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IN THE NEXT ISSUE...
Managing readmission numbers, and more

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SHM'S DIVERSITY AND INCLUSION STATEMENT

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

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WILEY

WINNER 2024 APEX AWARDS FOR PUBLICATION EXCELLENCE

Veklury®
remdesivir 100 MG FOR INJECTION

LEADING THE WAY

THE ONLY COVID-19 ANTIVIRAL WITH
OUTCOMES ACROSS 3 KEY TREATMENT GOALS:

DISEASE PROGRESSION, RECOVERY TIME, AND READMISSION[1-3]

INDICATION

VEKLURY is indicated for the treatment of COVID-19 in adults and pediatric patients (birth to <18 years of age weighing ≥1.5 kg), who are:

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

THE ONLY NIH RECOMMENDED COVID-19 TREATMENT OPTION
included for adult patients hospitalized for COVID-19[4]

- Not requiring supplemental O_2 and
- Requiring low- or high-flow O_2

Turn the page for details

IMPORTANT SAFETY INFORMATION

Contraindication

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

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

VEKLURY® REDUCED DISEASE PROGRESSION AND RECOVERY TIME, AND DEMONSTRATED READMISSION OUTCOMES ACROSS A BROAD RANGE OF COVID-19 SEVERITY[1-3]

Disease progression[2]

10% **Absolute reduction in incidence of new mechanical ventilation or ECMO with VEKLURY in ACTT-1** (13%, n=402) vs placebo (23%, n=364) in patients who did not receive either at baseline (95% CI, -15 to -4)

Recovery time[1,2]

5 **Days shorter recovery time with VEKLURY in the ACTT-1 overall study population**

Median 10 days with VEKLURY vs 15 days with placebo; recovery rate ratio: 1.29 (95% CI, 1.12 to 1.49), $P < 0.001$

Adverse reaction frequency was comparable between VEKLURY and placebo–any adverse reactions (ARs), Grades ≥3: 41 (8%) with VEKLURY vs 46 (9%) with placebo; serious ARs: 2 (0.4%)* vs 3 (0.6%); ARs leading to treatment discontinuation: 11 (2%)† vs 15 (3%).[1]

ACTT-1 study design: a randomized, double-blind, placebo-controlled, phase 3 clinical trial in hospitalized adult 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. Disease progression was a secondary endpoint. Recovery was defined as patients who were no longer hospitalized or hospitalized but no longer required ongoing COVID-19 medical care.[1,2]

Real-world readmission data[3]

40% reduced likelihood of 30-day, COVID-19–related readmission was observed with VEKLURY; aOR: 0.60 (95% CI, 0.58 to 0.62), $P < 0.0001$

- In the overall cohort, 10,396 out of 191,816 (5.4%) non-VEKLURY patients compared to 7,453 out of 248,785 (3%) VEKLURY patients

27% reduced likelihood of 30-day, all-cause readmission was observed with VEKLURY; aOR: 0.73 (95% CI, 0.72 to 0.75), $P < 0.0001$

- In the overall cohort, 17,437 out of 191,816 (9.1%) non-VEKLURY patients compared to 15,780 out of 248,785 (6.3%) VEKLURY patients

A large, real-world, retrospective observational study examined 30-day COVID-19–related‡ and all-cause§ readmission to the same hospital after being discharged alive from the index hospitalization for COVID-19 in adult patients (≥18 years of age) who were treated with VEKLURY vs those not treated with VEKLURY across variant periods: pre-Delta, Delta, and Omicron, from 5/2020-4/2022. Data were examined using multivariate logistic regression.‖

- **Data Source:** PINC AI™ Healthcare Database
- This study was sponsored by Gilead Sciences, Inc.
- The study included index patients on room air, low- and high-flow supplemental oxygen, and IMV/ECMO
- VEKLURY-treated patients received at least 1 dose of VEKLURY during the index COVID-19 hospitalization¶

Study population and select characteristics[3]

- **440,601 patients** with a primary diagnosis of COVID-19 and who were discharged alive
- **248,785 VEKLURY patients** were compared to **191,816 non-VEKLURY patients**

Compared to nonreadmitted patients, readmitted patients:

- **Were older:** median 71 years vs 63 years
- **Had more comorbidities:** CCI ≥4: 36% vs 16%
- **Were more likely to have NSOc** (42% vs 39%) and **less likely to be on low-flow oxygen** (40% vs 42%)
- **Were less likely to be treated with VEKLURY:** 48% vs 57%
- **Were more likely to have received corticosteroid monotherapy during index hospitalization:** 38% vs 29%

Compared to non-VEKLURY patients, VEKLURY patients:

- **Were younger:** median 62 years vs 64 years
- **Were more likely to have received some level of supplemental oxygen support (any supplemental oxygen support, 1-NSOc):** 70% vs 48%

Study considerations[3]

Real-world studies should be interpreted based on the type and size of the source datasets and the methodologies used to mitigate potential confounding bias. Real-world data should be considered in the context of all available data. Results may differ between studies.

Strengths: This large study population enabled subgroup analyses across variant periods and supplemental oxygen requirements and considered a well-defined cohort of patients hospitalized for COVID-19.

Limitations: There exists a potential for residual confounding due to unmeasured variables, including differences in groups that could not be accounted for. The database did not capture data relating to time from symptom onset, infecting viral lineages, and prehospital care such as other treatments. Some patients who received supplemental oxygen could be misclassified as NSOc due to the absence of billing charges for supplemental oxygen.

*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).
‡Defined as a readmission with a primary or secondary discharge diagnosis of COVID-19.
§Defined as readmission to the same hospital within 30 days of being discharged alive from the hospitalization for COVID-19.
‖The model adjusted for age, corticosteroid use, variant era, Charlson Comorbidity Index, maximum oxygenation requirements, and ICU admission during COVID-19 hospitalization.
¶Refer to the VEKLURY Prescribing Information for dosing and administration recommendations.

Veklury® remdesivir 100 MG FOR INJECTION | LEADING THE WAY

IMPORTANT SAFETY INFORMATION (cont'd)

Warnings and precautions

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

Adverse reactions

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

Dosage and administration

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

- **Treatment duration:**
  - — For patients who **are hospitalized**, VEKLURY should be initiated as soon as possible after diagnosis of symptomatic COVID-19. For patients who are hospitalized and do not require invasive mechanical ventilation and/or ECMO, the recommended treatment duration is 5 days. If a patient does not demonstrate clinical improvement, treatment may be extended up to 5 additional days, for a total treatment duration of up to 10 days.
  - — For patients who are hospitalized and require invasive mechanical ventilation and/or ECMO, the recommended total treatment duration is 10 days.
  - — For patients who are **not hospitalized**, diagnosed with mild-to-moderate COVID-19, and are at high risk for progression to severe COVID-19, including hospitalization or death, the recommended total treatment duration is 3 days. VEKLURY should be initiated as soon as possible after diagnosis of symptomatic COVID-19 and within 7 days of symptom onset for outpatient use.
- **Testing prior to and during treatment:** Perform hepatic laboratory and prothrombin time testing prior to initiating VEKLURY and during use as clinically appropriate.
- **Renal impairment:** No dosage adjustment of VEKLURY is recommended in patients with any degree of renal impairment, including patients on dialysis. VEKLURY may be administered without regard to the timing of dialysis.

Pregnancy and lactation

- **Pregnancy:** A pregnancy registry has been established for VEKLURY. Available clinical trial data for VEKLURY in pregnant women have not identified a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes following second- and third-trimester exposure. There are insufficient data to evaluate the risk of VEKLURY exposure during the first trimester. Maternal and fetal risks are associated with untreated COVID-19 in pregnancy.
- **Lactation:** VEKLURY can pass into breast milk. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for VEKLURY and any potential adverse effects on the breastfed child from VEKLURY or from an underlying maternal condition. Breastfeeding individuals with COVID-19 should follow practices according to clinical guidelines to avoid exposing the infant to COVID-19.

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

Learn more at vekluryhcp.com

aOR=adjusted odds ratio; CCI=Charlson Comorbidity Index; ECMO=extracorporeal membrane oxygenation; IMV=invasive mechanical ventilation; NSOc=no supplemental oxygen charges.

PINC AI™ is a trademark of Premier, Inc. (formerly Premier Healthcare Database).

References: 1. VEKLURY. Prescribing Information. Gilead Sciences, Inc.; 2024. **2.** Beigel JH, Tomashek KM, Dodd LE, et al; ACTT-1 Study Group Members. Remdesivir for the treatment of COVID-19 — final report. *N Engl J Med*. 2020;383(19):1813-1826. doi:10.1056/NEJMoa2007764 **3.** Mozaffari E, Chandak A, Gottlieb RL, et al. Treatment of patients hospitalized for COVID-19 with remdesivir is associated with lower likelihood of 30-day readmission: a retrospective observational study. *J Comp Eff Res*. 2024;13(4):e230131. doi:10.57264/cer-2023-0131. **4.** National Institutes of Health. Coronavirus Disease 2019 (COVID-19) Treatment Guidelines. Updated February 29, 2024. Accessed March 25, 2024. https://www.covid19treatmentguidelines.nih.gov

GILEAD

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 (birth to <18 years of age weighing ≥1.5 kg), who are:

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

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

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

VEKLURY must be prepared and administered under supervision of a healthcare provider and must be administered via intravenous infusion only, over 30 to 120 minutes. Do not administer the prepared diluted solution 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, one Phase 3 study in 279 non-hospitalized adult and pediatric subjects (12 years of age and older weighing at least 40 kg) with mild to moderate COVID-19, four Phase 1 studies in 131 healthy adults, and from patients with COVID-19 who received VEKLURY under the Emergency Use Authorization or in a compassionate use program. The 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). Study GS-US-540-9012 included non-hospitalized subjects, who were symptomatic for COVID-19 for ≤7 days, had confirmed SARS-CoV-2 infection, and had at least one risk factor for progression to hospitalization treated with VEKLURY (n=279; 276 adults and 3 pediatric subjects 12 years of age and older weighing at least 40 kg) for 3 days.

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

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.

Remdesivir and its metabolites are in vitro substrates and/or inhibitors of certain drug metabolizing enzymes and transporters. Based on a drug interaction study conducted with VEKLURY, no clinically significant drug interactions are expected with inducers of cytochrome P450 (CYP) 3A4 or inhibitors of Organic Anion Transporting Polypeptides (OATP) 1B1/1B3, and P-glycoprotein (P-gp).

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

Pregnancy

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

Lactation

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

Pediatric Use

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

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

Geriatric Use

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

Renal Impairment

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

Hepatic Impairment

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

OVERDOSAGE

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

214787-GS-017

GILEAD

In the Literature

University of Pittsburgh School of Medicine Medical Research Reviews

By Matan Arnon, DO, Pooja Bhatt, MD, James Dreer, DO, MS, Kristian Feterik, MD, FAMIA, Lauren Glikes, MD, William I. Levin, MD, FACP, FHM, Kathryn Leyens, MD, MS, Raghunandan Purushothaman, MD, Danica Smith, DO, Christopher L. Wynkoop, MD, MS, FACP, Ashten Ebersbacher, DO, Shea Ford, MD, Almut Troeller McDermott, MD, PhD, and Michael Simonson, MD, MS

University of Pittsburgh School of Medicine, Pittsburgh

IN THIS ISSUE

By Matan Arnon, DO

1 Comparative Effectiveness and Safety of Apixaban, Rivaroxaban, and Warfarin in Patients with Cirrhosis and AF

CLINICAL QUESTION: What is the effectiveness and safety of apixaban, rivaroxaban, and warfarin in patients with cirrhosis and atrial fibrillation?

Dr. Arnon

BACKGROUND: The use of direct oral anticoagulants for atrial fibrillation (AF) has increased rapidly, including in patients with cirrhosis. To date, no large study of patients with both cirrhosis and AF has directly compared apixaban, rivaroxaban, and warfarin in a head-to-head manner. Understanding differences in the safety and effectiveness of these agents in cirrhosis could have major implications for clinical care.

STUDY DESIGN: Population-based cohort study

SETTING: Two U.S. claims data sets (Medicare and Optum's de-identified Clinformatics Data Mart Database [2013 to 2022])

SYNOPSIS: Researchers examined a total of 24,138 propensity score matched patients with cirrhosis and nonvalvular AF who were initiated on apixaban, rivaroxaban, and warfarin. This study demonstrated that patients initiated on rivaroxaban had significantly higher rates of major hemorrhagic events compared to apixaban initiators, with an absolute risk difference of 33.1 per 1,000 person-years (PY) (95% confidence interval [CI], 12.9 to 53.2 per 1,000 PY, hazard ratio, 1.47 [CI, 1.11 to 1.94]), but no significant differences in rates of ischemic events or death. Warfarin initiators also had significantly higher rates of major hemorrhage than apixaban initiators, with an absolute risk difference of 26.1 per 1,000 PY (CI, 6.8 to 45.3 per 1,000 PY, hazard ratio 1.38 [CI, 1.03 to 1.84]), particularly hemorrhagic stroke. The main limitation of this study is the nonrandomized treatment selection. Given warfarin use is challenging in advanced liver disease because of the accompanying coagulopathy, as well as the superior safety profile demonstrated in the apixaban group, this study assists hospitalists in anticoagulation agent choice in this patient population.

BOTTOM LINE: Apixaban may offer safety benefits over both rivaroxaban and warfarin in patients with cirrhosis and AF.

CITATION: Simon TG, et al. Comparative effectiveness and safety of apixaban, rivaroxaban, and warfarin in patients with cirrhosis and atrial fibrillation: a nationwide cohort study. *Ann Intern Med*. 2024;177(8):1028-1038. doi: 10.7326/M23-3067.

Dr. Arnon is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and a clinical assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By Pooja Bhatt, MD

2 Gabapentinoid Use Associated with Increased Risk of Severe Exacerbations in Patients with COPD

CLINICAL QUESTION: Does gabapentinoid use increase the risk of severe exacerbation in patients with chronic obstructive pulmonary disease (COPD)?

BACKGROUND: Gabapentinoids are indicated for the treatment of epilepsy and neuropathic pain, with increasing off-label use as a perceived safer alternative to opioids. Concerns about respiratory depression as a serious adverse effect are particularly relevant for patients with COPD.

Dr. Bhatt

STUDY DESIGN: Time-conditional, propensity-score-matched, new user, cohort study

SETTING: Population-based health administrative data in Quebec, Canada

SYNOPSIS: This study examined 13,504 patients aged at least 55 years with COPD who initiated gabapentin or pregabalin for epilepsy, neuropathic pain, or other chronic pain, matched 1:1 with nonusers. Gabapentinoid use was associated with an increased risk of severe COPD exacerbations (hazard ratio, 1.39; 95% CI, 1.29-1.50) across all indications. In patients with neuropathic and other chronic pain, the elevated risk persisted regardless of opioid or benzodiazepine use at entry. Limitations include potential residual confounders, particularly from unmeasured smoking status. These findings are consistent with regulatory warnings and case reports of respiratory risks associated with gabapentinoid use in patients with COPD.

BOTTOM LINE: Findings from this large population-based cohort study suggest that gabapentinoids should be prescribed with caution in patients with COPD, given the increased risk of severe exacerbations.

CITATION: Rahman AA, et al. Gabapentinoids and risk for severe exacerbation in chronic obstructive pulmonary disease: a population-based cohort study. *Ann Intern Med*. 2024;177(2):144-154. doi: 10.7326/M23-0849.

Dr. Bhatt is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and an assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By James Dreer, DO, MS

3 Gram-Negative Bacteremia: Early Transition from IV to Oral Antibiotic Therapy

CLINICAL QUESTION: What is the safety and efficacy of switching from IV to oral antibiotic therapy after three to five days in patients with gram-negative bacteremia?

Dr. Dreer

BACKGROUND: Bacteremia is ubiquitous among

hospitalized patients and is traditionally treated with prolonged courses of IV antibiotic therapy after clearance of blood cultures. To date, there has been limited, low-quality evidence demonstrating the safety of transitioning to oral therapy to complete the course of therapy recommended for gram-negative bacteremia.

STUDY DESIGN: Randomized, controlled, open-label, noninferiority study.

SETTING: 11 sites in Bahrain, Kuwait, Qatar, and Türkiye

SYNOPSIS: A total of 1,476 patients with monomicrobial *Enterobacterales* bacteremia admitted to the hospital were assessed for inclusion in the trial. Only 174 patients were randomized due to many patients not meeting eligibility requirements, including hemodynamic stability with resolution of fever >48 hours and source control. Randomized patients received either IV or oral antibiotics, after three to five days of IV therapy (85 to the IV group, 89 to the oral group). The primary endpoint was treatment failure within 90 days including death, need for additional antimicrobial therapy, microbiological relapse, or infection-related readmission. Treatment failure was documented in 25.6% of the IV group and 21.7% of the oral group. Median length of stay was three days shorter in the oral group; six days versus nine days.

These findings were limited in application for complicated infections: the study excluded neutropenic patients, central nervous system infections, and infective endocarditis. Additionally, resistance profiles excluded 23% of possible enrollment due to no oral therapy being available.

BOTTOM LINE: Switching clinically stable patients with gram-negative bacteremia from IV to oral antibiotic therapy was non-inferior to completing a course of therapy with IV alone and may reduce hospital length of stay.

CITATION: Omrani AS, et al. Switch to oral antibiotics in gram-negative bacteraemia: a randomized, open-label, clinical trial. *Clin Microbiol Infect*. 2024;30(4):492-8. doi: 10.1016/j.cmi.2023.10.014.

Dr. Dreer is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and a clinical assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By Kristian Feterik, MD, FAMIA

4 Renal Function and Decongestion with ADHF: the ADVOR Trial

CLINICAL QUESTION: Does acetazolamide enhance loop diuretic effect in patients with acute decompensated heart failure (ADHF) and how does this combination affect renal function?


Dr. Feterik

BACKGROUND: Nearly 50% of patients with heart failure also have chronic kidney disease (CKD) (eGFR <60 mL/min/1.73 m^2). CKD is associated with an impaired response to diuretics, making it difficult to achieve decongestion in these patients. As many as 20% to 40% of patients with ADHF experience worsening renal function during treatment with loop diuretics. Few trials have evaluated diuretic strategies specifically for patients with impaired renal function. The ADVOR trial investigated whether adding intravenous acetazolamide to standardized intravenous loop diuretics can improve diuretic efficacy in patients with ADHF and volume overload.

STUDY DESIGN: This was a randomized, double-blinded, placebo-controlled trial of patients admitted for ADHF and on oral maintenance therapy with furosemide for at least one month

SETTING: 30 acute care hospitals in Belgium

SYNOPSIS: ADVOR is the largest randomized diuretic trial to date in patients with ADHF, investigating acetazolamide to improve decongestion on top of standardized loop diuretics. It found that an intravenous bolus of 500 mg of acetazolamide in combination with intravenous loop diuretic therapy significantly increased the rate of successful decongestion and reduced hospital stay, regardless of baseline renal function. Although there was a higher incidence of worsening renal function during treatment, this did not affect long-term renal function or clinical outcomes. The findings suggest that acetazolamide is particularly beneficial for patients with lower baseline renal function, enhancing natriuresis and diuresis. Overall, these insights could lead to more effective and nuanced approaches to the treatment of heart failure, particularly in patients with concurrent renal impairment.

BOTTOM LINE: Acetazolamide treatment is an effective strategy to enhance diuretic response and achieve better decongestion in heart failure management.

CITATION: Meekers E, et al. Renal function and decongestion with acetazolamide in acute decompensated heart failure: the ADVOR trial. *Eur Heart J*. 2023;44(37):3672-82. doi: 10.1093/eurheartj/ehad557.

Dr. Feterik is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, an associate professor of medicine at the University of Pittsburgh School of Medicine, the medical director for enterprise interoperability, and the associate program director for UPMC Clinical Informatics Fellowship, all in Pittsburgh.

By Lauren Glikes, MD

5 Finerenone Reduces HF Events in Patients with Preserved Ejection Fraction

CLINICAL QUESTION: Does finerenone improve outcomes in patients with heart failure (HF) with mildly reduced or preserved ejection fraction?


Dr. Glikes

BACKGROUND: Steroidal mineralocorticoid receptor antagonists have proven benefits in HF with reduced ejection fraction, but their role in preserved ejection fraction remains unclear. Finerenone, a novel nonsteroidal mineralocorticoid receptor antagonist, needs evaluation in this population.

STUDY DESIGN: International, double-blind, randomized controlled trial

SETTING: Multiple international centers

SYNOPSIS: This study included 6,001 patients with HF and left ventricular ejection fraction at least 40%. Patients were randomized to receive either finerenone (20 to 40 mg daily) or placebo in addition to standard therapy. Over a median follow-up of 32 months, the finerenone group experienced significantly fewer primary outcome events (1,083 versus 1,283 events; rate ratio 0.84; 95% CI, 0.74 to 0.95; *P*=0.007). The primary outcome was a composite of total worsening HF events and death from cardiovascular causes. The total number of worsening HF events was also lower in the finerenone group (842 versus 1,024; rate ratio, 0.82). Cardiovascular death rates were similar between groups (8.1% versus 8.7%). Safety analysis showed increased hyperkalemia but reduced hypokalemia with finerenone. Limitations include low numbers of enrolled Black patients in the cohort and underpowering of all prespecified subgroups.

BOTTOM LINE: Finerenone significantly reduces worsening HF events in patients with mildly reduced or preserved ejection fraction, though without affecting cardiovascular mortality.

CITATION: Solomon SD, et al. Finerenone in heart failure with mildly reduced or preserved ejection fraction. *N Engl J Med*. 2024;391(16):1475-85. doi: 10.1056/NEJMoa2407107.

Dr. Glikes is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and a clinical assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By William I. Levin, MD, FACP, FHM

6 Empagliflozin After Acute Myocardial Infarction

CLINICAL QUESTION: Does empagliflozin improve cardiovascular outcomes in patients who have had an acute myocardial infarction?


Dr. Levin

BACKGROUND: Studies have shown that empagliflozin improves cardiovascular outcomes in patients with heart failure (HF), type 2 diabetes mellitus at high cardiovascular risk, and chronic kidney disease (CKD). The safety and efficacy of empagliflozin in improving outcomes in patients after acute myocardial infarction has not been determined.

STUDY DESIGN: Event-driven, double-blinded, randomized, placebo-controlled trial

SETTING: 451 sites in 22 countries across North America, Latin America, Europe, and Asia

SYNOPSIS: The EMPACT-MI trial enrolled patients hospitalized with acute myocardial infarction and either symptoms of HF or newly identified left ventricular ejection fraction below 45%. Inclusion required one additional heart failure risk factor. 3,260 patients were randomized to receive empagliflozin 10 mg daily and 3,262 to receive placebo. The primary endpoint was the composite of the first hospitalization for heart failure and death from any cause. Secondary endpoints included the total number of cardiac or noncardiac hospitalizations, and death from any cause.

The composite endpoint occurred in 8.2% of the empagliflozin group and 9.1% of the placebo group (hazard ratio, 0.90; 95% confidence interval, 0.76 to 1.06; *P*=0.21). The occurrence of secondary endpoints and serious adverse events did not differ between groups. Median follow-up was 17.9 months, and 6,328 patients (97%) were followed until the end of the trial. Limitations included a lack of analysis of outpatient HF events and the underrepresentation of racial and ethnic minorities. As in other recent trials, findings differ from patients with established HF, suggesting further study is warranted.

BOTTOM LINE: Treatment with empagliflozin

in patients with increased risk of HF after acute myocardial infarction did not lead to a significantly lower risk of first hospitalization for heart failure or death compared to placebo.

CITATION: Butler J, et al. Empagliflozin after acute myocardial infarction. *N Engl J Med*. 2024;390(16):1455-1466. doi: 10.1056/NEJMoa2314051.

Dr. Levin is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and a clinical professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

SHORT TAKES

Liberal Versus Conservative Transfusion in Traumatic Brain Injury

By Ashten Ebersbacher, DO

A randomized open-label study showed that in patients with a traumatic brain injury, a liberal red cell transfusion strategy (transfusion at <10 g/dL) did not reduce the risk of unfavorable neurological outcomes (on the Glasgow Outcome Scale- Extended) compared to a restrictive transfusion strategy (transfusion at <7 g/dL) at 6 months.

CITATION: Turgeon AF, et al. Liberal or restrictive transfusion strategy in patients with traumatic brain injury. *N Engl J Med*. 2024;391(8):722-35. doi:10.1056/NEJMoa2404360

Dr. Ebersbacher is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and an assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

Predicting Cardiovascular Morbidity in Pre-Dialysis CKD Patients with Transferrin Saturation Levels

By Shea Ford, MD

This prospective cohort study of 1,416 pre-dialysis chronic kidney disease (CKD) patients in Japan suggests that the risk of cardiovascular events in this patient population greatly increases when transferrin saturation levels are less than 20%. Further trials need to be conducted to determine if iron supplementation in this patient population can reduce the incidence of cardiovascular disease events.

CITATION: Hasegawa T, et al. Association between serum iron markers, iron supplementation and cardiovascular morbidity in pre-dialysis chronic kidney disease. *Nephrol Dial Transplant*. 2023;38(12):2713-22. doi: 10.1093/ndt/gfad096.

Dr. Ford is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and an assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By Kathryn Leyens, MD, MS

7 Slower Correction of Sodium in Severe Hyponatremia is Associated with Increased Mortality and Length of Stay

CLINICAL QUESTION: Is the sodium correction rate in severe hyponatremia associated with mortality and length of stay?

Dr. Leyens

BACKGROUND: Hyponatremia is commonly encountered in the hospital, with high levels of associated in-hospital mortality. Prior literature has associated rates of sodium correction more rapid than 12 mEq/L in 24 hours with the development of osmotic demyelination syndrome and central pontine myelinolysis. U.S. guidelines currently recommend a rate of sodium correction of sodium of 8 mEq/L per day in high-risk patients and 10 to 12 mEq/L per day in normal-risk patients with chronic severe hyponatremia. Few studies have associated slower sodium correction rates with increased mortality, but no larger studies have examined this relationship.

STUDY DESIGN: Multicenter retrospective cohort study

SETTING: Two academic medical centers (Massachusetts General Hospital and Brigham and Women's Hospital) between January 1, 1993 and December 31, 2018

SYNOPSIS: A cohort of 3,274 patients ages 18 and older with severe hyponatremia (<120 mEq/L) were included, with correction rates of <6 mEq/L/24 hours (38%), 6 to 10 mEq/L/24 hours (29%), and >10 mEq/L/24 hours (33%). Common comorbidities of included patients were COPD, malignancy, and congestive heart failure. Primary observed outcomes were mortality rates (in-hospital, 30-day), length of stay, and 90-day incidence of CPM.

In a multivariable model, patients with a correction rate >10 mEq/L/24 hours had lower odds of in-hospital, and 30-day mortality compared with patients with a correction rate 6-10 mEq/L/24 hrs, whereas patients with a correction rate <6 mEq/L/24 hours had higher odds of mortality. The group with a rate of correction >10 mEq/L/24 hours had a shorter average length-of-stay by 2.2 days compared to the group with a rate of correction 6-10 mEq/L/24 hrs. Seven patients enrolled in the study developed CPM, with no association with the rate of sodium correction. Six of the seven patients had risk factors of malnutrition, electrolyte abnormalities (low potassium, low phosphorus), or alcohol use disorder.

BOTTOM LINE: Slower sodium correction rates, notably those under 6 mEq/L/day, in patients hospitalized with severe hyponatremia were associated with increased mortality and length of stay, but no association was found with sodium correction rate and the incidence of osmotic demyelination syndrome.

CITATION: Seethapathy H, et al. Severe hyponatremia correction, mortality, and central pontine myelinolysis. *NEJM Evid*. 2023;2(10):EVIDoa2300107. doi: 10.1056/EVIDoa2300107.

Dr. Leyens is an academic hospitalist in the divisions of general internal medicine and pediatric hospital medicine at the University of Pittsburgh Medical Center, and an assistant professor of internal medicine and pediatrics at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By Raghunandan Purushothaman, MD

8 Safety of Diltiazem in Patients Taking Apixaban or Rivaroxaban

CLINICAL QUESTION: Does diltiazem increase the risk of major bleeding in patients on apixaban or rivaroxaban?

Dr. Purushothaman

BACKGROUND: Diltiazem is a potent CYP3A4 inhibitor and a mild P-glycoprotein inhibitor. Previous studies have shown that co-administration with diltiazem increases the bleeding risk and plasma levels of apixaban and rivaroxaban.

STUDY DESIGN: Retrospective cohort study with propensity score matching

SETTING: Medicare database for patients aged 65 and older in the U.S.

SYNOPSIS: This study included 205,155 Medicare beneficiaries aged 65 and older with atrial fibrillation newly prescribed apixaban or rivaroxaban along with diltiazem or metoprolol. During a median follow-up of 120 days, patients on diltiazem had a higher risk of major bleeding compared to those on metoprolol (hazard ratio,1.21; number needed to harm, 99) and an increased risk of death from major bleeding (hazard ratio, 1.22). The risk was dose-dependent, with doses >120 mg/day linked to even higher risks. The study did not analyze the effects of reducing apixaban/rivaroxaban doses with diltiazem, so such adjustments cannot be recommended without further evidence.

BOTTOM LINE: Diltiazem is associated with an increased bleeding risk when combined with apixaban or rivaroxaban. Clinicians should consider alternatives and involve patients in shared decision-making regarding rate control options before prescribing diltiazem.

CITATION: Ray WA, et al. Serious bleeding in patients with atrial fibrillation using diltiazem with apixaban or rivaroxaban. *JAMA*. 2024;331(18):1565-75. doi:10.1001/jama.2024.3867

Dr. Purushothaman is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and a clinical assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By Danica Smith, DO

9 Semaglutide Decreases Risk of Kidney Failure, Worsening of Kidney Disease, and Kidney-Related or Cardiovascular Death

CLINICAL QUESTION: Does treatment with semaglutide in patients with chronic kidney disease (CKD) and diabetes mellitus (DM) type II reduce the risk of kidney failure, progression of chronic kidney disease, or kidney-related or cardiovascular death?

Dr. Smith

BACKGROUND: Diabetes is the most common cause of CKD in many countries. Studies of renin-angiotensin inhibitors and sodium-glucose cotransporter 2 (SGLT2) inhibitors have demonstrated decreased risks of cardiovascular and renal-related outcomes but studies have yet to evaluate glucagon-like peptide (GLP-1) receptor agonists.

STUDY DESIGN: Double-blinded, randomized, placebo-controlled trial

SETTING: Multinational (387 sites in 28 countries)

SYNOPSIS: This study randomized 3,533 participants with DM type II and CKD to receive semaglutide at 1 mg weekly (1,767 participants) or placebo (1,766 participants) and followed participants over a median of 3.4 years. There was a 24% reduction (P=0.0003) of major kidney disease events in patients receiving semaglutide weekly (number needed to treat, 20). Kidney events were defined as dialysis, transplantation, estimated glomerular filtration rate of less than 15, at least 50% reduction in estimated glomerular filtration rate from baseline, or kidney-related or cardiovascular death. Secondary outcomes demonstrated reduced major cardiovascular events and slowed the progression of CKD in the semaglutide group. Adverse events and rates of discontinuation were similar in both groups. One limitation was that only 15% of patients were on SGLT2 inhibitors. For patients on an SGLT2 inhibitor, semaglutide showed a nonsignificant trend towards benefit in patients with DM for over 15 years and A1C lower than 8% but not higher.

BOTTOM LINE: Semaglutide at a dose of 1.0 mg weekly compared to placebo decreased the risk of kidney failure or progression and kidney-related or cardiovascular death in patients with CKD and type II DM.

CITATION: Perkovic V, et al. Effects of semaglutide on chronic kidney disease in patients with type 2 diabetes. *N Engl J Med*. 2024;391(2):109-21. doi: 10.1056/NEJMoa2403347.

Dr. Smith is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and a clinical assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

SHORT TAKES

Statin Therapy for Primary Prevention in Older Adults Reduces CVD Risk

By Almut Troeller McDermott, MD, PhD

This sequential target trial emulation using observational data from Hong Kong demonstrated a five-year risk reduction in cardiovascular disease events and mortality in both patients aged 75 to 84 years and patients aged 85 years and older who were initiated on statins compared to patients not on statins. There was no significant increase in the risk of adverse events such as liver dysfunction and statin-induced myopathy.

CITATION: Xu W, et al. Benefits and risks associated with statin therapy for primary prevention in old and very old adults: real-world evidence from a target trial emulation study. *Ann Intern Med*. 2024;177(6):701-10. doi: 10.7326/M24-0004.

Dr. McDermott is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and a clinical assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

Effect of Cash Benefits on Healthcare Utilization and Health: A Randomized Study

By Michael Simonson, MD, MS

Monthly cash benefit reduced emergency department visits. A randomized trial of recurring monthly cash benefits amounting to $200 to $400 per month resulted in decreased emergency department utilization (87 fewer emergency department visits per 1,000 persons) in low-income individuals.

CITATION: Agarwal SD, et al. Effect of cash benefits on health care utilization and health: a randomized study. *JAMA*. 2024;332(17):1455-63. doi: 10.1001/jama.2024.13004.

Dr. Simonson is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and an assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh.

By Christopher L. Wynkoop, MD, MS, FACP

10 Absence of CSF Pleocytosis Prevalent in Encephalitis and Can Delay Empiric Treatment

CLINICAL QUESTION: Is there a difference in clinical factors and outcomes among patients with new-onset encephalitis based on whether their initial cerebrospinal fluid (CSF) studies demonstrate the presence or absence of pleocytosis, and do these differing CSF findings affect the administration of empiric therapy?

Dr. Wynkoop

BACKGROUND: Optimal management of patients with encephalitis includes prompt recognition, accurate diagnosis, and timely intervention. Clinical diagnostic criteria have been established for this purpose: they often rely on initial CSF studies, including the presence of pleocytosis (≥5 WBC/μL), as a key indicator of central nervous system inflammation. However, the absence of pleocytosis has been noted in cases of encephalitis (especially those of autoimmune and idiopathic etiologies). This study aimed to compare the clinical factors and outcomes in cases of encephalitis based on this difference, as well as determine if it significantly affected the timely administration of empiric therapy.

STUDY DESIGN: Retrospective study

SETTING: Hospital systems in Houston and Baltimore

SYNOPSIS: A total of 597 adult patients with all-cause encephalitis-related ICD-9 discharge codes were included, of whom 151 (25.3%) had no pleocytosis on CSF analysis. Of this subgroup, they were equally likely to have an infectious versus autoimmune etiology (31.1% versus 25.6%, P >.05). Within the infectious subgroup, 40% of cases were due to HSV-1; 23.7% of these exhibited no pleocytosis. Patients without pleocytosis were less likely to receive empiric acyclovir than those with pleocytosis (47.7% versus 71.1%, P <.001). The presence of pleocytosis was associated with neurologic dysfunction at presentation but was not correlated with worse outcomes or mortality.

A substantial proportion of cases examined in this study remained idiopathic, likely leading to underdiagnosis which may affect these results. This was also an observational study that is at risk of confounding. Nevertheless, these findings suggest that the absence of pleocytosis cannot reliably discriminate between infectious and autoimmune etiologies of encephalitis. They also imply that empiric therapy should not necessarily be delayed if clinical suspicion remains high.

BOTTOM LINE: The absence of CSF pleocytosis in encephalitis is prevalent in infectious, autoimmune, and idiopathic cases of encephalitis, and can lead to delayed initiation of empiric therapy.

CITATION: Habis R, et al. Absence of cerebrospinal fluid pleocytosis in encephalitis. *Clin Infect Dis*. 2024:ciae391. doi: 10.1093/cid/ciae391.

Dr. Wynkoop is an academic hospitalist in the section of hospital medicine at UPMC Presbyterian Hospital, and an assistant professor of medicine at the University of Pittsburgh School of Medicine, both in Pittsburgh. ■

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Scan the QR code for more information about clinical options (In the Literature, Key Clinical Questions, Interpreting Diagnostic Tests), and HM Voices.

Shining a Spotlight on National Hospitalist Day

These hospitalists help to advance care, build community, and create opportunities. Here's how they do it.

JUANDY - STOCK.ADOBE.COM

By Vanessa Caceres

Hospitalists work hard (not that we have to tell you that!), so celebrating March 6 as National Hospitalist Day is an ideal time to recognize the work done in hospital medicine. *The Hospitalist* recently caught up with a handful of hospitalists to find out more about their work and what makes them tick professionally. Their stories are organized under the themes of Advancing Care, Building Community, and Creating Opportunities (in other words, the ABCs).

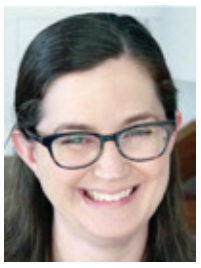
Read on to discover more about these hardworking hospitalists.

The *Journal of Hospital Medicine's* Digital Media Team helps build community within hospital medicine.

SHM

Advancing care

Valerie Press, MD, FAAP, FACP, MPH, SFHM, is a professor of medicine and pediatrics, an associate chief in the clinical transformation office, and medical director of the care transitions clinic at the University of Chicago in Illinois.



Dr. Press

Current research from Dr. Press focuses on improving care quality for patients with chronic obstructive pulmonary disease (COPD). Specifically, her research evaluates how to use the time of hospitalization to help patients receive guideline-recommended care during hospitalization and post discharge to reduce future exacerbations.

Dr. Press' research is funded by the National Institutes of Health (NIH) and the Agency for Research on Healthcare and Quality (ARHQ). SHM is an investigator for both studies.

The NIH-funded project is a five-year study working with 20 hospitals across the U.S. During the first phase of the three-part study, sites worked with the study team to identify two to three interventions to make up their transition-of-care bundle for patients with COPD using implementation science and human-centered design methods.

In phase two of the study, the 20 hospitals were randomized into one of four groups. Sites were randomized to deliver the interventions they chose either virtually or in person, and they received implementation support through SHM's mentored implementation model at all sites, with half also receiving co-design, which is a human-centered design approach.

Although the study implications are not yet published, Dr. Press shared that pulmonary rehabilitation was recognized by many of the sites as an important care aspect but that some sites could not include it in their bundle due to resource limitations. Another area that received attention was better education for rescue- and control-based inhalers, which can be hard to use.

Currently, the study is in its post-implementation phase, which involves collecting data for two additional years to understand which programs were successfully implemented and sustained.

The second project is funded by AHRQ and takes place at Dr. Press' hospital as a single-site study. Researchers are taking evidence-based approaches to virtual self-management for COPD using pharmacy-led strategies.

The study's first phase involved published evidence-based approaches with a user-centered design approach tailored for the hospital's patient population. The second phase will test whether adding the evidence-based tailored approach of using pharmacy-led virtual self-management visits to the existing COPD transitions-of-care program adds value for both patients and the hospital.

The study's third phase will involve disseminating lessons learned via the group HOMERuN (Hospital Medicine Reengineering Network).

One barrier the study at Dr. Press' institution will address is the lack of equitable access to broadband internet and/or reliable Wi-Fi access, which can affect patients' access to the growing telehealth care and education opportunities, she explains.

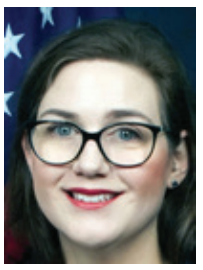
"We need to move forward with these technology interventions

when it's appropriate, but not let them kind of worsen disparities in health or healthcare," Dr. Press said.

Dr. Press shares that as a physician-researcher, she enjoys the one-on-one care of patients and also finding solutions that can help many.

"Being part of a system, you identify opportunities where perhaps you could help the population at large and not solve a problem over and over, one by one … The work that I do tries to use rigorous research methods to study very practical questions. That's the field of implementation science. We have evidence to say X, Y, or Z could help patients, but we're not necessarily doing it systematically. So how do we get that evidence into practice? It's very satisfying to try and think about taking all that hard work that went into that evidence and getting it out into the care for patients," she said.

Building community


Dr. Brooks

Michelle Brooks, MD, FACP, SFHM, is deputy associate chief of staff for education and a hospitalist at South Texas Veterans Health Care System in San Antonio. She is also adjoint associate professor at Long School of Medicine, The University of Texas Health Science Center at San Antonio, and deputy editor of digital media for the *Journal of Hospital Medicine* (*JHM*).

The editorial team leading *JHM*, established in 2006, wants *JHM* to be "More Than a Journal."

They're doing that successfully in several ways by connecting to readers.

"While we want people to submit their scholarly work to us, we also want them to connect to the larger hospital medicine community," Dr. Brooks said. She joined as a co-deputy editor for digital media in 2023, and the team brainstormed about what a digital team could do for *JHM*.

That led them to create their mission statement: The mission of the *JHM* Digital Media Team is to develop, design, and disseminate dynamic digital content that informs, inspires, and interconnects the hospital medicine community.

That mission has led the journal editors to introduce several outreach efforts:

#JHMChat: This online journal club on Twitter/X is a scheduled event with opportunities for both synchronous and asynchronous discussion about a *JHM* article, Dr. Brooks says. (Some follow-up articles from #JHMChat have been published on *The Hospitalist's* website.)


SHM
Members of *JHM's* Digital Media Team love a good #JHMChat!

Expanding the Digital Footprint: *JHM* now has accounts on other platforms, including recently adding Instagram and LinkedIn.

Visual Abstracts: To help provide more visual content, the *JHM* editors use visual abstracts to recognize authors' efforts and engage readers visually, Dr. Brooks explains. "The images can be shared when teaching on wards or to give a synopsis of an article to a colleague. Popular visual abstracts include those made for the Things We Do For No Reason series," she said.

Video Content: The *JHM* digital team experiments with music, shared visual abstracts, and fun content, such as a "Get Ready With Me" video for SHM Converge, created by digital media teammate Joe Thomas, MD.

Connecting Through Music: "We also created a *JHM* Editorial Picks Spotify playlist, just for fun," Dr. Brooks said.

Downloads of *JHM* have increased year to year, which is in part due to the digital media efforts. Dr. Brooks also met people at SHM Converge last year who knew her through *JHM's* social media.

"Other journals have started forming digital media teams and have reached out to us for assistance. I've started a digital media fellowship curriculum for *JHM* covering many of the core topics," she said.

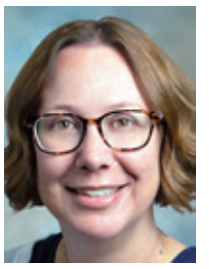
JHM's digital team hopes to increase its presence at SHM Converge and recruit some content creators or social media ambassadors. "We will recruit new digital media fellows for 2025-2026, and we plan to monitor the social media landscape and expand to emerging platforms, such as Bluesky, if they show sustained growth with our readership population," Dr. Brooks said.

Finding additional ways to connect with readers helps readers to obtain information, advocate for causes, and connect with the greater community, Dr. Brooks says.

"*JHM* not only engages in these spaces but also leads and creates easily digestible content for busy hospitalists to consume on the go and share with their fellow hospitalists. [That] really makes us different as a journal," Dr. Brooks said.

SHM also has been very supportive, she adds.

Creating opportunities


Dr. Hrach

Christine M. Hrach, MD, SFHM, is a professor of pediatrics in hospitalist medicine, at the Washington University School of Medicine in St. Louis.

Dr. Hrach has been part of SHM since the beginning of her career and became an SHM Senior Fellow in 2016. She has been active in a variety of roles and joined the Pediatrics SIG Executive Council in 2019. She is still part of that Special Interest Group (SIG).

Dr. Hrach is currently co-chair for Pediatric Hospital Medicine 2025 (to be held in July 24 to 27 in Anaheim, California) and is in her third year of serving on the PHM Planning Committee.

Dr. Hrach enjoys her role in planning PHM 25. "Working with the SHM planning team is fabulous. They keep us organized and on track with our timeline," she said.

Those in pediatric hospital medicine or those who just want to learn more about it will get a lot out of attending, she says.

"I think one of the most important reasons to attend is to network with friends and colleagues who are passionate about Pediatric Hospital Medicine across the country. With ACGME [Accreditation Council for Graduate Medical Education] changes, the last year's residency match, and workforce issues, I think this is an important year to get together and discuss some of these hot topics," she said.

Staying active in SHM has given Dr. Hrach the chance to build networks across the country and collaborate with others. "Being a part of SHM has expanded my own career growth and leadership by learning from my colleagues and now friends across the country in Pediatric Hospital Medicine [PHM]," she said.

Dr. Hrach also shares what drives her within pediatric hospital medicine. "I love the clinical work that I do—taking care of acutely sick children in the hospital," she said. "I am interested in quality improvement and strive to work on hospital issues to improve our system daily. I have gained the knowledge and support I need to do my job through the mentoring and support of colleagues within my own division of pediatric hospitalist medicine and across our PHM community."


Dr. Migliore

Christopher Migliore, MD, MS, FACP, FHM, is director of general medicine consult and perioperative services, medical director of surgery and surgical step-down, and an assistant professor of medicine at Columbia University Irving Medical Center in New York.

Dr. Migliore contributes to hospital medicine education in a variety of ways, such as serving as a Spark author and then recently becoming a section editor, a role he currently holds. He is also a member of the Academic Committee (and co-chair of the Academic Summit) and a new addition to *The Hospitalist* editorial board.

Spark is a question bank written by hospitalists designed to help prepare fellow hospitalists for board review. Within Spark, Dr. Migliore answers his own assigned questions but also takes on orphan questions.

Dr. Migliore decided to join SHM and became active within the group to network, increase his clinical acumen, and become a better physician for patients. At the same time, he always has had a passion for education, so his current roles are a great match for his interests and skills.

"What SHM allows is for you to meet all of these people from different practice environments. When you sit down and talk with them at Converge or in a SIG, there are cool opportunities. You get new ways of thinking," he said.

Dr. Migliore's interest in work-

Celebrate NHD by Entering the HM Voices 2025 Contest

The third annual HM Voices National Hospitalist Day Contest is now accepting submissions. HM Voices is *The Hospitalist's* online section where SHM members can unleash their creativity. We showcase creative writing—In Your Words (poetry, essays, etc.) or creative visuals—In Your Eyes (photos, art, digital creations).

This year's National Hospitalist Day is focused on celebrating the ABCs of hospitalists' impact on the hospital medicine community through Advancing care, Building community, and Creating opportunity.

Express any or all aspects of this theme creatively through art, poetry, videos, essays, photography, etc., and send your submissions to lcasinger@wiley.com. The deadline is March 31. The top three winners will be published in an upcoming issue of *The Hospitalist*, and all submissions will be published online. ■

ing with *The Hospitalist* editorial board was spurred by intense pressures within the specialty. Members can turn to the magazine and use SHM as a guiding light.

"*The Hospitalist* and SHM provide a place where hospitalists can go and not only can they network, but they can read practice blurbs that help them right now," he said. "It's a good hub to stay not only up to date on the latest papers but also get practical advice on burnout and how to deal with stress. I don't want to sound dramatic, but it's kind of like a buoy in the middle of an ocean, a place of respite, because you know when you get to it, it's going to be filled with things that can help you."

For hospitalists looking to broaden their career and also grow within SHM, Dr. Migliore emphasizes seeking mentors. A great place to start is by joining a SIG.

The second thing that he advises is looking at the SHM committee list and finding a committee that you have passion for and applying for that committee. "You may not get on the first time and that's fine, but continue to demonstrate your passion," he said. Be persistent about it.

"Once you get on the committee, volunteer and shine, and then you might get a bigger leadership position, perhaps even becoming head of the committee," he said.

The final thing that Dr. Migliore advises is reading SHM emails closely. This can be tough as everyone gets overwhelmed by emails, texts, and all other types of messages nowadays. Still, make the effort to get laser-focused on those SHM communications.

"Take the time, just to make sure you're not missing out on an opportunity that can help you reach your goals," he said.

"If you find even one thing that you have passion for, sign up. There might be opportunities for research, collaboration, and publications," he said.

Woo J Moon, DO, FACP, is an associate professor of medicine, associate program director of the internal medicine residency, program director of the medicine POCUS service, and co-director of undergraduate medical education in ultrasound at Saint Louis University School of Medicine in St. Louis.


Dr. Moon

Dr. Moon has dedicated a large amount of time to helping hospital medicine physicians learn more about point-of-care ultrasound (POCUS). He has been part of the POCUS SIG Executive Council since 2022 and has been the SIG's secretary since early 2024. He also has been a POCUS Certificate of Completion image review faculty member since 2022 and will join the POCUS Certificate of Completion Steering Committee starting this April.

Dr. Moon believes that his interest in POCUS reflects its large future role within medicine, even beyond hospital medicine. "Many healthcare systems and academic programs are looking for POCUS champions to lead the hospitalist or residency programs. It has allowed me to grow into a more competent hospitalist and teacher," he said.

He believes that participation within SHM has many advantages. "Being part of SHM committees allows me to connect with others with similar interests, and I get to keep up with the latest advancements in the rapidly changing field of hospital medicine and POCUS," he said.

"I also like that this allows me to make contributions to the field, which helps others that are currently where I was when I was fresh out of residency and just garnering interest in POCUS," he said.

Dr. Moon has been an SHM member since 2014.

For other hospitalists looking to grow professionally, he encourages volunteering for SHM committee work to grow as a professional. ■

Vanessa Caceres is a medical writer in Bradenton, Fla.

The Power of Attention and Specificity in Medical Trainee Evaluations

Tips from the trenches

By Ruth Jessen Hickman, MD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Many hospitalists regularly work with medical trainees—medical students, interns, and upper-level residents—and teaching, overseeing, and evaluating these trainees is an important aspect of the job. But many evaluators haven't received explicit instruction on how best to make trainee evaluations fair and helpful to both learners and education program directors. Time limitations and other constraints can sometimes make this challenging.

Daniel Payson Hunt, MD, MHM, a hospitalist, director of the division of hospital medicine, and a professor of medicine at Emory in Atlanta, pointed out that these clinical evaluations supply key information about learners that can't be obtained through other means. "Doctoring is taking care of patients, and it doesn't take place in conference rooms or during an exam," he said. "Exams tell us a fair amount about [the trainee's] knowledge, but not their applied knowledge."


Dr. Hunt

John Woller, MD, a hospitalist, associate program director for clinical reasoning for the Osler medical residency training program, and assistant professor of medicine at Johns Hopkins Medical School in Baltimore, added, "Our feedback should be timely, specific, and personally tailored to the individual."


Dr. Woller

Eliza Bullis, MD, a hospitalist, internal medicine/pediatric specialist, and director of undergraduate medical education in the department of medicine at Maine Medical Center in Portland, Maine, emphasized, "A brief, high-quality observation is better than a long evaluation with lots of general statements."


Dr. Bullis

The Hospitalist talked with these and other hospitalists experienced in evaluating medical trainees and in reviewing such evaluations in the context of medical-student or resident education. They focused on key advice to other hospitalists who evaluate learners, sharing their insights on giving high-quality feedback that promotes trainee growth.

Trainee evaluations: Context, benefits, impact, and challenges

Dr. Woller noted that the foremost purpose of evaluations is providing formative feedback, so trainees can become better at practicing medicine. The evaluation process may be particularly important to flag a struggling trainee, identifying those who aren't progressing adequately in their milestones and who might need extra support and guidance.

However, Dr. Woller noted that evaluations also possess other functions, like providing clues about whether a medical student might be a good fit for a residency program, or a resident for employment after residency.

At schools that have not gone to pass/fail grading, clinician evaluations are factored into medical students' rotation grades, but the evaluations can also significantly impact students' careers at pass/fail institutions. Dr. Woller explained that in addition to the move to pass/fail rotations at many medical schools, the change making the United States Medical Licensing Examination pass-fail has meant that physician evaluations may hold even greater weight than they did in the past. Regardless of the grading system, students' letters from the dean—so critical for residency applications—may rely highly on specific quotes taken from their rotation evaluations.

Programs vary in the specifics of the format and frequency of required trainee evaluations. However, these evaluations are designed to be in alignment with nationwide recommendations on areas of competence and milestones for medical students and residents. Typically, both in-person and written evaluation components are required at the end of rotations with a clinician. Evaluations vary by institution but typically include both scales to rank trainees' competency numerically, and also more open-ended questions, where physicians can share more specific comments about trainee achievements or areas for future growth.

Dr. Bullis noted a semantic distinction between trainee assessment and trainee evaluation. Assessment is often conceptualized as ongoing and formative, one critical component of continued learning. Clinicians might perform this kind of ongoing assessment and feedback throughout a rotation, as specific learning points arise. Some characterize evaluation, in contrast, as more definitive and retrospective, assigning some sort of value to a person's work.

Dr. Bullis said, "But I think in medicine, we're really doing assessing and evaluating all the time. No matter where they are as trainees, you are always trying to help them get better."

However, several physicians noted challenges to providing truly informative evaluations. Dr. Woller noted that it can be difficult to find time to provide solid feedback on a service with many patient responsibilities and many trainees, but it's still critical to do so. Dr. Bullis also noted that due to limited time on service, clinicians might not witness enough encounters to evaluate trainees in all the various domains assessed in evaluations.

Dr. Hunt remarked that one relatively recent challenge in evaluating medical students and interns is the cut-and-paste function in writing patient notes in electronic health records. He said, "We used to be able to look at documentation and glean a lot about the writer's thought process, but now you can't do that as much."

Another concern is implicit bias, which can affect even the most well-intentioned evaluators. Dr. Woller pointed to studies that have demonstrated that factors like race, sex, or ethnicity may impact evaluations.[1-3]

Tips for helpful and informative evaluations

Several of the doctors recommended setting expectations and goals with trainees at the beginning of their rotation. Alex J. Chinn, MD, FHM, is a hospitalist, internal medicine physician, and associate program director for the internal medicine residency program at the University of Tennessee Health Science Center in Memphis, Tenn. He asks his trainees to give him a specific goal that they want to accomplish during their rotation. He added, "Often, they know the places they need to improve, and it might be something that's not specifically on the evaluation form."


Dr. Chinn

Dr. Bullis also embraces this approach, adding, "It also helps you as the evaluator, because you can laser focus on those moments rather than trying to absorb and give feedback on everything they do throughout the day."

Some programs explicitly require mid-rotation check-ins with students. Even if these are not mandatory, several of the hospitalists recommended doing them to give trainees time to improve based on their initial feedback.

It's also often helpful to become familiar with the evaluation forms required by one's institution before the rotation begins. Dr. Chinn and others pointed out that doing so helps inform the evaluator's perspective from the beginning, prompting better awareness of the domains that will need attention. In evaluating these different areas,

Dr. Bullis also noted that a good evaluation usually has some variation in it, as it's very uncommon for learners to be at exactly the same level in every domain.

Unlike some hospitalists, Dr. Hunt still chooses to do bedside rounding with his whole team, interspersing teaching points and questions between seeing each patient. He finds this method a particularly helpful way to observe his trainees, take notes on their performance, and offer specific feedback in the moment.

This notetaking approach was heartily endorsed by others as well, e.g., during student presentations, both to provide better evaluations and also to make the evaluation writing process itself less difficult and tedious. Whatever mode is most personally convenient is best, whether an electronic device that is always handy or an old-fashioned small notebook dedicated to this purpose.

Dr. Chinn remarked on the importance of being mindful of time and place when giving an in-person evaluation. Although some kinds of specific feedback might be appropriate during rounding with the whole team, more difficult or serious discussions should be held in private. "You shouldn't write down anything in a written evaluation that you wouldn't be willing to say face-to-face," Dr. Waller added.

Setting the right tone for the team can also make a big difference in how well the feedback is received. It's important to build a relationship with the trainee and build a sense of shared purpose and community. "You want to let people know early on that you want them to be the best that they can be," Dr. Bullis explained.

As part of that, good evaluators give feedback on specific areas for potential improvement, whether with respect to their direct clinical skills or in other areas. However, Dr. Hunt remarked on the importance of also reinforcing and underscoring areas where trainees are already excelling, encouraging them to keep building on their strengths.

Dr. Chinn elaborated, "Giving anecdotes really does help illustrate what you are talking about. More generic comments like, 'did a good job' are generally not very helpful for those of us trying to assess readiness for promotion, and they aren't helpful for the resident or student who is trying to become a better doctor." Dr. Bullis agreed that it was better, for example, to explain what a student did to demonstrate their professionalism, rather than simply stating that they were professional.

To be able to provide this level of specific feedback requires dedicated attention. Dr. Woller noted that with so much activity, it's easy to get distracted on the wards. "I want to make sure I'm really dedicating some mental space to the medical student or resident," he added.

Dr. Bullis concurred, "Being intentional about spending five minutes or ten minutes specifically observing someone gives you a lot of information. Then, you can debrief with them about what they did, which is huge."

Dr. Woller also recommended being thoughtful about one's own possible implicit bias and trying to be as objective and as concrete as possible. "It's much easier than we think to form opinions based on first impressions. We should all try to be thoughtful about evaluating trainees based on their abilities and competence and not simply whether we enjoyed spending time with them," he said.

It's best to write evaluations promptly, just after a given rotation is complete, when one's memories of the trainee are clearest. If that's not possible, Dr. Chinn encourages physicians at least to take some notes then, so they'll have some points to share when they do fill out the official forms.

Dr. Chinn also added an overall point to help trainees take their comments to heart: "When you're having difficult conversations, be honest, but also be kind. It doesn't help your learner for you to withhold your thoughts if you have concerns about the performance, but they're not going to take much away from it if it's a very unpleasant conversation." ■

Ruth Jessen Hickman, MD, is a graduate of the Indiana University School of Medicine in Indianapolis. She is a freelance medical writer living in Bloomington, Ind.

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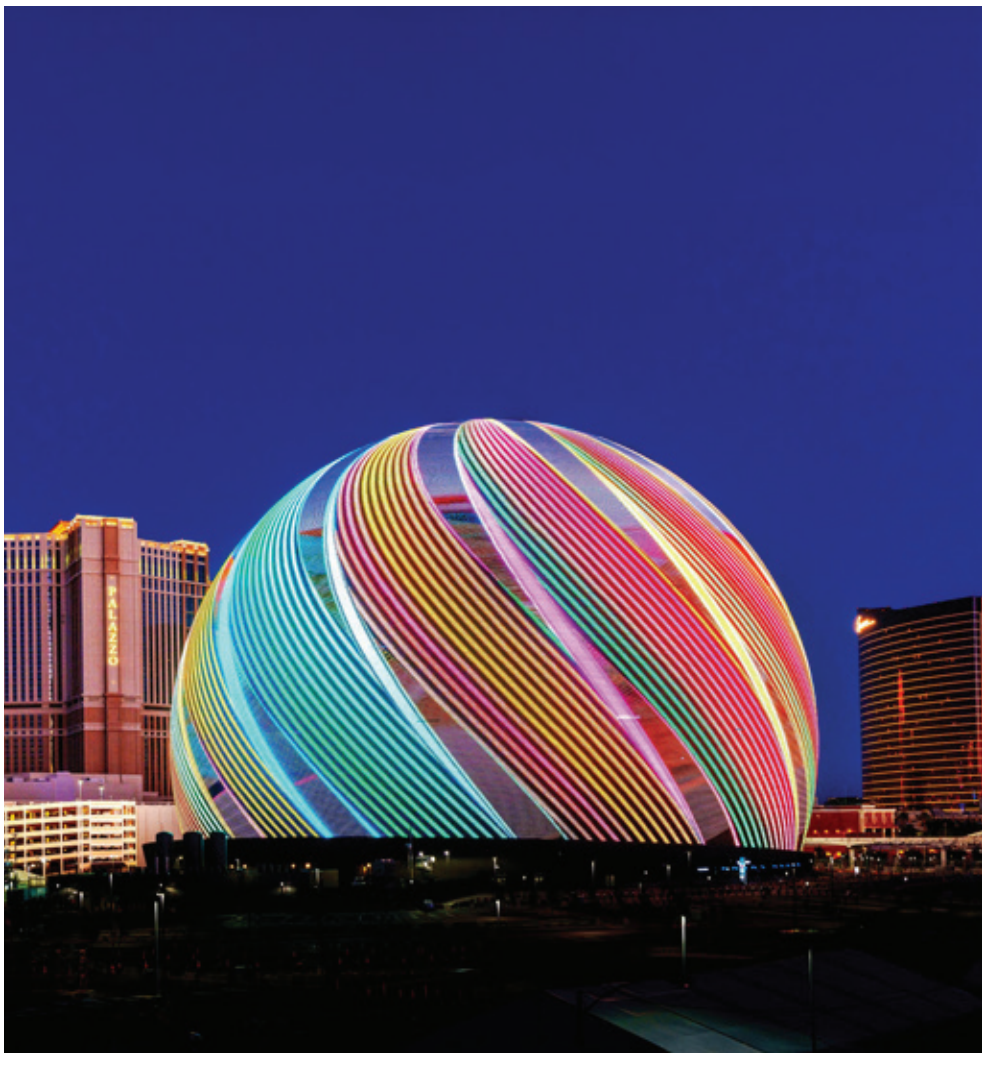

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Sightseeing in Sin City

There's something for everyone

By Lisa Casinger

In case you haven't heard, SHM Converge is happening in Las Vegas this year (April 22-25). Whether it's your first time attending or your first time in Las Vegas, or you're a veteran of both, we have a few suggestions to occupy your downtime.

Before we jump into places to go, things to do, and restaurants to discover, here are a few lesser-known tidbits about the Neon City.

The Las Vegas Strip isn't actually in Las Vegas; it's outside the city limits in Winchester and Paradise. Fremont Street, in "Old Las Vegas," was the first paved street in 1925. The Venetian is the second-largest hotel in the world. You can view the world's largest gold nugget (it weighs 61 pounds) in the Golden Nugget Casino on Fremont Street. While the Paris Hotel's Eiffel Tower is only half the size of the original (developers wanted a full-scale replica but it was too dangerous for planes flying in and out of McCarran International Airport), the Luxor's sphinx is 35 feet taller than the original and its pyramid is one of the tallest in the world.

If your idea of fun isn't on par with The Hangover, Showgirls, or Casino, here are some activities you might find more up your alley.

Nature and the great outdoors

Grand Canyon—There are many options for exploring the Grand Canyon, so plan to spend at least a full day on your visit. You can take a tour that includes a stop at the Hoover Dam Memorial Bridge, and for the adventurous, a trip to the Skywalk. If you're interested in the Wild West experience, consider the Grand Canyon Ranch Tour, which offers horseback and wagon rides.

Bellagio Conservatory and Botanical Gardens—Located in the Bellagio Hotel & Casino (also home to the famous dancing fountains and an art museum), the 14,000-square-foot space is transformed by horticulture and engineering teams each season.

Red Rock Canyon—About a 20-minute drive from Las Vegas Boulevard, the Red Rock Canyon National Conservation Area is 195,819 acres in the Mojave Desert and includes a one-way, 13-mile, scenic drive, 26 hiking trails, rock climbing opportunities, and more.

Flamingo Wildlife Habitat at the Flamingo Hotel—This four-acre, outdoor garden is home to exotic birds, turtles, and fish, including, of course, flamingos. Admission is free.

The Shark Reef at Mandalay Bay—This aquarium is home to more than 2,000 species of sharks, exotic fresh and saltwater fish, sea turtles, crocodiles, and much more. There's also an aquarium in the Silverton Casino that offers interactive stingray feedings and mermaid swims.

Culture, kitsch, and fun

Seven Magic Mountains—Located about 10 miles outside of Las Vegas, this art installation features seven, 30- to 35-foot totems made from dayglow painted, locally sourced boulders. The Swiss artist Ugo Rondinone says the location is physically and symbolically important because it's midway between the natural and artificial—mountains, desert, Jean Dry Lake, and the highway and its traffic between Los Angeles and Las Vegas.

Pinball Hall of Fame—If you're a Pinball Wizard, or just enjoy playing, check out the Pinball Hall of Fame. It's home to more than 200 different pinball machines—and each one is playable. Profits go toward charitable organizations.

Smith Center for the Performing Arts—Located in Symphony Park, the venue hosts theatre productions, dance shows, and concerts—about 400 performances a year. April performances include the Nevada Ballet's Peter Pan and international jazz star, Nnenna Freelon.

Princess Diana Exhibition—Located in The Shops at Crystals connected to the ARIA Resort and Casino, this exhibition features 12 themed rooms and more than 700 personal artifacts of Princess Diana. This self-guided tour (there's also an audio guide) includes seven of her evening gowns.

The Mob Museum—This non-profit museum is dedicated to organized crime artifacts, videos, interactive exhibits, and special talks and programs. There's also an underground speakeasy serving Prohibition-era cocktails and live music.

Electric Playhouse—Located in the Forum Shops at Caesars Palace, the Electric Playhouse is a must-see for immersion-experience lovers. There are motion-based games, like Paint Pong and Light Hockey (no need for headsets or controllers), immersive dining experiences, and a full bar and patio with motion-activated visuals.

Fremont Street Experience—From ziplining, free concerts, and live music, to free Viva Vision light shows and more, Fremont Street does not disappoint. This canopied, five-block area is classic downtown Las Vegas with some of the most iconic hotels and casinos from Binion's and the Golden Nugget to Las Vegas' oldest hotel (it opened in 1906), the Golden Gate Hotel. If you're an Elvis fan, you'll want to check out the King's Ransom Museum; some say it's the best collection of Elvis memorabilia outside of Graceland.

Sphere—It's described as the intersection of art and technology—it's an immersive experience with various elements, including seat haptics, movement sensations, flashing lights, intense lighting, visual effects, loud noises, and atmospheric simulations that may include fog, scent, and wind. April's shows include Darren

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Aronofsky's first multi-sensory film, Postcard from Earth, and Dead & Company: Dead Forever.

Palate pleasers

Las Vegas is well known for its plethora of fine-dining restaurants—Joël Robuchon at the MGM Grand; Piccasso, Le Cirque, and Michael Mina at the Bellagio; Wing Lei and Min Kim's Mizumi at the Wynn; Gordon Ramsay's Hell's Kitchen at Caesars Palace; Mon Ami Gabi at the Paris Hotel; LAVO at The Venetian; and so many more. Here are a few hidden gems you just might like to explore:

Bootlegger Italian Bistro is one of the oldest restaurants in town (1949) and it's still family-owned and operated. It features original recipes from the family matriarch, Maria Perry.

Tacos El Gordo (open until 2 a.m. Sunday through Thursday and 4 a.m. on Friday and Saturday), is another family owned and operated restaurant that got its start in San Diego. It features authentic Tijuana tacos with several locations in Las Vegas, including on the Strip.

Sain Honoré Doughnuts & Beignets & Pizza offers classic and signature couture doughnuts, beignets, and pizza. This local, women-owned shop boasts 100% made-from-scratch tasty treats with locations on Flamingo Road and Blue Diamond Road (and delivery within five miles).

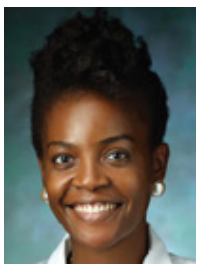
Casa Di Amore, a locally owned, old-school, Vegas restaurant, features classic Italian cuisine and nightly Rat Pack-era live entertainment. It also offers complimentary transportation when you call (not online) to make a dinner reservation. ■

Session Recommendations for Converge 2025

The Hospitalist's editorial board members are making plans for SHM Converge 2025. Here they share some of the sessions they're looking forward to.

Nkemdilim Mgbojikwe, MD, SFHM

Associate professor of the department of medicine and associate chief medical officer, at Fox Chase Cancer Center in Philadelphia



Dr. Mgbojikwe

I am always excited for Converge as it's a two for the price of one for me—getting to reconnect with friends across the country and having a rich educational experience! As I look at the agenda there are so many exciting talks and workshops, I am excited about several, so I will highlight two here for brevity. Interhospital Transfers Beyond the Basics: Integrated Command Centers, Tackling Capacity Challenges, and Waitlists promises to be interesting, as capacity and interhospital-transfer challenges impact a wide array of folks, [including] frontline hospitalists, operational leaders, patient care experience, legal, hospital leaders, and much more. In my role as a hospitalist and as the associate chief medical officer, this is right up my alley, and I am always interested to hear how others are creatively approaching these issues. I am also excited for the Update in Hospital Medicine talk as well, which has been a great way to get abreast of high-impact publications in an abbreviated, digestible way.

Lucy Shi, MD

Adult hospitalist, assistant clinical professor, and director of student-run clinics at UC Davis Health in Sacramento, Calif.

Dr. Shi

I'm excited about a lot of sessions this year. Each day is packed with interesting topics covering practical updates for your clinical practice, how to navigate career advancement, and best practices for building sustainable hospital medicine services. I'm looking forward to checking out Dr. Massart's session Winning Big in MedEd: Best Practices for Optimizing Bedside Rounds for Patients and Learners. I'm a big proponent of bedside rounding, but still trying to refine and improve my teaching. After residency, we don't usually get a chance to see our peers' rounding styles and I'm interested to learn some new tips to incorporate into my practice.

Another session to check out for some career inspiration is Stories from the Journey: 2024 Research & Innovation Finalists jointly hosted by the Academic Committee and Research Committee. The session will highlight innovative work and research, specifically focused on the journey and how projects can play a role in career development. I sometimes struggle with visualizing where my career might end up and how current projects could fit in, especially as my interests evolve. I hope some of these journeys will resonate and help me appreciate the unexpected turns along the way.

You'll also find me at Physical Diagnosis Potpourri with Dr. Mansoor. You may recognize Dr. Mansoor as the author of the highly rated textbook, Frameworks for Internal Medicine. He was one of my favorite attendings in residency and every time I'm on service, I still use what he taught me about physical diagnosis. I'm eager to learn some new pearls from this session to keep improving my bedside clinical diagnosis skills.

Mihir H. Patel, MD, MPH, MBA, CLHM, FACP, SFHM

Chair of the inpatient clinical informatics council, medical director of virtual medicine, and hospitalist at Ballad Health System in Johnson City, Tenn.

Dr. Patel

As a senior hospitalist with a strong interest in the digital transformation of healthcare, I am highly engaged in leveraging technology to enhance patient care and streamline operational workflows. Serving as the director of virtual medicine and chair of clinical informatics at Ballad Health, I am particularly drawn to the following sessions at SHM Converge 2025, which address critical topics in hospital medicine.

The session Interhospital Transfers Beyond the Basics: Integrated Command Centers, Tackling Capacity Challenges, and Waitlists. focuses on optimizing interhospital transfers. Effective transfer management is crucial for timely and appropriate care while addressing capacity challenges and throughput pressures. Topics like integrated command centers, enhanced workflows, and automation are highly relevant in improving the efficiency and quality of care during patient transitions. The importance of clear communication between transferring and receiving facilities and the role of dedicated physicians in the transfer process is pivotal for success. Understanding how other health systems have implemented these strategies can provide actionable insights for improving operational efficiency and patient outcomes.

The session Gambling on the Virtual Unit – It's Not Just Craps aligns closely with my expertise and interest in virtual medicine. The hospital at home and virtual care models represent a significant shift toward patient-centered healthcare, enabling treatment in home settings while improving satisfaction and outcomes. These models also present opportunities to integrate innovative technology that enhances workflows and reduces operational inefficiencies. Moreover, virtual care supports a scalable approach to addressing patient needs, ensuring quality care even in resource-constrained environments.

These sessions are particularly relevant to my role and interests, addressing key challenges and opportunities in modern hospital medicine and digital healthcare innovation.

Elizabeth Herrle MD, FACP, FHM

Assistant professor of medicine at Tufts University School of Medicine in Boston, associate medical director for professional development, division of hospital medicine at Maine Medical Center, and medical director of clinical informatics at MaineHealth, both in Portland, Maine

Dr. Herrle

While you can't judge a book by its cover, I like to hope that sometimes you can judge a talk by its title. As I perused the amazing list of upcoming talks at SHM Converge 2025, one title made me feel like I was standing just a bit too close to the speakers. So don't be surprised if you find me elbowing my way to the front row to see Dr. Christopher Moriates present his talk Subverting Systems to Build Trust: An Alt-Rock Approach for Hospitalists. One of my favorite things about SHM Converge is the opportunity to hear how our colleagues in hospital medicine are challenging conventions and breaking new ground in the service of our patients' health and wellbeing. Dr. Moriates is a national leader in healthcare quality, cost, and value who has been at the forefront of addressing the pressing challenges of our healthcare system through his work with initiatives like the [US Choosing Wisely] STARS program. He knows the system. And I'm excited to hear his perspective on how subversion of existing systems can lead to better care of our patients. As an added bonus, I'm assuming there will be a steady stream of nostalgic alt-rock references to enjoy throughout the session. I hope that when we leave Dr. Moriates' session, our ears will be ringing for a while – a persistent reminder that if the system doesn't support our patients – it's not a system worth supporting. See you at Converge!

Andrea Hadley, MD, FAAP, FHM

Assistant professor of internal medicine and pediatrics at Michigan State University College of Human Medicine and chief of pediatric hospital medicine at Helen DeVos Children's Hospital of Corewell Health, both in Grand Rapids, Mich.

Dr. Hadley

I am excited about Updates in Health Policy. Given the current political climate, it will be imperative for us to stay up to date on the public health impacts of the current administration so we can best advocate for our patients.

Anika Kumar, MD, FAAP, FHM

Clinical assistant professor of pediatrics at Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, pediatric hospitalist at Cleveland Clinic Children's Hospital in Ohio, and pediatric editor of The Hospitalist.

Dr. Kumar

There are so many great sessions at Converge in 2025, that it's hard to choose what to attend. As the pediatrics editor of *The Hospitalist*, I am especially excited for the Pediatric Update—Top 10 Articles and Things We Do for No Reason in Pediatrics. I am also excited for Trans-forming Your Care: A Hospitalist's Guide to Transgender Health Across the Lifespan from Child to Adult and Business Updates for the Hospitalist: The Top Business Articles of 2024 That Will Change the Way You Lead, Do Your Job, and Practice Medicine.

Arunab Mehta, MD, MEd, FHM

Vice-chair of inpatient clinical affairs, medical director, and assistant professor of medicine in the clinical core faculty for program valuation and improvement at the University of Cincinnati Medical Center in Cincinnati.

Dr. Mehta

I am absolutely thrilled for SHM Converge this year, and not just because it's in Las Vegas (though let's be honest, that's a huge plus!). The talks look absolutely scintillating. While the annual Things We Do For No Reason is always a safe winner, I am particularly excited about attending a talk on evidence-based methods for managing delirium with the cheekily titled TADA, No Magic Tricks Required!: Evidenced-Based Delirium Management for Hospitalists.

I'd also love to learn about operations in the talk Smoothing Operations: Hospitalists as Operational Leaders. because who doesn't want a ton of tools to use in their personal practice? And let's not forget the talk Generative Artificial Intelligence for Hospital Medicine—a very timely topic given the current AI craze. I wonder if they'll side with DeepSeek or ChatGPT for that one. ■

What the Presenters Want You to Get from Their Presentations

SHM Converge 2025 is packed with sessions covering the latest research, best practices, and newest innovations in the field. We asked a few presenters what they hope you'll get out of their sessions. Here's what they had to say:

Jackpot! Winning Strategies for GI Care for the Hospitalist is presented by Benjamin Verplanke, MD, FHM, section chief of hospital medicine at NYU Langone Health and a clinical assistant professor in the department of medicine at NYU Grossman School of Medicine, both in New York.

I'm really hoping the attendees come out of my lecture with a better understanding of subtle but valuable updates in the management of acute pancreatitis, the basics of treatment of ulcerative colitis, and some GI-related side effects of medications. Similarly to last year, there will also be some random GI-related fun facts as well!

No Addiction Medicine Service? Things You Need to Know to Care for Patients with Substance Use Disorders is presented by Anna-Maria South, MD, assistant professor of medicine, academic hospitalist, and attending physician on the addiction consult and education service at the University of Kentucky College of Medicine in Lexington, Ky., and Keri Holmes-Maybank, MD, SFHM, academic hospitalist and associate professor of medicine at the Medical University of South Carolina in Charleston, S.C.

It is estimated that 11% of hospitalizations are related to substance use disorders (SUD) or substance-related complications. These percentages continue to increase yearly as do the deaths related to SUD. Treating patients with SUD, such as starting buprenorphine for opioid use disorder, is essential to keep patients engaged in care and to reduce morbidity and mortality. Treatment has become more complicated with the illicit substances in our communities such as illicit fentanyl and xylazine. The mortality from alcohol-related complications continues to climb, highlighting the importance of starting medication for alcohol use disorder in hospitalized patients.

We're hospitalists who are also addiction medicine certified and appreciate the challenges that non-addiction medicine-trained hospitalists face. We hope this session will provide practical information including medication and dosing on hot topics including initiation of buprenorphine in patients who use illicit fentanyl or substances adulterated with illicit fentanyl including low-dose buprenorphine initiation (micro-dosing); management of buprenorphine precipitated withdrawal; approach to the patient who uses xylazine adulterated substances; treatment of alcohol withdrawal with phenobarbital in non-intensive care unit patients; initiation of treatment for alcohol use disorder in hospitalized patients; and harm reduction strategies for the hospitalized patient with substance use disorder. Our goal is to increase knowledge and comfort in initiating these treatments for hospitalists who do not have access to an addiction medicine consult team. Come with questions and get answers from experts in addiction medicine and hospital medicine. We look forward to seeing everyone at Converge!

Getting Paid for What You Do: Documentation & Billing for the Hospitalist is presented by Samuel Lipten, MD, a hospitalist at Pennsylvania Hospital and a clinical assistant professor of medicine at the Perelman School of Medicine at the University of Pennsylvania, both in Philadelphia.

I hope to empower individual hospitalists and group leaders to feel more confident about documentation, billing, and coding. We receive minimal formal education on these topics and what does exist usually comes from non-clinicians. I admit that I used to snooze through the required billing talks. However, I became more invested once I learned how I could make my documentation more streamlined and increase revenue for my group with a few simple changes, and I am excited to share that perspective with the attendees at SHM.

Subverting Systems to Build Trust: An Alt-Rock Approach for Hospitalists is presented by Christopher Moriates, MD, SFHM, chief of hospital medicine in the VA Greater Los Angeles Healthcare System and professor of clinical medicine at UCLA, both in Los Angeles.

For my session, I am hoping that hospitalists will leave with a sense of hope and agency for our future as we discuss everyday ways that we can reconnect with our patients, develop trust, and deliver meaningful care. I hope to inspire more "punk rock moments" where hospitalists (appropriately) break the rules to deliver on our oath to best care for patients. I hope participants will reconnect with the music of a more rebellious past and add their own favorites to my "Subverting Systems" playlist (scan the QR code to enjoy Dr. Moriates' Spotify playlist).

Peering Into a Crystal Ball: Leveraging EMR Tools to Predict Clinical Deterioration and How to Intervene is presented by Jessica Nave, MD, FHM, vice president of CDI, coding and revenue integrity of Emory Healthcare, and hospitalist and assistant professor of medicine at Emory University School of Medicine in Atlanta.

I hope people will walk away with an understanding of some of the technology tools that can be leveraged to help us predict and identify patients who are at serious risk of decompensating. As busy hospitalists, we need a triage system that helps focus our attention on the critical patients. ■

Key Operational Question

Can Expediting Patient Discharge Past Clinical and Non-Clinical Barriers Improve Overall Hospital Throughput?

By Sneha Tella, MD, Neel Vibhakar, MD, MBA, FACEP, June Kippeny, BSN, RN, and Heather Stauder BSN, RN

It's 8 a.m. and the hospital is starting the day in a tough position. There are 15 patients boarding in the emergency department (ED), two patients who can be downgraded from the intensive care unit, and another five admissions planned from the post-anesthesia care unit. Hospital leadership is requesting hospitalists prioritize early discharges to accommodate the bed needs of those waiting for admission. Determining how to tackle the day differently and with urgency can be challenging given the number of issues that may seem to be out of the hospitalist's control.

ED crowding is an unfortunately common occurrence that has troubled hospitals across the nation for decades. Crowding is defined to occur "when the identified need for emergency services exceeds available resources for patient care in the ED, hospital or both."[1] ED, boarded, and admitted patients have been shown to have an increase in morbidity and mortality as a result of crowding and prolonged wait times.[2] A recent study based in the U.K. stated "For every 82 admitted patients whose time to inpatient bed transfer is delayed beyond 6 to 8 hours from time of arrival at the ED, there is one extra death."[3] ED crowding is also correlated with "increased violence toward staff, high clinician and nursing staff turnover, decreased provider productivity, increased staff distraction resulting in human error, and consequent legal action."[4]

Multiple causes lead to ED boarding. On a larger scale, there are healthcare system economic structures along with a lack of healthcare capacity in play.[4] On a more focused scale, ED boarding is a result of issues with patient flow. This can be broken down into an input, throughput, and output framework. Increased input of patients is driven by an aging, more acute, patient population and by lack of access to outpatient services. Poor throughput can be attributed to a lack of care-delivery standardization, a mismatch of bed capacity and demand, delays in treatment, and staffing gaps. Decreased output can be attributed to competing clinical priorities, lack of post-acute care availability, and patient discharge delays due to clinical and nonclinical barriers. When organizations face throughput challenges, hospitalist teams are often called to improve output. This can be seen in several familiar initiatives such as early rounding and discharges prior to noon.

To create additional capacity with the finite number of inpatient beds available, we implemented an Expediting Team and a Departure Lounge. We hypothesized that if a dedicated team was tasked with addressing patient flow barriers while simultaneously operating a Departure Lounge for discharged patients, we would create additional hospital bed capacity. Clinical and nonclinical barriers to address included pending radiology testing, consultant input, physical therapy, medication or durable medical equipment delivery, delay in transportation home, or further discharge instructions.

Key Points

- ED crowding leads to increased mortality and morbidity to both ED and inpatients, increased wait times, higher length of stay and cost of care, and increased workplace violence and staff turnover.
- Hospital discharges are often delayed due to clinical and non-clinical barriers, which results in a bottleneck to patient flow.
- Implementing an Expediting Team can help avoid various bottlenecks and overcome certain impediments to overall throughput.
- A Departure Lounge, with direct oversight by the Expediting Team, can serve to house discharged patients and thereby increase inpatient capacity.
- While an Expediting Team's primary focus is to improve throughput, there can also be opportunities to improve the quality of care by focusing on the discharge process and ensuring close follow-up.


Dr. Tella


Dr. Vibhakar


Ms. Kippeny


Ms.Stauder

Dr. Tella is a hospitalist/physician advisor at the University of Maryland at Baltimore Washington Medical Center in Baltimore. Dr. Vibhakar is the senior vice president and associate chief clinical officer for the University of Maryland Medical System. Ms. Kippeny is the nurse manager of nursing support services and patient placement at the University of Maryland at Baltimore Washington Medical Center in Baltimore. Ms. Stauder is a discharge expediting nurse in nursing support services at the University of Maryland at Baltimore Washington Medical Center in Baltimore.

Figure 1A: The Expediting Team Concept

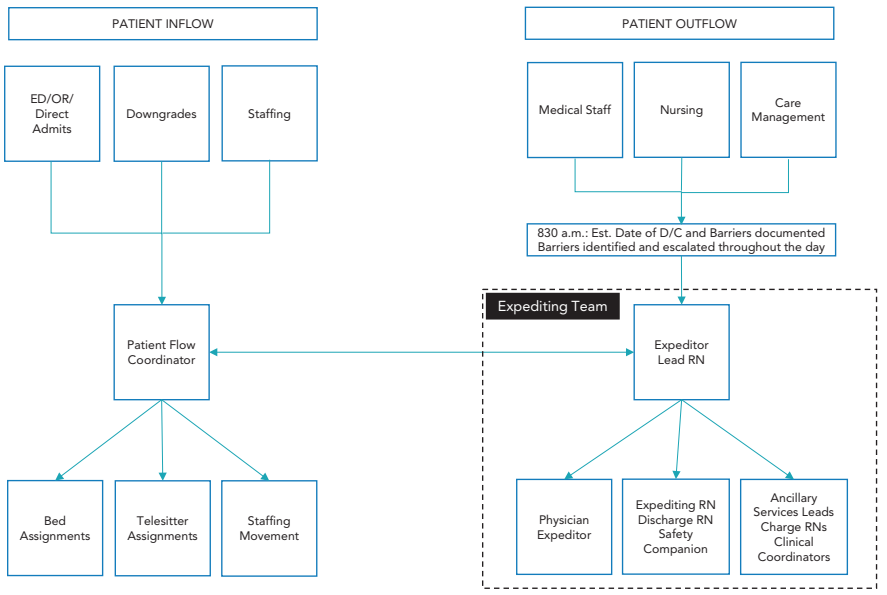
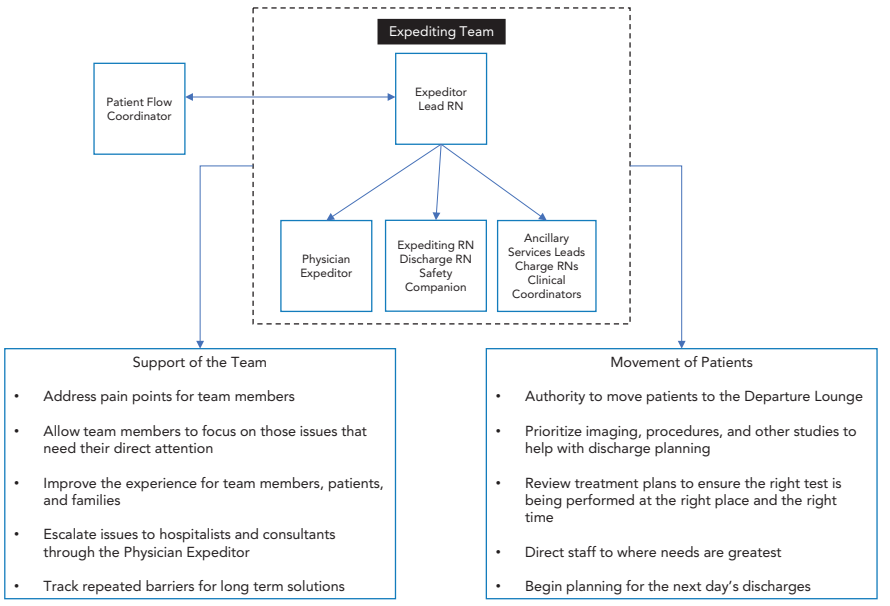


Figure 1B: Goals of The Expediting Team



Setting up an Expediting Team

The Expediting Team consists of an expediting nurse, an expediting physician, a discharge nurse, and a nursing companion. This team focuses on collaborating with the frontline staff to identify any barriers to throughput and works to remove these obstacles with the expectation of achieving an earlier discharge time. (Figures 1A, 1B)

The Team starts the day obtaining and acting on information regarding the planned discharges for that day and the following day. The main driver for this is a daily 9:00 a.m. secure text message the expediting nurse sends to rounding hospitalists asking for all barriers to discharge. The expediting nurse then escalates the need to the correct department using newly created Escalation Pathways (Figure 2).

Figure 2: Sample Escalation Pathways

DEPARTMENT	ESCALATION PATHWAY	MISCELLANEOUS
Cardiology (echo, stress test)	Text Cardiology Manager. If off, please text the covering Nurse Manager or BWMC Cardiology Echo/Graphics MD. *Try to get echos early in the a.m. or previous day as techs get in at 6 a.m. and then draw their list.* Expediting Physician can help change to OP echos (We can set this up at our outpatient practices).	Same-day discharge should be escalated prior to 10 a.m. After that time, we can prioritize first thing in the morning the next day. Text the BWMC Cardiology Echo/Graphics MD for read if needed. For neurology: case by case on if MRI echo can be done out-patient. Average turnaround time is 1 to 1.5 hours for test and read.
Therapy: • PT • OT • SLP	Text the therapist on the "treatment team" for that day. If no assigned therapist text the associated Manager. When the mobility level is high consider asking the provider if outpatient therapy is more appropriate (see pathway for therapy). OT or PT = x1111	See PT/OT/SLP eval flowsheet in binder. Make sure you use the appropriate pathway listed. Vertigo patients: escalate to vestibular rehab therapist.
Radiology (MRI, CT, US (regular), X-ray, nuc med (except stress test)	Text Radiologist lead assigned for (within texting system roles) MRI, CT, US, X-ray, Nuc Med. Vascular Ultrasounds: Text vascular lead. Barium Swallow Study: Text SLP assigned.	If multiple MRIs are ordered, consider consulting with the Expediting Physician if any testing can be changed and which needs priority. Text Radiology Reading Room when the test is done but the read needs to be prioritized.

These pathways allow the ancillary departments to prioritize their work based on the greatest need. This collaboration also improves communication from the ancillary departments back to the expediting nurse. For example, if the radiology department is down several techs, the expediting nurse would then work with the expediting physician to determine which tests could be safely performed as an outpatient to avoid a bottleneck within the radiology department.

These pathways also grew to encompass the ability to direct staff to the greatest need. For example, home oxygen testing can be a barrier to discharge. Nursing primarily performs this test. However, when the inpatient unit capacity and acuity are high, the frontline nursing staff may be unable to complete this timely. The expediting nurse would then redirect respiratory therapists to perform home oxygen testing to avoid another delay.

The expediting physician plays an active role with access to all secure text messaging that occurs between the expediting nurse, medical staff, nursing, and others. Interventions by the expediting physician include:

- Identifying outpatient over inpatient testing opportunities
- Assisting in tertiary care center transfers
- Assisting in medical staff-related escalations (consults, testing results)
- Collaborating with the expediting nurse and patient flow coordinator to redirect medical staff based on greatest need
- Identifying ED boarders that can be discharged
- Providing verbal handoff to the outpatient physician accepting the patient post-discharge

Figure 3: Capabilities of the Departure Lounge

Transportation

- Accommodate patients waiting for transportation
- Set up transportation for patients who have none

Medication Delivery

- Coordinate pharmacy medication delivery to the lounge for patients prior to discharge
- Address concerns around new medications

Durable Medical Equipment

- Deliver DME that is available in the lounge (home O2, walkers, wheelchairs, nebulizers, bedside commodes) while working with vendors to ensure the post-discharge coordination is in place

Discharge Education

- Reinforce discharge instructions to patients or to family members who may arrive later

Appointments

- Schedule outpatient appointments for post-discharge follow up prior to them leaving

Population Health

- Connect patients with population health for further discharge needs (focus on social determinants of health)

Setting up a Departure Lounge

In addition to addressing barriers throughout the hospital, the expediting nurse, in partnership with a nursing companion, is responsible for oversight of the Departure Lounge. The Lounge is open from 8 a.m. to 7:30 p.m., Monday to Friday. Based on previous attempts to open a Departure Lounge, we learned the importance of location, amenities, patient selection, and staff buy-in. The location of the Lounge is just off the hospital's main entrance to make it easily accessible for patients' families. The Lounge has light refreshments, comfortable chairs, and entertainment such as TVs, iPads, and puzzles. It also has areas for privacy and spaces that can accommodate contact-isolation patients. The inclusion criteria were simple—patients need to be alert and oriented with the ability to ambulate with minimal assistance.

Drawing from our hospital's previous attempts, the process of identifying patients was critical. Previously, frontline nursing and clinicians would be the primary drivers in identifying who was appropriate. In our current design, the expediting nurse identifies patients based on discharge orders visible in the electronic health record. They would then "pull" patients to the Lounge by reaching out to the primary nurse to discuss the patient's care. This process, along with expanding the capabilities of the lounge (Figure 3) to include durable medical equipment delivery and medication delivery, has proven to be effective in increasing utilization.

While the primary focus of the Departure Lounge was to have a place for patients to wait safely post-discharge to free up inpatient capacity, it has since expanded. Now the Lounge has the capabilities to set up post-discharge care for high-need population patients and perform discharges.

For example, the hospitalist may identify a diabetic patient as high-risk for readmissions and medication issues. This is then communicated to the Expediting Team who will bring the patient to the lounge. Medications will be delivered to the patient bedside and affordability concerns can be addressed at that time. Arrangements will be made so the patient can meet with the diabetic educator and a member of the outpatient team. They will then get a follow-up appointment scheduled by the Lounge staff. This touchpoint with the outpatient team while still in the hospital helps form a relationship to aid in the transition of care to a home setting. The hospital's population health team can aid in any outstanding issues that may need to be further addressed at home such as meal plans or other social determinants of health.

Lastly, the Departure Lounge has recently expanded to include the ability to perform discharges in the Lounge itself. This has given us the ability to free up inpatient capacity earlier in the day and has improved patient engagement in the discharge process itself, including increased use of scheduling appointments.

Outcomes

Comparing our base metrics to those one year with the Expediting Team in place, there has been a:

- 41.7% improvement in discharges before noon (17% versus 12%)
- 38.9% improvement in discharges before 2 p.m. (39.6% versus 32.1%)
- 9.6% improvement in time from discharge order to discharge completion (2 hours 30 minutes versus 2 hours 46 minutes)
- 27-minute improvement in discharge time of day (2:49 p.m. versus 3:16 p.m.)

Expediting Team escalation results include:

- An average of 11 clinical escalations for barriers to discharge per day
- The top five categories are: rehabilitation services (physical or occupational therapy or speech-language pathology); cardiology testing (echocardiogram, stress test); home oxygen (testing and delivery); radiology testing and reads; consultant clearance
- More than 98% of these escalations were completed on the same day

The Departure Lounge has seen the following:

- Lounge currently serves 18.8 patients per day
- Patients spend on average 32 minutes in the lounge
- Has served 3,500 patients in the 15 months it has been open
- Total time spent in the Lounge is 1,918 hours or 80 patient days
- The growth of the Lounge has steadily increased month over month as demonstrated below

Quiz:

Which of the statements below is false?

A. Lack of inpatient capacity is a large driver of poor throughput resulting in ED crowding.

B. ED-boarded patients have a higher length of stay due to ED crowding, however inpatients do not.

C. ED crowding is often seen as a local ED problem however it is due to a multitude of factors within the hospital and outside of it.

D. It has been demonstrated that ED crowding causes an increase in overall patient mortality and morbidity.

Correct option: B. ED boarding has been shown to increase length of stay for all patients admitted through the ED, not just those who board within the ED.[7]

Bottom line

Implementing an Expediting Team and Departure Lounge to eliminate clinical and non-clinical barriers to discharge can lead to sustained improvements in earlier discharges, decreased lengths of stay, and smoother transitions in care, proving to be an effective strategy to improve patient throughput and improving accessible care in a safe environment for patients and staff. ■

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