Celebrating Black hospital medicine professionals

IN THE LITERATURE
Johns Hopkins

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For patients hospitalized with COVID-19, HELP REDUCE DISEASE PROGRESSION AND SHORTEN RECOVERY TIME

INDICATION
VEKLURY is indicated for the treatment of COVID-19 in adults and pediatric patients (≥28 days old and weighing ≥3 kg), who are:
• Hospitalized, or
• Not hospitalized, have mild-to-moderate COVID-19, and are at high risk for progression to severe COVID-19, including hospitalization or death.

IMPORTANT SAFETY INFORMATION
Contraindication
• VEKLURY is contraindicated in patients with a history of clinically significant hypersensitivity reactions to VEKLURY or any of its components.

Warnings and precautions
• Hypersensitivity, including infusion-related and anaphylactic reactions: Hypersensitivity, including infusion-related and anaphylactic reactions, has been observed during and following administration of VEKLURY; most reactions occurred within 1 hour. Monitor patients during infusion and observe for at least 1 hour after infusion is complete for signs and symptoms of hypersensitivity as clinically appropriate. Symptoms may include hypotension, hypertension, tachycardia, bradycardia, hypoxia, fever, dyspnea, wheezing, angioedema, rash, nausea, diaphoresis, and shivering. Slower infusion rates (maximum infusion time of up to 120 minutes) can potentially prevent these reactions. If a severe infusion-related hypersensitivity reaction occurs, immediately discontinue VEKLURY and initiate appropriate treatment (see Contraindications).
• Increased risk of transaminase elevations: Transaminase elevations have been observed in healthy volunteers and in patients with COVID-19 who received VEKLURY; these elevations have also been reported as a clinical feature of COVID-19. Perform hepatic laboratory testing in all patients (see Dosage and administration). Consider discontinuing VEKLURY if ALT levels increase to >10x ULN. Discontinue VEKLURY if ALT elevation is accompanied by signs or symptoms of liver inflammation.
• Risk of reduced antiviral activity when coadministered with chloroquine or hydroxychloroquine: Coadministration of VEKLURY with chloroquine phosphate or hydroxychloroquine sulfate is not recommended based on data from cell culture experiments, demonstrating potential antagonism, which may lead to a decrease in the antiviral activity of VEKLURY.

Adverse reactions
• The most common adverse reaction (≥5% all grades) was nausea.
• The most common lab abnormalities (≥5% all grades) were increases in ALT and AST.

Dosage and administration
— Administration should take place under conditions where management of severe hypersensitivity reactions, such as anaphylaxis, is possible.

ECMO=extracorporeal membrane oxygenation.
**In the ACTT-1 overall study population, patients experienced**

**5 DAYS SHORTER RECOVERY TIME WITH VEKLURY**

<table>
<thead>
<tr>
<th>Median 10 days with VEKLURY vs 15 days with placebo; recovery rate ratio: 1.29 (95% CI, 1.12 to 1.49), P&lt;0.001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery was defined as patients who were no longer hospitalized or hospitalized but no longer required ongoing COVID-19 medical care</td>
</tr>
</tbody>
</table>

**Significantly greater likelihood of improvement in clinical status, a key secondary endpoint**

- Patients were 54% more likely to have improved clinical status on Day 15 vs placebo; odds ratio for improvement: 1.54 (95% CI, 1.25 to 1.91)

**Helped reduce progression to more severe disease, an additional secondary endpoint**

- 7% absolute reduction in incidence of new noninvasive ventilation or high-flow oxygen with VEKLURY (17%, n=307) vs placebo (24%, n=266) in patients who did not receive either at baseline (95% CI, -14 to -1)
- 10% absolute reduction in incidence of new mechanical ventilation or ECMO with VEKLURY (13%, n=402) vs placebo (23%, n=364) in patients who did not receive either at baseline (95% CI, -15 to -4)

**Adverse reaction frequency was comparable between VEKLURY and placebo**

- All adverse reactions (ARs), Grades ≥3: 41 (8%) with VEKLURY vs 46 (9%) with placebo; serious ARs: 2 (0.4%) vs 3 (0.6%); ARs leading to treatment discontinuation: 11 (2%) vs 15 (3%)

ACTT-1 was a randomized, double-blind, placebo-controlled, phase 3 clinical trial in hospitalized patients with confirmed SARS-CoV-2 infection and mild, moderate, or severe COVID-19. Patients received VEKLURY (n=541) or placebo (n=521) for up to 10 days. The primary endpoint was time to recovery within 29 days after randomization. Secondary endpoints included clinical status of patients on Day 15 as assessed on an 8-point ordinal scale and incidence of new high-flow oxygen requirement or new mechanical ventilation or ECMO.

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### IMPORTANT SAFETY INFORMATION (cont’d)

#### Dosage and administration (cont’d)

- **Treatment duration:**
  - For patients who are hospitalized, VEKLURY should be initiated as soon as possible after diagnosis of symptomatic COVID-19.
  - For patients who are hospitalized and do not require invasive mechanical ventilation and/or ECMO, the recommended treatment duration is 5 days. If a patient does not demonstrate clinical improvement, treatment may be extended up to 5 additional days, for a total treatment duration of up to 10 days.
  - For patients who are hospitalized and require invasive mechanical ventilation and/or ECMO, the recommended total treatment duration is 10 days.
  - For patients who are not hospitalized, diagnosed with mild-to-moderate COVID-19, and are at high risk for progression to severe COVID-19, including hospitalization or death, the recommended total treatment duration is 3 days. VEKLURY should be initiated as soon as possible after diagnosis of symptomatic COVID-19 and within 7 days of symptom onset for outpatient use.

- **Testing prior to and during treatment:** Perform hepatic laboratory and prothrombin time testing prior to initiating VEKLURY and during use as clinically appropriate.

- **Renal impairment:** No dosage adjustment of VEKLURY is recommended in patients with any degree of renal impairment, including patients on dialysis. VEKLURY may be administered without regard to the timing of dialysis.

#### Pregnancy and lactation

- **Pregnancy:** A pregnancy registry has been established for VEKLURY. Available clinical trial data for VEKLURY in pregnant women have not identified a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes following second- and third-trimester exposure. There are insufficient data to evaluate the risk of VEKLURY exposure during the first trimester. Maternal and fetal risks are associated with untreated COVID-19 in pregnancy.

- **Lactation:** VEKLURY can pass into breast milk. The developmental and health benefits of breastfeeding should be considered along with the mother’s clinical need for VEKLURY and any potential adverse effects on the breastfed child from VEKLURY or from an underlying maternal condition. Breastfeeding individuals with COVID-19 should follow practices according to clinical guidelines to avoid exposing the infant to COVID-19.

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**Please see Brief Summary of full Prescribing Information on the following page.**

**References:**


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VEKLURY® (remdesivir)

Brief summary of full Prescribing Information. Please see full Prescribing Information. Rx Only.

INDICATIONS AND USAGE
VEKLURY is indicated for the treatment of COVID-19 in adults and pediatric patients (≥28 days old and weighing ≥3 kg), who are:

- Hospitalized, or
- Not hospitalized, have mild-to-moderate COVID-19, and are at high risk for progression to severe COVID-19, including hospitalization or death.

DOSE AND ADMINISTRATION [Also see Warnings and Precautions, Adverse Reactions, and Use in Specific Populations]

Testing Before Initiation and During Treatment: Perform eGFR, hepatic laboratory, and prothrombin time testing prior to initiating VEKLURY and during use as clinically appropriate.

Recommended Dosage in Adults and Pediatric Patients: ≥28 days Old and Weighing ≥3 kg:

- For adults and pediatric patients weighing ≥40 kg: 200 mg on Day 1, followed by once-daily maintenance doses of 100 mg from Day 2, administered only via intravenous infusion.
- For pediatric patients: ≥28 days old and weighing ≥3 kg: 5 mg/kg on Day 1, followed by once-daily maintenance doses of 2.5 mg/kg from Day 2, administered only via intravenous infusion.

Treatment Duration:

- For patients who are hospitalized and require invasive mechanical ventilation and/or ECMO, the recommended total treatment duration is 10 days. VEKLURY should be initiated as soon as possible after diagnosis of symptomatic COVID-19.
- For patients who are hospitalized and do not require invasive mechanical ventilation and/or ECMO, the recommended treatment duration is 5 days. If a patient does not demonstrate clinical improvement, treatment may be extended up to 5 additional days, for a total treatment duration of up to 10 days.
- For patients who are not hospitalized, diagnosed with mild-to-moderate COVID-19, and at high risk for progression to severe COVID-19, including hospitalization or death, the recommended total treatment duration is 3 days. VEKLURY should be initiated as soon as possible after diagnosis of symptomatic COVID-19 and within 7 days of symptom onset.

Renal Impairment: No dosage adjustment of VEKLURY is recommended in patients with any degree of renal impairment, including patients on dialysis. VEKLURY may be administered without regard to the timing of dialysis.

Dose Preparation and Administration [See full Prescribing Information for complete instructions on dose preparation, administration, and storage]:

VEKLURY must be prepared and administered under supervision of a healthcare provider and must be administered via intravenous infusion only, over 30 to 120 minutes. Do not administer the prepared diluted solution concomitantly with any other medication.

- VEKLURY for injection (supplied as 100 mg lyophilized powder in vial) must be reconstituted with Sterile Water for Injection prior to dilution in a 100 mL or 250 mL 0.9% sodium chloride infusion bag.
- VEKLURY should be prepared with attention to aseptic technique to avoid inadvertent microbial contamination; there is no preservative or bacteriostatic agent present in these products.

Dosage Preparation and Administration in Pediatric Patients: ≥28 Days of Age and Weighing 3 kg ≥60 kg:
The only approved dosage form of VEKLURY for pediatric patients ≥28 days of age and weighing ≥3 kg to <40 kg is VEKLURY for injection (supplied as 100 mg lyophilized powder in vial). Carefully follow the product-specific preparation instructions.

CONTRAINDICATIONS [Also see Warnings and Precautions]:

VEKLURY is contraindicated in patients with a history of clinically significant hypersensitivity reactions to VEKLURY or any of its components.

WARNINGS AND PRECAUTIONS [Also see Contraindications, Dosage and Administration, Adverse Reactions, and Drug Interactions]:

Hypersensitivity, including anaphylaxis-related and Anaphylactic Reactions: Hypersensitivity, including infusion-related and anaphylactic reactions, has been observed during and following administration of VEKLURY; most reactions occurred within 1 hour. Monitor patients during infusion and observe for at least 1 hour after infusion is complete for signs and symptoms of hypersensitivity as clinically appropriate. Symptoms may include hypotension, hypertension, tachycardia, bradycardia, hypoxia, fever, dyspnea, wheezing, angioedema, rash, nausea, diaphoresis, and shivering. Slower infusion rates (maximum infusion time ≥120 minutes) can potentially prevent these signs and symptoms. If a severe infusion-related hypersensitivity reaction occurs, immediately discontinue VEKLURY and initiate appropriate treatment.

Increased Risk of Transaminase Elevations: Transaminase elevations have been observed in healthy volunteers and in patients with COVID-19 who received VEKLURY; the transaminase elevations were mild to moderate (Grades 1-2) in severity and resolved upon discontinuation. Because transaminase elevations have been reported as a clinical feature of COVID-19, and the incidence was similar in patients receiving placebo versus VEKLURY in clinical trials, discerning the contribution of VEKLURY to transaminase elevations in patients with COVID-19 can be challenging. Perform hepatic laboratory testing in all patients.

- Consider discontinuing VEKLURY if ALT levels increase ≥10×ULN.
- Discontinue VEKLURY if ALT elevation is accompanied by signs or symptoms of liver inflammation.

Risk of Reduced Antiviral Activity When Coadministered With Chloroquine or Hydroxychloroquine: Coadministration of chloroquine phosphate or hydroxychloroquine sulfate is not recommended. Remdesivir and its metabolites are in vitro substrates and/or inhibitors of certain drug metabolizing enzymes and transporters. Based on a drug interaction study conducted with VEKLURY, no clinically significant drug interactions are expected with inducers of cytochrome P450 (CYP) 3A4 or inhibitors of Organic Anion Transporting Polypeptides (OATP) 1B1/1B3, and P-glycoprotein (P-gp).

ADVERSE REACTIONS [Also see Warnings and Precautions]:

Clinical Trials Experience: The safety of VEKLURY is based on data from three Phase 3 studies in 1,313 hospitalized adult subjects with COVID-19, one Phase 3 study in 279 non-hospitalized adult and pediatric subjects (12 years of age and older weighing at least 40 kg) with mild to moderate COVID-19, four Phase 1 studies in 131 healthy adults, and from patients with COVID-19 who received VEKLURY under the Emergency Use Authorization or in a compassionate use program. The NAID ACTT-1 study was conducted in hospitalized subjects with mild, moderate, and severe COVID-19 treated with VEKLURY (n=532) for up to 10 days. Study GS-US-540-5773 (Study 5773) included subjects hospitalized with severe COVID-19 and treated with VEKLURY for 5 (n=200) or 10 days (n=197). Study GS-US-540-5774 (Study 5774) was conducted in hospitalized subjects with moderate COVID-19 and treated with VEKLURY for 5 (n=191) or 10 days (n=193). Study GS-US-540-9012 included non-hospitalized subjects, who were symptomatic for COVID-19 for ≤7 days, had confirmed SARS-CoV-2 infection, and had at least one risk factor for progression to hospitalization treated with VEKLURY (n=279; 267 adults and 3 pediatric subjects 12 years of age and older weighing at least 40 kg) for 3 days.

Adverse Reactions: The most common adverse reaction (<5% all grades) was nausea.

ADVERSE REACTIONS: Clinically significant adverse reactions reported in <2% of subjects exposed to VEKLURY in clinical trials include hypersensitivity reactions, generalized seizures, and rash.

Laboratory Abnormalities: In a Phase 1 study in healthy adults, elevations in ALT were observed in ≥90% of subjects receiving 10 days of VEKLURY (Grade 1; n=8; Grade 2; n=11); the elevations in ALT resolved upon discontinuation. No subjects (0% of 9) who received 5 days of VEKLURY had grade increases in ALT.

Laboratory abnormalities (Grades 3 or 4) occurring ≥2% of subjects receiving VEKLURY in Trials NAID ACTT-1, Study 5773, and/or Study 5774, respectively were ALT increased (3%, ≤8%, ≤3%), AST increased (8%, ≤7%, ≤1%), creatinine clearance decreased, Cockcroft-Gault formula (18%, ≤19%, ≤5%), creatinine increased (15%, ≥15%, ≥5%), eGFR decreased (18%, n/a, n/a), glucose increased (12%, ≤11%, ≤4%), hemoglobin decreased (15%, ≤8%, ≤3%), lymphocytes decreased (11%, n/a, n/a), and prothrombin time increased (9%, n/a, n/a).

DRUG INTERACTIONS [Also see Warnings and Precautions]:

Due to potential antagonism based on data from cell culture experiments, concomitant use of VEKLURY with chloroquine phosphate or hydroxychloroquine sulfate is not recommended. Remdesivir and its metabolites are in vitro substrates and/or inhibitors of certain drug metabolizing enzymes and transporters. Based on a drug interaction study conducted with VEKLURY, no clinically significant drug interactions are expected with inducers of cytochrome P450 (CYP) 3A4 or inhibitors of Organic Anion Transporting Polypeptides (OATP) 1B1/1B3, and P-glycoprotein (P-gp).

IN SPECIFIC POPULATIONS [Also see Dosage and Administration and Warnings and Precautions]:

Pregnancy

Risk Summary: A pregnancy registry has been established for VEKLURY. Available clinical trial data for VEKLURY in pregnant women have not identified a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes following second- and third-trimester exposure. There are insufficient data to evaluate the risk of VEKLURY exposure during the first trimester. Maternal and fetal risks are associated with untreated COVID-19 in pregnancy. COVID-19 is associated with adverse maternal and fetal outcomes including preterm birth, premature rupture of membranes, venous thromboembolic disease, and fetal death.

Lactation

Risk Summary: A published case report describes the presence of remdesivir and active metabolite GS-441524 in human milk. Available data (n=11) from pharmacovigilance reports do not indicate adverse effects on breastfed infants from exposure to remdesivir and its metabolite through breastmilk. There are no available data on the effects of remdesivir on milk production. In animal studies, remdesivir and metabolites have been detected in the nursing pups of mothers given remdesivir, likely due to the presence of remdesivir in milk. The developmental and health benefits of breastfeeding should be considered along with the mother’s clinical need for VEKLURY and any potential adverse effects on the breastfed child from VEKLURY or from the underlying maternal condition. Breastfeeding individuals with COVID-19 should follow practices according to clinical guidelines to avoid exposing the infant to COVID-19.

Pediatric Use

The safety and effectiveness of VEKLURY for the treatment of COVID-19 have been established in pediatric patients ≥28 days old and weighing ≥3 kg. Use in this age group is supported by the following:

- Trials in adults
- An open-label trial (Study GS-US-540-5823) in 53 hospitalized pediatric subjects

Geriatric Use

Dosage adjustment is not required in patients over the age of 65 years. Appropriate caution should be exercised in the administration of VEKLURY and monitoring of elderly patients, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of potential concomitant disease or other drug therapy.

Renal Impairment

No dosage adjustment of VEKLURY is recommended for patients with any degree of renal impairment, including those on dialysis.

Hepatic Impairment

Perform hepatic laboratory testing in all patients before starting VEKLURY and while receiving VEKLURY as clinically appropriate.

OVERDOSAGE

There is no human experience of acute overdosage with VEKLURY. Treatment of overdose with VEKLURY should consist of general supportive measures including monitoring of vital signs and observation of the clinical status of the patient. There is no specific antidote for overdose with VEKLURY.

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By Kelsey Perry, MD, Julian R. Sansbury, MD, FACP, FHIM, Alan M. Hall, MD, FAAP, SFHM, and Ethan Molitch-Hou, MD, MPH, SFHM

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domedical school and residency, the emphasis on medical knowledge often over- shadows the equally important aspects of effective patient care. At some point, the hard realization hits that just knowing and understanding the literature is not enough. Without medical knowledge matched to excellent communication skills, our knowledge is unavailing. Strong communication skills are foundational to ensure a multidisciplinary care plan is carried out by consultants, nurses, social workers, and physical therapists. High-quality communication between the care team, patients, and their caregivers can prevent medical errors and decrease readmissions. Unfortunately, in the busy, stressful life of a hospitalist, our day-to-day tasks can take precedence over the basic and powerful notion of being a good listener.

With technological advances, modern communication practices have added more opportunities and associated challenges. Video calls are now routinely used to communicate with patient’s families, and patients have direct access to their medical records in real time. Electronic health records (EHRs) have integrated chat features with resultant workplace communication now at risk of mimicking casual texting patterns. As technology changes, the practice for inpatient providers must adapt, and the fundamentals of communication and careful listening must remain.

Video calls at the bedside

It’s estimated that 90% of communication lies in the nonverbal and paraverbal components—how we use body language, gestures, facial expressions, and the tone and volume of our voices. Nonverbal communication can significantly impact patient satisfaction, outcomes, and the likelihood of adherence to the recommended care plan. Communicating information to patients should resemble a conversation we have with loved ones. We must confer empathy, show interest in a patient’s story or questions, and ensure we are patient and avoid interrupting.

Technology has both helped and hampered this ability as we have been pushed to spend more time with the EHR and less with the patient. As hospitalists, we are often required to multitask, calling our patients and caregivers on the phone and updating our patient’s families while writing notes. This can lead to distracted conversations and less engagement and active listening. The use of video calls has grown exponentially with the COVID-19 pandemic. Video calls have been shown to reduce loneliness and isolation for the geriatric population and improve connections between patients and mental-health providers.44

During the pandemic, many hospitals expanded the use of tablets on the wards to allow for video calls for consultants and family members. Some EHRs have integrated the feature, as have smartphone apps for physicians, like Doximity. Helping a patient set up a video call to connect to their family members or friends can be a bright spot during the connection needed to allow for the nonverbal and paraverbal

By Dr. Kelsey Perry, MD, Julian R. Sansbury, MD, FACP, FHIM, Alan M. Hall, MD, FAAP, SFHM, and Ethan Molitch-Hou, MD, MPH, SFHM

Dr. Perry is an internal medicine-pediatrics resident at Indiana University in Bloomington. Dr. Sansbury is the transitional-year program director, internal-medicine associate program director, chair of the department of medicine, and medical director of the Grand Strand Health Education and Simulation Center at Grand Strand Health in Myrtle Beach, S.C. Dr. Hall (@AlanHall_UKHM), is an associate professor and hospitalist in internal medicine and pediatrics at the University of Kentucky College of Medicine in Lexington, Ky., where he also serves as the assistant dean for curriculum integration. Dr. Molitch-Hou (@EthanMfH3), is an assistant professor, director of hospital medicine and co-director of the Care Transition Clinic at the University of Chicago Medical Center in Chicago.

Dr. Perry
Dr. Sansbury
Dr. Hall
Dr. Molitch-Hou
Open access to health information

Though this existed well before COVID-19, the pandemic embroiled us in a world where disinformation became as prevalent as good information. With the advent of telehealth and the ability to get information about confusing a Google search response with sarcastic memes, the medical community responded with sarcasm about the increasing number of disinformation. The self-proclaimed experts by doing so, the medical community has become as prevalent as good physicians to watch for nonverbal cues to ensure understanding. Video calls can be made in a patient room to allow for a hold or put on the shoulder that a distant family member cannot provide. 

Secure messaging

Though it’s easy to forget in the era of constant notifications, secure messaging has been viewed favorably by hospitalists as an improvement in clarity and efficiency. Secure messaging on a pediatric hospitalist service resulted in a 99% decrease in communication failure between nurses and residents but was accompanied by increased messaging rates. Secure messaging provides many benefits but has drawbacks including lack of standardization, confusion on whom to contact, and risk of alert fatigue. Successful communication in the era of secure messaging relies on clear rules of engagement about whom to get in contact with and when and how to do so. Health care systems must establish conventions, with all stakeholders involved in patient care providing input. Specifying approaches for urgent- or emergent-care needs is imperative. Alternative communication options must remain, including pagers, phones, and/or overhead paging to provide a backup and an emergent response system. Clear pathways and expectations on communication type can promote efficiency while ensuring closed-loop communication. When clinicians go off service, there should be standard practice to change the contact person and make the outgoing clinician unavailable to avoid communication delays.

It is too easy to be informal in secure messaging which can lead to miscommunication and multiple unneeded messages back and forth. Messaging must follow existing standards, such as Situation, Background, Assessment, and Recommendation (SBAR) or other validated communication tools. Clinicians should set an example by using one message in an SBAR format rather than multiple fragments that increase alert fatigue. High-quality direct communication on multidisciplinary rounds, recognizing quickly when a return to the bedside is needed, and clarifying complex issues verbally (by phone or in person) can decrease the messaging burden.

For now, we encourage hospitalists to understand the importance of communication, with a distinct focus on how to leverage technology to help us, including how to videoconference to update families, how to ensure the medical record is patient-focused and patient-friendly, and how to secure-chat professionally. Technology will continue to change rapidly, and hospitalists will often be at the forefront to see its potential to improve care while also appreciating its flaws and shortcomings. As technologies advance, we must stay up-to-date to ensure that the changes of the future positively impact outcomes for our patients and assure a heightened sense of pride in our day-to-day careers extending far beyond checking the boxes of our future Hospitalist(s) and perception of efficacy, workflow. J Hosp Med. 2014;9(9):573-8.

References


Good communication with patients and families involves integrating their input and ideas. Taking time to listen, even when the information challenges your care plan, is key to building a trusting relationship. We must avoid being adversarial and instead focus on slowing down, showing genuine empathy, and sharing our expectations for patient care with patients and family members.

Previously, patients did not have easy access to their medical records. With advancing technology and federal legislation, patients now can quickly view their lab results (sometimes before the clinician), including those flagged as abnormal. Health systems must partner with patients to find ways to ensure certain diagnoses (i.e., cancer) are not discovered by a patient alone when viewing results with limited context. We must advocate for continued direct communication in the timely delivery of bad news. Harm can also come when patients read notes that have stigmatizing language such as “difficult” or “non-compliant.” Clinicians must refine the language used in notes to eliminate stigma and understand more about why certain labels are short-sighted. We must presume that all of our notes are being read by our patients and their family members.

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Adult hospitalizations from immigration-detention facilities

**CLINICAL QUESTION:** What are the causes of hospitalizations from immigration-detention facilities and what is their relative morbidity?

**BACKGROUND:** Over the last three decades, an exponential increase in detained individuals has overwhelmed the capabilities of immigration jails and prisons to attend to people’s basic health needs, prevent the spread of infectious diseases, and address the well-known psychiatric impacts of immigration detention and incarceration. Despite mortality case reports, little is known about this vulnerable population’s morbidity or other health outcomes.

**STUDY DESIGN:** Cross-sectional study

**SETTING:** Federal and privately owned hospitals in Texas and Louisiana between 2015 and 2018

**SYNOPSIS:** Analysis of U.S. Immigration and Customs Enforcement’s (ICE’s) payer designations (16, 16.0%) and toxic exposure (17, 17.0%), heat exposure, custody were predominantly related to trauma from U.S. Customs and Border Protection to infectious disease (179, 24.7%) and psychiatric attributable to immigration facilities. Hospitalizations of adults aged 18 and older to ICE’s payer designations (16, 16.0%) or up-titrations (0.4 in usual care (P <0.001). The intervention group had twice the usual-care group. The mean age was 69 years with 66% of the patients being men and 73% white. The median hospital stay was six days in both groups. About 25% in each group were hospitalized for heart failure exacerbations. The mean GDMT score was 1.1 in the intervention group compared to 0.4 in usual care (P <0.001). The intervention group had twice as many initiations (P=0.001) or up-titrations (P=0.002) as the usual care. There were no significant differences (P=0.30) in safety events (28% versus 21%), the most common being hypotension.

**BOTTOM LINE:** A virtual care team can safely provide input on the optimization of a patient’s medications for chronic heart failure.


**By Amit Pahwa, MD, SFHM**

Virtual care team increases the number of patients with CHF on GDMT during hospitalization

**CLINICAL QUESTION:** Can a virtual care team increase the number of patients with chronic heart failure (CHF) on goal-directed therapy during hospitalization?

**BACKGROUND:** Maximizing goal-directed medical therapy (GDMT) in patients with CHF with reduced ejection fraction improves mortality. However, on discharge, 40% of patients are on a beta blocker, angiotensin-converting enzyme inhibitors (ACE inhibitors), or angiotensin II receptor blockers (ARBs), and mineralocorticoid receptor antagonists. The study team piloted a virtual care team to optimize the intensity of medications for patients with CHF who were hospitalized for other reasons.

**STUDY DESIGN:** Randomized control prospective trial (by birth month)

**SETTING:** Three hospitals in a Boston health care system

**SYNOPSIS:** The study team enrolled patients with a history of CHF with reduced ejection fraction (~40%) who were hospitalized for any reason from October 2021 to June 2022 in a non-ICU setting. They excluded patients who spent time in ICU, required circulatory support, were diagnosed with acute coronary syndrome or stroke, had recent surgery, or were hypertensive. A virtual care team of physicians and pharmacists reviewed patients’ charts in the study group to maximize quadruple therapy. They made recommendations in a progress note and paged the treating team. The primary outcome was change in a GDMT score. Secondary was new initiations or up-titrations. Safety outcomes were hypotension, bradycardia, acute kidney injury, or hypokalemia. There were 107 encounters (83 patients) in the intervention group and 145 encounters (115 patients) in the usual-care group. The mean age was 69 years with 66% of the patients being men and 73% white. The median hospital stay was six days in both groups. About 25% in each group were hospitalized for heart failure exacerbations. The mean GDMT score was 1.1 in the intervention group compared to 0.4 in usual care (P <0.001). The intervention group had twice as many initiations (P=0.001) or up-titrations (P=0.002) as the usual care. There were no significant differences (P=0.30) in safety events (28% versus 21%), the most common being hypotension.

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**By Julie Coursen, MD**

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**SETTING:** Federal and privately owned hospitals in Texas and Louisiana between 2015 and 2018

**SYNOPSIS:** Analysis of U.S. Immigration and Customs Enforcement’s (ICE’s) payer designations (16, 16.0%) and toxic exposure (17, 17.0%), heat exposure, custody were predominantly related to trauma from U.S. Customs and Border Protection to infectious disease (179, 24.7%) and psychiatric attributable to immigration facilities. Hospitalizations of adults aged 18 and older to ICE’s payer designations (16, 16.0%) or up-titrations (0.4 in usual care (P <0.001). The intervention group had twice as many initiations (P=0.001) or up-titrations (P=0.002) as the usual care. There were no significant differences (P=0.30) in safety events (28% versus 21%), the most common being hypotension.

**BOTTOM LINE:** A virtual care team can safely provide input on the optimization of a patient’s medications for chronic heart failure.


**By Julie Coursen, MD**
3 Fewer COPD exacerbations and pneumonia hospitalizations with LABA-LAMA inhalers compared to ICS-LABA in COPD

**CLINICAL QUESTION:** Is a long-acting beta agonist and long-acting muscarinic antagonist (LABA-LAMA) inhaler combination better than an inhaled corticosteroid and long-acting beta agonist (ICS-LABA) combination to improve clinical outcomes in patients with chronic obstructive pulmonary disease (COPD)?

**BACKGROUND:** Clinical guidelines recommend LABA-LAMA over ICS-LABA in COPD patients but randomized clinical trials have shown mixed data on clinical outcomes comparing these maintenance combination inhalers.

**STUDY DESIGN:** Large retrospective cohort study

**SETTING:** National insurance database

**SYNOPSIS:** From a national insurance database, 30,216 pairs of COPD patients were identified as starting maintenance combination inhalers with either LABA-LAMA or ICS-LABA. Those with a prior diagnosis of asthma were excluded. LABA-LAMA showed improved clinical outcomes compared to ICS-LABA with a 20% reduction in first pneumonia hospitalization and an 8% reduction in moderate or severe COPD exacerbation. No difference was found in patients with higher eosinophil counts. Limitations included only one year of follow-up time. These results were consistent with findings from the 2016 FLAME trial.

**BOTTOM LINE:** A large retrospective cohort study demonstrated fewer COPD exacerbations and pneumonia hospitalizations for COPD patients initiated on LABA-LAMA as opposed to ICS-LABA for new start of maintenance combination inhalers.


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4 No clear benefit to the use of haloperidol for ICU delirium

**CLINICAL QUESTION:** Does the use of haloperidol versus placebo for delirium in ICU patients improve mortality and increase the chance of hospital discharge at 90 days?

**BACKGROUND:** Haloperidol is the most commonly used medication for delirium in ICU patients but was not found to be effective in prior clinical trials. The goal of this trial was to determine if the use of haloperidol for delirium in ICU patients, compared to a placebo, would lead to a greater number of days alive and out of the hospital.

**STUDY DESIGN:** Blinded, placebo-controlled, randomized, controlled trial

**SETTING:** 16 general ICUs in Denmark, Finland, the U.K., Italy, and Spain

**SYNOPSIS:** All adult patients (median age 70 to 71 years, 65% men) admitted to the ICU with an acute condition were screened for delirium using a well-validated measure, the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU) or the Intensive Care Delirium Screening Checklist (ICDSC), and if positive, were enrolled and randomized to receive haloperidol or placebo. A total of 1,360 patients were enrolled with 310 in the haloperidol group and 490 in the placebo group. Haloperidol and placebo were kept in identical ampules so both patients and clinicians were blinded to the study group. The primary outcome was the number of days alive and out of hospital at 90 days, but they also evaluated days alive without mechanical ventilation, and adverse reactions. There were no significant differences seen between the two groups but a trend to improved mortality with haloperidol (63.3% versus 36.3% mortality; CI, 0.50 to 0.69). Interestingly, both groups received similar doses of the medications and had similar rates of adverse reactions.

**BOTTOM LINE:** The use of haloperidol to treat delirium in ICU patients does not improve mortality or likelihood of hospital discharge at 90 days.


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**SHORT TAKES**

By Ashwini Niranjan-Azadi, MD, SFHM

**Continuous versus intermittent meropenem administration in critically ill patients with sepsis: The MERCY randomized clinical trial**

Double-blind randomized control trial of 607 critically ill patients with sepsis or septic shock in 31 ICUs in Croatia, Italy, Kazakhstan, and Russia were randomized to intermittent or continuous administration of meropenem. Continuous administration did not improve all-cause mortality over intermittent administration (47% versus 49%), nor did it increase the emergence of extensively resistant or pan-drug-resistant bacteria (RR, 0.96; 95% CI, 0.81-1.13) at 28 days.


**Use of nonstigmatizing language is associated with improved outcomes in hospitalized people who inject drugs**

A retrospective medical record review of 328 discharge summaries of patients with infectious complications of opioid use disorder noted stigmatizing language was common (67%). Use of best-practice language was associated with increased odds of addiction treatment (AOR, 4.11; 95% CI, 1.89-8.93) and addiction follow-up care (AOR, 2.31; 95% CI, 1.30-4.09).


**Effect of hemodiafiltration or hemodialysis on mortality in kidney failure**

A randomized control trial of 1,360 patients in Europe to conventional high-flux hemodiafiltration versus high-dose hemodiafiltration with a 30-month median follow-up shows a reduction in death from any cause in high-dose hemodiafiltration group (HR, 0.77; 95% CI, 0.65-0.93).


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By Margueritta El Asmar, MD

**Transcatheter repair of secondary mitral regurgitation improves outcomes**

**CLINICAL QUESTION:** Does transcatheter mitral valve repair of secondary mitral regurgitation improve hospitalization rates and mortality in patients with refractory symptoms despite maximal medical therapy?

**BACKGROUND:** Patients with left ventricular cardiomyopathy and secondary mitral regurgitation have an increased risk of heart failure hospitalizations and reduced survival. Previously, the COAPT Trial showed safety and improved outcomes of transcatheter repair using MitraClip at two years. This study assessed outcomes after a five-year follow-up.

**STUDY DESIGN:** Open-label randomized-controlled trial

**SETTING:** Multicenter study across 78 centers in the U.S. and Canada

**SYNOPSIS:** 614 patients with ischemic or non-ischemic cardiomyopathy and ejection fraction 20% to 50% with both moderate-to-severe or severe secondary mitral regurgitation by TTE and NYHA II or greater functional status were randomized to undergo guideline-directed medical therapy with or without transcatheter mitral valve repair. Those who underwent transcatheter repair were noted to have an average annual hospitalization rate of 33.1% compared to 57.2% in controls (HR, 0.53; 95% CI, 0.41-0.68). Sim-
Abatacept and infliximab may improve mortality in patients hospitalized with COVID-19 pneumonia

**CLINICAL QUESTION:** What immunomodulatory drugs should we use in hospitalized patients with COVID-19 in addition to corticosteroids?

**BACKGROUND:** Inflammation is a key driver of morbidity and mortality in patients with COVID-19. The RECOVERY trial first demonstrated the efficacy of corticosteroids in hospitalized patients with COVID-19 who required supplemental oxygen. Subsequent trials have shown additive benefit in select patients for the IL-6 inhibitors tocilizumab (RECOVERY; REMAP-CAP) and sarilumab (REMAP-CAP), as well as with the Janus kinase inhibitors baricitinib (ACTT-2; COV-BARRIER; RECOVERY) and tofacitinib (STOP-COVID), leading to their inclusion in national guidelines. Other unique immunomodulators have not shown clear benefits. Little data exist for adding two or more immunomodulatory agents to corticosteroids.

**STUDY DESIGN:** Multicenter, randomized, double-blind, placebo-controlled trial

**SETTING:** Hospitalized patients (including ICU patients) in the U.S. and Latin America

**SYNOPSIS:** 1,971 hospitalized adults with COVID-19 pneumonia between October 2020 and December 2021 (Omicron wave) were randomly assigned to receive abatacept (T-cell inhibitor), cenicriviroc (monocyte and macrophage inhibitor), infliximab (TNF-alpha inhibitor), or placebo, in addition to standard care. More than 90% of patients received corticosteroids and remdesivir, but fewer than 5% received IL-6 or Janus kinase inhibitors. No agents significantly improved the primary outcome of median time to recovery. Abatacept (11.0% versus 15.1% (OR, 0.62; CI, 0.41-0.94) and infliximab (10.1% versus 14.5% (OR, 0.59; CI, 0.39-0.90), but not cenicriviroc (13.8% versus 11.9%) (OR, 1.18; CI 0.72-1.94), improved all-cause mortality at day 28, a pre-specified key secondary endpoint.

This study further supports adding another immunomodulatory agent to corticosteroids when treating hospitalized patients with COVID-19 pneumonia. Which agent is best and if multiple agents should be used remains unknown. Stronger evidence supports the use of either IL-6 inhibitors or Janus kinase inhibitors; abatacept or infliximab are unlikely to be recommended on par with these treatments.

**BOTTOM LINE:** Abatacept and infliximab should not replace IL-6 or Janus kinase inhibitors as the recommended non-corticosteroid immunomodulators for treating hospitalized patients with COVID-19 pneumonia.


By Michael Rose, MD, MPH

Risk stratification of patients with HF in the ED coupled with close outpatient follow-up reduces mortality and CV rehospitalization

**CLINICAL QUESTION:** In patients presenting to the emergency department (ED) with heart failure (HF) symptoms, are patient outcomes affected by the use of a risk stratification tool to guide the need for admission or discharge with close outpatient follow-up?

**BACKGROUND:** ED physicians often rely on clinical judgment to determine if patients presenting with heart failure symptoms need hospital admission or can be safely discharged with outpatient plan follow-up. Lack of access to timely outpatient care is a barrier to safe discharge planning from the ED and can lead to higher rates of hospitalization.

**STUDY DESIGN:** Step-wedge, cluster-randomized trial

**SETTING:** 10 academic and community hospitals in Canada

**SYNOPSIS:** 5,452 patients with the clinical diagnosis of HF presenting to the ED with acute heart failure symptoms were enrolled. Nursing home residents and patients with an inability to follow up outpatient were excluded. The intervention arm used the Emergency Heart Failure Mortality Risk Score for 7- and 30-day mortality to triage patients to low, intermediate, and high risk. Low-risk patients were either discharged from the ED or underwent fewer than three days of observation before discharge with close follow-up appointments with cardiology. High-risk patients were admitted. Clinicians used their judgment on disposition for intermediate-risk patients.

Composite co-primary outcome of all-cause mortality or cardiovascular (CV) hospitalizations in the control versus intervention group was 14.5% versus 12.1% (HR, 0.88; 95% CI, 0.78-0.99) at 30 days and 56.2% versus 54.3% (HR, 0.95; 95% CI, 0.92-0.98) at 20 months. Among patients with early discharge, 27% of patients in the high-risk group were discharged in the control group compared to 19% in the intervention group. The intervention and control groups had similar rates of early discharge for low-risk patients. As the study included two interventions (risk stratification and outpatient follow-up), it is unclear which component was the main driver of the results.

**BOTTOM LINE:** Implementation of a risk-stratification tool to aid in determining disposition for patients with heart failure in the ED coupled with close outpatient follow-up reduces composite CV re-admission or mortality by 14% at 30 days and 1.8% at 20 months.


By Niloofar Latifi, MD

Risk for CKD progression after AKI

**CLINICAL QUESTION:** Is acute kidney injury (AKI) associated with subsequent worsening of renal function trajectory in patients with chronic kidney disease (CKD)?

**BACKGROUND:** Prior research has indicated that AKI may lead to long-term renal function decline, and this has led to changes in clinical practice, funding, research focus, and even public health initiatives. However, those studies had methodologic limitations such as inadequate control for differences between patients with or without an AKI, and insufficient consideration of pre-AKI estimated glomerular filtration rate (eGFR), proteinuria, or eGFR slope.

**STUDY DESIGN:** Multicenter prospective cohort study

**SETTING:** U.S.

**SYNOPSIS:** This study evaluated 3,150 racially and ethnically diverse CKD patients using a linear mixed-effects regression model that adjusted for factors such as pre-AKI eGFR and proteinuria, to assess post-AKI eGFR trajectory with measurements at annual study visits. There were 826 episodes of AKI among 433 patients in a 3.9-year median follow-up. After adjusting for pre-AKI factors, AKI was not independently associated with worsened kidney function. The findings suggest that decline in renal function after AKI is more likely attributable to pre-AKI factors and, thus, the focus should shift towards earlier treatment of CKD and proteinuria. Limitations included a lack of evaluation of the etiology of AKI or use of nephrotoxic medications after AKI, and a small number of severe AKI cases.

**BOTTOM LINE:** Mild to moderate AKI may have limited effect on subsequent renal function trajectory in patients with CKD.


By Sonia Dalal, MD

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Celebrating Black HM Professionals

Examing their journeys in hospital medicine

By Lisa Casinger

In honor of Black History Month, we’re highlighting four members of the Society of Hospital Medicine (SHM) who are making a positive impact on the lives of their patients, colleagues, students, and communities. Despite having different career paths, their stories share common threads.

Teaching, inspiring, and championing the next generation of doctors

TaLawnda Bragg, MD, FACP, internal medicine residency program director and an internal medicine hospitalist at Corewell Health in Grand Rapids, Mich., and associate clinical professor of medicine at Michigan State University College of Human Medicine, was inspired to become a hospitalist after seeing her father suffer with sickle cell disease and thalassemia. She was impressed with the care he received in the hospital, and the doctors who helped him recover became her role models. “I didn’t know much about hospital medicine back then,” said Dr. Bragg. “But to see my dad so ill, and then get better; the people in the hospital were miracle workers. Having hospital-based physicians who can navigate the acute-care world, swiftly build rapport with patients and their families, and diagnose and treat their acute illnesses through the lens of quality and safety, is priceless for patients and their families during these vulnerable times of being hospitalized.”

Witnessing the care her dad received was the catalyst that led her down the health care path. Having amazing mentors throughout her residency kept the idea of hospital medicine at the forefront. Combining teaching, learning, mentoring, and collaborating—all the things she enjoys, which happen to be the principles hospitalists embody—steered her down the academic hospital–medicine path.

“Every day I get to learn, teach, mentor, and have a hand in training the next generation of physicians,” Dr. Bragg said. “I think about the type of doctors it took to get my dad well. Witnessing that as a family member—physicians taking time, being trustworthy and culturally intelligent, and recognizing that structural deter-

minates of health put people on uneven footing—made me want to have a role in educating medical students and training resident doctors to be just like that.”

As the program director for internal medical residency where she teaches about 45 residents and works with hundreds of medical students rotating through internal medicine, Dr. Bragg considers it her duty to stress those vital, valuable skills. “It brings me joy and hope for the future of medicine,” she said.

She credits her team—the “best team ever”—for helping to make sure Corewell Health residents get the best educational training experience possible, which helps her thrive in her career. Because of this work, she sees promise in the next generation of physicians. “When you think of who physicians used to be, that’s not who our patients need now. They need the new-age physician: the one who belongs in and with the communities. We need to know the people we serve; we need to meet them where they are and partner with them on their health journeys,” Dr. Bragg said.

Thriving is more than surviving, and that’s why she stresses the importance of physician well-being. Dr. Bragg tells her residents that while they’re super and amazing, they’re not superhuman. “You can’t pour from an empty cup,” she said. “We’re better for our patients and communities if we maintain our health. Physicians are human beings who need the same care, regard, and TLC that patients need. We’re turning out better physicians but how do we preserve this noble profession? Resilient?—I hate that word—we’re plenty resilient. Instead, how can we change what’s expected of physicians and the environment in which we practice so that our profession is sustainable and doesn’t deplete us? The pandemic made things more obvious, but working and being burned out, but working anyway, was always there. The pandemic just made the importance of well-being more obvious and more of a critical necessity. That has to remain a priority.”

Dr. Bragg is aware that fewer than 5.7% of all physicians are Black, and 2.2% are Black females.11 She believes the shortage of Black health care practitioners is a national problem and wants hospitalists to protect us at all costs.” She wants colleagues to realize that Black physicians “are in a constant state of self-repair, bleeding from a million different paper cuts,” and their experiences as minority physicians can be very different.

People aren’t used to seeing Black physicians, let alone Black female physicians, so it’s not at all uncommon for many physicians to assume she’s a service worker, second-guess her diagnosis, treatment, and competency, or ask where she’s from. “If she sees ranges from subtle microaggressions to flat-out racism, requesting another (white) physician—fortunately, there’s zero tolerance for racism and discrimination at Dr. Bragg’s institution.”

“Listen to our stories. Learn from us,” Dr. Bragg said. “I want to be heard. We need our team members to be allies. To do that you have to listen.” The best things colleagues can do are to be supportive and realize there are experiences that Black physicians deal with because of racial biases, and to be an advocate so they feel supported.

For Black hospitalists just beginning their careers, Dr. Bragg says, get connected. She says it’s not uncommon to feel isolated as a Black physician, but you have to be open and let people get to know you. “Most Black hospitalists will find themselves as one or one of a few in their practice. Because of that, it’s very likely that you will care for a senior Black hospitalist to be your mentor,” she said. “But somebody hired you; somebody believes in you and wants you to succeed. Find that person. It’s important to have someone who will have your back, especially if adversity arises. You need your people to support you.”

Dr. Bragg says she’s fortunate to be a mentoring physician and to have had many mentors who still support her. At her institution, she says when a new Black doctor joins the hospital she and other Black physicians will send an email letting them know, essential and important, investing in documentation, billing, and quality education.

Mr. Desamours

Patrick Desamours, MSPA, PA-C, MBA, CHC-OM, SFHM, is the director of APP operations in hospital medicine at US AcuteCare Solutions in Westminster, Md. His journey to becoming a physician assistant (PA) started during clinical rotations where he experienced diverse disciplines, but was particularly drawn to the academic setting, and then to the field of hospital medicine. After passing his board, he worked at a hospital in Baltimore where he began experiencing the complexity of hospital medicine beyond medicine. He joined SHM to enhance his experience and grow professionally, investing in documentation, billing, and quality education.

Mr. Desamours attributes his ability to flourish and be successful to his wife’s support, networking with other hospital medicine professionals, caring for patients, and his positive mindset. “My wife helps me thrive beyond measure,” he said. “We started our careers around the same time. Our stressful days at work became normal conversations over dinner. She believes in me, and my ability, and her support and prayers keep me going daily.”

Networking with others, he says, helps meet people who make you feel like you’ve chosen the wrong profession and others who become family—both are needed.
Diversity and inclusion are not simply buzzwords in today’s society; they are essential pillars that should be embraced within every aspect of our lives, including health care. Fostering diversity and promoting inclusion is crucial for providing equitable access to high-quality health care, she said. "An orchestra comprises various instruments, each unique in tone and character, coming together harmoniously to create something beautiful. Similarly, diversity and inclusion in health care bring together individuals from different backgrounds, experiences, and perspectives to create a harmonious, inclusive, and effective health care system.

Caring for patients in rural areas

Bryan Dawkins, MD, is vice president of hospital services at Elite Medical Services and a physician and faculty member in inpatient family medicine at Loma Linda University Medical Center, which is an acute-care teaching hospital in rural Belle Glade, Fla.

Dr. Dawkins was inspired to become a hospitalist because of his upbringing in Jamaica and his move to the U.S. when he was 10 years old. He credits his parents, who were devoted to education and community service, for instilling in him a passion for medicine. He attended Howard University in Washington, D.C., which not only provided him with a strong medical education but also fostered a sense of identity and purpose as a Black practitioner.

Currently, he’s working as a hospitalist and faculty member of a family-medicine residency in Belle Glade, a rural and underserved area of South Florida, where he is dedicated to improving accessible health care.

He attributes his success as a hospitalist to a combination of factors including unwavering support from his family, belief of mentors in his potential, and a strong sense of community. "These interconnected factors not only advanced my professional journey but also played a significant role in fostering a sense of belonging in a field where diversity is often lacking," Dr. Dawkins said.

For colleagues who may not share the same experiences, Dr. Dawkins wants them to recognize the valuable perspectives and insights that Black health care professionals bring to the table. "Our diverse backgrounds enrich patient care, allowing for a more comprehensive and culturally sensitive approach," he said. "Acknowledging and valuing these differences is essential to a more equitable and effective health care system."

"To my fellow Black hospitalists in the early stages of your careers, I advise staying true to your roots and the passion that led you to pursue medicine," Dr. Dawkins said. "Seek out mentors who understand and appreciate your unique journey, and don’t hesitate to be a trailblazer. Embrace challenges as opportunities for growth and development, recognizing that your presence in the field is not only necessary but transformative."

To ensure equitable access to hospital medicine for Black practitioners, Dr. Dawkins believes it is essential to address systemic issues contributing to inequality. Initiatives such as mentorship programs, diversity and inclusion training, and increased representation in leadership roles can create a supportive and inclusive environment. "Advocating for policies that promote equitable opportunities and eliminate bias in hiring and promotions is critical for lasting change," he said. "Through collective efforts, the goal is to make Black History Month not only a time for reflection but a catalyst for meaningful change in the medical field."

References

Tips (and a bit of common sense)

- Don’t drink and drive. Ever. Take an Uber. Phone a friend. Do whatever is needed to avoid a DUI.
- Document well. Make sure your daily notes meet local and national standards of documentation.
- Don’t self-prescribe or prescribe medications for friends or family. If you do so in an emergent situation, clearly document why in progress note format.
- Don’t hide anything from the medical board, including arrests, medical staff investigations, and more.
- If you’re under investigation, please do everything the board asks of you promptly.
- Always document in real time for prescriptions you’re writing for family or friends—and be sure to save those documents. I’ve seen where someone created a Word document after the complaint was initiated and the medical board could see when the document was created and modified.
- Do not voluntarily resign or withdraw your privileges from a hospital if you are under active investigation by their medical staff. Some hospitals, in their medical staff bylaws, state that doing so will cause a complaint automatically to proceed to their state medical board.
- Remember that once a public order is published by a state medical board, it will be seen in other states where you have a license. Those states can do their own investigation into the matter. Surrendering your license in one state to avoid an investigation will only prompt other states to investigate.
- I’ve seen a complaint about an unrelated and minor issue that led to the subpoena and review of prescriptions sent to local pharmacies. That review led to the discovery that the physician in question was self-prescribing, and prescribing for family members, various controlled substances. Never prescribe controlled substances outside of your traditional medical practice.

By Robert A. Craven, MD, FACP, CHCQM-PHYADV, SFHM

First, a disclaimer: I am not an attorney, and this is not intended to be legal advice. Any specific questions or concerns you may have should be directed to your legal counsel. The recommendations in this article are my own opinions and do not represent those of SFHM, McLeod Health, or any other entity.

Few things cause panic in a doctor’s life like a phone call or letter from a state medical board. That initial call or letter can tarnish reputations and threaten and potentially end careers. I recently responded to a post on a popular physician forum on social media concerning a physician who had a complaint filed against her to her state medical board. I mentioned that I review complaints for my state medical board and offered my free advice, which she gladly welcomed. Soon after, I received a handful of requests from other physicians across the country going through similar situations, which led to the realization that this is a large and frequent issue that can be incredibly stressful for the physician in question and their family.

Please keep in mind that state medical boards exist for one specific reason—to protect the citizens of their state from haphazard and/or dangerous medical care. They do not exist to protect physicians. Each state’s medical board operates differently and independently based on its bylaws, which are formed and regulated by the state legislature, not the state medical board. You can usually find your state’s bylaws on its website. The state medical board enforces these laws but cannot create or change them. Some states post physician board orders publicly while others do not.

Recently, there has been a push for more transparency and better communication between different state medical boards, especially after the highly publicized Dr. Christopher Duntsch (aka “Dr. Death”) case in Texas, where a fellowship-trained spine surgeon was eventually arrested and convicted of aggravated assault and injury to an elderly person in 2015, after years of bad patient outcomes, some of which were seemingly intentional. Dr. Duntsch was sentenced to life in prison in 2017. The case received national attention and shined a light on loopholes in medical board processes that allow potentially dangerous physicians to move from one hospital to another unchecked. Some state medical boards have changed their policies and procedures in response to this case to take physi-
Types of complaints and investigations

Medical board complaints and investigations come in different forms and each category is addressed differently. There are criminal investigations like arrests and DUIs, complaints sent directly to the board—usually from patients, other practitioners, pharmacists, or nurses—and medical malpractice cases where a payout occurred.

If you practice medicine long enough, you’ll likely know another physician who has been arrested. I’ve seen numerous stories unfold among my colleagues over the years, including DUIs, solicitation of prostitution, domestic violence, and failure to pay child support. Some medical boards run daily reports on arrest records within their state, checking names and dates of birth for potential matches to their licensed physicians. If one is found, the board initiates an investigation. However, most states do not actively look for physician misconduct. Instead, they expect the physician to self-report any arrest. Those who don’t could face serious consequences should the board later discover the infraction. In criminal situations, it is best to hire an attorney and be forthcoming to the medical boards where you are licensed. Typically, physicians’ criminal or behavioral issues are handled by a specific committee on the medical board.

Depending on the results of the charges, the medical board will follow their bylaws on how best to proceed.

It’s important to remember that anyone can generate a formal complaint against a physician with a state medical board, including patients, patients’ family members, nurses, pharmacists, colleagues, and hospital medical executive committees. While some states do not accept anonymous complaints, there are several states that either allow them or are heading in that direction.

The process

Most state medical boards follow a similar process once a complaint is filed. Initially, the physician in question will receive notice of the complaint, usually by phone call or letter. They will be given the opportunity to explain themselves via a written letter, a phone call, or a teleconference. Some states end the investigative process altogether and dismiss the complaint based entirely on the physician’s response to the complaint, so the content of the response is crucial.

In this scenario, many physicians consider hiring an attorney. Whether or not legal representation is necessary, in my opinion, depends on the circumstance. If no harm occurred to the patient and the complaint seems trivial, I would not recommend getting an attorney. Instead, if you’re the doctor in question, you should craft a thoughtful and well-reasoned response letter to the medical board that explains your side of the story. I recommend the response be shared with others, preferably those who are familiar with this process. Also, it’s imperative that a response is error-free, so a good proofreader is essential.

If you feel the complaint has legitimacy or there was harm, whether there was causation or not, I recommend hiring an attorney to help you through this process. Keep in mind that many medical malpractice insurance policies include coverage for this scenario. Also, if you’re employed by a hospital or health care system, they often have in-house legal counsel who would prefer to be involved before you contact your medical malpractice insurer. If you are hesitant to contact your in-house legal counsel for privacy reasons, please realize some medical staff bylaws require you to let your medical executive committee know if you have received any medical board complaints.

It is difficult to estimate how many of these complaints are dismissed without a formal investigation, but it is the majority. If not, the medical board will typically have the case reviewed by one or more peer experts like me. As an internal-medicine-trained hospitalist, I frequently review cases for my medical board that involve the practice of hospital medicine. The medical board will subpoena all relevant records, including prescription history, and send these to the reviewing physician(s) in addition to the written statement of the physician in question and the initial complaint. The reviewing physician will typically focus on three questions:

1. Was there a deviation from the standard of care?
2. Was there harm to the patient because of this deviation?
3. Did the physician’s documentation meet the minimum standard as defined by that state’s medical bylaws?

The reviewer writes a report based on their assessment and sends it to the medical board, where it’s reviewed by the committee that handles complaints. They then vote on how best to proceed. This typically yields three possible results: proceeding with a formal complaint, which is a legal proceeding; issuing a letter of caution, which can be public or confidential depending on the state; or the dismissal of the complaint.

Dismissal is self-explanatory and does not get reported to the federal database or go on your permanent record. A letter of caution might have a different title and be publicly posted depending on the state. This occurs more frequently than a formal complaint and does stay on your record. A formal complaint usually requires additional action by the physician in question. This is where disciplinary action or remediation typically occurs. The physician in question will likely be given the options to either accept the board recommendations regarding education, fines, etc., or proceed with a series of hearings. Some states have a panel hearing available where the physician’s case will be presented to a group, mostly made up of physician peers (like me). This panel will then decide whether the physician is guilty of the claims brought against them. If so, the physician in question will have to either proceed with the board’s recommendations or proceed with a formal hearing in front of the actual medical board.

Decisions at this level include complaint dismissal (which is unlikely if the complaint has made it this far), mandatory education or remediation, license suspension, or license revocation. Some states will not allow doctors who have had their licenses previously revoked to work in their state. It is typically easier for everyone involved if you can resolve the issue without proceeding to a hearing. Keep in mind these steps vary from one state to another, so it’s extremely important to familiarize yourself with your state’s policies and procedures.

Medical malpractice cases are typically referred to your state medical board after the civil proceedings have been completed and if there has been a payout made in your name, whether through a pre-trial settlement or a jury verdict. Some states will require you to disclose when you’re named in a suit, but most only require notification if you’re named in a payout.

Again, it would benefit you to familiarize yourself with your state’s expectations in this scenario. Typically, the same legal counsel that represented you during your malpractice case would also represent you before your medical board.

Medical board complaints and their subsequent investigations can be scary, but remember that everything is reviewed by a peer physician who is not on the medical board. They should give you the benefit of the doubt. Try to use the tips in this article to keep these reviewers—and your state medical board—on your side.

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Debriefings After an Unexpected Hospital Death or Code

Helping trainees—and hospitalists—move forward

By Larry Beresford

Hospitalist and palliative-care physician Kencee Graves, MD, FACP, recalls participating on a difficult code-team response while still a new medicine intern at the University of Utah, where she is now chief medical officer for inpatient health. This case was her first death on duty.

The patient was a woman in her 40s brought in by ambulance after an unexpected cardiac arrest in the community. “It was awful because her family was out in the hall waiting and watching. It was just this overall very traumatic experience,” Dr. Graves said. “We were ultimately unsuccessful in resuscitating her on a second attempt, despite a lot of effort. And for those of us who were in a learning position, residents, and interns, we were all a little shell-shocked.”

She continued, explaining that the next morning the attending came into the hospital and said, “For today’s didactic session, we’re going to talk about what happened last night.” It still amazes me how cathartic that experience was, having that talk. I remember thinking that taking the time to honor that person and discuss what happened helped us all move forward.”

One name for this kind of postmortem conversation by the hospital team is debriefing, although it’s also called a time-out or a pause. It is increasingly done in hospitals when a patient dies, typically after an unsuccessful code.1 Different hospitals and teams may approach debriefings in different ways, with greater or lesser degrees of formality and structure, sometimes but not always with an emphasis on medical trainees.2 Debriefings have been shown to improve participants’ ability to manage their grief and are associated with lower rates of burnout.

The American Heart Association’s Advanced Cardiac Life Support protocol spells out how to do a debriefing as a facilitator-led, reflective, participant discussion of the events, assimilated into the trainees’ learning.3 In 2009 Jonathan Bartels, a trauma- and emergency-care nurse, developed the medical pause, a procedure implemented after the death of a patient.4 Any member of the medical team can request a pause after an unsuccessful code, preferably performed immediately after the death is called around the patient’s bedside.

Doing a debriefing in the room of a patient who has just died may not always be advisable, however, depending on the presence and emotional state of the family. Busy schedules and competing pages and texts also need to be overcome. It may mean taking the team down the hall to the nearest available conference room and asking everyone to hold their pages for the few minutes of the debriefing. But regardless of those constraints, the debriefing should be done as soon as it can be arranged for as many members of the team as possible. Whatever the format or setting, it shows the team that this moment is important because this death was significant.

When there is an event like this in the hospital, a code or rapid response or bad outcome, clinicians need an opportunity to acknowledge the loss. Dr. Graves said, “I think the worst thing we can do is act like nothing happened.”

Not just codes

“The baseline for debriefings was the code team,” she said. “But as I had more experience in my career, I started to realize there are a lot of events in the hospital beyond codes that can have as big an impact emotionally as a code does on residents, students, nurses, and other team members. So, I started debriefing every single big event—a code, a rapid response, a medical error, even a patient on comfort care whose death was anticipated. Sometimes those are wrought with complexity,” Dr. Graves said.

“I always start by asking the participants, ‘How are you doing? I want to be clear that I care about you as a human being. I want to help you get through this event, and that’s the point of why we’re doing this. Let’s take a second to recognize what happened, and talk about the questions you have, what you would have liked to see happen differently.’”

Being able to express feelings is important, but for many participants, it’s also important to review the clinical facts of the case, bringing a quality-improvement perspective to the debriefing, said Rab Razzak, MD, a hospitalist and director of palliative care at University Hospitals in Cleveland. Like Dr. Graves, he is active in SHM’s Palliative Medicine Special Interest Group, which has tried to educate the hospital medicine field about debriefings. What went well? What could have been done differently? Are there ethical or moral issues to explore? What can we all learn going forward?

Moving on doesn’t work

Elizabeth Gundersen,(@top_gundersen), MD, FAAHPM, FHM, a hospitalist and palliative-care physician at the University of Colorado-
Different places today in medicine.

A pandemic, is that we're in a very recognized, especially through the culture historically, as aallen. One thing we've to hit our targets, our RVUs. And patients,” Dr. Razzak said. “We have that we need to keep seeing more infrastructure/system has taught us about death, and the team just carried on like nothing happened,” she said.

“We learn in medical training that we need to put the needs of the patient first. So, if we're rounding and something happens and a patient dies, we've trained ourselves to just pick up and soldier on and go see the next patient. I've had students come to me and say, ‘You know, the patient died, and the team just carried on like nothing happened,’” Dr. Gundersen said.

“Quite often the health care infrastructure/system has taught us that we need to keep seeing more patients,” Dr. Razzak said. “We have to hit our targets, our RVUs. And the culture historically has told us: You move on. One thing we've recognized, especially through the pandemic, is that we’re in a very different place today in medicine. Many of us are suffering from burnout, moral injury, and other emotions of despair or hopelessness.”

Doctors have learned that moving on doesn’t work. “There can be an emotional stacking effect that occurs from moving on from not addressing what we're going through, from not talking about it or processing it. It’s going to show up later, perhaps as no longer feeling engaged with our patients and families, which is a sign of burnout,” he said.

Palliative care's contribution

Dr. Graves, who is also board-certified in hospice and palliative medicine, thinks hospital-based palliative-care teams have something to offer to the rest of the hospital when it comes to debriefings after sudden deaths. Palliative care may have more experience with in-the-moment debriefings for deaths on service since it often is involved with more of these challenging cases.

“Because we see difficult cases and deaths, we are aware that the risk of compassion fatigue and burnout are higher if we don’t,” she said. And the team's commitment to interdisciplinary teamwork and person-centered care makes the debriefing even more important.

Palliative-care teams like hers dedicate time, perhaps weekly, to continue these conversations. “For my team, that's where we formalize our practice, reflect, talk about our patients who have died, their lives, our journeys with them. Our chaplain does a kind of ritual, perhaps reading a poem, and we say their names. It’s a nice way to close the book of their lives.”

Based on its experience with creating opportunities for this kind of closure, the palliative-care team can be called on by hospitalists to help them enact debriefings for their patients. Dr. Graves said, “I think what palliative care can do well is help support other hospital teams through some of their toughest cases.”

Dr. Razzak’s team also meets weekly at a set time for a routine review of cases and to talk about how everyone is doing, what’s been hard, and what’s been enjoyable. “It actually helps us process, it helps us build community and move forward.”

Dr. Gundersen said that it’s important for hospitalists to have a method by which they debrief and process after patients’ deaths. “That is a skill of self-care that we need for ourselves, as well as teaching it to our learners. And if hospitalists are not doing it for themselves, then that’s the lesson they’re passing on to their learners,” she said.

“I’m making a case for why hospitalists need to role-model this, and why medical educators and the whole system need to be intentional about providing the spaces where we can talk about these cases.”

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

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The Role of D-dimer in Diagnosing Pulmonary Embolism

By Leela Chockalingam, MD, Kendal Flegenheimer, MD, and Amiran Baduashvili, MD

Case

A 58-year-old previously healthy woman presents with pleuritic chest pain triggered by moving heavy boxes. She denies dyspnea, extremity swelling, hemoptysis, recent surgery, immobility, personal or family history of blood clots, malignancy, or smoking. Her vitals and physical exam are unremarkable. An electrocardiogram, chest radiograph, and laboratory evaluation, including troponin, are normal. She has a low pre-test probability (PTP) for pulmonary embolism (PE). D-dimer returns elevated at 700 ng/mL (normal <500 ng/mL). Is further imaging to evaluate for PE indicated?

Brief overview

The annual incidence of PE in the U.S. is approximately 700 cases per million individuals. PE ranks third among causes of cardiovascular mortality, responsible for approximately 100,000 deaths per year. The most widely used diagnostic strategies include a clinical decision rule, such as the Wells or revised Geneva score, in combination with d-dimer testing. D-dimer testing has thresholds can be fixed (500 ng/mL) or dependent on clinical characteristics (age times 10 mL), age-adjusted (age times 10 ng/mL in patients aged over 50 years), or dependent on clinical PTP (higher d-dimer thresholds in lower PTP) such as determined by the YEARS algorithm. A network meta-analysis evaluating the diagnostic performance of these three scoring systems found all to be safe across predefined patient subgroups, and no single strategy was favored.

Although catheter-based pulmonary angiography is considered the reference standard for diagnosing PE, it is rarely performed due to its invasive nature, the need for specialized providers to perform it, and its high cost. Computed tomography pulmonary angiography (CTPA) is the preferred imaging modality for diagnosing PE. Ventilation/perfusion (V/Q) scanning and compression ultrasound (CUS) are typically reserved for patients in whom CTPA is contraindicated or inconclusive (Table 1).

Despite excellent test characteristics, CTPA can yield false-positive results. The CTPA specificity of 98% implies that 2% of those without PE have a false-positive scan. According to Bayes’ rule, there is a 50% chance a positive CTPA result for a patient with a very low PTP (approximately 2%) is a false positive. A single-center retrospective study found that 26% of all positive CTPAs and 59% of subsegmental PE diagnoses were false positives (irrespective of patients’ PTP), as all three blinded expert radiologists disagreed with the initial CTPA-based PE diagnosis. Furthermore, an analysis of U.S. nationwide PE-related trends from 1993 to 2006 showed PE incidence increased by 80% after the introduction of CTPA in 1998, but PE-related mortality only marginally decreased, likely due to false positives or overdiagnosis of clinically insignificant PEs.

Given the concern for overdiagnosis and false positives, especially in those with low PTP, clinicians should be cautious about overutilizing CTPA. When used correctly, d-dimer can further stratify PE probability and reduce unnecessary testing.

D-dimer is a degradation product of cross-linked fibrin, a by-product of clot breakdown that occurs when the fibrinolytic pathway is activated. D-dimer assays rely on a variety of testing methodologies and a lack of standardized calibrators and reporting units, resulting in between-asay variability. Some assays use purified d-dimer as the calibrator and report results in d-dimer units (DDU), while others use plasmin proteolysis products of fibrin clots and report results in fibrinogen equivalent units (FEU). Most guidelines are based on assays reporting in FEU using 500 ng/mL as the clinical cut point. DDU can be approximated to FEU by multiplying the d-dimer concentration by two. For example, 250 ng/mL DDU is roughly equivalent to 500 ng/mL FEU. All d-dimer units mentioned henceforth are expressed in ng/mL FEU.

Overcoming oversimplification—interval likelihood ratios

Generally, PE is ruled out in patients with low to intermediate PTP and a negative d-dimer. However, interpreting d-dimer results simply as positive and negative oversimplifies the continuous diagnostic test. Setting a cut point at 500 ng/mL implies that d-dimer results of 490 and 510 ng/mL have vastly different effects on the likelihood of PE. Moreover, an undetectable d-dimer and a d-dimer level of 490 ng/mL are considered equally negative, and the levels of 510 and 10,000 ng/mL are equally positive, which does not reflect clinical experience or intuition. A clinician interpreting the d-dimer result of 600 ng/mL may question how this result or a narrow range around it, such as 500 to 750 ng/mL, affects the probability of PE. To obtain this information, one needs to know the probability of patients with PE having a d-dimer around 600 ng/mL, divided by the probability of patients without PE having a d-dimer in the same range (Figure 1). Interval likelihood ratios (ILR) provide precisely such information.

To maximize diagnostic utility, Kohn and colleagues aggregated patient-level data from five studies to produce ILRs for eight different d-dimer strata (Table 2, Figure 1).

Using ILRs leads to the following insights: a patient with intermediate PTP with a “negative” d-dimer <250 ng/mL and a patient with low PTP with a “positive” d-dimer of 600 ng/mL both have the same post-test probability of PE under 2%. However, conclusions differ with the dichotomous ILRs, potentially leading to unnecessary additional testing for...
a patient with low PTP (Figure 2).

The YEARS algorithm suggests that mildly elevated d-dimer levels reduce PE probability. The algorithm excludes PE both for low and intermediate PTP patients (scores 0 to 1) with a d-dimer <500 ng/mL and for patients with a score of 0 and a d-dimer level between 500 and 1,000 ng/mL. The PEGeD study evaluated 315 patients with low PTP (Wells score 0 to 1) and d-dimer levels between 500 and 999 ng/mL, and none of them were diagnosed with VTE during a 3-month follow-up.10 The YEARS and PEGeD study strategies, which allowed for d-dimer cutoffs to vary with PTP, reduced CTPA use without compromising diagnostic accuracy.10

D-dimer for patients with high PTP

The use of d-dimer to exclude PE is generally not recommended for patients with high PTP, as it may not sufficiently lower PE probability.11 However, the modern d-dimer assays may have sensitivity upwards of 99% with a negative LR under 0.02. Applying Bayes’ rule, a very low d-dimer can decrease a high PTP of 50% to about 2%, which is within the accepted failure rate.13 However, most studies conducted on d-dimer focused on low- and intermediate-PTP populations, making it challenging to assess if these test characteristics apply to those with high PTP. Two observational studies involving high-PTP patients (n=541) and those with prior VTE (n=308) have reported d-dimer sensitivity of 100% and a correlated low false-negative rate; however, further research is needed to determine if d-dimer can safely exclude PE in high-PTP populations.14,15

D-dimer for other special populations

Most d-dimer validation studies have been conducted in outpatient and emergency-department settings. Thus, it is unclear whether d-dimer can be used in hospitalized patients and other special populations such as post-surgical, pregnant, or autoimmune patients who may have higher baseline d-dimer levels. The 2018 American Society for Hematology guidelines note that d-dimer has limited utility in these populations, partially due to the scarcity of research in these patients.11 One retrospective study of 600 inpatients from 2014 to 2019 found that when using age-adjusted d-dimer cut points, VTE prevalence was 7%, sensitivity 90%, specificity 30%, and negative predictive value 97%.16 Similarly, there is a paucity of literature evaluating d-dimer test characteristics for patients with autoimmune conditions. One study of 28 inpatients with systemic lupus erythematosus undergoing d-dimer testing for VTE...
evaluation found that d-dimer had 93% sensitivity, 28% specificity, and 97% negative predictive value.\(^5\) While these studies are too small to draw significant inferences, they indicate that low d-dimer levels may sufficiently lower PE probability in these populations with baseline elevated d-dimers, but further research is warranted.

The role of d-dimer in diagnosing VTE in patients with COVID-19 remains unclear. A 2021 meta-analysis noted a marked variability in d-dimer thresholds (all dichotomized at 1,000 ng/mL or above) and test characteristics.\(^6\) Therefore, when faced with extremely high d-dimer levels, clinicians may consider a broad range of further diagnoses and pursue evaluation as appropriate.

**Application of data to original case**

The patient has a low PTG according to Wells and modified Geneva criteria. D-dimer level between 500-1,000 ng/mL modestly reduces her probability of PE (Table 2). Further testing with CTPA is not warranted, in line with the YEARS algorithm and PEGeD study.\(^7\)

The d-dimer result has markedly lowered the PE probability in this patient. Other etiologies should be considered for her symptoms.

**Bottom line**

Mildly elevated d-dimer levels do not increase PE probability. The use of Bayes’ rule and iLRs for d-dimer may help reduce unnecessary imaging for low and intermediate VTE patients without sacrificing diagnostic accuracy. \(^1\)

**References**


**Quiz:**

A 50-year-old man with a history of left knee replacement surgery one week prior presents to the ED for acute-onset shortness of breath and pleuritic chest pain. He has not noticed any leg pain, swelling, or redness. No associated fevers or cough. He denies a personal or family history of venous thromboembolism. He has no history of malignancy and is up to date on age-appropriate cancer screening. Vital signs are notable for a heart rate of 92 and O2 saturation of 95% on 2L of supplemental oxygen.

On exam, lungs are clear bilaterally. Chest radiograph and electrocardiogram are normal. A d-dimer is ordered and pending. Which of the following statements is correct regarding your next steps (assuming a normal creatinine)?

a. If the d-dimer is >500 ng/mL, CTPA imaging should be obtained.

b. CTPA imaging should only be ordered if the d-dimer is >1,000 ng/mL.

c. A d-dimer result of 600 ng/mL would increase the probability of PE.

d. The d-dimer should never have been checked because it has no diagnostic utility in patients with intermediate or high pre-test probability for PE.

Correct answer: A. This patient has an intermediate PTP for PE (20%) based on a Wells score of 4.5 and a Geneva score of 5, with the recent surgery being one of the main risk factors. A d-dimer in the 500 to 750 ng/mL range would lower the probability of PE, but not sufficiently to rule it out. The iLR (0.3) from Kohn, et al.\(^7\) reduces 20% pre-test probability to 8% post-test probability, which is still high enough to warrant further evaluation. This eliminates choice B because CTP-PE imaging would be indicated even for a d-dimer in the 500-1,000 ng/mL range. Setting a d-dimer cut-point >1,000 ng/mL (iLR of 1) would miss an unacceptable high proportion of PE. Choice C is incorrect because the probability is lowered by a d-dimer of 600 ng/mL from 20% to 8%. Choice D is incorrect because sufficiently low d-dimers can exclude PE in patients with intermediate PTP and possibly even in patients with high PTP, though further research is needed in this population. This question highlights the importance of considering the pretest probability in conjunction with the iLR.

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**Table 2: D-dimer Interval Likelihood Ratios for the Diagnosis of Pulmonary Embolism**

<table>
<thead>
<tr>
<th>D-DIMER INTERVALS (NG/ML FEU)</th>
<th>PATIENTS WITH PE, % (N)</th>
<th>PATIENTS WITHOUT PE, % (N)</th>
<th>ILR</th>
<th>LR 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;250</td>
<td>0.5 (5)</td>
<td>18.7 (930)</td>
<td>0.03</td>
<td>0.01-0.06</td>
</tr>
<tr>
<td>250-499</td>
<td>1.3 (14)</td>
<td>23.8 (1,180)</td>
<td>0.06</td>
<td>0.03-0.09</td>
</tr>
<tr>
<td>500-749</td>
<td>4.7 (49)</td>
<td>16.3 (810)</td>
<td>0.3</td>
<td>0.22-0.38</td>
</tr>
<tr>
<td>750-999</td>
<td>6.0 (63)</td>
<td>9.4 (468)</td>
<td>0.64</td>
<td>0.50-0.62</td>
</tr>
<tr>
<td>1,000-1,499</td>
<td>11.3 (118)</td>
<td>11.5 (570)</td>
<td>1</td>
<td>0.81-1.18</td>
</tr>
<tr>
<td>1,500-2,499</td>
<td>18.5 (194)</td>
<td>9.1 (450)</td>
<td>2</td>
<td>1.8-2.4</td>
</tr>
<tr>
<td>2,500-4,999</td>
<td>29.8 (312)</td>
<td>7.0 (349)</td>
<td>4.2</td>
<td>3.7-4.9</td>
</tr>
<tr>
<td>&gt;5,000</td>
<td>27.9 (292)</td>
<td>4.2 (209)</td>
<td>6.6</td>
<td>5.6-7.8</td>
</tr>
</tbody>
</table>

**PE=pulmonary embolism, iLR=interval likelihood ratio, CI=confidence interval**

*data adapted from Kohn MA et al.\(^7\)
A dedicated nightly reader and med-peds-trained hospitalist, Richard Wardrop, MD, PhD, is the Cleveland Clinic Internal Medicine Program Director. He has a unique way of showing his appreciation to learners by gifting them books as a token of their “chapter” spent learning and teaching together. This tradition was shown to him by his mentor, Dr. Clay Marsh, who gifted him the book Who Moved My Cheese? when he was a medical student.

Inspired by this gesture, Dr. Wardrop began gifting classic medical titles to learners, such as the Tarascon Internal Medicine & Critical Care Pocketbook to a medical student named Noel Ivey, who is now a hospitalist at Duke. The books have taken different forms over the years, from gifting Osler for White Coat Pockets to first-year residents as a welcome to the profession, to gifting the classic Quotable Osler to chief residents at graduation.

An avid reader himself, Dr. Wardrop spends at least 30 minutes reading before bed. He often keeps what he affectionately calls a commonplace journal to record important points from a book or thoughts that he doesn’t want to forget. While he often reads two to three books at a time, one of his favorite collections, Ernest Hemingway’s short stories, is a constant companion and has found its way into his program’s Narrative Medicine curriculum.

For example, the classic short story “A Day’s Wait” was recently used to teach his residents about the power of perspective and suffering in the eyes of the patient and the caregiver. When asked why he reads daily, Dr. Wardrop said “Reading is a tonic for my heart, my brain, and my soul. Reading and reflecting makes my thinking, writing, and interpersonal relationships better.” As a new group of medicine students enter the MATCH and resident/fellow graduation marks the end of an academic year Dr. Wardrop has shared some of his top favorites to gift.

**Best Leadership**
- Only the Paranoid Survive by Andrew S. Grove
- The Leadership Challenge by James M. Kouzes and Barry Z. Posner
- Choosing Civility by P.M. Forni
- Multipliers by Liz Wiseman

**Best Diagnostic Reasoning**
- Sapira’s Art & Science of Bedside Diagnosis by Jane M. Orient
- Evidence-Based Physical Diagnosis by Steven McGee
- Atlas of Pediatric Physical Diagnosis by Basil J. Zitelli, Sara McIntire, and Andrew J. Nowalk
- Symptom to Diagnosis by Scott D.C. Stern, Adam S. Cifu, and Diane Aitkorn

**Life and Medicine**
- Aequanimitas by William Osler
- Being Mortal by Atul Gawande
- The Obstacle is the Way by Ryan Holiday
- Internal Medicine by Terrence Holt

Although these are just a few titles in the sea of medical texts, the Hippocratic oath upholds physicians sharing the art and craft of medicine. Consider the impact of a personalized gift to a learner and the lasting memory made through such a gesture.
Are You Asking the Right Questions in a Job Interview?

Increase your chance of getting hired

By Erica Grabscheid, MD, FACP, FHm, Anand Shukla, MD, and Jessica Sarmiento, MD

Every hospitalist program is unique because it is tailored to meet the specific needs of the hospital it serves. For instance, one employer may require hospitalists to rotate through a post-discharge clinic, while another may have them take care of ventilated or intensive care unit (ICU) patients. The next employer may expect hospitalists to work a certain number of night shifts per month. Therefore, when interviewing for a hospitalist position, it is crucial to ask the right questions to ensure you clearly understand the job requirements.

Most interviewees prepare for questions the potential employer may ask (such as “Tell me about yourself.”). However, to best understand the position and its offerings, there should be a detailed two-way conversation between you and your potential employer. Although a natural conversation flow would be ideal, it is essential to arrive at the interview with smart and appropriate questions that will benefit both you and the employer.

Here are potential questions to ask during the job-interview process broken down into categories:

Duties and responsibilities

1. What responsibilities do the physicians have? Describe all potential clinical and non-clinical roles.
2. What is the work schedule? What’s the expectation of how many days are worked per year? Is it shift work? If so, what are the hours? Who covers nights, weekends, and holidays (the call schedule)? Is a sick call available? Are there moonlighting opportunities?
3. What does an average workday look like?
4. Are hospitalists responsible for patients in an emergency department or ICU setting?
5. Are telemetry floors covered by hospitalists or specialists?
6. Are most patients admitted under a hospitalist, or are patients admitted under their respective service? For example, is a stroke patient admitted under medicine or to a neurology/stroke service?
7. Who performs bedside procedures? Is it mandatory to be certified in procedures? If so, which procedures would this include?
8. Are medical residents, physician assistants, and nurse practitioners available? Are they on every case? What are their roles?
9. Is there direct patient care?
10. Do the hospitalists cover services in addition to the medicine wards, such as comanagement or an observation unit?
11. Are there any administrative roles available (quality improvement, informatics, C-suite, etc.)?
12. What is the average rate of admissions and follow-ups per day? What is the average census? Is there a cap on the number of patients a physician can see per day?
13. What ancillary services are available?

About the institution

1. Is the hospital considered a full-service hospital? For example, are interventional cardiology or advanced endoscopy services available? If resources are limited, are patients transferred to other centers?
2. Is the job located at one center; or does it involve affiliated centers?
3. How large is the current program? What are the rates of staff turnover and why?
4. What electronic health record system is used?
5. Describe the patient population. Is it diverse? Is it underserved? What are the principal diagnoses seen?
6. From where are the patients being referred (community primary care physicians, specialty clinics)?
7. Is there a mentorship program? What is the makeup of the staff in terms of years of experience?
8. Is the hospital affiliated with an academic institution? Are there medical students, and what is the hospitalist’s involvement in their education? What opportunities are there to get involved in academics, education, or research?
9. Who is the employer (e.g., the hospital itself, university or medical school, physician group, management company)?
10. Is the hospital a 501c3 organization? Are there opportunities for loan forgiveness?
11. What is the financial standing of the employing company or hospital? Are any changes to the company or hospital system expected in the next one to five years?

Compensation and benefits

1. What is the salary structure? Is it a straight salary? If there is an incentive component, how is that calculated? Are the bonuses achievable? Is there a cost-of-living adjustment?
2. Are any benefits provided, such as health insurance or a retirement plan?
3. Are there any avenues for advancement? For additional roles taken on, is there a full-time equivalent reduction? If so, how does this affect clinical time and compensation?
4. Is a contract provided?
5. Who is responsible for malpractice, and what is the coverage?
6. Is there assistance with moving costs?

It is important to keep in mind that you may not receive all the answers during your first meeting with a potential employer. This is a process, and you should start with general inquiries, such as the call schedule. If the employer is seriously considering hiring you, there will be further opportunities for communication, such as follow-up interviews, phone calls, and emails. During these occasions, you will have multiple chances to ask more detailed questions about your potential salary, 401K benefits, and whether the malpractice insurance includes tail insurance. These questions can vary depending on the job position, but having a toolbox of questions can significantly increase your preparedness and success in a hospitalist interview.

Dr. Grabscheid is a senior hospitalist at Mount Sinai Beth Israel and a professor of medicine at the Icahn School of Medicine at Mount Sinai in New York. Dr. Shukla is a hospitalist at Mount Sinai Beth Israel, an assistant professor of internal medicine at the Icahn School of Medicine at Mount Sinai, site director for the MS3 inpatient medicine clerkship, and co-director of the hospitalist elective for the Mount Sinai Beth Israel internal medicine residency program in New York. Dr. Sarmiento is a hospitalist at Mount Sinai Beth Israel, assistant professor of medicine at the Icahn School of Medicine at Mount Sinai, and co-director of the hospitalist elective for the Mount Sinai Beth Israel internal medicine residency program in New York.
Physician advisors are responsible for a lot. Their work exists at the intersection of clinical matters and revenue. Think clinical documentation, hospital quality measures, length-of-stay management, utilization review, and the check-box difference between observation and inpatient status.

So, of course, most of them are hospitalists, given the quarterback-like role in clinical care the specialty plays.

‘The majority of physician advisors are hospitalists because we are natural experts in understanding hospital operations and managing patients in the hospital,’ said Aziz Ansari, DO, FAAHPM, FACP, SFHM, professor of medicine and associate chief medical officer of clinical optimization and revenue integrity at Loyola University Medical Center in Maywood, Ill.

‘It’s the natural next step for a hospitalist to take on additional roles if they choose to. Because there are so many hospitalists who are physician advisors, there was a big need and a want to have an organized forum within the Society of Hospital Medicine, where physician advisors can congregate, learn, and support each other,’ Dr. Ansari said.

So was born the Physician Advisors Special Interest Group, which Dr. Ansari took over as chair in 2022.

‘It is vital that there is a forum where the physician advisors can get together, learn from each other, and offer insights to continue to improve hospital operations and hospital financial and quality metrics,’ he said.

For Dr. Ansari, the SIG is a necessary community that gives physician advisors a place to share pearls, pitfalls, successes, and challenges.

‘A lot of us think we’re alone in this big fight with insurance companies, with keeping our lifeboats open and trying to maximize revenue integrity and quality metrics,’ he said. ‘You realize that the same challenges you’re having are the same as others and you are not alone. That sense of community and camaraderie, sharing best practices, and sharing war stories are very helpful for your sanity. And we can learn together to improve and do what’s best for our patients collectively.’

Dr. Ansari says learning what other physician advisors have done in their workflows gives SIG members the confidence to defend their positions to administrators in their respective institutions.

‘One can go to their C-suite and say, ‘We’re not the only ones struggling here, and I’ve networked with X, Y, or Z health care system,’ and saying, ‘Hey, there is an idea that one of my colleagues had, and we can try this.’’’ Dr. Ansari said. ‘Or, if a C-suite member feels like they are the only ones with a certain problem, well, you have a whole network of colleagues who will tell you you’re not alone.’

Dr. Ansari says that a communal approach to improvement can be as high-level as a conversation with C-suites and as granular as what programs to use.

‘It’s a lot of sharing of ideas and what methods have been tried to improve metrics in various domains, and also learning from others what did not work, if people are willing to share,’ he said. ‘This can be very helpful, especially for those with less experience and just starting their career as a physician advisor.’

The SIG also aims to be forward-looking to help physician advisors deal with the ever-changing health care landscape.

‘For example, Medicare Advantage came out with a rule in January 2024 that says that Medicare Advantage must follow the two-midnight rule,’ Dr. Ansari said. ‘So, we’ve been spending some time trying to figure out what that means, collectively, and in February, we’re going to have a webinar on Medicare Advantage that will focus on what are the lessons learned in a panel discussion. This is an example of continuous learning, advocacy, building that sense of community.’

The SIG hosts roughly four webinars a year, plus its annual meeting, SHM Converge. The webinars are always available to members to review later, as the topics aim to be more universal with evergreen content.

‘That repository of webinars is accessible,’ he said. ‘These are topics that hopefully can stand the test of time.’

Dr. Ansari is also clear that the SIG’s job isn’t to train physician advisors. A role like that is filled by the American College of Physician Advisors, as one example.

‘The SIG is there for support, networking, and mentorship. This is a great forum to find friends and colleagues who share your same interests and who can support each other,’ Dr. Ansari said. ‘You’re not alone. This is a tough job. The answers may be right there in our community if we engage in dialogue.’

Richard Quinn is a freelance writer in New Jersey.
Chapter Spotlight: Maryland

Looking to engage the next generation

By Richard Quinn

If there’s one struggle that all SHM chapters know well, it’s engagement. Evelyn Gathecha, MD, FACP, FHM, tackles the issue head-on as president of the Maryland outpost.

“Engagement is always a challenge,” said Dr. Gathecha, a hospitalist with Mid-Atlantic Permanente Medical Group in Rockville, Md. “So we’ve tried to look for different ways to engage our members, and also hospitalists in general, to become members.”

It’s working well, as the group was awarded platinum status after a busy slate of at least six events in 2022.

“That level of activity is the key to success,” says Dr. Gathecha. “Maryland is a huge state,” she said. “We have more than 50 hospital-medicine groups, we cannot meet the needs of all of the hospitalists across the state. So, having the virtual platform, in addition to keeping an in-person platform, has gone a long way.”

While some chapters have abandoned virtual events after the worst of the COVID-19 pandemic, Dr. Gathecha sees a mix of remote and in-person events as another trick in the toolbox for—wait for it—engagement.

“We’re able to meet the needs of those hospitalists who are not able to travel to come and meet us in Baltimore, or Howard County,” she said. “At the same time, it’s also keeping interest in meetings with those hospitalists who are local and can stay engaged in person with their fellow hospitalists. That’s one way we have kept engagement, by being creative and maintaining both platforms so we can reach out to everybody.”

Attendance isn’t the only metric that matters, though. Engagement means holding lectures, discussions, or panels that speak to issues members care the most about.

Dr. Gathecha says that includes the needs of academic and non-academic hospitalists, who can sometimes feel at odds. “I had the opportunity of being an academic hospitalist for more than 10 years before transitioning to non-academic hospital medicine,” she said. “This has allowed me to experience both academic and non-academic environments and personally interact with hospitalists in both settings. I bring these conversations and experiences back to our chapter office meetings as we discuss ways to maintain and increase the engagement of all hospitalists.”

But engagement work is never done, Dr. Gathecha and her board believe. She wants more residents and early-career hospitalists involved in the chapter, building the leadership board of the future.

“The engagement among resident physicians is not that high,” she said. “My vision in terms of our chapter growth, is to tap into these young hospitalists and try to encourage them to join the chapter. I think it’s a niche that we’re still working on and trying to grow.”

One approach is having a resident chapter-advisory member who can weigh in on “content that is of value to residents in training,” Dr. Gathecha said.

“This year, we are awarding membership to resident members, and we are looking for them as being SHM resident ambassadors,” she said. “Hopefully, as they go to their programs, they can share what SHM has to offer and hopefully get more residents to join the chapter.”

In addition, we’re going to create a lecture series this year dedicated to the residents. That’s another way we can show the value of SHM to residents.”

Richard Quinn is a freelance writer in New Jersey.
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