidence interval, 2%-36%) with a number needed to treat to prevent one syncopal episode of 5.3 (95% CI, 2.8-47.6). The study was limited by small sample size and short window of observation.

BOTTOM LINE: Midodrine is a reasonable consideration in otherwise healthy adults with recurrent syncope.

CITATION: Sheldon R et al. Midodrine for the prevention of vasovagal syncope: A randomized clinical trial. Ann Intern Med. 2021 Oct;174(10):1349-56. doi: 10.7326/M20-5415.

Dr. Imber is a hospitalist and executive director, assessment & learning, at the University of New Mexico, Albuquerque.

By Beulah Koduru, MD

4 Targeted hypothermia vs. targeted normothermia after out-of-hospital cardiac arrest

CLINICAL QUESTION: In patients with coma after out-of-hospital cardiac arrest, does targeted hypothermia lead to decreased mortality, compared with targeted normothermia?

BACKGROUND: Although guidelines strongly recommend targeted temperature management with a constant target between 32˚ C and 36˚ C, they also state that the overall evidence is of low certainty. Available trials have been identified as having significant risk of bias and random error.

STUDY DESIGN: Multicenter, randomized, superiority, open-label trial with blinded assessment of outcomes.

SETTING: Sixty-one centers in 14 countries with enrollment 2017-2020.

SYNOPSIS: Of adults with coma who had an out-of-hospital cardiac arrest of presumed cardiac or unknown cause, 1,900 were random-

ly assigned to undergo targeted hypothermia at 33˚ C, followed by controlled rewarming or targeted normothermia with early treatment (body temperature greater than 37.8˚ C). Primary outcome was death from any cause at 6 months. Secondary outcomes included functional outcome at 6 months as assessed by modified Rankin scale. Of those enrolled, 1,850 patients were evaluated for primary outcome: At 6 months, 50% in the hypothermia group had died, compared with 48% in the normothermia group (relative risk with hypothermia, 1.04; 95% CI, 0.94-1.14; *P* = .37). Of the 1,747 patients in whom functional outcome was assessed, 55% in the hypothermia group had moderately severe disability or worse (modified Rankin scale score greater than 4), compared with 55% in the normothermia group (RR with hypothermia, 1; 95% CI, 0.92-1.09). Arrhythmia resulting in hemodynamic compromise was more common in the hypothermia group than in the normothermia group (24% vs 17%; *P* less than .001). Incidence of other adverse events did not differ significantly between the two groups. Limitations of this trial were that the unblinded study design may have led to changes in treatment choices by clinical staff, concomitant care was not protocolized, and 20% of patients were co-enrolled in the TAME trial, which could be a potential confounder.


Dr. Koduru

BOTTOM LINE: In patients with coma after out-of-hospital cardiac arrest, targeted hypothermia did not lead to a lower incidence of death at 6 months and did not improve functional outcomes.

CITATION: Dankiewicz J et al. Hypothermia vs. normothermia after out-of-hospital cardiac arrest. N Engl J Med. 2021; 384:2283-94. doi: 10.1056/NEJMoa2100591.

5 Effects of intensive blood pressure treatment on orthostatic hypotension

CLINICAL QUESTION: Does intensive BP-lowering treatment lead to orthostatic hypotension (OH)?

BACKGROUND: Over the past several years, secondary analyses of trials have suggested that more intensive BP treatment lowers risk for OH, although results of individual trials were not always statistically significant. This study is the first attempt to systematically pool these trials.

STUDY DESIGN: Individual participant data meta-analysis.

SETTING: Secondary analysis.

SYNOPSIS: Of participants from primary trials, 18,466 were enrolled – mean age–baseline characteristics of 64.5 years of age with 38.9% women. In the pooled analysis of the primary five trials of BP treatment goals, patients were assigned to a more intensive vs. standard BP goal lowered the odds of OH (odds ratio, 0.93; 95% CI, 0.86-0.99). When the four placebo-controlled trials were pooled with the five trials of different BP treatment goals, more intensive BP treatment was still associated with a significantly lower risk for OH (OR, 0.93; 95% CI, 0.89-0.98). Mean postural change was conserved with more intensive BP treatment, suggesting that intensive treatment improves BP regulation upon standing by improving baroreflex function and diastolic filling while reducing left ventricular hypertrophy and stiffness. Limitations of this study were that assessments of OH were done while participants were seated and did not include the first minute after standing.

BOTTOM LINE: In contrast to widespread concerns, more intensive BP treatment did not increase a patient's risk for OH. For patients who are hospitalized for syncope or dizziness and found to have OH, adjustment of intensive BP medication may not be indicated.

CITATION: Juraschek SP et al. Effects of intensive blood pressure treatment on orthostatic hypotension. Ann Intern Med. 2021 Jan;174(1):58-68. doi: 10.7326/M20-4298.

Dr. Koduru is a hospitalist at the University of New Mexico, Albuquerque.

By Anthony Nguyen, MD; Abu Baker Sheikh, MD

6 Naltrexone therapy reduces risk of alcohol use–related hospitalizations

CLINICAL QUESTION: How does the use of pharmacotherapy for alcohol use disorder (AUD) affect rates of hospitalization, work disability, and mortality?

BACKGROUND: The use of pharmacologic agents for AUD (naltrexone, acamprosate, and disulfiram) have been shown to reduce binge-drinking behavior, maintain abstinence, and increase treatment adherence. Few studies have been conducted on how these agents affect real-world outcomes such as hospitalization rates and work disability utilization.

STUDY DESIGN: Prospective nationwide, registry-based cohort study.

SETTING: Sweden.

SYNOPSIS: This study conducted a search of a nationwide registry in Sweden to gather data on 125,556 patients with a diagnosis of AUD (25.6% of which were on at least one type of pharmacotherapy for AUD). There was a significant reduction in risk of hospitalization related to alcohol use in patients on either naltrexone combined with acamprosate (hazard ratio, 0.74; 95% CI, 0.61-0.89), naltrexone combined with disulfiram (HR, 0.76; 95% CI, 0.60-0.96), and naltrexone monotherapy (HR, 0.89; 95% CI, 0.81-0.97). Polytherapy of the studied medications was also associated with a lower risk of hospitalization resulting from any cause. No statistically significant effects were found for work disability or mortality. Acamprosate monotherapy and benzodiazepines use were associated with a higher risk of hospitalization because of AUD. Limitations of the study include that the severity of AUD was not known, the effectiveness of medications was evaluated with secondary measures, and the authors were unable to determine if patients combined psychosocial treatments along with pharmacotherapy.

BOTTOM LINE: Use of naltrexone, especially in combination with acamprosate or disulfiram, is associated with a significant reduction in risk of all-cause hospitalization.

CITATION: Heikkinen M et al. Real-world effectiveness of pharmacological treatments of alcohol use disorders in a Swedish nationwide cohort of 125,556 patients. Addiction. 2021 Aug;116(8):1990-8. doi: 10.1111/add.15384.

Dr. Nguyen is a resident at the University of New Mexico, Albuquerque. Dr. Sheikh is a hospitalist and IM associate program director at the University of New Mexico.

By Suman Pal, MD

7 Benefit of SGLT2 inhibitors in heart failure with reduced ejection fraction

CLINICAL QUESTION: In patients with heart failure with reduced ejection fraction (HFrEF), does the use

Continued on following page

Continued from previous page

of SGLT2 inhibitors improve clinical outcomes?

BACKGROUND: Sodium-glucose co-transporter-2 (SGLT2) inhibitors have been shown to improve cardiovascular outcomes in patients with type 2 diabetes mellitus. Two trials, Study to Evaluate the Effect of Dapagliflozin on the Incidence of Worsening Heart Failure or Cardiovascular Death in Patients with Chronic Heart Failure (DAPA-HF) and Empagliflozin Outcome Trial in Patients With Chronic Heart Failure With Reduced Ejection Fraction (EMPEROR-Reduced), have shown benefit of SGLT2 inhibitors in HFrEF with a composite outcome of cardiovascular death and heart failure hospitalization but were underpowered to study other clinically relevant outcomes or to assess outcomes in subgroups.

Dr. Pal

STUDY DESIGN: Meta-analysis.

SETTING: Secondary analysis.

SYNOPSIS: Study-level published data from DAPA-HF and patient-level data from EMPEROR-Reduced, including data from a total of 8,474 patient, were analyzed. The primary outcomes assessed were mortality, heart failure hospitalization, and adverse renal outcomes with a composite renal endpoint defined as 50% or higher sustained decline in estimated glomerular filtration rate, end-stage renal disease, or renal death. Subgroup analysis was done based on demographic factors, presence of diabetes mellitus, severity of heart failure, and treatment with angiotensin neprilysin inhibitor.

Combined data from the two studies showed a 31% reduction in risk of first heart failure hospitalization, a more modest 13% reduction in all-cause mortality, and 14% reduction in cardiovascular death. The risk of adverse renal outcome was significantly reduced (HR, 0.69; 95% CI, 0.62-0.78). The reduction in a composite of first hospitalization or cardiovascular death was consistent across all subgroups. The benefits were less marked but still significant for patients with more symptomatic heart failure (NYHA III-IV).

BOTTOM LINE: SGLT2 inhibitors have a beneficial role in a wide spectrum of patients with HFrEF with reduction in risk of hospitalizations for heart failure, death, and adverse renal effects.

CITATION: Zannad F et al. SGLT2 inhibitors in patients with heart failure with reduced ejection fraction: A meta-analysis of the EMPEROR-Reduced and DAPA-HF trials. Lancet. 2020 Sep 19;396(10254):819-29. doi: 10.1016/S0140-6736(20)31824-9.

Dr. Pal is a hospitalist at the University of New Mexico, Albuquerque.

By Abu Baker Sheikh, MD

8 Intravenous ferric carboxymaltose improves cardiac function

CLINICAL QUESTION: Does treating iron-deficiency anemia with IV ferric carboxymaltose in heart failure with reduced ejection fraction (HFrEF) on cardiac resynchronization therapy have any effect on cardiac function?

Dr. Sheikh

BACKGROUND: Commonly found in heart failure, iron-deficiency anemia (IDA) leads to a high risk for heart failure hospitalization and cardiovascular mortality. Because of its involvement in many enzymatic pathways, IDA is partially responsible for cardiac remodeling. In IDA with underlying HFrEF, the cardiac output does not proportionally increase with the exercise load. Additionally, the remodeling response to cardiac resynchronization therapy (CRT) in these patients is diminished. Although ferric carboxymaltose (FCM) has been known to reduce heart failure admissions in this patient cohort, little information is available about its impact on cardiac function and structure.

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

SETTING: Two sites in Belgium.

SYNOPSIS: Of patients with symptomatic HFrEF with underlying IDA and a persistently reduced left ventricular ejection fraction (LVEF) less than 45% at least 6 months after CRT on maximum guideline-recommended medical therapy, 75 were included. At baseline, both treatment groups were well matched. Of the 75, 38 received 250 ml of 0.9% normal saline and 37 received FCM. After 3 months, LVEF was significantly higher for the FCM group (*P* less than .001). A significant improvements in left ventricular end-systolic volume (*P* less than .001), cardiac contractility index (*P* less than .001), and functional status (*P* = .011) were also noted. Left ventricular end-diastolic volume did not vary significantly. Limitations included lack of magnetic resonance imaging and invasive modalities to measure contractility, small sample size, and limited inclusion of only patients with HFrEF on CRT, so results might not apply to all HFrEF patients.

BOTTOM LINE: Treating IDA in patients with HFrEF on optimal medical and device therapy leads to reverse cardiac remodeling which improves LVEF, LV end-systolic volume, cardiac contractility, and functional status.

CITATION: Martens P et al. The effect of intravenous ferric carboxymaltose on cardiac reverse remodelling following cardiac resynchronization therapy-the IRON-CRT trial. Eur Heart J. 2021 June; ehab411. doi: 10.1093/eurheartj/ehab411.

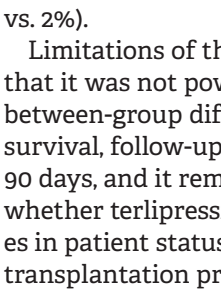
Dr. Sheikh is a hospitalist and IM associate program director at the University of New Mexico.

By Karl Stoltze, MD

9 Terlipressin plus albumin for the treatment of type 1 hepatorenal syndrome

CLINICAL QUESTION: Does the use of the vasoconstrictor terlipressin plus albumin, compared with albumin alone, improve the chance of renal recovery in patients with cirrhosis and type 1 hepatorenal syndrome (HRS-1)?

BACKGROUND: Patients with decompensated cirrhosis and ascites who develop HRS-1 have a very high mortality rate with a median survival of weeks to months if left untreated. Liver transplant is the only curative treatment for HRS-1. Terlipressin, a synthetic vasopressin analogue, can redistribute circulatory volume from the splanchnic to the systemic circulation and increase renal perfusion. Prior studies on its use have been relatively small, and more data are needed to confirm its safety and efficacy.



Dr. Stoltze

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

SETTING: Sixty clinical sites in the United States and Canada.

SYNOPSIS: Of patients with HRS-1, Cr 2.25 mg/dL or more, cirrhosis, and ascites, 300 were randomly assigned in a 2:1 ratio to receive terlipressin (199) or placebo (101). The mean duration of follow-up was 56 days. The percentage of patients who had reversal of HRS-1 by day 14 (Cr 1.5 mg/dL or less, survival, absence of renal replacement therapy) was significantly higher in the terlipressin group (32% vs. 17%; *P* = .006), and HRS reversal persisted to day 30. There was no difference in overall or transplant-free survival at 90 days. The terlipressin group received fewer liver transplants within 90 days (23% vs. 29%). More patients in the terlipressin group died from respiratory disorders during treatment (3% vs. 0%) and within 90 days (11% vs. 2%).

Limitations of this study include that it was not powered to assess between-group differences in survival, follow-up was limited to 90 days, and it remains unknown whether terlipressin-related changes in patient status may influence transplantation priority.

BOTTOM LINE: The use of terlipressin plus albumin was more efficacious than placebo plus albumin in producing verified reversal of HRS-1 in patients with decompensated cirrhosis, but overall 90-day mortality was unchanged and there were more deaths from respiratory disorders in the terlipressin group.

CITATION: Wong F et al. Terlipressin plus albumin for the treatment of type 1 hepatorenal syndrome. N Engl J Med. 2021;384(9):818-28. doi: 10.1056/NEJMoa2008290.

Dr. Stoltze is a hospitalist at the University of New Mexico.

SHORT TAKES

Lactated ringers does not reduce SIRS at 24 hours compared with normal saline

This meta-analysis found no statistically significant difference in systemic inflammatory response syndrome (SIRS) at 24 hours in patients with acute pancreatitis who received fluid resuscitation with lactate ringers, as opposed to normal saline, but did find a statistically significant reduction in rates of ICU admission in patients that received lactate ringers.

CITATION: Vedantam S et al. Lactated ringers does not reduce SIRS in acute pancreatitis compared to normal saline: An updated meta-analysis (published online ahead of print). Dig Dis Sci. 2021 Jul 30. doi: 10.1007/s10620-021-07153-5.

Chronically interrupted

Communication with patients and families during the pandemic

By Nichola Haddad, MD; John Halporn, MD; Ebrahim Barkoudah, MD, MPH

Case narrative

A 35-year-old woman has worsening alcoholic cirrhosis and repeated admissions for ascites, hepatorenal syndrome, and alcoholic hepatitis. Upon recognition of her grave prognosis, we proceeded with a shared-management approach involving medicine, gastroenterology, social work, chaplaincy, and palliative care. When the team spoke with the patient's health care proxy (HCP), family, and friends for collateral information and involvement in goals of care conversation, we realized that none were aware of her months-long decline and poor prognosis for recovery to hospital discharge.

Although several factors contributed to the disconnect between the patient and her support system, the obstacles were greatly exacerbated by profound changes in hospital protocol because of the COVID-19 pandemic. Physicians feel underprepared and challenged by prognostication and discussion of end of life during normal times; we believe COVID-19 has limited this essential physician role and led to tragic delays in effective communication and end-of-life planning.

Closing the loop

For patients with complex medical issues or those reaching end of life, effective communication within the health care system is critical. While inpatient teams often drive the plan, they care for their patients during a snapshot in time; contrarily, primary care providers (PCPs) and specialists often have established longitudinal relationships with their patients. Ergo, clinicians should communicate directly, and ideally with both patients and families, to achieve patient-centered and goal-concordant care.

For medically complex patients, PCPs tend to prefer verbal handoffs. Timely and reliable communication between inpatient and outpatient providers has also been shown to prevent medical adverse events.[1] Despite this, direct communication occurs infrequently.[2] Given that hospitalists serve as primary inpatient providers for most general admissions, it is their responsibility to communicate with outpatient providers.

A multidisciplinary team redesigned the process by which PCPs were contacted following patient discharge. The transmission of information should ideally occur prior to discharge.[3] Deficits in communication are extremely common and may negatively impact patient care, patient satisfaction, and patient safety.

Level	Proposal
Clinicians/Providers	• Emphasize active involvement of patient/family with global understanding of next steps • Stress the value of communication alongside utilizing education and training resources • Advocate for patients/families to engage further resources and infrastructure • Rework discharge protocols to add redundancy for known communication deficits (i.e., making inpatient-outpatient connections between social workers, physical and occupational therapists, nurses, case managers)
Hospital	• Standardize discharge communications to include operational active involvement of caregivers through quality improvement initiatives • Support hospital systems to apply effective hospital visiting policies • Align the resources with value-based metrics • Incorporate new team structure with the redeployment of healthcare workforce (i.e., OR providers with work reductions with the cancellation of elective procedures); experienced providers can focus on providing enhanced communication with families and outpatient providers
Health System	• Implement tools that integrate innovative technology into solutions for communication • Ensure family/caregiver understanding of discharge plan and contingencies such as tele-conferencing • Utilize standardized tools such as I-PASS for objective data as vehicles for transition of information • Promote provider readiness for goals of care conversations with patients and families through training, documentation tools, and dedicated communication time and locations
Policy	• Leverage health policy efforts to place the patient/family at the center of system improvement rather than focusing on mandates and liability aspects. • Address the current barriers of the current pandemic and identify opportunities to facilitate implementation of communication tools.

Table 1. Proposal for improving communication between clinicians in the era of COVID-19.

Changes to communication during the COVID-19 era

During the pandemic, patients have only one visitor per day, restricted visiting hours, and limited interactions with clinicians per implemented policies. Along with the increased burdens from personal protective equipment, remote hospital providers (social workers, case managers), and increased bureaucratic duties, COVID-19 has elucidated limitations in medical capacity and revealed the difficulties that clinicians face in communicating with patients and families, especially about serious illness.

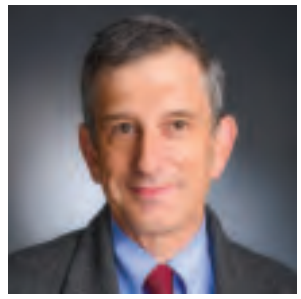
Tasks include facilitating virtual goodbyes between dying patients and families, conducting family meetings via teleconference, and discussing patient care with specialists through virtual technologies.[4] While these tasks are arguably more important during a global disaster, COVID-19 paradoxically restricts physical presence and severely hinders communication.[5] Clinicians should continue to utilize core skills like building rapport, assessing patient/family perspectives and agenda, and using empathy.[6] Patients tend to more frequently value functional outcomes while clinicians tend to default to treatment modalities.[7]

Deficits in communication are extremely common and may negatively impact patient care, patient satisfaction, and patient safety.

Additionally, goals of care and end-of-life discussions are associated with improved quality of life, fewer aggressive medical interventions near death, and even increased survival.

Given the limited resources and difficulties in communication during the pandemic, clinicians

Continued on following page


Dr. Haddad is a resident physician in the psychiatry residency program at Brigham and Women's Hospital, Boston. Dr. Halporn is clinic director, Division of Adult Palliative Care, in the department of psychosocial oncology and palliative care, Dana-Farber Cancer Institute and Brigham and Women's Hospital. Dr. Barkoudah is associate director of the Hospital Medicine Unit at Brigham and Women's Hospital.

Mortality in second wave higher with ECMO for COVID-ARDS

By Neil Osterweil

For patients with refractory acute respiratory distress syndrome (ARDS) caused by COVID-19 infections, extracorporeal membrane oxygenation (ECMO) may be the treatment of last resort.

But for reasons that aren't clear, in the second wave of the COVID-19 pandemic at a major teaching hospital, the mortality rate of patients on ECMO for COVID-induced ARDS was significantly higher than it was during the first wave, despite changes in drug therapy and clinical management, reported Rohit Reddy, BS, a second-year medical student, and colleagues at Thomas Jefferson University Hospital in Philadelphia.

During the first wave, from April to September 2020, the survival rate of patients while on ECMO in their ICUs was 67%. In contrast, for patients treated during the second wave, from November 2020 to March 2021, the ECMO survival rate was 31% (P = .003).

The 30-day survival rates were also higher in the first wave compared with the second, at 54% versus 31%, but this difference was not statistically significant.

"More research is required to develop stricter inclusion/exclusion criteria and to improve pre-ECMO management in order to improve outcomes," Mr. Reddy said in a narrated poster presented at the annual meeting of the American College of Chest Physicians, held virtually.

ARDS is a major complication of COVID-19 infections, and there is evidence to suggest that COVID-associated ARDS is more severe than ARDS caused by other causes.

"ECMO, which has been used as a rescue therapy in prior viral outbreaks, has been used to support certain patients with refractory ARDS due to COVID-19, but evidence for its efficacy is limited. Respiratory failure remained a highly concerning complication in the second wave of the COVID-19 pandemic, but it is unclear how the evolution of the disease and pharmacologic utility has affected the clinical utility of ECMO," Mr. Reddy said.

To see whether changes in disease course or in treatment could explain changes in outcomes for patients with COVID-related ARDS, the investigators compared characteristics and outcomes for patients treated in the first versus second waves of the pandemic. Their study did not include data from patients infected with the Delta variant of the SARS-CoV-2 virus, which became the predominant viral strain later in 2021.

> *"We speculate that sepsis was attributed to use of immune modulation therapy. The prevention of the sepsis would be key to improve survival of ECMO for COVID-19."*

The study included data on 28 patients treated during the first wave, and 13 during the second. The sample included 28 men and 13 women with a mean age of 51 years.

All patients had venovenous ECMO, with cannulation in the femoral or internal jugular veins; some patients received ECMO via a single double-lumen cannula.

There were no significant differences between the two time periods in patient comorbidities prior to initiation of ECMO.

Patients in the second wave were significantly more likely to receive steroids (54% vs. 100%; P = .003) and remdesivir (39% vs. 85%; P = .007). Prone positioning before ECMO was also significantly more frequent (11% vs. 85%; P < .001).

Patients in the second wave stayed on ECMO longer – median 20 days versus 14 days for first-wave patients – but as noted before, ECMO mortality rates were significantly higher during the second wave. During the first wave, 33% of patients died while on ECMO, compared with 69% in the second wave (P = .03). Respective 30-day mortality rates were 46% versus 69% (ns).

Rates of complications during ECMO were generally comparable between the groups, including acute renal failure (39% in the first wave vs 38% in the second), sepsis (32% vs. 23%), bacterial pneumonia (11% vs. 8%), and gastrointestinal bleeding (21% vs. 15%). However, significantly more patients in the second wave had cerebral vascular accidents (4% vs. 23%; P = .050).

Senior author Hitoshi Hirose, MD, PhD, professor of surgery at Thomas Jefferson University, said in an interview that the difference in outcomes was likely caused by changes in pre-ECMO therapy between the first and second waves.

"Our study showed the incidence of sepsis had a large impact on the patient outcomes," he wrote. "We speculate that sepsis was attributed to use of immune modulation therapy. The prevention of the sepsis would be key to improve survival of ECMO for COVID 19."

"It's possible that the explanation for this is that patients in the second wave were sicker in a way that wasn't adequately measured in the first wave," CHEST 2021 program cochair Christopher Carroll, MD, FCCP, from Connecticut Children's Medical Center in Hartford, said in an interview.

The differences may also have been attributable to changes in virulence, or to clinical decisions to put sicker patients on ECMO, he said.

Casey Cable, MD, MSc, a pulmonary disease and critical care specialist at Virginia Commonwealth Medical Center in Richmond, speculated that second-wave patients may have been sicker.

"I wonder if there is a subset of really sick patients, and no matter what we treat with – steroids, proning – whatever we do they're just not going to do well," she said.

Both Dr. Carroll and Dr. Cable emphasized the importance of ECMO as a rescue therapy for patients with severe, refractory ARDS associated with COVID-19 or other diseases.

Continued from previous page

should place greater emphasis on values-based shared decision-making. Internet-based solutions are essential and widely used, and videoconferencing has been initiated at the institutional scale at many hospitals. Many clinicians with little experience are broadly implementing these technologies.[7] Despite these technological innovations, issues still arise in how to communicate effectively in the hospital setting, and we must acknowledge that strategies require devices, Internet access, and technological literacy, highlighting disparities in access to quality health care.[6]

Conversations during the pandemic will require listening, empathy, responsive action, and the acknowledgment of the social determinants of health.[7]

Improving communication and transition of care

Multiple steps will be warranted to implement the safe transition process and improve communication. High-quality patient care encompasses careful review of medications, communication between inpatient and outpatient providers, and close follow-up at discharge. These steps serve to increase our reliance on patient compliance and the exchange of information about global progression of disease.

The quantitative and qualitative steps of transition of care should overcome disconnect between teams, specifically deficit areas regarding postdischarge communication, monitoring, and understanding of prognosis around the relevance to this era of COVID-19.

References

1. Goldman L et al. Passing the clinical baton: 6 principles to guide the hospitalist. Am J Med. 2001;111(9B):36S-39S. doi: 10.1016/s0002-9343(01)00968-8.

2. Kripalani S et al. Deficits in communication and information transfer between hospital-based and primary care physicians. JAMA. 2007 Feb 28;297(8):831-41. doi: 10.1001/jama.297.8.831.

3. Scotten M et al. Minding the gap: Interprofessional communication during inpatient and post discharge chasm care. Patient Educ Couns. 2015 Jul;98(7):895-900. doi: 10.1016/j.pec.2015.03.009.

4. Back A et al. Communication skills in the age of COVID-19. Ann Intern Med. 2020 Jun 2;172(11):759-60. doi: 10.7326/M20-1376.

5. Hart JL et al. Family-centered care during the COVID-19 era. J Pain Symptom Manage. 2020 Aug;60(2):e93-7. doi: 10.1016/j.jpainsymman.2020.04.017.

6. Rubinelli S et al. Implications of the current COVID-19 pandemic for communication in healthcare. Patient Educ Couns. 2020 Jun;103(6):1067-9. doi: 10.1016/j.pec.2020.04.021.

7. Simpson N et al. Don't forget shared decision-making in the COVID-19 crisis. Intern Med J. 2020 Jun;50(6):761-3. doi: 10.1111/imj.14862.

Hospitalists/Nocturnists

Ochsner Health is seeking physicians to join our hospitalist team. BC/BE Internal Medicine and Family Medicine physicians are welcomed to apply. Highlights of our opportunities are:

- Hospital Medicine was established at Ochsner in 1992. We have a stable 50+ member group.
- 7 on 7 off block schedule with flexibility
- Dedicated nocturnists cover nights
- Base plus up to 40 K in incentives
- Average census of 14-18 patients
- E-ICU intensivist support with open ICUs at the community hospitals
- EPIC medical record system with remote access capabilities
- Dedicated RN and Social Work Clinical Care Coordinators
- Community based academic appointment
- The only Louisiana Hospital recognized by *U.S. News and World Report* Distinguished Hospital for Clinical Excellence award in 3 medical specialties
- Co-hosts of the annual Southern Hospital Medicine Conference
- We are a medical school in partnership with the University of Queensland providing clinical training to third and fourth year students.
- Leadership support focused on professional development, quality improvement, and academic committees & projects
- Opportunities for leadership development, research, resident and medical student teaching
- Skilled nursing and long term acute care facilities seeking hospitalists and mid-levels with an interest in geriatrics
- Paid malpractice coverage and a favorable malpractice environment in Louisiana
- Generous compensation and benefits package

Ochsner Health is a system that delivers health to the people of Louisiana, Mississippi and the Gulf South with a mission to **Serve, Heal, Lead, Educate and Innovate**. Ochsner Health is a not-for-profit committed to giving back to the communities it serves through preventative screenings, health and wellness resources and partnerships with innovative organizations that share our vision. Ochsner Health healed more than 876,000 people from across the globe in 2019, providing the latest medical breakthroughs and therapies, including digital medicine for chronic conditions and telehealth specialty services. Ochsner Health is a national leader, named the top hospital in Louisiana and a top children's hospital by *U.S. News & World Report*. As Louisiana's leading healthcare educator, Ochsner Health and its partners educate thousands of healthcare professionals annually. Ochsner Health is innovating healthcare by investing in new technologies and research to make world-class care more accessible, affordable, convenient and effective. Ochsner's team of more than 26,000 employees and 4,500 providers are working to reinvent the future of health and wellness in the region. To learn more about Ochsner Health, please visit **www.ochsner.org**. To transform your health, please visit **www.ochsner.org/healthyyou**.

Interested physicians should apply to:
https://ochsner.wd1.myworkdayjobs.com/en-US/OchsnerPhysician/job/New-Orleans—New-Orleans-Region—Louisiana/Hospital-Medicine-Sourcing-Requisition—all-regions_REQ_00022186

Sorry, no opportunities for J1 applications.

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

Ochsner Health

325038

CENTERED ON YOU

LUCRATIVE HOSPITALIST OPPORTUNITY

BAPTIST HEALTH MEDICAL GROUP IS SEEKING BE/BC INTERNAL MEDICINE PHYSICIANS. If you are an internal medicine physician looking for a health system where you can be a vital part of the team, Baptist Health would like to hear from you. At Baptist Health Medical Group, you'll find a caring, collaborative environment, where leadership listens, work/life balance is a priority, and there is a strong focus on family.

Our medical group is a growing network that encompasses nearly 1,500 providers, including more than 750 employed physicians and more than 740 advanced practice clinicians. With hospitals in metro and rural areas throughout Kentucky and southern Indiana, you'll find a location where you feel at home.

Baptist Health Medical Group offers:
- Competitive compensation
- Comprehensive benefits package
- Starting bonus and relocation allowance
- Epic, electronic health record fully integrated in all facilities
- CME allowance

329603

For more information or to submit your CV, contact Cindy Keller at **Cindy.Keller@bhsi.com** or **865.242.5317** or Joan Lustig at **Joan.Lustig@bhsi.com** or **502.807.7908.**

ChooseBaptist.com

BAPTIST HEALTH® MEDICAL GROUP

CEO Corner

Reflecting on 2021, looking forward to 2022

Our profession is more vital than ever

By Eric E. Howell, MD, MHM

This month marks the end of my first full calendar year as SHM CEO. Over the years, I have made it a habit to take time to reflect during the month of December, assessing the previous year by reviewing what went well and what could have gone better, and how I can grow and change to meet the needs of future challenges. This reflection sets the stage for my personal and professional "New Year" goals.

This year, 2021, is certainly a year deserving of reflection, and I believe 2022 (and beyond) will need ambitious goals made by dedicated leaders, hospitalists included. Here are my thoughts on what went well in 2021 and what I wish went better – from our greater society to our specialty, to SHM.

Society (as in the larger society)

What went well: Vaccines

There is a lot to be impressed with in 2021, and for me, at the top of that list are the COVID-19 vaccines. I realize the research for mRNA vaccines started more than 20 years ago, and the most successful mRNA vaccine companies have been around for more than a decade, but to roll out a COVID-19 vaccine in less than a year is still just incredible. To take a disease with a 2% mortality rate for someone like myself and effectively reduce that to near zero is something historians will be writing about for years to come.

What I wish went better: Open dialogue

I can't remember when we stopped listening to each other, and by that, I mean listening to those who do not think exactly like ourselves. As a kid, I was taught to be careful about discussing topics at social events that could go sideways. That usually involved politics, money, or strong beliefs, but wow – now, that list is much longer. Talking about the weather used to be safe, but not anymore. If I were to show pictures of the recent flooding in Annapolis? There would almost certainly be a debate about climate change. At least we can agree on Ted Lasso as a safe topic.

Our specialty

What went well: Hospitalists are vital

There are many, many professions that deserve "hero" status for their part in taming this pandemic: nurses, doctors, emergency medical services, physical therapists, physician assistants, nurse practitioners, administrators, and more. But in the doctor category, hospitalists are at the top. Along with our emergency department and intensivist colleagues, hospitalists are one of the pillars of the inpatient response to COVID. More than 3.2 million COVID-19 hospitalizations have occurred, according to the Centers for Disease Control and Prevention, with numerous state dashboards showing three-quarters of those are cared for on general medical wards, the domain of hospitalists (for example, see my own state of Maryland's COVID-19 dashboard: https://coronavirus.maryland.gov).

> *"As a profession, we need to be more deliberate about getting credit for the fantastic work we have done to care for COVID-19 patients."*

We've always had "two patients" – the patient in the bed and the health care system. Many hospitalists have helped their institutions by building COVID care teams, COVID wards, or in the case of Mindy Kantsiper, MD, building an entire COVID field hospital in a convention center. Without hospitalists, both patients and the system that serves them would have fared much worse in this pandemic. Hospitalists are vital to patients and the health care system. The end. Period. End of story.

What I wish went better: Getting credit

As a profession, we need to be more deliberate about getting credit for the fantastic work we have done to care for COVID-19 patients, as well as inpatients in general. SHM can and must focus more on how to highlight the great work hospitalists have done and will continue to do. A greater understanding by the health care industry – as well as the general public – regarding the important role we play for patient care will help add autonomy in our profession, which in turn adds to resilience during these challenging times.

SHM

What went well: Membership grew

This is the one thing that we at SHM – and I personally – are most proud of. SHM is a membership society; it is the single most important metric for me personally. If physicians aren't joining, then we are not meeting our core mission to provide value to hospitalists. My sense is the services SHM provides to hospitalists continue to be of value – even during these strenuous times of the pandemic when we had to be physically distant.

Whether it's our Government Relations Department advocating for hospitalists in Washington, or the Journal of Hospital Medicine, or this very magazine, The Hospitalist, or SHM's numerous educational offerings, chapter events, and SHM national meetings (Converge, Pediatric Hospital Medicine, Leadership Academies, Academic Hospitalist Academy, and more), SHM continues to provide hospitalists with vital tools to help you in your career.

This is also very much a two-way street. If you are reading this, know that without you, our members, our success would not be possible. Your passion and partnership drive us to innovate to meet your needs and those of the patients you serve every day. Thank you for your continued support and inspiration.

What could have gone better: Seeing more of you, in person

This is a tough one for me. Everything I worried about going wrong for SHM in 2021 never materialized. A year ago, my fears for SHM were that membership would shrink, finances would dry up, and the SHM staff would leave (by furlough or by choice). Thankfully, membership grew, our finances are in very good shape for any year, let alone a pandemic year, and the staff have remained at SHM and are engaged and dedicated! SHM even received a "Best Place to Work" award from the Philadelphia Business Journal.

Maybe the one regret I have is that we could not do more in-person events. But even there, I think we did better than most. We had some chapter meetings in person, and the October 2021 Leadership Academy hosted 110 hospitalist leaders, in person, at Amelia Island, Fla. That Leadership Academy went off without a hitch, and the early reviews are superb. I am very optimistic about 2022 in-person events!

Dr. Howell is the CEO of the Society of Hospital Medicine.

Looking forward: 2022 and beyond

I have no illusions that 2022 is going to be easy. I know that the pandemic will not be gone (even though cases are falling nationwide as of this writing), that our nation will struggle with how to deal with polarization, and the workplace will continue to be redefined. Yet, I can't help but be optimistic.

The pandemic will end eventually; all pandemics do. My hope is that young leaders will step forward to help our nation work through the divisive challenges, and some of those leaders will even be hospitalists! I also know that our profession is more vital than ever, for both patients and the health care system. We're even getting ready to celebrate SHM's 25th anniversary, and we can't wait to revisit our humble beginnings while looking at the bright future of our society and our field.

I am working on my 2022 "New Year" goals, but you can be pretty sure they will revolve around making the world a better place, investing in people, and being ethical and transparent.

The Future Hospitalist

A case-based framework for de-escalating conflict

By Rachna Rawal, MD; Allison Ashford, MD; Nicole Lee, MD; Eileen Barrett, MD, SFHM

Hospital medicine can be a demanding and fast-paced environment where resources are stretched thin, with both clinicians and patients stressed. A hospitalist's role is dynamic, serving as an advocate, leader, or role model while working with interdisciplinary and diverse teams for the welfare of the patient. This constellation of pressures makes a degree of conflict inevitable.

Often, an unexpected scenario can render the hospitalist uncertain and yet the hospitalist's response can escalate or deescalate conflict. The multiple roles that a hospitalist represents may buckle to the single role of advocating for themselves, a colleague, or a patient in a tense scenario. When this happens, many hospitalists feel disempowered to respond.

De-escalation is a practical skill that involves being calm, respectful, and open minded toward the other person, while also maintaining boundaries. Here we provide case-based tips and skills that highlight the role for de-escalation.

Questions to ask yourself in midst of conflict:

- How did the problematic behavior make you feel?
- What will be your approach in handling this?
- When should you address this?
- What is the outcome you are hoping to achieve?
- What is the outcome the other person is hoping to achieve?

Case 1

There is a female physician rounding with your team. Introductions were made at the start of a patient encounter. The patient repeatedly calls the female physician by her first name and refers to a male colleague as "doctor."

Commentary: This scenario is commonly encountered by women who are physicians. They may be mistaken for the nurse, a technician, or a housekeeper. This exacerbates inequality and impostor syndrome as women can feel unheard, undervalued, and not recognized for their expertise and achievements. It can be challenging for a woman to reaffirm herself as she worries that the patient will not respect her or will think that she is being aggressive.

Approach: It is vital to interject by firmly reintroducing the female physician by her correct title. If you are the subject of this scenario, you may interject by firmly reintroducing yourself. If the patient or a colleague continues to refer to her by her first name, it is appropriate to say, "Please call her Dr. XYZ." There is likely another female colleague or trainee nearby that will view this scenario as a model for setting boundaries.

To prevent similar future situations, consistently refer to all peers by their title in front of patients and peers in all professional settings (such as lectures, luncheons, etc.) to establish this as a cultural norm. Also, utilize hospital badges that clearly display roles in large letters.

Case 2

During sign out from a colleague, the colleague repeatedly refers to a patient hospitalized with sickle cell disease as a "frequent flyer" and "drug seeker," and then remarks, "you know how these patients are."

Commentary: A situation like this raises concerns about bias and stereotyping. Everyone has implicit bias. Recognizing and acknowledging when implicit bias affects objectivity in patient care is vital to providing appropriate care. It can be intimidating to broach this subject with a colleague as it may cause the colleague to become defensive and uncomfortable as revealing another person's bias can be difficult. But physicians owe it to a patient's wellbeing to remain objective and to prevent future colleagues from providing subpar care as a result.

Approach: In this case, saying, "Sometimes my previous experiences can affect my thinking. Will you explain what behaviors the patient has shown this admission that are concerning to you? This will allow me to grasp the complexity of the situation." Another strategy is to share that there are new recommendations for how to use language about patients with sickle cell disease and patients who require opioids as a part of their treatment plan. Your hospitalist group could have a journal club on how bias affects patients and about the best practices in the care of people with sickle cell disease. A next step could be to build a quality improvement project to review the care of patients hospitalized for sickle cell disease or opioid use.

Case 3

You are conducting bedside rounds with your team. Your intern, a person of color, begins to present. The patient interjects by requesting that the intern leave as he "does not want a foreigner taking care" of him.

Commentary: Requests like this can be shocking. The team leader has a responsibility to immediately act to ensure the psychological safety of the team. Ideally, your response should set firm boundaries and expectations that support the learner as a valued and respected clinician and allow the intern to complete the presentation. In this scenario, regardless of the response the patient takes, it is vital to maintain a safe environment for the trainee. It is crucial to debrief with the team immediately after as an exchange of thoughts and emotions in a safe space can allow for everyone to feel welcome. Additionally, this debrief can provide insights to the team leader of how to address similar situations in the future. The opportunity to allow the intern to no longer follow the patient should be offered, and if the intern opts to no longer follow the patient, accommodations should be made.

Approach: "This physician is a member of the medical team, and we are all working together to provide you with the best care. Everyone on this team is an equal. We value diversity of our team members as it allows us to take care of all our patients. We respect you and expect respect for each member of the team. If you feel that you are unable to respect our team members right now, we will leave for now and return later." To ensure the patient is provided with appropriate care, be sure to debrief with the patient's nurse.


Dr. Rawal


Dr. Ashford


Dr. Lee


Dr. Barrett

Dr. Rawal is clinical assistant professor of medicine at the University of Pittsburgh Medical Center. Dr. Ashford is assistant professor and program director in the department of internal medicine/pediatrics at the University of Nebraska Medical Center, Omaha. Dr. Lee and Dr. Barrett are based in the department of internal medicine, University of New Mexico School of Medicine, Albuquerque.
This article is sponsored by the SHM Physicians in Training (PIT) committee, which submits quarterly content to The Hospitalist on topics relevant to trainees and early-career hospitalists.

Conclusion

These scenarios represent some of the many complex interpersonal challenges hospitalists encounter. These approaches are suggestions that are open to improvement as de-escalation of a conflict is a critical and evolving skill and practice.

For more tips on managing conflict, consider reading "Crucial Conversations" (3rd edition. New York: McGraw Hill, 2022) by Kerry Patterson and colleagues. These skills can provide the tools we need to recenter ourselves when we are in the midst of these challenging situations.

HOSPITALIST OPPORTUNITIES NORTHWEST OF BOSTON

Location, Location, Location

WORLD-RENOWNED AFFILIATIONS | 30 MINUTES FROM BOSTON | QUALITY OF LIFE

Come join a collegial and supportive hospitalist team at Emerson Hospital located in historic Concord, Massachusetts. Enjoy living in the suburbs with convenient access to metropolitan areas such as Boston, New York and Providence as well as the mountains, lakes and coastal areas.

Emerson Hospital is seeking a Director of Clinical Operations as well as full or part time hospitalists to join our well-established team of 12 attending physicians and 3 nurse practitioners.

- Manageable daily census
- Flexible scheduling to ensure work life balance
- Dedicated nocturnist program
- Intensivist coverage of critical care unit
- Competitive compensation and bonus structure
- Comprehensive benefit package including CME allowance
- Access to top specialty care

For more information please contact:

Diane M Forte Willis
Director of Physician Recruitment and Relations
phone: 978-287-3002
email: dfortewillis@emersonhosp.org

Not a J-1 or H1B opportunity

About Concord, MA and Emerson Hospital

Emerson Hospital provides advanced medical services to more than 300,000 people in over 25 towns. We are a 179 bed hospital with more than 300 primary care doctors and specialists.

Our core mission has always been to make high-quality health care accessible to those that live and work in our community. While we provide most of the services that patients will ever need, the hospitals strong clinical collaborations with Boston's academic medical centers ensures our patients have access to world-class resources for more advanced care.

Emerson Hospital
Premium Care. Personal Touch.
EMERSONHOSPITAL.ORG

325037

T0621