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For patients hospitalized with COVID-19,<sup>1</sup>

# HELP REDUCE DISEASE PROGRESSION AND SHORTEN RECOVERY TIME<sup>1,2</sup>

## INDICATION

VEKLURY is indicated for the treatment of COVID-19 in adults and pediatric patients (≥28 days old and weighing ≥3 kg) with positive results of SARS-CoV-2 viral testing, 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.

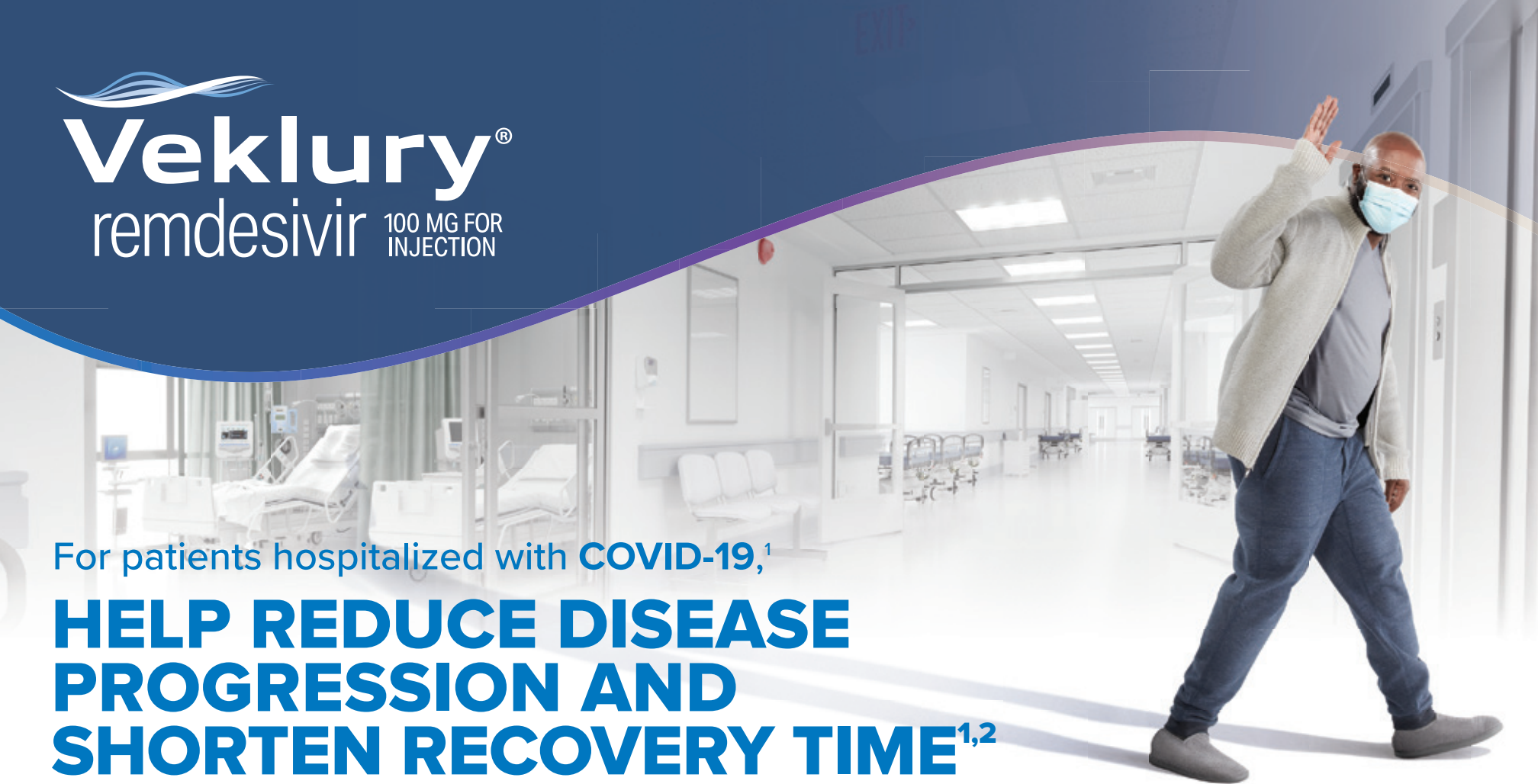
### Drug interactions

- Drug interaction trials of VEKLURY and other concomitant medications have not been conducted in humans.

### Dosage and administration

- **Dosage:**
  - 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 to <40 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.

ECMO=extracorporeal membrane oxygenation.



In the ACTT-1 overall study population, patients experienced

**5** DAYS SHORTER RECOVERY TIME WITH VEKLURY<sup>1</sup>

**Median 10 days with VEKLURY vs 15 days with placebo; recovery rate ratio: 1.29 (95% CI, 1.12 to 1.49), p<0.001<sup>1,2</sup>**

- Recovery was defined as patients who were no longer hospitalized or hospitalized but no longer required ongoing COVID-19 medical care

**Significantly greater likelihood of improvement in clinical status, a key secondary endpoint<sup>1</sup>**

- 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<sup>1,3</sup>**

- 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<sup>1</sup>**

- All adverse reactions (ARs), Grades  $\geq 3$ : 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.<sup>1</sup>

\*Seizure (n=1), infusion-related reaction (n=1).

+Seizure (n=1), infusion-related reaction (n=1), transaminases increased (n=3), ALT increased and AST increased (n=1), GFR decreased (n=2), acute kidney injury (n=3).

## IMPORTANT SAFETY INFORMATION (cont'd)

### Dosage and administration (cont'd)

#### • 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 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.

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

• **Renal impairment:** VEKLURY is not recommended in individuals with eGFR <30 mL/min.

#### • Dose preparation and administration:

- There are two different formulations of VEKLURY: VEKLURY for injection (supplied as 100 mg lyophilized powder in vial), the only approved dosage form of VEKLURY for pediatric patients weighing 3 kg to <40 kg; and VEKLURY injection (supplied as 100 mg/20 mL [5 mg/mL] solution in vial). See full Prescribing Information.
- Administration should take place under conditions where management of severe hypersensitivity reactions, such as anaphylaxis, is possible.

### Pregnancy and lactation

- **Pregnancy:** A pregnancy registry has been established. There are insufficient human data on the use of VEKLURY during pregnancy. COVID-19 is associated with adverse maternal and fetal outcomes, including preeclampsia, eclampsia, preterm birth, premature rupture of membranes, venous thromboembolic disease, and fetal death.
- **Lactation:** It is not known whether VEKLURY can pass into breast milk. Breastfeeding individuals with COVID-19 should follow practices according to clinical guidelines to avoid exposing the infant to COVID-19.

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

**References:** 1. Veklury. Prescribing Information. Gilead Sciences, Inc.; 2022. 2. Beigel JH, Tomashek KM, Dodd LE, et al; ACTT-1 Study Group. Remdesivir for the treatment of COVID-19—final report. *N Engl J Med*. 2020;383(19):1813-1826. doi:10.1056/NEJMoa2007764 3. Beigel JH, Tomashek KM, Dodd LE, et al; ACTT-1 Study Group. Remdesivir for the treatment of COVID-19—final report. Supplementary appendix. *N Engl J Med*. 2020;383(19):1813-1826. Accessed May 24, 2022. [https://www.nejm.org/doi/suppl/10.1056/NEJMoa2007764/suppl\\_file/nejmoa2007764\\_appendix.pdf](https://www.nejm.org/doi/suppl/10.1056/NEJMoa2007764/suppl_file/nejmoa2007764_appendix.pdf)



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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), with positive results of SARS-CoV-2 viral testing, who are:

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

**DOSAGE 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:** VEKLURY is not recommended in individuals with eGFR <30 mL/min.

**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 simultaneously 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 diluting in a 100 mL or 250 mL 0.9% sodium chloride infusion bag.
- Care should be taken during admixture to prevent 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 to <40 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 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 ≤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 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** [*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, 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 NIAID 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).

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

**Less Common 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 9 of 20 subjects receiving 10 days of VEKLURY (Grade 1, n=8; Grade 2, n=1); the elevations in ALT resolved upon discontinuation. No subjects (0 of 9) who received 5 days of VEKLURY had graded increases in ALT.

Laboratory abnormalities (Grades 3 or 4) occurring in ≥3% of subjects receiving VEKLURY in Trials NIAID ACTT-1, Study 5773, and/or Study 5774, respectively, were ALT increased (3%, ≤8%, ≤3%), AST increased (6%, ≤7%, n/a), creatinine clearance decreased, Cockcroft-Gault formula (18%, ≤19%, ≤5%), creatinine increased (15%, ≤15%, n/a), 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.

Drug-drug interaction trials of VEKLURY and other concomitant medications have not been conducted in humans. Remdesivir and its metabolites are in vitro substrates and/or inhibitors of certain drug metabolizing enzymes and transporters. The clinical relevance of these in vitro assessments has not been established.

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

**Pregnancy**

**Risk Summary:** There are insufficient human data on the use of VEKLURY during pregnancy to inform a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. COVID-19 is associated with adverse maternal and fetal outcomes, including preeclampsia, eclampsia, preterm birth, premature rupture of membranes, venous thromboembolic disease, and fetal death.

**Lactation**

**Risk Summary:** There are no available data on the presence of remdesivir in human milk, the effects on the breastfed infant, or the effects 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**

All patients must have an eGFR determined before starting VEKLURY and while receiving VEKLURY as clinically appropriate. VEKLURY is not recommended in patients with eGFR less than 30 mL/min.

**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 overdose 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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Weijen.ChangMD@baystatehealth.org

Pediatric Editor

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ldionnelen@wiley.com

Associate Director, Advertising Sales

Tracey Davies  
tdavies@wiley.com

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Phone: 800-843-3360  
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WILEY



# Contract Negotiation Know-How

Do your research, ask for what's important to you, and pay attention to details if you're a new hospitalist

## By Vanessa Caceres

Whether you're a hospitalist negotiating your first job contract out of residency or a seasoned professional considering a new opportunity after years with the same institution, negotiating physician employment contracts can be overwhelming.

However, with some preparation, the negotiation process can go smoothly. Here's what to expect in a hospitalist employment contract and how to ask tactfully for what's important to you.

### What to expect in a contract

When reviewing a prospective job contract, it's common for hospitalists to look right away at the compensation, says Richard Wardrop III, MD, PhD, hospitalist and program director of the internal medicine residency program at the Cleveland Clinic in Cleveland.



Dr. Wardrop

However, there's a lot more to review than just your salary. Here are three things to consider:

**Work expectations**—should cover in detail how often you work, including the number of days on and off (for instance, seven days on and seven days off), when you're on call, vacation scheduling, and similar issues.

Read the details closely as there may be obligations you'll have even during your off weeks, such as attending meetings.

Don't automatically assume that a demanding work schedule is the best one for you, Dr. Wardrop cautions. You may have been willing to put in extra time in residency but working those longer hours long-term can become too stressful as you attempt to carve out a post-residency life or raise a family, he says. At the same time, that doesn't mean you should pursue part-time work right away. Aim for a schedule that strikes the work/life balance you desire.

**Pay**—this section of the contract includes base salary, bonuses, and incentives. Research typical salaries in the area for hospital-

ists. One potential resource for salary data is the Medical Group Management Association's annual physician compensation surveys, Dr. Wardrop says.

Keep in mind that physicians in urban areas often get paid less than those in rural areas, says Anita N. Lwanga, MD, FACP, an assistant professor of general internal medicine at the University of Saskatchewan in Saskatoon, and a general internist at the Saskatchewan Health Authority. She also has worked in various hospitals in Chicago and New York.



Dr. Lwanga

If the salary seems unusually high, make sure it's not tied to performance metrics that could be hard to meet as a hospitalist.

Bonus types could include a sign-on bonus, a retention bonus based on the number of years you've worked, and a performance bonus based on certain metrics, says Ramesh Adhikari, MD, MS, FHM, a hospitalist with the Franciscan Alliance in Lafayette, Ind., and a member of The Hospitalist's editorial board.

If details on the terms of these bonuses aren't spelled out in the contract, make sure to ask for them. There may also be moving bonuses or coverage for some moving expenses. The IRS will typically impose a higher tax rate on bonuses as they're considered supplemental income, Dr. Lwanga says.

Depending on the type of bonus or incentive, you should consider how likely you are to achieve it, depending on your skill set and what's in your control as a hospitalist, says Stu Schaff, founder of Contract Medicine, a service that helps physicians understand, evaluate, and negotiate their



Dr. Adhikari



Mr. Schaff



employment contracts.

Expect the contract to include information on health insurance, retirement benefits, and other fringe benefits. When you consider your compensation, also consider the value of these extra benefits.

**Legal**—there will be other terms the employer is putting on your employment, including when you could be fired with or without cause, Mr. Schaff says. “Keep your eyes open for wording that states the contract can be dissolved at any time without any cause,” Dr. Lwanga said.

Legal parts of a contract also will address noncompete clauses, malpractice coverage, and tail coverage (including who purchases the tail coverage).

You want to ensure that leaving the hospital isn’t financially disastrous for you, although it can be hard to think about that when you’re focused on getting the job, Dr. Wardrop says.

### Contract perks

There may be some perks you’d like included in your contract, or you may work at a hospital that includes certain perks as standard practice. Some examples of perks include:

- Paid time off.
- Student loan forgiveness or repayment. This may be more common if you’re working in an underserved area.
- Processing of a permanent residency visa if you’re working in the U.S. with a visa. Beware of a contract that requires you to work for a prolonged period before your employer sponsors your green card if you’re on an H1B visa, Dr. Lwanga says.
- A continuing medical education allowance.
- Participating in medical education. Dr. Wardrop sees the opportunity to educate others, including non-physician staff such as nurse practitioners and physician assistants, as a rewarding perk.
- Paid gym membership.
- Onsite childcare.
- Employee assistance programs.
- Access to pet, auto, homeowners, and renters insurance discounts.
- Employee discount programs for everything from travel and dining to computers and car rentals.

### Ask for what you want

If there’s something not in your contract that you think is important, it’s okay to ask for it respectfully and confidently, Mr. Schaff says. After all, if you don’t ask, you won’t get it. One phrase he recommends using when you ask for something is: “I’m looking to make sure the contract will put my family/me in the best position.”



“The human on the other side of the table can usually sympathize with this,” Mr. Schaff said.

However, keep in mind that if you receive something additional in your contract, it often takes away from something else, he says. Hospital leaders will try to keep contracts for new hospitalists fair, which means they won’t typically give you a lot more money or a lavish perk that’s not given to others.

Also, contract additions aren’t made in a vacuum, Mr. Schaff says. While you can ask for something else—say, additional money—consider the hospital’s pressures and challenges. If you’re asking for more money while they’re focused on budget cuts, you may not get the answer you want.

Asking for something else in the contract process can be a learning process. Dr. Wardrop shares the story of wanting to change a 60-day term in one contract provision to a 90-day term. Although he didn’t get the change as it was a boilerplate number in all the hospital’s contracts, asking helped educate him more about the contracts, and he felt more comfortable asking questions with that staff contact in the future.

### Tips for better negotiation

Negotiating your job contract as a hospitalist may seem a bit overwhelming, but here are a few tips to ease the pressure.

1. Share your contract with a professional such as a contract attorney or advisor who regularly works with physician employment contracts. It might be a little pricey, but that person will keep you out of unreasonable

contract terms, Dr. Lwanga says. Mr. Schaff often sees physicians using people who aren’t the right experts, such as a family member who’s a real estate attorney or the family accountant. Your best source will be someone familiar with physician employment contracts.

2. Avoid high-pressure offers. It’s a red flag if the hospital offering you a job wants an answer by tomorrow, Dr. Wardrop cautions. Although he realizes all hospitals have staffing pressures, there must be a reasonable amount of time for you to consider their offer. This could be a week or so.
3. Talk to colleagues at the hospital that you’re considering, Dr. Adhikari advises. Ask what they think about the city where the hospital is located and what they like or dislike about working with the hospital. This gives you more information to make your decision.
4. Consider tax implications and time commitments with certain contract provisions. As mentioned before, bonuses are taxed at a higher rate by the IRS and are taxed in the year paid. If you have a forgivable student loan covered under the contract, a portion of the loan and accrued interest is forgiven each year. That specific amount is taxed annually. The forgivable loan is usually contingent on you remaining in good standing at the hospital for a certain number of years, Mr. Schaff says. The bottom line: Know the tax and timing implications of these additions.
5. Give some thought to the

amount of time you’re locked into working at the hospital. A three-year term may be a little excessive, Dr. Wardrop says. While one or two years is reasonable for most new hospitalists, it also depends on how well you know the area and how likely you may be to move as your life evolves.

6. Ask yourself four important questions before signing an employment contract, Mr. Schaff advises:
  - Are you as sure as you can be that you want to work for this employer, given the culture, your future colleagues, and the organization’s reputation?
  - Are you clear on what will be expected of you in the job?
  - Are you clear on what you’ll earn and how you can earn more?
  - Have you asked and received acceptable answers to every question you have, big or small?

If you can’t answer yes to each of these questions, perhaps it’s not the right job for you. If you do your best to ensure that your overall goals and expectations align well with the hospital, you’ll go a long way in preventing burnout, Dr. Wardrop says.

Remember, know what to expect, consider the perks, ask for what you want, get your questions answered by the right people, and complete your due diligence to secure a contract you’re happy with. ■

*Vanessa Caceres is a medical writer in Bradenton, Fla.*



# University of Virginia School of Medicine Research Reviews

By Alexander Lawson, MD, Angel L. Morvant, MD, Anirudh Sundararaghavan, MD, Brian Peterson, MD, Charlie Magee, MD, MPH, FACP, and Mohammad Usmaan Bashir, MD

University of Virginia School of Medicine, Charlottesville, Va.

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By Alexander Lawson, MD

### 1 Using POCUS of the internal jugular vein to predict central venous pressure

**CLINICAL QUESTION:** Does point of care ultrasound (POCUS) of the internal jugular vein accurately predict central venous pressure?

**BACKGROUND:** Assessing volume status is critical to care of heart failure patients in both the inpatient and the outpatient setting, but volume exams are notoriously difficult. While the gold-standard measurement of venous congestion is determining central venous pressure via right heart catheterization, this invasive test is not practical nor indicated for most patients with decompensated heart failure.

**STUDY DESIGN:** Retrospective cohort study

**SETTING:** Two U.S. academic hospitals

**SYNOPSIS:** In this study of 100 patients undergoing right heart catheterization for heart failure (mean age 59.6, 66% with a reduced ejection fraction), jugular venous pressure (JVP) was estimated via handheld ultrasound and compared to invasive hemodynamic measurements performed on the same day. Their estimated JVP via ultrasound (uJVP) was measured via POCUS by determining the height above the sternal angle at which the internal jugular vein tapered to become smaller than the adjacent internal carotid artery with the patient semi-upright between 30 and 45 degrees. This measurement was then added to the classically accepted 5-centimeter distance between the sternal angle and the right atrium to estimate right atrial pressure in centimeters of water.

The correlation between uJVP measurements and right atrial pressure measured via right heart catheterization had a correlation coefficient of 0.79. A uJVP measurement of  $>8$  cm  $H_2O$  was 94% sensitive for detecting elevated right atrial pressure of  $>10$  mm Hg. The AUC of the receiver-operating characteristics curve was 0.84.

**BOTTOM LINE:** POCUS performs well at estimating right atrial pressures compared to invasive right heart catheterization and may prove to be an increasingly useful tool in the care of patients with heart failure.



Dr. Lawson

**CITATION:** Wang L, et al. Accuracy of ultrasound jugular venous pressure height in predicting central venous congestion. *Ann Intern Med.* 2022;175(5):W54. doi:10.7326/L22-0118.

Dr. Lawson is an assistant professor of medicine at the University of Virginia School of Medicine, Charlottesville, Va.

By Angel L. Morvant, MD

### 2 Parathyroidectomy does not reduce mortality or morbidity in mild primary hyperparathyroidism

**CLINICAL QUESTION:** Does parathyroidectomy improve mortality or morbidity in mild primary hyperparathyroidism?

**BACKGROUND:** It is known that in patients with severe hypercalcemia or symptoms from hyperparathyroidism, parathyroidectomy is beneficial as curative treatment. However, it is not known whether parathyroidectomy improves mortality or morbidity in patients with mild primary hyperparathyroidism.

**STUDY DESIGN:** Prospective, randomized, controlled trial

**SETTING:** Eight referral centers in Sweden, Norway, and Denmark

**SYNOPSIS:** 191 patients (165 women, 26 men) from three Scandinavian countries with mild primary hyperparathyroidism with albumin-corrected calcium levels between 2.6 and 2.8 mmol/L were randomly assigned to observation-only versus parathyroidectomy. They were followed for 10 years, with no significant differences between the groups in mortality, prespecified morbidities, bone mineral density, or quality of life. The prespecified morbidities were cardiovascular disease, cerebrovascular disease, cancer, fractures, kidney stones, and kidney failure. Therefore, it could be concluded that it is safe to observe patients with mild primary hyperparathyroidism for up to 10 years with regard to mortality and the morbidities listed above.

Previous studies have demonstrated a benefit from parathyroidectomy in patients with severe or symptomatic hypercalcemia, but it has not yet been demonstrated whether there is a benefit from parathyroidectomy in patients with mild primary hyperparathyroidism. One limitation of



Dr. Morvant

this study is the disproportionate percentage of women versus men enrolled, thereby limiting the external validity of the results to certain patients.

**BOTTOM LINE:** Parathyroidectomy in mild primary hyperparathyroidism does not reduce mortality or morbidity compared to observation alone.

**CITATION:** Pretorius M, et al. Mortality and morbidity in mild primary hyperparathyroidism: results from a 10-year prospective randomized controlled trial of parathyroidectomy versus observation. *Ann Intern Med.* 2022; 175(6):812-9.

Dr. Morvant is an assistant professor of medicine at the University of Virginia School of Medicine, Charlottesville, Va.

By Anirudh Sundararaghavan, MD

### 3 The use of magnesium sulfate for acute COPD exacerbations

**CLINICAL QUESTION:** Can magnesium sulfate be used as an efficacious adjunct therapy in the treatment of chronic obstructive pulmonary disease (COPD) exacerbations?

**BACKGROUND:** Low serum magnesium has been shown to be a predictor of frequency of acute COPD exacerbations and hospital readmissions. While guidelines recommend a single dose of intravenous magnesium in patients with inadequate response to bronchodilator therapy in acute asthma exacerbations, standard guidelines do not recommend the routine use of magnesium in acute COPD exacerbations.

**STUDY DESIGN:** Systematic review and meta-analysis of randomized controlled trials (RCTs)

**SETTING:** Eight single-center trials (four in Iran, one each in New Zealand, Nepal, Turkey, and the United Kingdom) and three two-center trials (New Zealand, Tunisia, and the United States)

**SYNOPSIS:** The systematic review included 11 RCTs with a total of 762 participants with mean ages between 62 and 76 years. Seven studies assessed intravenous magnesium sulfate infusion + standard of care versus placebo + standard of care. Low-certainty evidence from three of the trials indicated a reduced rate of hospital admissions with intravenous magnesium therapy (NNT = 7). Otherwise, there was no significant difference seen in need for non-invasive ventilation, all-cause mortality, lung function measured as a change in FEV1 post-intervention, or improvement in oxygen saturation. There was similarly no significant difference seen in use of nebulized magnesium sulfate versus placebo in any of the measured outcomes.

The study has several limitations, including the fact that all the studies included in the analysis were single- or two-center studies with small numbers of participants. Additionally,



Dr. Sundararaghavan



there was a low level of heterogeneity and a small number of trials, making it difficult to make a confident pooled-effects estimate.

**BOTTOM LINE:** There is limited evidence supporting the use of intravenous or nebulized magnesium in the treatment of acute COPD exacerbations.

**CITATION:** Ni H, et al. Magnesium sulfate for acute exacerbations of chronic obstructive pulmonary disease. *Cochrane Database of Systematic Rev.* 2022;5(5):CD013506. doi:10.1002/14651858.

4 The bleeding risk of NOACs in patients on systemic or topical azole therapy

**CLINICAL QUESTION:** Is there an increased bleeding risk in patients with atrial fibrillation on novel oral anticoagulants (NOACs) that are concurrently on systemic fluconazole or topical azole treatment?

**BACKGROUND:** Systemic antifungal therapy with azoles has been associated with increased risk of bleeding in patients on anticoagulation with NOACs although there is no strict contraindication for concomitant use with fluconazole, the most commonly prescribed systemic azole, and NOACs. Case reports have also suggested an increased bleeding risk association between topical azoles and NOACs, indicating a need for further evaluation.

**STUDY DESIGN:** Case-crossover study

**SETTING:** Nationwide database search of Danish administrative health registers

**SYNOPSIS:** The study included 32,340, 32,409, and 24,940 patients on apixaban, rivaroxaban, and dabigatran, respectively, for the treatment of atrial fibrillation with a median age across all patients of 75. Systemic fluconazole use among the patients in the cohort was similar across all NOACs with 4.9%-5.3% of patients claiming at least one prescription with less than 2% claiming more than one prescription. Treatment with topical azoles was more frequent with 16.1%-17.6% of patients obtaining at least one prescription. Among apixaban users, a significantly increased risk of bleeding following exposure to systemic fluconazole was found with a case-crossover OR of 3.5 (95% CI of 1.4-10.6) for a 30-day exposure window. Interestingly, this increased risk was not noted among rivaroxaban (OR 0.9 with 95% CI 0.2-3.0), despite a common CYP3A4 elimination pathway, and dabigatran (OR 1.7 with 95% CI 0.5-5.6) users. There was no increased bleeding risk noted with topical azole exposure among apixaban, rivaroxaban, or dabigatran users.

The major limitation in the study was that not many patients were exposed to systemic fluconazole with less than 2% claiming more than one prescription within three years of initiation of either NOAC. This led to large confidence intervals making interpretation of the data difficult that may explain the lack of increased bleeding risk noted with rivaroxaban and dabigatran users exposed to systemic fluconazole.

**BOTTOM LINE:** Systemic fluconazole should be used with caution in patients on NOAC therapy for atrial fibrillation, especially apixaban, due to a potential increased bleeding risk. No increased bleeding risk was noted with topical azole exposure.

**CITATION:** Holt A, et al. Bleeding risk following systemic fluconazole or topical azoles in patients with atrial fibrillation on apixaban, rivaroxaban, or dabigatran. *Am J Med.* 2022;135(5):595-

SHORT TAKE

Moderate fluid resuscitation safer in acute pancreatitis

By Mohammad Usmaan Bashir, MD

**BOTTOM LINE:** A randomized, multicenter, open-label trial assessing optimal fluid resuscitation strategy in acute pancreatitis was stopped early due to increased risk of volume overload without demonstrated benefit on disease severity in the aggressive resuscitation arm.

**CITATION:** de-Madaria E, et al. Aggressive or moderate fluid resuscitation in acute pancreatitis. *N Engl J Med.* 2022;15;387(11):989-1000.

Dr. Bashir is an assistant professor of medicine at the University of Virginia School of Medicine, Charlottesville, Va.



Dr. Bashir

602.e5. doi:10.1016/j.amjmed.2021.11.008.

Dr. Sundararaghavan is an assistant professor of medicine at the University of Virginia School of Medicine, Charlottesville, Va.

By Brian Peterson, MD

5 Hospitalists can reliably diagnose DVT with POCUS

**CLINICAL QUESTION:** Can hospitalists safely and accurately perform bedside deep vein thrombosis (DVT) ultrasounds to promptly diagnose DVT?

**BACKGROUND:** DVTs are a common source of morbidity in the inpatient, non-ICU setting. Point-of-care ultrasound (POCUS) allows for timely diagnosis of DVTs by the bedside clinician, which could expedite treatment with anticoagulation to reduce venous thromboembolism (VTE) risk.

**STUDY DESIGN:** Prospective, multi-center trial comparing the sensitivity and specificity of hospitalist POCUS to the gold standard, formal vascular studies (FVS).

**SETTING:** Inpatient, non-ICU wards at four institutions—the University of Minnesota, MedStar Georgetown University, HealthPartners/Regions, and The University of Cincinnati Medical Center.

**SYNOPSIS:** Hospitalists completed two hours of didactic and hands-on POCUS training followed by 10 proctored DVT studies on standardized patients prior to participating in the study. 73 non-ICU patients were enrolled for a total of 125 extremity scans (bilateral scans were counted separately). When compared with the gold-standard FVS, sensitivity of POCUS for DVT was 100% (95% CI 74-100%) and the specificity was 95.8% (95% CI 90-98%). The POCUS results were available approximately five hours sooner than the FVS, calculated from the median time from FVS order to final report.

Some of the limitations of this study were that they did not reach their enrollment goal due to slow enrollment and low FVS orders. There was also a lower-than-expected prevalence



Dr. Peterson

of DVT in their study, which the authors attribute to scanning patients with lower pre-test DVT probability.

**BOTTOM LINE:** Trained hospitalists can perform lower extremity DVT POCUS with good sensitivity and specificity to help guide clinical care.

**CITATION:** Fischer EA, et al. Hospitalist-operated compression ultrasonography: A point-of-care ultrasound study (HOCUS-POCUS). *J Gen Intern Med.* 2019;34(10):2062-7.

Dr. Peterson is an assistant professor of medicine at the University of Virginia School of Medicine, Charlottesville, Va.

By Charlie Magee, MD, MPH, FACP

6 Benefits of triple inhaler therapy for patients with moderate to severe asthma

**CLINICAL QUESTION:** Does triple inhaler therapy improve outcomes over dual inhaler therapy in patients with moderate to severe asthma?

**BACKGROUND:** For patients with moderate and severe asthma, an inhaled corticosteroid (ICS) and long-acting beta agonist (LABA) are foundational agents in management. Current guidelines, such as the National Asthma Education and Prevention Program, reserve the addition of a long-acting muscarinic antagonist (LAMA) to late stages in asthma management.

**STUDY DESIGN:** Meta-analysis of 20 randomized clinical trials from 2017-2020

**SETTING:** Authors included randomized clinical trials comparing dual-inhaler therapy to triple-inhaler therapy in adults and children with moderate to severe asthma from a highly inclusive list of reference databases from November 2017 to December 8, 2020, without a language restriction.

**SYNOPSIS:** This high-quality meta-analysis of 20 randomized clinical trials from 2017-2020 evaluated outcomes in patients with moderate to severe asthma on triple inhaler therapy with ICS, LABA, and LAMA as compared to dual therapy with ICS and LABA.

Triple inhaler therapy was found to increase time to severe asthma exacerbation compared to dual inhaler therapy, with a slight improvement in FEV1. No differences in asthma-specific quality of life or mortality were identified. Although dry mouth and dysphonia are associated with LAMA therapy, there was no increase in treatment-related or serious adverse events.

This study demonstrates the potential benefits of adding a LAMA to reduce severe exacerbations in the moderate to severe asthma population.

**BOTTOM LINE:** Since the outcome of severe exacerbation often means an admission to the hospital, hospitalists should consider triple inhaler therapy to reduce future severe exacerbations, and therefore admissions, in patients with moderate to severe asthma without concern for risk of harm.

**CITATION:** Kim LHY, et al. Triple vs dual inhaler therapy and asthma outcomes in moderate to severe asthma: A systematic review and meta-analysis. *JAMA.* 2021;325(24):2466-79.

Dr. Magee is an assistant professor of medicine at the University of Virginia School of Medicine, Charlottesville, Va.



Dr. Magee



# Cephalosporin: How Vital Are They in a Hospitalist's Toolkit?

By Rahul Gujarathi, MD

## Case

A 57-year-old female with a history of hypertension and diabetes mellitus presented to the emergency department with complaints of chills, fever, and productive cough progressively worsening over the last five days. A physical exam revealed a well-nourished woman with mild respiratory distress and was remarkable for rhonchi heard on auscultation at the left lung base. Her blood pressure was 124/73 mm Hg, heart rate was 112 beats per minute, respiratory rate was 24 breaths per minute, and temperature was 101.2 Fahrenheit. Lab work revealed leukocytosis with bandemia. A chest X-ray reported an infiltrate in the lower lobe of the left lung. She was admitted to the hospital for sepsis secondary to left lower lobe community-acquired pneumonia and started on the third-generation cephalosporin ceftriaxone 2 g intravenously, and oral azithromycin 500 mg daily. Subsequently, the patient developed right upper quadrant abdominal pain, and ultrasound revealed biliary tract sludge.

Here are key clinical questions to consider:

- **What is most likely the cause of the patient's abdominal pain?**

- Ceftriaxone is one of the most used third-generation cephalosporins in the hospital setting. It can bind to the calcium in bile, forming ceftriaxone crystals in the biliary tract and leading to the syndrome called biliary pseudolithiasis,<sup>1</sup> which can present as biliary colic. Most cases are self-resolving with the discontinuation of ceftriaxone. Misdiagnosis of this condition can lead to unnecessary invasive procedures and prolonged hospital stays.
- Ceftriaxone is the first-line treatment against community-acquired pneumonia and gonorrhea, combined with azithromycin. Ceftriaxone and cefotaxime can cross the blood-brain barrier, and they're recommended as an empirical treatment for bacterial meningitis along with vancomycin.<sup>2</sup>
- Ceftriaxone is associated with adverse effects such as toxic epidermal necrolysis or Stevens-Johnson syndrome. Ceftriaxone-induced encephalopathy featuring limb numbness or weakness, behavioral problems, and memory impairment has been reported.
- Ceftriaxone is contraindicated in neonates with jaundice as it has the affinity for binding to albumin by replacing bilirubin and may lead to bilirubin encephalopathy.

Ceftriaxone is contraindicated in neonates expected to receive any calcium-containing products, as it can precipitate in their lungs and kidneys by reacting to calcium-containing solutions, which could be life-threatening.

- **What is the mechanism of action of cephalosporins?**

- Cephalosporins are similar to beta-lactam antibiotics which inhibit the synthesis of the bacterial cell wall, particularly peptidoglycan, the exoskeleton of bacteria that provides structural integrity and shape to bacterial cells and protects them from bursting.
- Most bacteria possess peptidoglycan polymers, collectively called penicillin-binding proteins (PBPs), which are the target of cephalosporins. The beta-lactam ring of cephalosporins mimics the "D-Ala-D-Ala" moiety of the natural substrate of PBPs. Structural binding of cephalosporins to the active site of PBPs in bacterial cell walls leads to inhibition of their enzymatic activity and synthesis of defective peptidoglycan, resulting in osmotic lysis and subsequent death of the bacterial cells.<sup>3</sup>
- Cephalosporins are classified into first through fifth generations based on the timeline of drug development and their antimicrobial properties.<sup>4</sup> Moving from the first generation to the third, the microbicidal activity of cephalosporins increases against gram-negative bacilli but

decreases against gram-positive organisms. Strikingly, the resistance against beta-lactamases surges from the first generation to the fifth.

In the case outlined above, ceftriaxone was discontinued due to probable biliary pseudolithiasis. The patient's clinical status worsened, and her respiratory culture test returned positive for *Pseudomonas aeruginosa*, resistant to anti-pseudomonal penicillins.

- **Which other cephalosporins can be used to treat the patient?**

- Ceftazidime is an effective medication for severe infections caused by *Pseudomonas aeruginosa*, especially if the patient is allergic to penicillin or the organism is resistant to penicillin. Ceftazidime is also utilized as an inhalational agent in bronchiectasis, ventilator-associated pneumonia, and post-transplant airway infections.
- Ceftazidime, in combination with avibactam (beta-lactamase inhibitor), is reserved for infections with carbapenem-resistant *Enterobacterales* and extensively drug-resistant *Pseudomonas aeruginosa* infections as seen in cystic fibrosis patients.
- Cefepime is the fourth-generation cephalosporin active against *Pseudomonas aeruginosa*. It has better penetration through the outer membrane of gram-negative bacteria and a lower affinity than the third-generation cephalosporins due to a positively charged quaternary ammonium attached to its dihydrothiazine ring. Cefepime has similar activity to cefotaxime and ceftriaxone against pneumococci and methicillin-susceptible *Staphylococcus aureus* (MSSA). It is active against the *Neisseria*, *Enterobacteriaceae*, and *Haemophilus influenzae* and has greater activity against the gram-negative enterics that have a broad-spectrum, inducible, chromosomal AmpC beta-lactamase (*Citrobacter*, *Enterobacter*, indole-positive *Proteus*, and *Serratia* species).<sup>5</sup>

- **What are the risk factors associated with toxicity due to cefepime?**



Dr. Gujarathi

Dr. Gujarathi is a hospitalist for Sound Physicians at the University of Florida Health in Jacksonville, Fla.

- Severe neurotoxicity has been reported with cefepime use, including aphasia, encephalopathy, myoclonus, seizure, opsoclonus, and non-convulsive status epilepticus.
- The mechanism of the toxicity is not fully understood but may be associated with concentration-dependent gamma aminobutyric acid-mediated neurotransmission resulting in a decreased seizure threshold.<sup>6</sup> Risk factors associated with neurotoxicity are renal impairment, excessive dosing, and pre-existing brain injury. The neurotoxicity will potentially subside within days after discontinuation of therapy.
- Other adverse effects include superinfection (particularly with enterococci or *Candida*)<sup>7</sup> and elevated international normalized ratio.

## Fifth-generation cephalosporins

The creation of three fifth-generation cephalosporins has made a significant evolution in the last decade (ceftaroline, ceftobiprole, and ceftolozane)

- Ceftaroline is a fifth-generation cephalosporin with a higher affinity for penicillin-binding protein (PBP2a) in MSSA. It has activity against MSSA, as well as vancomycin-intermediate *Staphylococcus aureus* (VISA) and hetero-VISA.



KEY CLINICAL QUESTION

- Ceftaroline has activity for *Streptococcus pneumoniae* which is resistant to ceftriaxone or penicillin. Ceftaroline is not active against enterococci, extended-spectrum beta-lactamase (ESBL)-producing or AmpC-over-producing Enterobacteriaceae, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, or *Bacteroides fragilis*.
- The U.S. Food and Drug Administration (FDA) approved a label expansion for treating *Staphylococcus aureus* bacteremia associated with skin and soft tissue infections in adults in 2015 and in the pediatric population in 2016.<sup>8</sup> It is indicated for the treatment of acute bacterial skin and skin structure infections and community-acquired bacterial pneumonia caused by designated susceptible bacteria.
- Ceftolozane-tazobactam is a combination of the renowned beta-lactamase inhibitor tazobactam and an innovative anti-pseudomonal cephalosporin. The FDA has approved its use for complicated urinary tract infections including pyelonephritis, hospital-acquired and ventilator-associated pneumonia, and infectious disease of the abdomen in combination with metronidazole.<sup>9</sup>
- Ceftobiprole is a cephalosporin

available in some European countries and Canada (but not the United States) that is also capable of binding to PBP2a, the protein conferring *Staphylococcus aureus* resistance to beta-lactam antibiotics.<sup>10</sup>

Novel cephalosporin

- Cefiderocol is a siderophore cephalosporin reserved for patients with or at risk for infections with multidrug-resistant gram-negative bacteria, including ESBL- or carbapenemase-producing organisms, and multidrug-resistant *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Stenotrophomonas maltophilia*, and *Burkholderia cepacia*.<sup>11</sup>
- Cefiderocol has a novel mechanism for transport across the outer membrane that overcomes the effect of membrane permeability mutations, as seen with *Pseudomonas aeruginosa*.<sup>12</sup> Cefiderocol is thought to have poor anaerobic and gram-positive activity.
- In the U.S., cefiderocol has been approved by the FDA for use in adults with complicated urinary tract infections (including pyelonephritis) and hospital-acquired or ventilator-associated pneumonia due to otherwise highly

resistant gram-negative bacteria when there are no alternative treatment regimens.

What is the mechanism of antibiotic resistance to cephalosporin and how can we combat it?

- Antibiotic resistance occurs due to inappropriate prescribing, overuse, and agricultural use, and it's one of the biggest public health challenges, according to the Centers for Disease Control and Prevention.
- Enterobacteriaceae use the over-expression of AmpC cephalosporinase and the production of ESBL-E. Though these mechanisms are exclusively encountered in the hospital setting, there is increasing evidence of EBSL-producing strains in the community. *Haemophilus parainfluenza* uses PBP3 and PBP5 substitution as the mechanism of resistance. Antimicrobial stewardship programs based on prospective audits, preauthorization, guidelines, and feedback systems are mandatory to encourage judicious use of antibiotics. Effective communication among interprofessional and hospital supervisory authorities in reporting peculiar clinical presentation of an infectious pathogen and any new resistant organisms may lead to efficient patient care, tackle healthcare costs, and aid in the evolution of novel therapies.
- Strategies to combat antibiotic resistance include developing algorithms and flowcharts based on clinical presentation, presumptive diagnosis, susceptibilities of the causative organism, contra-indications of the medications, and potential drug interactions.
- Using antibiograms and molecular rapid diagnostic tests to tailor antibiotic therapy are valuable strategies.
- Emphasis on following culture and sensitivity results and de-escalating antibiotic regimens when appropriate is vital to developing an Antibiotic Stewardship Program.

- Patient education is paramount, and it is crucial to complete the entire course of antibiotics to eradicate the pathogen and avoid developing treatment failures or resistance. ■

References

1. Shiffman ML, et al. Pathogenesis of ceftriaxone-associated biliary sludge. In vitro studies of calcium-ceftriaxone binding and solubility. *Gastroenterology*. 1990;99(6):1772-8. doi:10.1016/0016-5085(90)90486-k.
2. van de Beek D, et al. ESCMID guideline: diagnosis and treatment of acute bacterial meningitis. *Clin Microbiol Infect*. 2016;22 Suppl 3:S37-62. doi:10.1016/j.cmi.2016.01.007.
3. Sarkar P, et al. A review on cell wall synthesis inhibitors with an emphasis on glycopeptide antibiotics. *Medchemcomm*. 2017;8(3):516-33. doi:10.1039/c6md00585c.
4. Klein NC, Cunha BA. The selection and use of cephalosporins: a review. *Adv Ther*. 1995;12(2):83-101.
5. Sanders WE Jr, Tenney JH, Kessler RE. Efficacy of cefepime in the treatment of infections due to multiply resistant Enterobacter species. *Clin Infect Dis*. 1996;23(3):454-61. doi:10.1093/cids/23.3.454.
6. Sugimoto M, et al. Evidence for the involvement of GABA(A) receptor blockade in convulsions induced by cephalosporins. *Neuropharmacology*. 2003;45(3), 304-14. doi:10.1016/s0028-3908(03)00188-6.
7. Lynch JP, 3rd. Combination antibiotic therapy is appropriate for nosocomial pneumonia in the intensive care unit. *Semin Respir Infect*. 1993;8(4):268-84.
8. Pani A, et al. Off-label use of ceftaroline fosamil: A systematic review. *Int J Antimicrob Agents*. 2019;54(5):562-71. doi:10.1016/j.ijantimicag.2019.06.025.
9. Wagenlehner FM, et al. Ceftolozane-tazobactam compared with levofloxacin in the treatment of complicated urinary-tract infections, including pyelonephritis: a randomised, double-blind, phase 3 trial (ASPECT-UTI). *Lancet*. 2015;385(9981):1949-56. doi:10.1016/S0140-6736(14)62220-0.
10. Noel GJ. Clinical profile of ceftobiprole, a novel beta-lactam antibiotic. *Clin Microbiol Infect*. 2007; 13 Suppl 2:25-9. doi:10.1111/j.1469-0691.2007.01725.x.
11. Bassetti, M, et al. Efficacy and safety of cefiderocol or best available therapy for the treatment of serious infections caused by carbapenem-resistant gram-negative bacteria (CREDIBLE-CR): a randomised, open-label, multicentre, pathogen-focused, descriptive, phase 3 trial. *Lancet Infect Dis*. 2021;21(2), 226-40. doi:10.1016/S1473-3099(20)30796-9.
12. Zhanel GG, et al. Cefiderocol: A siderophore cephalosporin with activity against carbapenem-resistant and multidrug-resistant gram-negative bacilli. *Drugs*. 2019;79(3), 271-89. doi:10.1007/s40265-019-1055-2.



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# Tips for Properly Documenting and Coding HF

By Jason Velasquez, MD, CHCQM-PHYADV

As hospitalists, we encounter heart failure (HF) regularly, but we have all seen it documented in a variety of ways (congestive HF (CHF), acute on chronic HF, heart failure with preserved ejection fraction (HFpEF), etc.). While all these diagnoses possess clinical validity, there’s a very specific way we need to document HF to accurately capture our patients’ severities of illness and risks of mortality while also optimizing our hospitals’ lengths of stay (LOS), quality metrics, and reimbursements. Before delving into the specifics of heart failure documentation, we need to first understand two important concepts in clinical documentation and coding: principal diagnosis and secondary diagnosis(es).

### Principal Dx and secondary Dx

According to the Uniform Hospital Discharge Data Set (UHDDS) definition,<sup>1</sup> the principal diagnosis is “that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.” Secondary diagnoses are all additional conditions that affect patient care in terms of requiring any of the following: clinical evaluation, therapeutic treatment, diagnostic procedures, extended LOS, or increased nursing care or monitoring.

Our clinical-documentation-improvement and coding partners use the principal and secondary diagnoses from our notes to determine which specific diagnosis-related group (DRG) within a cluster of DRGs a patient belongs to. Each specific DRG has an expected LOS and relative weight (RW). The expected LOS is the average amount of time a patient is expected to require hospital care for a particular diagnosis, and the RW is a surrogate marker for the expected intensity of care and



resource utilization for a particular diagnosis. So, a patient assigned to a DRG with a higher LOS and RW is expected to require longer hospitalization and more resource utilization, which translates to a more favorable reimbursement for our hospital system.

**Example 1:** A 70-year-old patient with diabetes mellitus type II, peripheral vascular disease, and poorly controlled hypertension is admitted to the hospital for dyspnea, moderate left pleural effusions, and hyponatremia with a sodium of 127. The admission history and physical lists dys-

pnea as the principal diagnosis. A brain natriuretic peptide (BNP) test and echocardiogram are ordered as part of the workup, and the patient is started on a trial of intravenous diuresis. The following day, the BNP results are found to be significantly elevated, and the echocardiogram reveals an ejection fraction of 60% with grade II diastolic dysfunction. The attending physician adds acute diastolic HF as a new diagnosis to their assessment and plan, and the patient is discharged once medically optimized.

In this scenario, even though dyspnea was the main reason the patient presented to the hospital, the underlying etiology of this patient’s signs and symptoms that resulted in their hospital admission was acute diastolic HF. So, acute diastolic HF would be the principal diagnosis, as long as it’s been consistently documented in the attending’s notes.

**Example 2:** A 65-year-old patient with hypertension, diabetes mellitus type II, and hyperlipidemia presents to the hospital with chest pain and shortness of breath. She’s found to have elevated troponin, ST depressions in the lateral leads on the electrocardiogram, an elevated BNP, mild pulmonary edema on chest X-ray, and oxygen



Dr. Velasquez

*Dr. Velasquez is an assistant professor of medicine in Emory’s division of hospital medicine. He serves as a hospitalist and physician advisor at Emory Saint Joseph’s Hospital in Atlanta.*

### Key Takeaways

1. It’s reasonable to list a diagnosis of dyspnea, pleural effusion, or acute respiratory failure initially while evaluating a patient. However, if the patient is found to have HF as a principal diagnosis, it’s important to document this so that the most appropriate DRG for quality metrics and reimbursement is assigned.
2. Even if HF ends up being a secondary diagnosis, it’s still vital to document it since it assigns our patients to the appropriate DRG and can affect expected LOS and RW.
3. Acceptable ways of documenting the type of HF include systolic HF, diastolic HF, or combined systolic and diastolic HF. HFrEF or HFpEF are also acceptable alternatives. “CHF” alone is too non-specific.
4. For acuity, document whether the HF is acute, chronic, or acute on chronic. Terms like “decompensated” or “exacerbation” can be used as synonyms for acute.

saturation of 87% on room air. She is admitted to the hospital for treatment of a non-ST-elevation myocardial infarction (NSTEMI) and heart failure. Her echocardiogram reveals an ejection fraction of 40% with wall motion abnormalities. She undergoes left heart catheterization and percutaneous coronary intervention to the left



circumflex artery and is diuresed for her first two days of hospitalization. Her cardiac medications are optimized, and she is euvolemic and chest pain-free by the time of discharge.

In this scenario, the principal diagnosis would be the NSTEMI since it was the condition that was primarily responsible for the hospitalization. Acute systolic HF (or acute heart failure with reduced ejection fraction [HFrEF]) would be a secondary diagnosis because it was evaluated and treated during the hospitalization but was not the chief reason for hospitalization.

HF as a principal diagnosis

In example 1, the history and physical lists dyspnea as the principal diagnosis. This is understandable, as the etiology of the patient’s symptoms and initial presentation was unclear. Upon further investigation, though, we find that this patient actually has acute diastolic HF, which is the underlying etiology of their dyspnea, pleural effusion, and hyponatremia.<sup>2</sup> Appropriately identifying and documenting HF as a principal diagnosis assigns this patient to the most appropriate DRG for quality metrics and reimbursement.<sup>2</sup> In Figure 1, we see the expected LOS and RW for this patient if the attending consistently documented dyspnea as the principal diagnosis and never updated their notes to identify that the patient has heart failure.

In Figure 2, we see a positive change in LOS and RW when the attending appropriately documents that the patient has acute diastolic heart failure. It’s important to remember that knowing you’re treating a patient for HF *without documenting heart failure in your note* does not translate to improved metrics. We must document heart failure for our patients to be assigned to the appropriate heart failure DRG.

HF as a secondary diagnosis

Secondary diagnoses are all conditions outside the principal diagnosis that impact a patient’s care. Secondary diagnoses are just as vital to document as the principal diagnosis because they help our clinical-documentation-improvement and coding partners assign our patients to the appropriate DRG. HF as a secondary diagnosis is particularly impactful as it often serves as a complication or comorbidity (CC) or a major complication or comorbidity (MCC), which assigns our patients to a DRG with a higher LOS and RW. When documenting HF as a secondary diagnosis, the two most important components to remember to document are the type and acuity of HF.

Type and acuity of HF

The different types of HF to specify in your documentation are systolic HF, diastolic HF, or combined systolic and diastolic HF. Depending on your practice, you may want to document HFrEF or HFpEF, which are also acceptable alternatives.<sup>4</sup> For acuity, it’s important to specify whether a patient’s HF is acute, chronic, or acute on chronic. You can also use terms like “decompensated” or “exacerbation” as synonyms for acute.<sup>5</sup>

Example 3: An 82-year-old male with systolic HF presented to the hospital with a three-day history of fevers, cough productive of green phlegm, and shortness of breath. He has a left lower lobe opacity on a chest X-ray and is admitted to the hospital for bacterial pneumonia. During exam in the emergency department, he’s also found to be volume overloaded. He is treated for pneumonia, diuresed with intravenous Lasix for two days, and discharged on day three

Figure 1

	DOCUMENTATION IMPACT
Principal Diagnosis	Dyspnea
Secondary Diagnosis	Hyponatremia
Medicare DRG	204 Respiratory Signs & Symptoms
Severity of Illness	2
Risk of Mortality	1
Relative Weight	0.7936
Length of Stay	2.1

Source: Centers for Medicare & Medicaid Services (CMS), 2021.<sup>3</sup>

Figure 2

	DOCUMENTATION IMPACT
Principal Diagnosis	Acute Diastolic Heart Failure
Secondary Diagnosis	Hyponatremia
Medicare DRG	292 Heart Failure & Shock w/CC
Severity of Illness	2
Risk of Mortality	1
Relative Weight	0.8635
Length of Stay	3.0

Source: CMS, 2021.<sup>3</sup>

Figure 3

	DOCUMENTATION IMPACT	DOCUMENTATION IMPACT	DOCUMENTATION IMPACT
Principal Diagnosis	Simple Pneumonia	Simple Pneumonia	Simple Pneumonia
Secondary Diagnosis	None	CHF	Acute on Chronic Systolic Heart Failure
Medicare DRG	195 Simple Pneumonia & Pleurisy without CC or MCC	194 Simple Pneumonia & Pleurisy with CC	193 Simple Pneumonia & Pleurisy with MCC
Severity of Illness	1	2	2
Risk of Mortality	1	2	2
Relative Weight	0.6658	0.8639	1.312
Length of Stay	2.5	3.1	4.1

Source: CMS, 2021.<sup>3</sup>

Abbreviations: CHF, congestive heart failure; CC, comorbidity; MCC, major complication or comorbidity

with oral antibiotics and diuretics. In this scenario, pneumonia is the principal diagnosis and HF is a secondary diagnosis, so documenting the type and acuity of HF is key. Figure 3 illustrates the impact of specific HF documentation.

Failure to document CHF as a secondary diagnosis assigns this patient to DRG 195. Documenting CHF assigns them to DRG 194 and documenting acute on chronic systolic HF assigns them to DRG 193. Capturing the type and acuity of HF by documenting acute on chronic systolic HF moves this patient into the highest weighted DRG.

You might be wondering how this affects your daily practice or why you should change your documentation habits. Consider the fact that most C-suite executives are using LOS and case mix index (CMI) as metrics to gauge our efficiency and productivity as a hospitalist group and as independent providers. CMI is simply the sum of all the RWs for all the DRGs our patients fall into divided by the number of patients we treat in a given time period. A higher CMI represents a sicker patient population that uses more resources. Being able to affect LOS and

CMI by learning how to document our patient’s diagnoses accurately is one of the most powerful ways we have to represent the stellar care we provide our patients every day. ■

References

1. Health information policy council; 1984 revision of the Uniform Hospital Discharge Data Set--HHS. Notice. Fed Regist. 1985;50(147):31038-40.

2. American Hospital Association. Acute congestive heart failure with diastolic or systolic dysfunction. In: ICD-10-CM/PCS Coding Clinic, First Quarter ICD-10 2017. Chicago, IL: American Hospital Association; 2017:46.

3. Centers for Medicare & Medicaid Services. CMS-1752-F, Table 5: Hospital inpatient prospective payment systems for acute care hospitals and the long term care hospital prospective payment system and policy changes and fiscal year 2022 rates. Available at: <https://www.cms.gov/files/zip/fy2022-ipp-5-fr-table-5-fy-2022-ms-drgrs-relative-weighting-factors-and-geometric-and-arithmetic-mean.zip>. Published August 13, 2021. Accessed October 31, 2022.

4. American Hospital Association. Heart failure with preserved ejection fraction and heart failure with reduced ejection fraction. In: ICD-10-CM/PCS Coding Clinic, First Quarter ICD-10 2016. Chicago, IL: American Hospital Association; 2016:10-11.

5. Pinson R, Tang C. CDI Pocket Guide. 15th ed. Houston, TX: Pinson & Tang, LLC; 2022.



# Hospitalists' Reflections Offer Hope and Optimism for the Coming Years

By Lisa Casinger

**A**s we come to the close of 2022, we take a moment to reflect on what we've learned these last few years, and more importantly, what new challenges and opportunities lie ahead. We spoke with hospitalists and leaders from a variety of institutions to get their feedback. The views they've shared are their own and not those of their institutions.

**Rachel Thompson, MD, MPH, FACP, SFHM, SHM president**, is the chief medical officer at Snoqualmie Valley Hospital and Public Health District in Snoqualmie, Wash.



Dr. Thompson

Dr. Thompson says the most important lesson hospitalists have learned in the last three years is that they're agile, innovative, bold, and connected. "We're powerful together and must keep that top of mind as we face the coming challenges," she said.

Those challenges for 2023 will be facing the tail end of the pandemic and, as everyone adapts to the "return to normal," she cautions hospitalists to address their own mental health, support each other and colleagues, and address equity and inclusion. The biggest threat in returning to normal, she says, is becoming complacent. "We saw what we can do when we have to—we must harness that power and continue to drive for a better future," she said.

Acute care leaving the hospital will be the biggest disruptor of hospital medicine (HM) in the next five to 10 years, Dr. Thompson says. "We'll continue to see higher and higher acuity in the hospital, and lower acuity will be outside our traditional walls."

Like most hospitalists, she wishes the world knew how truly fantastic hospitalists are. Through the pandemic, in the U.S. alone, hospitalists cared for more than 75% of the 4.5 million hospitalizations. "We led innovative care models, we did things that the medical community would have never been able to imagine pre-pandemic," she said. "And why? How? Because we are fully committed and will do anything for our patients, our teams, and our communities."

Dr. Thompson said SHM needs to continue to advocate for people, equity, and health care; to provide an opportunity for meaningful professional connection; to inspire innovation, to focus on building opportunities to diversify our workforce, and to educate and equip ourselves to best serve all the people of our communities.

**Venkatrao Medarametla, MD, MBA, FACP, SFHM** is a hospitalist and medical director of clinical operations at Baystate Health in Springfield, Mass., and an associate professor of medicine at the UMass Chan Medical School.



Dr. Medarametla

Dr. Medarametla says the last few years have shown how adaptable, resilient, and persistent hospitalists are. "Every crisis during the pandemic has been an opportunity to expand our knowledge," he said. "The pandemic gave us insight into the gaps in clinical care and it encouraged us to be more open to innovation.

It also created leadership opportunities."

The biggest challenges in 2023, he says, will be burnout, the economy, and behavioral health issues. "We've been in a constant battle for the last few years," Dr. Medarametla said, "You don't realize how badly wounded you are when you're going through it. But when the rush of battle is finally over, you realize how much you need to heal." Health care professionals are exhausted—physically and mentally—and you don't automatically bounce back to where you were pre-COVID-19 just because the pandemic is under control.

He says the economy—both from a personal and professional perspective—is troubling. "Whatever you've invested, be it stocks or retirement plans, everything is headed in the wrong direction and even health care systems are operating in the negative."

One direct result of the pandemic is an increase in behavioral health issues, which is compounded by the fact that psychiatry is an understaffed area of medicine. "During COVID-19, there was much isolation," Dr. Medarametla said. "As a result, we're seeing more and more behavioral health related issues in the hospital and a spike in addiction-related issues."

He anticipates seeing patients with more complex, challenging medical issues going forward. He also expects the role of technology in health care to increase. While technology already plays a role in medicine—from the increased use of telehealth to AI-driven protocolized medicine—it will grow astronomically. For example, he says, management of lower acuity patients, observation patients, etc. could be switched to telehealth-based management.

Hospital at home is going to be the biggest disruptor, he says. "That's where our role will be in the next 5 to 10 years," he said. "Patients will still come to the hospital, but will be much sicker with more complex health issues. But part of our schedule may be devoted to seeing patients in their homes."

He wishes more people knew what hospitalists do. "We connect

all the dots for the patient when they're in the hospital," he said. "We work with specialists and the primary care physicians to achieve optimal, high-quality patient care. We don't generate enough money through billing—our value comes from the higher quality of care and increased patient safety we bring to hospitalized patients. I wish more people knew and understood that."

When it comes to SHM and how it can help hospitalists prepare for the future, Dr. Medarametla says "Use SHM as your GPS. You know where you are and where you want to go—SHM has the resources to get you there. Use it on your journey and make it more enjoyable."

**Mark Shen, MD, FAAP, SFHM, SHM Board member**, is a former hospitalist and hospital CEO, and a current digital health entrepreneur.



Dr. Shen

Dr. Shen agrees that the most important lesson hospitalists learned in the last three years is that "we're critically important to the health of the nation. During the greatest global pandemic of our era, we stepped up to provide the majority of front-line care amid great scientific and public uncertainty about the best course of action. A related lesson is we should probably receive more credit for our role and leadership."

He says the biggest challenge in 2023 will be helping hospitals and health systems navigate the continuing economic fallout from the pandemic. And the biggest disruptor will be "continuing to face real pressure to think about delivering better value across a clinical episode and any payment system that is less focused

about location or quantity of care, and instead ties reimbursement to an outcome for a clinical episode would be a significant change."





Dr. Shen sees a link between the role technology will play in hospital medicine in the coming years and hospital at home initiatives. “I think it’s easy to imagine the ongoing evolution of hybrid care models that are augmented by technology. It’s less about new technology and more about the actual integration of existing technology with higher value methods of delivering care,” he says.

He sees SHM’s role as a supportive one—one that brings the talent together, facilitates networking and interest groups, and then helps the best ideas grow and change the world.

**Amira del Pino-Jones, MD**, is an associate professor, division of hospital medicine, and associate dean for diversity, equity, and inclusion, at the University of Colorado School of Medicine in Aurora, Colo.

Dr. del Pino-Jones says the pandemic unmasked and amplified the inequities that exist in our health care system and health care delivery. Hospitalists have learned to critically assess their health care systems and biases, and to take a deeper look at the medical mistrust that exists within their communities, particularly among BIPOC and other marginalized communities. “There’s still a lot of work to be done,” she said. “But we’re learning and taking steps in the right direction.”

Provider wellness and burnout will continue in the coming year, she says, and she encourages hospitalists, and physicians in general, to continue looking for ways to reduce burnout and maximize wellness in their health care systems. “We often prioritize the health of others over our own and the consequences can be dire,” she said.

The biggest disruptor will be technology, Dr. del Pino-Jones says, but also it will provide one of the biggest opportunities for innovation and the ability to provide care to individuals and communities whose needs may otherwise go unmet. “There’s been a movement to provide hospital-level services to patients outside the hospital (at home). I think technology is helping to make this possible, including the increased use of virtual health care, wearable devices, etc. I think there will always be a need for hospitals and hospitalists, but technology will provide opportunities to increase the breadth and depth of our care.”

SHM can help hospitalists prepare for the future by, “continuing to provide education and support in hospitalists’ endeavors, including providing a platform and safe space for us to continue sharing, learning, growing, and working together to do better for our patients and each other,” she said.

**Rusty Holman, MD, MHM**, is a past president of SHM, its former chief medical officer, chief operating officer, and chief clinical officer, and founder of the SHM Leadership Academies. He is also the founder of 1821Health.

Dr. Holman says, among other things, the pandemic showed us that effective leadership in medicine is important now more than ever. To him, being a leader means focusing intensely on relationships with those around you. He recommends building mutual respect, trusting others and being trustworthy, empathizing, showing humility, making the workplace psychologically safe, and looking out for



Dr. del Pino-Jones

*“We led innovative care models, we did things that the medical community would have never been able to imagine pre-pandemic. And why? How? Because we are fully committed and will do anything for our patients, our teams, and our communities.”*

—Dr. Rachel Thompson

the well-being of others while you look out for your own.

The pandemic accelerated and magnified existing workforce issues—loss of experienced professionals and institutional knowledge, high turnover, and pushing new trainees into the workforce—and these issues will continue to threaten effective teamwork, standardization, efficiencies, quality, and safety. “And it’s not just health care professionals and support staff, it also involves health care administrators and CEOs. This creates a new set of challenges to maintaining consistent priorities, organizational values, and culture,” Dr. Holman said.

The economy will also continue to be a challenge—costs are up (labor, supply, equipment, medications, lengths of stays) and revenue is down (reimbursements, higher margin elective cases, visits, investment income). These financial variables are a headwind. “The imperative? Hospitalists need to position their HM program as a tailwind,” Dr. Holman said. “The value of investing in and supporting the HM program (especially in leadership development) can be significant and far-reaching, not the least of which is to be allies in helping institutional leaders and boards cope with the headwinds above.”

When it comes to technology, Dr. Holman says he’s curious to see how electronic medical record (EMR) companies leverage technology to improve user interface, mobility, and integration of meaningful quality and cost data and analytics going forward.

As the founder of the SHM Leadership Academies, it’s no surprise that Dr. Holman sees leadership development as the greatest investment for hospitalists and one of the ways SHM can help them prepare for the future.

“Regardless of rank, title, or position, a hospitalist is a leader every moment from the time they walk through the doors of that building,” he said. “And yet, we receive no leadership training during any part of our formal instruction. In many ways, our training has often worked against us. We are taught and socialized to be individual decision makers instead of collaborators, and at the top of a hierarchy as opposed to being team facilitators. We are taught about respect through interprofessional *DIS*respect, e.g., internists making fun of surgeons; or physicians using disparaging language about administrators. Every single one of us needs professional development in building trust, teamwork, effective communication, mutual respect, creating a desired culture, and how to be part of change efforts. It does not matter if you aspire to become a medical director, a chief medical officer, or a CEO, these are life skills that will make everyone better at their jobs.”

**Darlene Tad-y, MD, MBA, SFHM, SHM Board member**, is the associate chief medical officer of patient flow at the University of Colorado Hospital and the medical director for capacity at

UCHealth, in Aurora, Colo. She’s also an associate professor of medicine at the University of Colorado School of Medicine where she’s an academic hospitalist.

Dr. Tad-y says the most important lesson hospitalists have learned in the last three years is that hospitalists are vitally important to the success of disaster medicine and ensuring that patients can continue to access health care even when resources become scarce.

The staffing shortage that’s affected the health care industry will continue to significantly impact the day-to-day work of hospitalists into 2023 and “because the smooth operation of inpatient care relies on appropriately staffed teams, the shortage of our nurses, therapists, care managers, and many other support services is likely to negatively impact inpatient access to care,” she said.

**Shaker M. Eid, MD, MBA, CPE, FACHE, SFHM**, is an associate professor of medicine at Johns Hopkins University School of Medicine in Baltimore, and director of research and innovation at Johns Hopkins Bayview Medical Center.

Dr. Eid says hospitalists have learned in the last three years that “we are braver than we believe, stronger than we seem, and more agile than we think we are. It was a thing of beauty seeing hospital medicine leading the fight during the pandemic from the front lines.”

He echoes what other leaders have said will be the biggest challenge in 2023—healing individually and collectively from the pandemic. “Being the heroes at the frontline did not come without a price,” he said. Dr. Eid believes healing is possible, and even more so with the right leadership.

Technology will continue to play a role in hospital medicine. We’ve already glimpsed how it can shape care options with telehealth. “The era of the Internet of Things is upon us, and we’re more connected than ever,” Dr. Eid said. “I see the use of predictive analytics, artificial intelligence (AI), and machine learning technology among the early tools we’ll very soon be using daily in hospital medicine. Think about this technology providing hospitalists with patient scores of health or wellness similar to how your FICO score is indicative of your financial health.”

Technology goes hand in hand with the digital revolution—the biggest disruptor in HM for the next decade, Dr. Eid says. With the sphere of influence and leadership roles of hospitalists expanding beyond hospital walls, “the way we practice will be more around the use of remote patient monitoring and treatment, more wearable technology providing data, using precision medicine to treat a multitude of diseases and even using augmented or virtual reality to not only treat patients but also train colleagues and future clinicians,” he said.

“SHM has always been at the forefront of educating hospitalists who will lead change in our health care system,” Dr. Eid said. “It surely can help by developing the next generation of hospitalists who along with the already established competencies are well-versed in digital health technology and innovation.”

**Flora Kisuule MD, MPH, SFHM, SHM treasurer**, is the director of the division of hospital



Dr. Tad-y



Dr. Eid



Dr. Holman



medicine at Johns Hopkins Bayview Medical Center in Baltimore.

Dr. Kisuule says hospitalists have learned many lessons in the last three years—namely that hospitalists matter and they're not immune to burnout. "We were the first to take care of patients with COVID at most of our institutions, ultimately managing 70% of patients hospitalized with COVID. We led in the operations of COVID care, developed workflows, informed clinical decision support tools, and so much more," she said. "As we heard from grateful institutions and patients, I hope we now firmly believe that we matter."



Dr. Kisuule

For years hospitalists have stepped up to be the problem solvers for just about every situation in the hospital. "Now more than ever," Dr. Kisuule said, "It's evident that we can burn out and we need to take care of ourselves on a personal level if we're going to be practicing hospitalists for the long haul."

She says the biggest challenge for hospitalists in 2023 will be the financial constraints faced by many hospitals; budgets will be lean and under scrutiny. "Since hospital medicine is usually one of the most expensive line items on many hospital budgets, we need to make sure that our practice stands up to any financial scrutiny," she said. "Hospital budgets may also make it challenging to operationalize great ideas, particularly those learned from the pandemic."

Dr. Kisuule also reminds hospitalists how important work-life balance is. "We'll have to be creative in ensuring wellness, joy in practice, and work-life balance for our teams without compromising patient care and without raising our costs," she said.

As for technology, there's no going back. She says we'll see an expansion of telemedicine, and the programs that began during COVID—tele-nocturnists, and clinical decision support—will continue. She also thinks machine learning will continue to be incorporated into HM, hybrid meetings will continue, and learning from colleagues around the world will continue through virtual talks.

Hospital medicine has evolved since its inception and a big disruptor, she believes, will be a renewed emphasis on practice beyond the four walls. Dr. Kisuule also says co-management is going to grow. "As the population continues to age, we'll see more hospitalists as the primary team in unusual specialties such as psychiatry with the psychiatrist as a consultant," she said.

Dr. Kisuule says SHM can help hospitalists prepare for the future by continuing to provide networking opportunities, advocate for policy changes that affect them and their patients, offer meaningful education, support the expansion of the specialty internationally, and be an organization that values diversity, equity, inclusion, and a just society.

**Efren Manjarrez, MD, FACP, SFHM, SHM Board member**, is an associate professor of clinical medicine, division of hospital medicine, at the University of Miami Miller School of Medicine, Miami.

Dr. Manjarrez says the most important thing hospitalists have learned in the last few years is the need to value their mental health.

He wishes the world knew that hospitalists are the backbone of the health care system and that



Dr. Manjarrez

their research on hospital medicine is world-class in the areas of patient safety, quality improvement, perioperative medicine, medical education, bedside procedures, and point-of-care ultrasound. "It's the innovations from hospitalists that are advancing the processes and systems of care," Dr. Manjarrez said. "As a result, people should value hospitalists in their communities like they do their oncologists or cardiologists."

**D. Ruby Sahoo, DO, MBA, FACP, SFHM, SHM Board member**, is a hospital medicine performance director for TeamHealth and resides in Austin, Texas.

Dr. Sahoo says an important lesson hospitalists have learned through the COVID-19 pandemic is their value. Hospitals and communities that have hospitalists have always thrived, and through the pandemic, they not only thrived but survived because of hospitalists, she says. "We supported our communities through the pandemic in a way that wore us all out but made many of us incredibly proud to have the gift to do what we do."

The biggest challenge hospitalists will face in 2023 is going to be the chronic state of burnout, she says. While hospitalists have proven they're adept stewards of quality, safety, patient throughput, accuracy of documentation, patient experience, and efficiency of care, they can't fix everything all at once, and certainly not by themselves. "Hospitalists must be supported by administrative leaders and consultants (not dumped on) and our voices truly heard," Dr. Sahoo said. "We should be involved in major decisions being made at every level that affect the care of patients—within the government, corporate medical groups, multi-specialty groups, hospital medical executive committees, etc."

Dr. Sahoo would love to see technology used to reduce the workload of hospitalists. She says during the past 15 years, the administrative burden put on hospitalists has increased significantly, but very little has been removed from their plates. "I want to see standardized and automated patient distribution, HIPAA-compliant and concise nurse, case manager, specialist communications, documentation made easier, billing that pulls from documentation, etc.," she said.

The collective voice of hospitalists has the potential to be so powerful, but only if we recognize our common goals and unite. "SHM is the organization I've always turned to that provides us with not only resources to help us in our practice of medicine, but also to advocate for us politically and represent us as the caring physicians that we are," Dr. Sahoo said.

**Richard M. Wardrop III, MD, PhD, FAAP, FACP, FHM**, is the program director of the internal medicine residency program at the Cleveland Clinic in Cleveland.

For Dr. Wardrop, the biggest lesson he's learned, and believes many would agree with, is that COVID was a hospital medicine disease



Dr. Sahoo

*"I see the use of predictive analytics, artificial intelligence, and machine learning technology among the early tools we'll very soon be using daily in hospital medicine. Think about this technology providing hospitalists with patient scores of health or wellness similar to how your FICO score is indicative of your financial health."*

—Dr. Shaker M. Eid

and that HM as a specialty evolved and grew itself around this problem, to the benefit of the future of the entire specialty. While COVID affected many frontline workers the majority of COVID care was delivered in the inpatient hospital setting.

The biggest challenge moving forward, he says, will be finding our footing and applying the lessons learned during the pandemic while intermittent COVID surges and lingering staff shortages continue. "It's finding the sweet spots in the 'new normal' as the financial pressures are there now more than ever," Dr. Wardrop said. "We must continue as a specialty to keep pushing for growth and maturation/expansion of our teams in continued uncertain times."

He sees electronic medical records (EMR) dominating the discussion in technology in most systems—specifically using the EMR to better share data between centers and providers, an obvious place where AI tech can be applied. "I also think AI will rise to a level of sophistication that may be able to inform treatment pathways, decisions to affect LOS [length of stay], and patient safety/quality," Dr. Wardrop said. "Finally, virtual meetings and continuing medical education are here to stay. Technology will allow us to share from greater distances like never before."

The biggest disruptor, unfortunately, will be the financial uncertainty lurking in many centers and systems for the foreseeable future. This will lead to stagnant growth and minimal risk-taking when it comes to designing new

models of care and new initiatives in many HM programs, Dr. Wardrop says. "This lack of financial confidence may allow a 'status quo' to predominate that will disrupt the ethos of HM practice which is about continuous quality improvement and process improvement."

He wishes more people understood that this career is not "just"—as in, "they're just a hospitalist." Hospitalists play central roles in patient care outcomes, safety, quality, medical education, etc. "We provide all these every day," Dr. Wardrop said. "And all over the U.S., the reason hospitals are safer and better at providing care in the past 20 years is because of the rise of HM!"

When it comes to the Society, Dr. Wardrop says SHM prepares hospitalists for the future in a variety of ways through programming, CME, leadership training, etc. It provides a professional home for so many HM physicians of all career stages and practice types. "SHM leadership serves a vital role modeling function by aligning with key stakeholders in the lives of HM members via the American College of Physicians, American Board of Internal Medicine, American Medical Association, and the Society of General Internal Medicine," he said. "Through this alignment, SHM and its membership are in the thoughts and plans of these other organizations that also support HM."

**Chad T. Whelan, MD, FACP, MHSA, SFHM, SHM Board member**, is a clinical professor of medicine at the University of Arizona College of Medicine Tucson and serves as a strategic advisor



Dr. Wardrop



to the University of Arizona Health Sciences, in Tucson, Ariz.

Dr. Whelan says the last three years have been truly life-altering for anyone in health care and hospitalists as individuals, groups, and a profession are no exception. He hopes they realize the incredible impact they've had during a time when the U.S. health system came close to reaching the tipping point of collapse, multiple times.

The biggest challenge for 2023, he says, is going to be moving from a national health crisis defined by a clear enemy, COVID-19, into one that is a crisis defined by what's missing rather than what we're battling. "The great resignation has hit health care hard and I'm afraid it will continue well into 2023," Dr. Whelan said. "This massive shortage of health care workers will continue to require those who remain to work harder and differently and for health systems to make more difficult decisions about what they do and what they don't do just to stay afloat. As with anything that hits the acute



Dr. Whelan

*“Hospitalists filled so many needs in an ever-changing environment, implemented new protocols based on the latest research that was coming at them quickly, and applied evidence-based care to give patients the best possible outcomes.”*

care space hard, hospitalists will be at the tip of the spear for this challenge of workforce shortages in 2023 and beyond.”

Technological advances will continue to flood into health care for the foreseeable future and influence hospitalists' daily lives, but, Dr. Whelan also says, over the longer term they'll shape the very definition of what it means to be a hospitalist. "I think it's safe to assume tech advances will target patient engagement, clinical workflows, and transforming data into information. What will be key is for hospitalists to be engaged and activated stakeholders who advocate not for the exciting 'shiny new thing' but those technologies that will make meaningful improvements in outcomes and efficiencies.”

There is a lot of discussion about disruptors in health care. The traditional list, he says, includes: the massive technology giants (Google and Amazon) entering health care (again); pharmacies and insurance

—Dr. Kris Rehm

companies attempting vertical integration to lower cost and consolidate markets; and the private equity-backed startups looking for the next game-changing technological solution. Dr. Whelan predicts one or more of these will likely land a big win in the next five to 10 years that will fundamentally change health care delivery in some unknown way.

"I do believe there's a disruptor that is known and will land with almost near certainty...the massive workforce shortage," he said. The shortage will change hospitalists' lives so it's imperative to learn new ways of working that support hospitalists and the clinicians who make up the broader team. "HM leaders need to embrace change as HM has historically done and find new paths to a model that provides high-quality outcomes and sustainable careers.”

Dr. Whelan believes SHM should continue its role in the professional development of individual hospitalists, hospital medicine leaders, and the profession as a whole, and support and advocate for members' interests. "Through policy, advocacy, education, and partnerships, SHM must be the voice for our profession to assure it continues to thrive in these rapidly changing times," Dr. Whelan said. It should also continue to challenge itself and its membership. "It was not too long ago that hospitalists were a new concept, a disruptor. SHM needs to keep that drive for disruption and transformation aimed at improving the value of health care alive by continually helping ready HM leaders and members to embrace progress and change, even when it can be uncomfortable and even scary.”

**Kris P. Rehm, MD, MMHC, SFHM, SHM president-elect**, is the associate chief medical officer of children's services in the department of pediatrics at Vanderbilt University Medical Center in Nashville, Tenn.



Dr. Rehm

Dr. Rehm says that though hospitalists have always known they're a valuable resource and important team members, COVID made it even more obvious. "They filled so many needs in an ever-changing environment, implemented new protocols based on the latest research that was coming at them

quickly, and applied evidence-based care to give patients the best possible outcomes," she said.

The lingering effects of the pandemic will be the biggest challenges in 2023, she says. "In pediatrics, we're no longer able to predict seasons of respiratory illnesses," she said. "We're currently in the biggest surge that we've ever seen in my professional career, and the longest lasting. This inability to predict the surges or see light at the end of the tunnel is the new normal." Because of this, Dr. Rehm says one challenge for hospitalists will be continuing to figure out ways to care for patients as efficiently and effectively as possible given the constraints of bed space, staffing issues, hospital finances, and shortages.

Technology's role is an interesting one, Dr. Rehm says, especially when you consider how quickly we transitioned to telemedicine during the pandemic. "Our ability to provide services to families, either in their homes or other locations, during the pandemic was really exciting," she said. "And now as the crisis ends and reimbursement will change, our roles and our abilities to do things like telemedicine will potentially change.”

Those changes, combined with the workforce shortages, make this the perfect time, she says, to consider other ways we can use AI in hospital medicine, whether for remote monitoring or hospital at home situations.

Dr. Rehm says the next generation of young HM professionals will be the next positive disruptor in the field. "They've taught us that work is part of life, but work is not all of life," she said. "And we need to really embrace taking care of our workforce and that might mean we don't reward overworking. We need to think about the well-being of our workforce and that may come at a higher cost so we're going to have to figure out where we can improve efficiencies and reduce some of our operational expenses.”

As SHM's president-elect, Dr. Rehm is excited about the role the Society can play in the future of hospital medicine. "I'm thrilled to take on my role as president at the next annual meeting and to think about how to really engage with the frontline members of our organization and those who are providing care every day," she said. "Things have changed so much in the past few years and so have the needs of our members. SHM has an incredible history of providing resources in education, practice management, and advocacy. It's done a good job of helping partner organizations to use our voice to help advocate for our patients and I'm really proud of that and look forward to continuing to talk with members and to do a needs assessment to unveil the future of SHM.” ■



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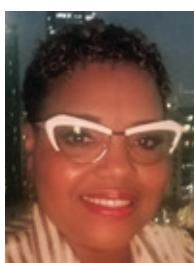
# Nursing Shortages Stress Existing Staff and Patient Care

Although “money talks,” creating a supportive work environment with responsive leadership and learning opportunities goes a long way to increasing retention

By Sue Coons

**T**he burden on critical care nurses during the pandemic has been well-documented, resulting in many nurses leaving their jobs. Even before the pandemic, the study United States Registered Nurse Workforce Report Card and Shortage Forecast: A Revisit projected a shortage of registered nurses across the country between 2016 and 2030. In the state-by-state analysis, the authors forecast the registered nurse shortage to be most intense in the South and the West.<sup>1</sup>

The nursing shortage is pretty severe, said Kimberly Bell, MD, MMM, FACP, SFHM, regional medical director of TeamHealth West Group, in Tacoma, Wash. TeamHealth staffs hospitals with physicians and advanced practice clinicians.



Dr. Bell

A lung-transplant nurse practitioner at UNC Health in Chapel Hill, N.C., sees the nursing shortage as well. “There have been a lot of staffing changes in many hospitals because of staff being out sick and staff leaving,” said Christina White, RN-BC, FNP-C.



Ms. White

The pandemic created a shift across the profession as a whole, she said. Many nurses who could retire took that door and left. “Nursing has lost a lot of senior staff.”

Nurses who were able to work from home part of the week in a hybrid schedule found they liked this arrangement and want to keep this type of position, leaving full-time bedside jobs open. Some nurses opted to go back to school to become advanced practice providers, so those jobs have become scarcer.

The political climate also affected the way the public perceived the nursing profession, Ms. White said. Nurses used to be one of the most trusted professions, but the politicization of COVID-19 and masks have branched into distrust of the medical community. Nurses no longer are generally seen as trusted healthcare providers. Some have been verbally abused or



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attacked by patients.

These factors can lead to nurses being pessimistic about their jobs. “The term ‘health care hero’ is often thrown around mockingly. What used to be uplifting and supportive at the beginning of the pandemic has become a means of mocking and highlighting how little nursing and other medical staff feel they are valued in the healthcare system currently,” said Anna Nelson, DO, a resident doctor at the University of Louisville School of Medicine in Louisville, Ky.

## Consequences of a shortage

The consequences of the nursing shortages are apparent in the hospitals, Dr. Bell said. For one, short staffing affects more than just that hospital. If one facility is short-staffed, patients may end up being deferred to another area hospital. If that hospital has a nursing shortage as well, the backup extends system-wide, she said.

Even if patients are accepted into the emergency department, they can back up in the waiting areas when staffing is not available. “When patients are in the waiting areas, they’re not really getting seen and evaluated,” Dr. Bell said. “By the time they get pulled back, they’re really sick.”

She has seen facilities that have closed parts of the hospital such as operating rooms (ORs) or made beds unavailable for patients due to a lack of available nurses. “Closing ORs is a big deal because they are usually the moneymaker for

the hospital,” she said.

The nursing shortage can mean that a long shift becomes even longer for existing staff, said Dr. Nelson. “They are so busy during their shift, they end up having to stay afterward, often for over an hour, catching up on the charting they have been otherwise too busy to do.” She noted this applies to other staff including techs, phlebotomists, and environmental services. “Everyone is stretched very thin.”

Nurses also have been frustrated with excessive patient loads and with what they perceive as low compensation for covering extra shifts for quarantined colleagues, she said.

## The issue of traveling nurses

A common solution for bolstering nursing staff has been the hiring of temporary traveling nurses. These nurses have short-term contracts at hospitals across the country and can be paid at a significantly higher hourly rate than in-house staff.

The increased pay attracts nurses, but it leaves the hospitals with float staff who are unfamiliar with that facility’s policy and procedures, Ms. White said. “The goal at any hospital is to have seasoned nursing staff, who are experienced and familiar with where they work and who can work through any challenges.”

Float nurses have a more difficult job because they don’t know their colleagues. They don’t know

where to find supplies. This could lead to poorer communication and more errors, Ms. White said. “The higher pay is a big incentive for them, but it’s a much higher-stress environment.”

Traveling nurses are contracted to work in a specific area. If that area is overstaffed and other areas in the hospital need nurses, the existing staff will be sent instead. This can cause frustration, Dr. Nelson said.

Conflicts also arise when the travelers are paid more but still need to be trained by the in-house nurses. “You can’t have two people working side by side, with one being a seasoned experienced OR nurse who’s getting paid less than the person they’re training to do the job temporarily,” Dr. Bell said.

To counter some of these issues, she has seen facilities keep the pay for the traveling nurses the same as the in-house staff. That usually means raising the wages of the existing nurses. “We need to increase the rates of our work in-house teams so that they stay and that we’re in a position to recruit to this position,” she said.

## The issue of pay

Compensation for in-house staff can become an issue, too. At one facility’s emergency department, nurse practitioners became aware that the nursing staff had received a \$10 to \$15 an hour raise, resulting in their pay now being higher than that of the nurse practitioners. “The nurse practitioners came back



to us and said, ‘Look, you have to pay us more because this isn’t right,” Dr. Bell said. That situation is still being resolved.

Hospitals cannot simply hire more staff quickly. “It takes time to train staff to do the job,” she said. “You have people who are working who are stretched thin. Then you add new people who need time to be trained, and there’s not really time to train them.”

Hiring now is being challenged by many nurses wanting a work-life balance, Ms. White said. “Lots of people want to work from home now, and so it’s very difficult, especially in the outpatient climate, for [hospitals] to be able to recruit nurses to be in an office five days a week because people don’t want that type of job.

“There’s been such an exodus and changes in how [the public] views the profession and what nurses are looking for now in jobs that I think there needs to be a nursing rebirth,” Ms. White said. “I don’t think they will be able to continue how it’s going right now without that.”

So what can hospitals do to increase their nursing staff? Some of the most common incentives are increased pay and sign-on bonuses. Benefits such as health insurance and retirement plans are

valuable as well. “It’s hard without financial incentives,” Ms. White said. “Money talks.”

Incentives for new hires

Dr. Bell is seeing some hospitals turning toward in-house nursing residency or other training programs. For example, a hospital can partner with a local nursing school so the nurses train at the hospital. “Having the nursing students familiar and comfortable with the hospital could mean they are more likely to want to work there,” she said. Hospitals are also inviting student nurses to do long- or short-term training sessions at the facility to increase the chances of them accepting positions in the future.

Continuing education and leadership development are also big incentives, so nursing staff feels like they are growing in their profession, Dr. Bell said.

Opportunities in this area were an integral part of Ms. White’s accepting her current position. “Continuing education does have a cost to it, but institutions providing continuing education is invaluable to the staff.” This could be like grand rounds where physicians or other staff can listen to a presentation, or a conference where the staff can travel and see what other

health care workers are doing in their area of expertise. The nursing staff can also present their own experiences at a conference to a group of their peers.

Nurses need to find the right job fit, too, Ms. White said. “Most of the nurses that I talk to are still happy because we love what we do. We still love our profession, we love our jobs, and we love the patients.” Nurses in the right fit are more likely to stay in their jobs. Ones who are unhappy maybe haven’t found the right fit yet.

“Nursing has a lot of lateral and vertical mobility, which is great,” Ms. White said. “But it can, especially for someone who’s a new graduate, take a while to find that sweet spot where you really enjoy being. Sometimes it takes a couple of tries to figure out which job is right for you, and which environment is good for you. That could be surgery, medicine, or an outpatient/inpatient type situation.”

To encourage finding the right fit, hospitals could offer a job-shadowing program, especially for newer nurses. “Sometimes it’s hard to know what another job is exactly,” Ms. White said. “You can guess, but until you follow someone around for a day, you don’t necessarily know.”

Leadership matters

Both Dr. Bell and Ms. White feel that receptive leadership adds to workplace satisfaction immensely.

Nursing staff needs to have a work environment that they enjoy being in and where they feel respected and valued, Dr. Bell said. For this to happen, leadership must actively listen to the staff’s concerns and address them, such as issues about compensation.

A responsive leadership structure and support from co-workers is an important part of being a good team, Ms. White said. “I know inpatient nurses tend to thrive when they have leadership that is willing to get out there and do the work with them, and not just sit in an office and give suggestions. I always appreciated it as an inpatient nurse when we had leadership who ‘gowned up’ with us when help was needed. That really helps increase morale and helps people feel better about seeking that common goal.” ■

*Sue Coons is a medical writer in Chapel Hill, N.C. She also has worked in the hospital patient access area for 10 years.*

References

1. Zhang X, et al. United states registered nurse workforce report card and short-age forecast: A revisit. *Am J Med Qual.* 2018;33(3):229-36.

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# Experts Offer Guidance on Transitioning Children to Adult Care

By Thomas R. Collins

LAKE BUENA VISTA—Transitioning a child from pediatric to adult care can be a sensitive process fraught with anxiety, and there is fairly little guidance on how to do it well, panelists said here at the Pediatric Hospital Medicine (PHM) 2022 annual meeting.

But doctors are drawing on their experience and the available literature to deliver suggestions so physicians can make better decisions on whether, when, and how to make these transitions.

“It is a messy and complex process,” said Rachel Peterson, MD, assistant professor of clinical medicine at Indiana University in Bloomington, Ind. “And so I think keeping that in mind and having grace both with our patients and their families—but also the systems in which we work—is really important.”

More and more patients in the transitional age range of 18 to 21, and more adult patients, are being cared for in children’s hospitals, she said, although it varies by different diseases. Patients with hematologic malignancies tend to do better when cared for according to pediatric protocols and may stay in pediatric beds longer. Children with cystic fibrosis might be more likely to be transferred to adult care—in part because cystic fibrosis centers for excellence have financial incentives to do so, Dr. Peterson said.

Whether a patient should receive care in the pediatric or adult setting can often fall into a gray area. Dr. Peterson once had a 23-year-old in her care who had a history of severe combined immunodeficiency and multiple infections and feeding problems as a child, with delayed growth and development and chronic hypoxic respiratory failure. His adult weight was only 75 pounds. The man lived with his mother but had decision-making capacity.

Pediatrics began to feel less comfortable providing care for the patient because of his growing adult medical issues. But the hospitalist team at a nearby hospital was unsure it could provide safe care in the adult setting because of his small size.

“Inpatient transition guidance is lacking,” Dr. Peterson said. Only 38% of children’s hospitals have transition policies, Dr. Peterson said. This survey also found that relatively few hospitals have leaders dedicated to overseeing the process.<sup>1</sup> This leaves physicians at the majority of hospitals to figure it out on their own as situations



arise. These decisions typically are determined by the institutional culture around the care of adults, the involvement of the stakeholders, knowledge of any gaps in care, and an understanding of the guidelines or policies at an institution, if they exist.

Despite this general lack of in-house policies, some guidance is available, said Harrison Luttrell, MD, a resident in pediatrics at Indiana University in Indianapolis. Got Transition, (GotTransition.org) a federally funded project intended to help pediatric-to-adult transitions, outlines six elements of the process<sup>2</sup>:

1. **Policy/guide**—develop, discuss, and share the policy/guide that describes the approach to the transition, assembled using input from children and their parents or caregivers, with the education of staff.
2. **Tracking and monitoring**—to identify transition-aged patients and regularly assess the progress of the transition.
3. **Readiness**—transition planning, with a regularly updated plan of care, preparing patients and families for the transition.
4. **Planning**—develop the transition plan with a medical summary.
5. **Transfer of care**—this should include a final readiness assessment and care plan with transition goals.
6. **Transition completion**—the actual transfer, with contact after three to six months to assure the transition was done, with an opportunity for anonymous feedback.

A model developed by researchers includes five factors that feed into these transitions:

- **Patient characteristics**—diagnoses, complexity and severity

of illness, duration of illness, cognitive status, demographics, family education/health literacy

- **Institutional context**—physicians’ training, experience, the scope of practice, and the structure of the organization
- **Facilitators**—proximity of adult and pediatric care, parent and patient advocates, institutional priority for transitions
- **Barriers**—disconnected medicine and pediatric divisions, conflicting stakeholders
- **Short-term outcomes**—experience of patients, families, and providers, and fewer hospitalizations, medical errors, and emergency department visits<sup>1</sup>

Dr. Luttrell and his colleagues have used these guides to put together a rubric to identify the elements of transitions so institutions can run through them as a kind of checklist as they go through their process. They’re now using the document “to figure out what is being included, what should be included, what are we missing, in the way that we’re transitioning these young patients right now,” he said.

Ann-Marie Tantoco, MD, a medspeds hospitalist at Northwestern Memorial Hospital and Lurie Children’s Hospital in Chicago, said physicians need to discuss with families why the transition needs to happen, the differences in the models of pediatric and adult care, legal changes, and education that is specific to the disease.

“We need to tell them why this needs to be done,” she said. “We want to make sure they have the best health care that can address all of their medical problems.”

The transition, she added, needs to be done at a time of stability.

“As hospitalists we know we would never transfer or discharge

an unstable patient,” she said. “This should also go with the transition process. We should make sure everything is intact, well-organized.”

For Dr. Peterson’s 23-year-old patient, a disease-specific transition plan had just been developed and agreed upon by both the pediatric and adult divisions. The patient was transferred to adult care. She spoke with the adult providers about a safety plan “to make sure they could have the resources needed should this patient require emergent care as a patient with small stature.” They also followed up on his care.

While a written plan can make the process seem “easy,” she said, this was not how the case played out, particularly since the patient was one of her first patients when she was a medical student.

“This was one of the most medically complex patients I had ever had,” she said. “I remember his name because I carried him with me through the rest of my training.

“I understand as pediatricians it is hard—it’s so hard to pass these patients into a system.... and to wonder about him and wonder if he’s going to do well.” ■

*Tom Collins is a medical writer in South Florida, who has written about everything from lethal infections to thorny ethical dilemmas, runaway tumors to tornado-chasing doctors. He gathers health news from around the globe and lives in West Palm Beach.*

## References

1. Coller RJ, et al. Transitioning from general pediatric to adult-oriented inpatient care: National survey of US children’s hospitals. *J Hosp Med*. 2018;13(1):13-20. doi:10.12788/jhm.2923.
2. The National Alliance to Advance Adolescent Health. Six core elements of health care transition. Got Transition website. <https://www.gottransition.org/six-core-elements/>. Accessed September 29, 2022.



# In Caring for Afghan Refugees, Hospitalists Discover New Capabilities

By Thomas R. Collins

LAKE BUENA VISTA—When leaders in the pediatric hospitalist service at Riley Hospital for Children in Indianapolis were asked to lead the medical care for a mass influx of Afghan refugees after the withdrawal of U.S. troops from their country last year, there were a lot of reasons to hesitate.

The Delta variant of COVID-19 was surging, and staffing levels at the hospital were already low. As was the case across the country, the hospitalist team was already stretched thin, presenters said at the Pediatric Hospital Medicine annual meeting.

“This felt like the wrong time,” said Rachel Peterson, MD, associate division chief of pediatric hospital medicine.

“We were hitting our cap every day,” said Kim Schneider, MD, chief of pediatric hospital medicine at Riley. “We were overwhelmed. Our team was exhausted. While I knew this was the right thing to do, it might go over like a lead balloon with our team, at first blush.”

It ended up being a richly rewarding experience that unlocked capabilities they didn’t even realize they had. The hospitalist staff at the center went on to become the main medical providers for the children who arrived at Camp Atterbury, a military barracks and training center located 45 minutes south of the hospital. A total of 7,200 people were relocated to the camp, 42% of whom were children. The population skewed younger because those at the camp needed to have been medically capable of making the trip.

They had to confront a long list of challenges—both medically and socially. These ranged from lack of vaccinations, having poorly controlled, chronic conditions, no refrigeration, no known dates of birth, malnourishment, language barriers, a lack of personal belongings, no transportation, distress over family separation, the spread of infections, and a lack of literacy even in their native language.

The illnesses ended up involving much more complicated matters than they were anticipating, Dr. Peterson said.

“Initially we thought, ‘Okay, many of these children are going to be coming in with general pediatric issues—RSV (respiratory syncytial virus), gastroenteritis. We’ve got this,’” she said. “What we found is while several of the children did have those general pediatric complaints we were used to handling, many also had either



undiagnosed medical conditions—what we came to find out could be life-threatening or life-impacting—or had chronic conditions that had been acutely exacerbated in the setting of being transplanted suddenly from their home of origin to a brand new country and missing out on medications that had been keeping them healthy.”

The hospitalist team helped lead care for kids with conditions including undiagnosed adrenoleukodystrophy, an unrepaired diaphragmatic hernia in an infant, congenital heart disease at risk of sudden death, multi-drug-resistant bacteria, and many other problems.

While the infrastructure and resources at Riley were not built for the influx or this level of complexity, they were able to draw on and tweak what they had. Their go-to analogy was building a plane while flying it.

Michele Saysana, MD, a pediatric hospitalist at Riley and chief medical officer at an adult medical center at Indiana University, said when she first got the call with the request to provide this care—while she was sitting on her back porch—she knew it was going to be a whole new experience. Most refugee resettlements involve a few families in a week.

“We don’t usually resettle hundreds of people in a week—or a

thousand,” she said. And there ended up being far more than a thousand.

Being able to use the Indiana Health Information Exchange—a system Riley pays into that allows it to exchange information with hospitals around the state—proved valuable. This allowed patients cared for and discharged at Riley to have their records shared almost instantly with primary care physicians and other hospitalists.

“Otherwise, we were going to be relying on a lot of things like faxing and phone calls, and we weren’t sure that was going to be reliable,” Dr. Saysana said.

Dr. Schneider described several other ways her team adapted and tapped into their existing resources. All the patients (except trauma patients) were admitted to the hospitalist service, no matter the diagnosis. Advanced practice providers were redeployed from the surgical service. No refrigerated medications were prescribed at discharge. Plans of care were simplified and given in paper format. Pre-mixed baby formula was given to parents. Flexible protocols had to be used with pharmacies to get patients the medications they needed.

The hospital also drew on its global health program for expertise on how to care for refugees and consulted with two pediatric

intensive care unit doctors who had arrived in the U.S. as children. They developed and distributed information sheets on Afghanistan and Afghan values to help the teams better understand and connect with their patients.

The experience sometimes took an emotional and mental toll, said Dr. Peterson, who said she sat down with many hospitalists to talk about their frustrations and their successes.

“The pain when watching individuals suffer was very hard for some of our members,” she said. “Recognizing that they were watching a child grieve the loss of a family member, the loss of a relationship that they had left, the loss of their schools and their toys, was really hard on many of us.”

But they were left with no regrets about having taken on the challenge.

“This was an opportunity that we could have said ‘no’ to,” Dr. Schneider said. “But it became one of the most fulfilling things we’ve ever done. And we would not trade it for the world.” ■

*Tom Collins is a medical writer in South Florida, who has written about everything from lethal infections to thorny ethical dilemmas, runaway tumors to tornado-chasing doctors. He gathers health news from around the globe and lives in West Palm Beach.*





## Chapter Spotlight: Wiregrass

By Richard Quinn

Like sports teams in the largest cities, SHM chapters in major metropolitan markets benefit from the resources of their surroundings.

But in smaller regions, resources—like hospitalists—are often stretched thinner.

Then there's the Wiregrass Chapter.

First, ask yourself if you've heard of Wiregrass country. If the answer is no, it's the name for the intersection of southeastern Alabama, southern Georgia, and the Florida Panhandle (the name comes from the distinctive grass that thrives there).

Second, take a second to read the group's resume.

Founded in 2015, now 110 members strong.

Won a Chapter Recognition award in its first year.

Has earned the Outstanding Chapter of the Year award twice since then, including the 2021 Chapter Excellence Award, from SHM.

"We are very proud of those achievements," said chapter president Waseem Mohamed, MD, FACP, SFHM, a hospitalist at Southeast Health Medical Center in Dothan, Ala. "Our chapter is being com-



Dr. Mohamed

pared to all the other chapters in the country including major cities."

In the beginning, the chapter—focused on southeast Alabama and a few Florida counties—worked most at educating people on what a hospitalist was. That included community outreach in a way that's impossible to replicate in larger regions.

Like "Walk With The Hospitalist," an early event held at a local park and used as a vehicle through which to teach community residents how their primary care physician would not be in the hospital with them.

By the time COVID-19 emerged, the job had changed.

"Initially, when COVID hit, we cleared a platform for all the local hospitals in Alabama, North Florida, and Georgia," Dr. Mohamed said. "We had a weekly meeting where all the hospital medicine leaders would join and discuss the issues their hospitals were facing. A few of these meetings included Alabama state legislators. It was a great platform to share solutions for those issues, especially at a time when things were very chaotic and stressful."

With Alabama among the lowest in the nation for vaccination rate stats, the chapter created a presentation to help move that needle.

"Here in our area, we know people rely a lot on the community leaders and religious leaders, and they trust them and share their concerns with them," Dr. Mohamed said. "We did that presentation for COVID and the vac-

cines—this is for a non-physician audience—in a simple way. We got some Alabama legislators and a lot of community and religious leaders in that meeting."

What happened next is the reason local chapters exist.

"They had a lot of questions and concerns about these vaccines that were cleared," Dr. Mohamed said. "We also recorded that whole presentation and circulated it among all the leaders for them to share with their family, friends, colleagues, or whomever. That's how...the video was viewed more than 1,000 times in our state itself. It had a tremendous impact on what people thought about vaccines and I think it helped a lot to improve the vaccination rates in the state."

Dr. Mohamed says the chapter also does a lot of advocacy for local hospitals, especially small rural community hospitals. The chapter leadership had a series of meetings in different cities with Alabama state legislators and state health policy leaders. One result: the state is now working to create a statewide transfer line where smaller hospitals can call that line and find out which hospital has beds.

As involved in public health as the Wiregrass Chapter has been, it has been just as focused on perhaps the favorite part of most chapters: an annual poster competition.

During the pandemic, many chapters had to pause their competitions.

Not Wiregrass.

They moved to Twitter instead,

a tactic that was highlighted by the Society of General Internal Medicine. Dr. Mohamed calls it an "academic experiment" and "the first time that a social media platform has been used for a poster competition."

"It actually provided a huge platform for the medical students and residents," he said. "Last year we had 100 posters, and we invited 25 judges from across the country who judged those posters and interacted with the presenters. That created a huge opportunity for networking and exhibiting their posters on a bigger platform. We had almost 525,000 interactions on Twitter last year because of the poster competition. It was a great thing."

So, what's next for the chapter?

Dr. Mohamed wants to reach out statewide for both more engagement and "robust leadership." One example—the chapter's current vice president is Sandeep Virk, MD, who is a hospital medicine program director at Jackson Hospital in Montgomery, Ala., 100 miles north of the Wiregrass region.

The leadership group has also expanded to include diversity, equity, and inclusion (DEI) and early career hospitalist councils, both of which have members from various health systems and different cities.

"This coming year we plan to focus our attention on grooming the new chapter leadership with multiple leadership educational activities and workshops," Dr. Mohamed said. ■

*Richard Quinn is a freelance writer in New Jersey.*



# SIG Spotlight: Substance Use Disorders

By Richard Quinn

It's become a refrain in society as common as complaining about the weather: COVID-19 accelerated trend lines in things that were already headed downward.

Parts of the economy. Political division. Crime.

But in the hospital setting, there may be no truer words than, "COVID-19 made substance use disorders worse."

"COVID-19 has really magnified the toll that addiction has taken on our patients," said Marlene Martin, MD, chair of SHM's Special Interest Group (SIG)



Dr. Martin

on substance use disorders and director of the addiction care team at San Francisco General Hospital.

"In some instances, people were in recovery, and their programs closed, or COVID-19 led to increased isolation, depression, and anxiety. People also lost their jobs during COVID-19. All of these are potential drivers of substance use."

And dealing with that fallout is what the SIG is all about. SHM has 27 SIGs whose purpose is to "create communities of hospitalists around topics of interest practice areas and/or care models."

None may be as acutely focused as the one on substance use.

It was founded in 2019 and has 239 members. Dr. Martin co-leads it with Richard Bottner, DHA-PA-C, director of quality improvement and patient safety for the Colorado Hospital Association, in Greenwood Village, Colo.

Before its founding, "we had a workshop at SHM focused on hospitalist management of opioid use disorder," Dr. Martin said. "We had a wonderful turnout and saw there were a ton of people interested...Rich Bottner collected signatures at the SHM conference because of all this interest. It's been really fun to see it grow and see all the different components that it's helping with."

Over the nearly three years of COVID-19, the purpose of the group became clearer as more and more patients presented with substance-use issues—either as the reason for admission or in addition to other health problems.

"People developed new and worsening substance use disorders as they were coping with all that has been happening over the last couple of years and as the prominent opioid across the country became fentanyl," Dr. Martin said. "We see this reflected in hospitals.



People in our community end up in the hospital, and as hospitalists, we care for them."

But to SIG member Susan Calcaterra, MD, MPH, COVID-19 also meant that during a crisis, use disorders could not get as much attention as they had prior.



Dr. Calcaterra

"The momentum and the attention that was paid to overdose before COVID-19 was slowed down in some ways because hospital systems had to develop pathways for COVID-19 management," said Dr. Calcaterra, who's a hospitalist in the division of hospital medicine at the University of Colorado in Aurora, Colo. "I think we lost some time for really educating our hospitalist workforce in managing opioid use disorder in the hospital. But I do think now that COVID seems to be better controlled, the interest is sparked again. Now is a good time to double down on our efforts to educate and empower hospitalists to diagnose and treat substance abuse disorders in the hospital setting."

A major step was taken in 2022 with the publication of a position statement<sup>1</sup> from SHM that was published in the *Journal of Hospital Medicine* (JHM). JHM also published a companion piece<sup>2</sup> that systematically reviewed guidelines for opioid use disorder (OUD). The white paper, *Management of Opioid Use Disorder and Associated Conditions Among Hospitalized Adults: A Consensus Statement* from the Society of Hospital Medicine, laid out 18 recommendations on how best to treat patients.

They were categorized as: nonstigmatized medical communication and language for people who use opioids; assessment of unhealthy opioid use and diagnosis of OUD; medication treatment

for DSM-5 confirmed OUD diagnosis; acute pain and perioperative pain management in the setting of OUD; and care transition at hospital discharge.<sup>1</sup>

"The hope is that by having a consensus statement endorsed by SHM, hospitalists practicing across the country can take a look at it and decide if they want to start treating opioid use disorder among their hospitalized patients," said Dr. Calcaterra, who worked on the papers with Dr. Martin, Mr. Bottner, and others. "The work is really gratifying because patients respond well when you treat them with dignity and respect and offer them medicine that is not only

evidence-based but is also highly effective in reducing death. There is a group of us that routinely do this work, and we're available to help, especially through the SIG."

"The position statement also makes it very clear that SHM and JHM agree—addiction is in our hospitalist wheelhouse," Dr. Martin said. "Many of us may defer addiction care to a specialist or refer patients to addiction care after hospital discharge. I saw patient after patient return to the hospital whenever their addiction went unaddressed, and every time they came back, they were sicker. It was only after I sought simple tools and used evidence-based practices, and started using these on my patients, that I saw my patients get better. It has made this work super rewarding." ■

*Richard Quinn is a freelance writer in New Jersey.*

## References

1. Calcaterra S, et al. Management of opioid use disorder and associated conditions among hospitalized adults: A consensus statement from the Society of Hospital Medicine. *J Hosp Med.* 2022 Sep;17(9):744-56.
2. Calcaterra S, al. Management of opioid use disorder, opioid withdrawal, and opioid overdose prevention in hospitalized adults: A systematic review of existing guidelines. *J Hosp Med.* 2022 Sep;17(9):669-72.

## shm CAREER CENTER

### Internal Medicine Hospitalist Opportunity

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Primary practice sites are the University of Iowa Hospitals and Clinics (UIHC), which is consistently recognized as one of the top health care employers by *Forbes* and has consistently ranked as one of the top 15 medical centers in the U.S. by *US News and World Report*, and Iowa City VA Medical Center, and the University of Iowa Health Network Rehabilitation Hospital. Iowa City is a diverse and family-friendly community located in the heart of the Midwest. As the site of the University of Iowa, it combines access to many of the cultural amenities of a larger city with the ease of living in a smaller town.

For further information, contact Kristin Goedken at [kristin-goedken@uiowa.edu](mailto:kristin-goedken@uiowa.edu).

Interested candidates are invited to search the Jobs@UIOWA site: <https://jobs.uiowa.edu/content/faculty/> and search for requisition #74556

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





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