

## Emory Division of Hospital Medicine Research Day 2025 Abstract Book

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### **EDHM Research Day 2025 Winners**

**First Place:** Sulieman M\*, Naidu S, Patidar V, Junaidi B, La Barrie R, Decaro S. System-Level Value of a Centralized Physician Advisor Program at Emory Healthcare.

**Second Place:** Eisenbraun K\*, Perito D, Terwilliger T. Bridging the Gap: Medical Students As Key Allies for Uninsured Patients.

**Third Place:** Fatima S, Alinnor I\*, Vigliotto D, Curry M, Patel P, Adharyu B. Improving Standardization of Care in Acute Sickle Cell Crisis Through Implementation of a Sickle Cell Order Set.

**Honorable Mention:** Incer A\*, Hwang P. Fighting the Lows: Pharmacist-Directed Mitigation Strategies to Decrease Hypoglycemic Events in a Hospital Setting.

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## Folate Deficiency Rates at a Safety Net Hospital: Leveraging the Electronic Medical Record to Inform Management

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**Background:** The utility of folate level testing has been called into question by several studies highlighting decreases in folate deficiency prevalence in the United States. Recent retrospective analyses have suggested that folate deficiency is a very rare occurrence, finding prevalence between 0.4% in a single health and <0.1% in a nationwide cohort. Despite evidence for decreasing prevalence, the rate of folate testing has increased. Due to low utility of testing, researchers have suggested that folate level testing is unwarranted. However, it is unclear if the populations highlighted in these retrospective studies can be generalized to all patient populations. This is particularly salient for health systems treating underserved individuals, who often experience food insecurity.

**Methods:** Epic SlicerDicer is a user-friendly exploration tool embedded within our hospital electronic medical records. We queried SlicerDicer using the "Patient" population data model for all admitted patients over a 6-month period (Jan 1–June 30, 2024) at our safety-net hospital, a population that often faces food insecurity. The data was sliced for patients who had serum folate levels tested using the "lab specimen" and further sliced to identify patients with abnormal values (<7.8 ng/mL).

**Results:** Among the 5079 patients admitted to the hospital who had serum folate levels measured, 922 (18%) had folate deficiency.

**Conclusion:** While some data suggests that folate levels are a potentially unnecessary laboratory test, the results from our patient population show a much higher rate of folate deficiency compared to previous studies. Therefore, providers should still consider screening for folate deficiency if they care for underserved populations.

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### Reducing the Standardized Infection Ratio of Observed/Expected Catheter-Associated Urinary Tract Infections in a Long-Term Acute Care Hospital

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**Background:** In long-term acute care (LTAC) facilities, catheter-associated urinary tract infection (CAUTI) incidence is high due to patients' multiple critical medical problems and comorbidities. We sought to decrease CAUTI incidence, lowering the Standardized Infection Ratio (SIR) of observed over expected CAUTIs and the Standardized Utilization Ratio (SUR) to reduce overutilization of catheters.

Previously, there was no systematization of indwelling catheter management or fever and urine culture management at our Long-Term Acute Care Hospital (ELTACH), nor its affiliated hospitals. The SIR was consistently higher than the target of 1.

**Methods:** Based on a thorough gap analysis, we created bladder management algorithms for Indwelling Catheter Management and Fever and Culture. We identified CAUTI champions for each of our hospital facilities. This helped in maintaining Bundle Audit Completion and maintenance of our Bundle compliance scores. The bladder management algorithm was finalized systemwide, and monthly meetings were held to discuss barriers, successes from audits, interprofessional round data input, and real-time education. We then conducted ongoing education of nursing staff and physicians on the bladder management algorithm, catheter bundle compliance, perineal care, and use of urinalysis and urine culture orders.

Our measures were monthly and 3-month rolling SIRs; monthly SUR; comparison from intervention initiation in July 2023 till April 2025. We performed descriptive statistical analyses using our electronic medical record system dashboard.

**Results:** We reduced our 1-month SIR from a high of 7.07 in June 2023 (the month prior to implementation) to a low of 1.76 in November 2024; in 9 separate months, no CAUTIS were observed, resulting in an SIR of 0. The 3-month SIR fell from 6.86 in August 2023 to 1.87 in April 2025. We observed no change in the SUR.

**Conclusions:** Although we have seen gradual decline in the SIR over 9 months, recent increases suggest that additional, updated gap analyses and educational interventions are still needed.

#### **Patient Safety and Quality Improvement Curriculum**

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**Background:** Patient safety and quality improvement (PSQI) is an ACGME core competency for physician trainees. Medical errors are a leading cause of morbidity and mortality, making the delivery of a PSQI curriculum paramount in early physicians' education. With no standardized method for delivering this information, approaches have varied results.

**Objective:** We aimed to build a timely and relevant PSQI curriculum open to all levels of trainees at our internal medicine residency program.

**Methods:** We delivered our curriculum during the 2023 – 2024 academic year. It consisted of 9 patient safety case-based conferences and quarterly experiential workshops. The lectures were delivered at a single academic hospital and open to internal medicine residents (82 in total). A post-curriculum survey gauged trainee sentiments using a Likert scale and overall satisfaction using a numeric scale from 1 (poor quality) to 5 (excellent quality).

**Results:** Nineteen residents (23%) completed the survey. Eighty-four percent of respondents strongly agreed that the curriculum improved their understanding of systems issues. Eighty-three percent of respondents strongly agreed that they felt more comfortable discussing safety events among their peers; whereas only 68% of residents strongly agreed to feeling comfortable discussing these events with their supervisors. Patient safety conferences received an average rating of 4.58. The experiential workshops received an average rating of 4.42.

**Conclusion:** The curriculum, especially the patient safety component, was received favorably by trainees. The data is limited by a low survey response rate, possibly related to survey fatigue or a self-selection of trainees interested in PSQI. However, our sample suggests this curriculum may be a viable and engaging option for promoting safety culture and collaboration with peers.

### Characterizing Identifiers for Immigrant Populations in Electronic Health Records

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**Aim:** To identify appropriate identifiers of immigrant health using Electronic Health Records (EHRs).

**Background:** The current use of identifiers to describe immigrant patients in EHRs is poorly described and lacks standardization, but nevertheless has broad implications related to clinical care and research of this population.

**Baseline data:** Identifiers characterizing immigrant patients in EHRs are at present poorly described and lack standardization.

**Methods:** We conducted interviews with stakeholders to discern strong identifiers for use to identify patients who have immigrated to the United States (U.S.).

**Results:** Language, country of origin, time in the U.S., and race/ethnicity were identified as effective, ethical, and acceptable for use. Limitations of each of these identifiers were noted, highlighting the need to use multiple identifiers in combination. Given the current political context, we stress the ethical collection and use of identifiers, prioritizing the protection of immigrant populations while also identifying unmet health needs.

**Conclusions:** Our results highlight the need for standards related to documentation of immigrant patients in EHRs. Further research is also needed to validate the identifiers we have outlined, and discern additional identifiers that are useful and acceptable in specific clinical and research contexts, and explore how strong identifiers can be operationalized in EHRs for clinical, research, and community engagement purposes with the ultimate goal to improve the health of immigrant populations.

## Bridging the Gap: Medical Students As Key Allies for Uninsured Patients

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**Second Place Winner** 

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**Hypothesis:** Medical students can aid patients in navigating a complex health insurance system, leading to improvements in access to care.

**Background:** Lack of insurance and underinsurance remain major barriers to healthcare for many people in the United States. Inadequate healthcare coverage contributes to inferior health outcomes in the US compared to other high-income countries. The complexity of insurance eligibility requirements creates challenges for patients to maintain continuous coverage.

Baseline Data: 25 uninsured patients were recruited to participate in this pilot program.

**Methods:** We designed a survey tool for medical student "Care Navigators" ("Navigators") to identify patients' eligible for affordable coverage options like Medicare, Medicaid, and Healthcare Marketplace Tax Credits. This survey tool incorporates branching logic, so recommendations were unique to each patient's circumstances. Care Navigators identified patients at a student-run free

clinic in Atlanta. After patients completed the initial survey, Navigators provided patients with informative flyers about their eligible insurance options, and, when requested, assisted patients in completing the appropriate application. Patient encounters lasted 5-30 minutes, depending on whether the patient requested support in completing the relevant application.

**Results:** 25 people were informed of their eligibility for an insurance option during seven distinct clinic days. Of these, five coinsurance applications were confirmed, and one Medicaid application for an uninsured patient was confirmed. We were unable to follow-up with patients to determine if applications were approved.

**Conclusions:** Medical student Care Navigators were effective in increasing access to health insurance for the uninsured population; this model serves as a proof-of-concept pilot that is scalable to myriad applications. Such a model is ideal for implementation in communities with a high density of uninsured patients, and particularly in hospitals or clinics with limited or absent social work resources. Such venues may include public safety-net hospitals, free clinics, community health fairs, and prison reentry programs.

## Improving Standardization of Care in Acute Sickle Cell Crisis Through Implementation of a Sickle Cell Order Set

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Third Place Winner

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**Background:** Variable pain management and supportive care in Acute sickle cell crisis (ASCC) patients with sickle cell disease (SCD) result in suboptimal outcomes, increased hospitalization, and patient dissatisfaction. Our institution responded by introducing a standardized electronic medical record (EMR)-based order set to improve evidence-based ASCC care, reduce variation in practice, and enhance provider efficiency.

**Methods:** A multidisciplinary team of hematologists, hospitalists, pharmacists, and clinical informaticists collaborated to develop and implement a Sickle Cell Order-set within the EMR. The initial version was a dedicated admission order-set for ASCC, incorporating guideline-based opioid dosing, supportive labs, hydration, and adjunctive therapies. Order-set utilization and patient outcome data were tracked from 2012 to 2025, during which several EMR-driven revisions

were made to enhance adoption. The primary outcome was order-set utilization rate, with door-to-IV opioid administration time as the secondary outcome.

**Results:** In 2012, the initial ASCC admission order-set intended to replace the general medicine order-set, saw only 10% usage due to limited adoption. A revised version launched in 2016, designed to complement rather than replace the general medicine order-set, improved usage to 40%, though it still depended on provider recall. In 2021, integration with EPIC SmartDecision, automatically triggered by adding "Acute sickle cell crisis" or related ICD-10 diagnosis to the problem list, boosted usage to 98%. Over the past two years, median time for the first IV opioid administration improved to 75 mins, approaching the national goal of 60 mins, and clinicians reported greater satisfaction with ordering efficiency and clinical standardization.

**Conclusion:** The implementation of a standardized Sickle Cell Order Set significantly improved adherence to evidence-based practices when integrated into the EMR and automatically triggered by diagnosis. This integration reduced care variability, improved the timeliness of pain management for ASCC, and promoted clinical consistency. Continuous updates based on user feedback and emerging data remain essential to sustaining these gains and optimizing outcomes for patients with SCD.

# Trends in Inpatient Versus Outpatient Serum Iron, Ferritin, and Transferrin in a University Hospital System: Should We Reset Our Expectations?

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Introduction: Serum iron, ferritin, and transferrin levels are commonly used to diagnose iron deficiency but require careful interpretation. Serum iron concentrations are significantly influenced by inflammatory and infectious processes. Low ferritin levels are highly specific for diagnosing iron deficiency, particularly in outpatient settings where comorbid inflammation is less common, but ferritin's value becomes limited in inpatient settings since it is an acute-phase reactant. Ferritin maintains high specificity for iron deficiency, even in inpatients, but sensitivity drops significantly in the presence of inflammation and levels can remain elevated, masking deficiency. Transferrin levels decrease during systemic inflammation, but various other conditions can also decrease serum transferrin levels.

Methods: We conducted a cross-sectional observational study of all adult patients (age >18 years) who underwent serum iron, ferritin, and transferrin testing at the University of Mississippi Medical Center (UMMC) between January 2013 and March 2025. De-identified patient data were obtained using the Patient Cohort Explorer for inpatients and outpatients separately. Descriptive statistics were performed using Microsoft Excel.

**Results:** Only 28.5% of serum iron was reported low in outpatient samples compared to almost twice that (53.6%) in inpatient samples (Table). We also observed a substantial difference in ferritin levels: 60% of ferritin samples were reported high in inpatient samples, compared to only 40% in outpatient samples. Finally, transferrin levels were low in 91% of inpatient samples compared to only 21% in outpatient samples.

**Conclusions:** To our knowledge, this is one of the largest samples comparing serum iron, ferritin, and transferrin samples from patients admitted in the hospital to outpatients. It is unclear how many of them are falsely low due to infection or inflammation. Interpreting single levels in inpatients should be done cautiously and only in conjunction with other iron studies.

Table. Proportion of Low, Normal, and High Values for Inpatient Versus Outpatient Serum Iron, Ferritin, and Transferrin Levels

	Inpatient Samples	Outpatient Samples
Serum iron levels	n=45,483	n=27,518
Low	24,316 (53.6%)	7,850 (28.5%)
Normal	19,426 (42.8%)	18,625 (67.7%)
High	1,613 (3.6%)	1,020 (3.7%)
Ferritin levels	n=43,951	n=45,974
Low	2,805 (6.3%)	3,333 (7.2%)
Normal	14,511 (33%)	23,887 (51.9%)
High	26,554 (60.5%)	18,744 (40.7%)
Transferrin levels	n=9,843	n=538
Low	8,927 (90.7%)	112 (20.8%)
Normal	806 (8.1%)	396 (73.6%)
High	108 (1.1%)	30 (5.6%)

### Trends in Cystatin C Testing and Results at a University Hospital System

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Introduction: Accurate assessment of kidney function is essential for early detection, staging, and management of chronic kidney disease (CKD). Unlike serum creatinine, Cystatin C levels are minimally influenced by age, sex, muscle mass, or diet, making it particularly useful in evaluating renal function in individuals with abnormal body composition, such as the elderly, cachectic, obese, and critically ill patients. This study aims to evaluate the trends in Cystatin C testing at a tertiary university hospital.

Methods: We conducted a cross-sectional observational study of all adult patients (age >18 years) who underwent inpatient or outpatient serum Cystatin C testing at the University of Mississippi Medical Center January 2018-March 2025. De-identified patient data were obtained using the Patient Cohort Explorer. Descriptive statistics were performed using Microsoft Excel.

Results: A total of 5,631 patients underwent Cystatin C testing across 9,937 encounters, yielding 13,001 samples (Table). Of these, 6,331 samples (48.7%) were from males and 6,670 (51.3%) from females. Racial distribution included 4,260 samples (32.8%) from Caucasians and 8,333 (64.1%) from African Americans.

Inpatient testing accounted for 6,265 samples (48.2%). One-time tests were performed in 3,125 patients (24%); the rest underwent repeat testing.

Annual testing increased significantly: 18 tests in 2018, 162 in 2019, 283 in 2020, 488 in 2021, 1,226 in 2022, 3,426 in 2023, and 6,027 in 2024. In January-March 2025, 1,371 tests were performed.

Conclusion: We observed a consistent increase in testing volume, particularly after 2021, likely reflecting growing awareness and usefulness of cystatin C. The high proportion of abnormal results suggests that clinicians are selectively ordering Cystatin C in patients with suspected or confirmed renal dysfunction.

Continued monitoring of testing patterns and outcomes is warranted to assess the clinical impact of Cystatin C utilization.

Table. Distribution of samples by inpatients' and outpatients' demographic characteristics, number of times tested, and test results

Sex	Inpatient Samples (n=6265)	Outpatient Samples (n=6736)	Overall Samples (n=13,001)
Men	3300 (52.6%)	3031 (45.0%)	6331 (48.7%)
Women	2965 (47.3%)	3705 (55.0%)	6670 (51.3%)
Race			
Caucasians	2543 (40.5%)	1717 (25.5%)	4260 (32.8%)
African Americans	3457 (55.1%)	4876 (72.4%)	8333 (64.1%)
Other	265 (4.2%)	143 (2.1%)	408 (3.1%)
Number of times tested per encounter			
1 time	2269 (36.2%)	856 (12.7%)	3125 (24.0%)
≥2 times	3996 (63.8%)	5880 (87.3%)	9876 (76.0%)
Test results			
High abnormal	5711 (91.1%)	5949 (88.3%)	11,660 (89.6%)
Normal	509 (8.1%)	769 (11.4%)	1278 (9.8%)
Low abnormal	45 (0.7%)	18 (0.2%)	63 (0.5%)

### Initiation of Hospital Medicine Procedure Service: Preliminary Data and Future Goals

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**Background:** Over the past few decades, the volume of bedside procedures performed by general internists has declined, with a greater reliance on specialty services to perform these procedures. However, performing bedside procedures such as lumbar punctures, paracentesis, arthrocentesis, and thoracentesis can improve patient outcomes and experience. Not only do they offer diagnostic value, but they also have potential to decrease length of stay (1), decrease hospital costs (2), with no increase in complications rates, (3) and have similar patient satisfaction scores (4).

**Objective:** To improve hospital efficiency, reduce length of stay, and enhance learner experience by piloting a hospitalist-led procedure service.

**Methods:** Procedure requests and completions were tracked over a 6-month period, starting January 2025. Metrics analyzed included volume of requests, completion rates, time to procedure, and success rates (defined as aspiration of respective fluid without immediate complications).

**Results:** Within 6 months, procedure service requests increased from 0.23/day in January to 1.27/day in June. Actual procedures performed rose from 0.23 to 0.93/day over the same period. Time from request to procedure was typically under 1 day, with most procedures completed on the same day. Over the last six months, recorded success rates ranged from 77% (May) to 94% (June). Notably, 38% of requests occurred over weekends.

**Conclusion:** Preliminary data demonstrate a growing demand for and effective delivery of bedside procedures by hospitalists, with high success rates and prompt turnaround. Future investigations plan to include a retrospective analysis comparing hospital outcomes, including length of stay, between procedures performed by the hospitalist-led service versus specialty teams.

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### Lucky Guess or Second Opinion? Chatbot Diagnostic Accuracy Against Real Clinical Scenarios

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**Aim Statement:** To evaluate if artificial intelligence (AI) chatbots — specifically, ChatGPT, Open Evidence, and Google Gemini can offer accurate and useful differential diagnoses in different clinical cases.

**Background:** The emergence of large language model-based chatbots has generated interest in their potential utility in medicine. Both ChatGPT and Google Gemini are general purpose AI chatbots popular amongst the general public for mixed use with ChatGPT being the more popular platform. Open Evidence is the preferred platform for medical professionals and specifically addresses medical questions and is not available for use by the general population. Despite the increasing use of these chatbots, there are currently few studies evaluating its accuracy in diagnosing complex clinical cases.

**Baseline Conditions:** We have a large collection of clinical vignettes accepted to the Emory Division of Hospital Medicine Clinical Vignette Competition that can serve as cases for review.

**Analysis:** Ten clinical vignettes from the 2020 competition were reviewed and a prompt created from the clinical scenario described in the vignette. The prompt was edited to remove key data points (e.g. biopsy, imaging) that would include the final diagnosis but would preserve the clinical presentation and initial labs/imaging that required to develop a working differential. Each AI chatbot was provided the same prompt and their differential diagnoses compared to the actual diagnosis.

**Measures:** The primary outcome was whether the AI chatbot was able to include the actual diagnosis within the top 3 three differential diagnoses.

**Results:** The p-value from chi square test was 0.17 for actual diagnosis as number one and 0.50 for actual diagnosis within top 3 differential, so there was no statistically significant difference in accuracy between the chatbots.

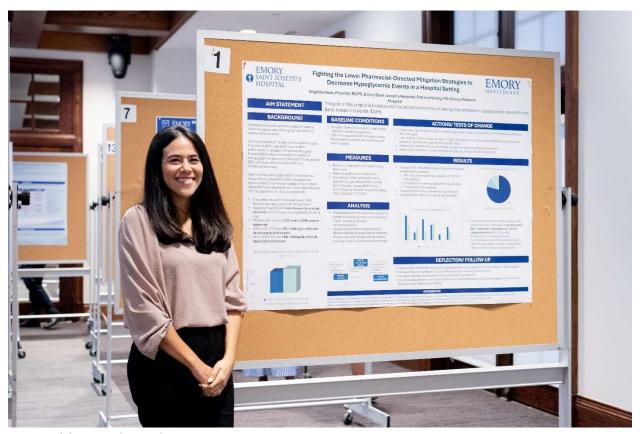
Table 1: AI Chatbot Accuracy

	Actual diagnosis listed as first differential	Actual diagnosis within the top 3 differential diagnoses
ChatGPT	5 out of 10	8 out of 10
OpenEvidence	6 out of 10	8 out of 10
Google Gemini	2 out of 10	6 out of 10

**Reflection/Follow up:** Although these results suggest that AI chatbots have potential to generate relevant differentials for complex clinical cases and could support clinicians, this was only a small pilot study, so its clinical reliability is not yet confirmed. Larger studies with more diverse cases are warranted to further assess performance and accuracy.

### Fighting the Lows: Pharmacist-Directed Mitigation Strategies to Decrease Hypoglycemic Events in a Hospital Setting

Angelita Incer, PharmD, BCPS\*1; Patricia Hwang, MD2



#### **Honorable Mention Winner**

**Affiliations:** (1) Emory Saint Joseph's Hospital, Atlanta, GA; (2) Emory University Hospital Midtown, Atlanta, GA.

**Aim Statement:** We aim to improve decrease the number of hypoglycemic events within Emory St. Joseph's Hospital (ESJH) through pharmacist led interventions.

**Background:** In a 2023 report, Vizient had identified increased hypoglycemia rates at ESJH. Vizient is a quality focused company which provides healthcare institutions with standardized data focused reports on their performance. Since hypoglycemic events can have a range of negative health consequences including, but not limited to: seizure, coma, or death, we aimed to decrease hypoglycemic event rate.

From 1/1/2023-12/31/2023, Vizient-reported hypoglycemic events (defined as blood glucose [BG] <50mg/dL while on insulin) were found to be more frequent in acute care floor settings (177/247 events) compared to critical care units. Recent published data indicated that fasting glucose levels

<100mg/dL are predictors for hypoglycemia within the next 24 hours. At EJSH, >78% (139/177) of Vizient events had a BG <100 mg/dL within the 24 hours preceding the event.

**Baseline Conditions:** There was no process to help identify patients at risk for hypoglycemia. Furthermore, there was no guidance on appropriate dose adjustments.

**Measures:** We compared the number of Vizient-reported hypoglycemic events from the preintervention group (8/1/2023-01/31/2024) to the post-intervention group (8/1/2024-01/31/2025).

**Actions/Test of Change:** From 08/01/2024-01/31/2025, Monday-Friday, pharmacists identified high-risk patients through an Epic-generated report. Pharmacists would contact providers and provide dosing recommendations. This intervention was piloted on: 4S, 4W, 4E, 6E, 6W, 7E, and 7W.

**Results:** We observed a cumulative 28% reduction in hypoglycemic events from the preintervention to the post-intervention group (46 vs 33 events). Furthermore, 51.5% (17/33) of reported post-intervention events occurred over the weekend (Friday 3:30 pm to Monday 8:00 am), aligning with the period when clinical pharmacists were absent.

**Reflection/Follow-Up:** Pharmacists' intervention successfully reduced the rate of hypoglycemic events and improved provider awareness of high-risk patients. Future goals include system-wide education efforts, and implementation of a clinical scoring tool.

## Improving Transfer Efficiency Through Centralized Triage and Capacity Management

Haritha Katakam, MD<sup>1</sup>\*; Jessica Sheridan, MSHA, MBA, FACHE<sup>2</sup>; Zeljka Matasic, MBA<sup>2</sup>; John Vazquez, MD<sup>1</sup>

**Affiliations:** (1) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA; (2) Emory Healthcare, Atlanta, GA.

**Aim Statement:** We sought to improve efficiency of transfers into and within Emory Healthcare via a three-part model for triage and capacity management.

**Background:** Our healthcare system experienced mismatches between patient demand and hospital capacity, particularly at our tertiary-referral center. Lack of real-time visibility into system-wide capacity caused bottlenecks.

**Baseline Conditions:** Prior to implementation, the transfer center team routed requests to a receiving hospital or provider based primarily on prior experience. There was no unified triage strategy. Providers made acceptance decisions in silos, often unaware of current bed availability.

**Analysis:** We analyzed metrics using 12 months of pre-pilot data (March 2023–February 2024) and 12 months of post-pilot data (March 2024–February 2025).

**Measures:** Number of transfers accepted systemwide; time from initiation of transfer request to bed assignment; time from bed assignment to patient arrival.

Actions/Tests of Change: Our three-part model includes (1) a triage physician (the Medical Officer of the Day, or MOD) within the transfer center; (2) systemwide bed huddles at 8:30 AM, 4:30 PM, and 10 PM where transfer center, patient placement, and nursing supervisor staff discuss capacity, pending admissions, and prioritization of transfers; and (3) load balancing, a capacity-triggered process where the MOD oversees ED admissions to other locations within Emory.

#### **Results:**

Metric	Pre-Pilot (March 2023- February 2024) Average	Post-Pilot (March 2024-February 2025) Average	% Change	P-Value
Number of Accepted Transfers	730	921	+26 %	p < 0.001
Hours: Transfer Request Start to Bed Assign	10.86	6.03	-44.45%	p < 0.001
Hours: Bed Assign to Patient Arrival	6.56	5.83	-11.06%	p < 0.001

Accepted transfer requests increased from a monthly average of 730 to 921 (+26 %, p < 0.001). Average time from initiation of transfer request to bed assignment decreased from 10.86 to 6.03 hours (-44.5%, p < 0.001). Average time from bed assignment to patient arrival decreased from 6.56 to 5.83 hours (-11.1%, p < 0.001).

**Reflection/Follow-Up:** Our model for centralized triage and capacity management improved transfer efficiency and allowed us to accept more transfers into the system. Future research can examine facility-level impact; reduction in lost cases (secondary to bed capacity and wait times); cost effectiveness based on capacity utilization.

### Physician-Scientist Professional Identity Formation: Socialization, Integration, and Reflection

Abhi Kole, MD, PhD<sup>1,2</sup>\*; Patricia Cheung, MD, PhD<sup>1,2</sup>; Mary Ann Kirkconnell Hall, MPH<sup>1</sup>; Jasmah Hanna, MS<sup>1</sup>; Joanna Bonsall, MD, PhD<sup>1,2</sup>

**Affiliations:** (1) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA; (2) Grady Memorial Hospital, Atlanta, GA.

**Background:** Professional identity formation is acknowledged to be vital in the training of physicians. There have been several theories about the development of professional identity in

medical training, but little has been studied about the development of professional identity in dual-degree physician-scientist training.

**Aim Statement:** We aim to determine whether physician-scientist trainees construct a blended identity and, if so, what elements are important in professional identity creation.

**Methods:** Using a phenomenological approach, the authors performed in-depth, semi-structured interviews with individuals either currently enrolled in MD/PhD training or recently graduated from an MD/PhD program to explore their experience of professional identity formation. Codes were developed using inductive and deductive approaches, and thematic analysis was used to identify factors influencing the participants' experiences.

Results: Twenty current students and recent alumni completed the interviews. Four major themes of influences on professional identity were identified: (1) the need for in-depth exposure to physicians engaged in research, (2) the need to understand how clinical activities and research influence and integrate with each other, (3) the need to form meaningful relationships with other physician-scientists (including classmates), and (4) influence of PhD advisors on how students hoped to integrate clinical science in their futures. Minor themes included the need for space to reflect and for exposure to a variety of career options.

**Conclusion:** Three of the major themes fit existing social-contextual theories of professional identity formation in physicians. The fourth theme is distinct from physician professional identity formation and involves "boundary crossing" between physician and researcher professional identities. The identification of these themes provides areas for further exploration and highlights the need to intentionally build opportunities for professional identity formation into physician-scientist training.

### Quality Improvement Project Evaluating Pharmacy and Nursing Understanding of Tacrolimus Monitoring and Administration

Dusty Lisi, MS, PharmD1\*; Sonjoy Laskar, MD2

Affiliations: (1) Emory Saint Joseph's Hospital, Atlanta, GA; (2) Emory Healthcare, Atlanta, GA.

**Background:** Tacrolimus is a calcineurin inhibitors and is one of the primary prescribed immunosuppressants post-transplant. The incidence of primary graft dysfunction according to a report from 2018 is 31% in post-transplant patients. Studies have determined that subtherapeutic tacrolimus levels are associated with an increased risk of primary graft dysfunction. Tacrolimus levels should be drawn as a trough within 1 hour of dose administration. When the levels are not drawn appropriately, it is more difficult to confirm appropriateness of tacrolimus dosing and lead

to errors in tacrolimus dose adjustment. Furthermore, during acute illness, some patients may need to receive tacrolimus doses sublingually to assure adequate absorption.

**Purpose:** To evaluate if providing education for monitoring and administration of tacrolimus improves understanding for pharmacy and nursing staff.

**Description:** Educational fliers were created for the education of pharmacy and nursing staff in an acute care cardiology unit. The fliers provided detailed information regarding proper administration and monitoring of tacrolimus trough levels. The study was conducted by administration of a pre-test and post-test to evaluate if there is improved understanding after education is provided.

**Results:** Pharmacy staff had similar level of understanding between baseline (pre-test), education, and post-test evaluation. However, nursing staff demonstrated increased level of understanding with essentially all questions answered correctly in the post-test following education.

**Conclusion:** Providing detailed education for tacrolimus monitoring and management demonstrated improvement in understanding for pharmacy and nursing staff.

**Reflection/Follow-up:** Expanded education should be provided to lab staff and nursing staff throughout the hospital. Further evaluation should include if there are increased tacrolimus levels drawn within 1 hour of dose administration, more tacrolimus levels within therapeutic range, and decreased adverse effects associated with tacrolimus.

### Unintentional Ingestion of Psychoactive Cannabis Products Among Adults: Scoping Review

Annie Massart, MD<sup>1,2</sup>; Malavika Kapuria, MD<sup>1,3</sup>; Manpreet Malik, MD<sup>1,3</sup>; Mohamad Moussa, MD<sup>1,4</sup>; Dhyana Sankar, MD<sup>1,3</sup>; Joyce Akwe, MD<sup>1,5</sup>; Mary Ann Kirkconnell Hall, MPH<sup>1</sup>; TaRessa Wills, MD<sup>1,3</sup>\*

**Affiliations:** (1) Emory University School of Medicine, Department of Medicine, Division of Hospital Medicine, Atlanta, GA; (2) Emory University Hospital, Atlanta, GA; (3) Grady Memorial Hospital, Atlanta, GA; (4) Emory Johns Creek Hospital, Johns Creek, GA; (5) Atlanta VA Healthcare System, Atlanta, GA

**Background:** Unintentional ingestion of cannabis products among children is well described, but we found no summary of adult presentations.

**Methods:** Scoping literature review of presenting symptoms, exposure sources, and clinical courses of adults seeking care following unintentional ingestion of THC-containing cannabis products. We searched 6 databases multiple times October 2023-August 2025, with no lower bound on dates.

Results: We included 377 manuscripts in title/abstract review, 123 in full-text review, and 21 for data extraction using Covidence collaborative software. Included articles were selected by 2 reviewers; disagreements were resolved by a third. Inclusion criteria were cases in adults ≥18 years involving unintentional ingestion of psychoactive cannabis or intentional ingestion of cannabidiol (CBD) for non-psychoactive/recreational purposes (i.e., CBD supplements for pain). We found 10 case reports, 67 case series, 2 conference abstracts, and 2 research studies of cases in the USA (n=15), Netherlands (n=2), and Brazil, France, Slovenia, and Turkey (all n=1). Number of subjects ranged from 1 to 69. The most common age group was 18-30 years of age. Exposure sources included baked goods (n=9), retail THC and/or CBD candies (n=5), and CBD oil (n=2).

Presenting symptoms included dizziness, nausea/vomiting, altered mental state, and confusion; several (paresthesias, weakness, difficulty speaking) are associated with stroke. One or more patients were admitted in 13 articles; duration ranged 4 hours-2 weeks. Treatment was generally supportive, but neuroleptics were needed in 1 case; Tenecteplase was used in 1 suspected stroke; apixaban was prescribed for a pulmonary embolism precipitated by CBD; atropine was required in a case of bradycardia; and 1 patient received ketamine for combativeness and was intubated for airway protection due to projectile vomiting.

**Conclusions:** Hospitalists should add inadvertent cannabis consumption to the differential when patients present with stroke-like symptoms/altered mental status without accompanying signs, and ask about consumption of foods prepared by others or of unknown provenance.

## Implementation of System-Wide Initiative to Improve Hospital Mortality

Sara Millwee, DNP, APRN<sup>1,2</sup>\*; Tammie Quest, MD<sup>3,4</sup>; Robert Groff, MD<sup>5</sup>; Philip Atoyebi, MD, MPH, MBA, FACHE<sup>1</sup>

**Affiliations:** (1) Emory Healthcare, Atlanta, GA; (2) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA; (3) Emory University School of Medicine, Department of Family and Preventive Medicine, Atlanta, GA; (4) Emory University School of Medicine, Department of Emergency Medicine, Atlanta, GA; (5) Emory University School of Medicine, Department of Anesthesiology, Division of Critical Care Medicine, Atlanta, GA.

**Hypothesis/Aim Statement:** We seek to improve Emory Healthcare's (EHC) mortality index and outcomes by decreasing misclassified observed mortality and increasing expected mortality. This is done with a two-pronged approach: utilization of scatter bed hospice (where patients receive hospice care in situ without disruption or hospice bed limitations, and are appropriately removed from observed mortality metrics) and an electronic health record (EHR) smart phrase.

**Background:** EHC's approach to monitoring high-risk mortality patients relies heavily on retrospective data collection and analysis, which delays identification of and addressing critical

issues. Additionally, the absence of standardized processes for mortality reviews and improvement efforts across the system leads to inconsistent practices and hinders proactive quality improvement initiatives.

**Baseline Data:** The Vizient mortality index (observed deaths/expected deaths) as of September 1, 2024, was 0.86 (observed deaths=185, expected deaths=214.09.

**Methods:** We implemented scatter bed hospice and an intuitive smart phrase in the EHR. Scatter bed hospice allows hospice patients, at end of life, to die in hospice care. The EHR tool helps capture variables and conditions that are present on admission to the hospital, which accurately impact the acuity and complexity of our patients.

**Results:** The overall mortality index decreased to 0.5 in June 2025 (observed deaths=113; expected deaths=227.54). Scatter bed hospice was gradually rolled out to different hospitals and the EHR smart phrase was embedded into all admission notes. Additionally, an EHC Mortality Oversight Committee was established to ensure robust, standardized, and sustainable mortality oversight that drives continuous learning, enhances patients' quality of care, and positions EHC within the top quartile of Vizient ranking.

**Conclusions/Lessons Learned:** There is no perfect solution to improving mortality. Initiating scatter bed hospice and developing a EHR tool to help capture variables present on admission have demonstrated improvement to our mortality index. We are continuously evaluating how to add to and improve these strategies.

### Impact of a Centralized Physician Advisor Team on Observation Rate and Length of Stay at Emory Healthcare

Viniya Patidar, MD<sup>1,2</sup>\*; Rashida La Barrie, MD<sup>1,3</sup>; Babar Junaidi, MD<sup>1,4</sup>; Sathya Naidu, MD<sup>1,4</sup>; Maha Sulieman, MD<sup>1,5</sup>

Affiliations: (1) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA;

- (2) Emory University Hospital Midtown, Atlanta, GA; (3) Emory Decatur Hospital, Decatur, GA;
- (4) Emory University Hospital, Atlanta, GA; (5) Emory Saint Joseph's Hospital, Atlanta, GA.

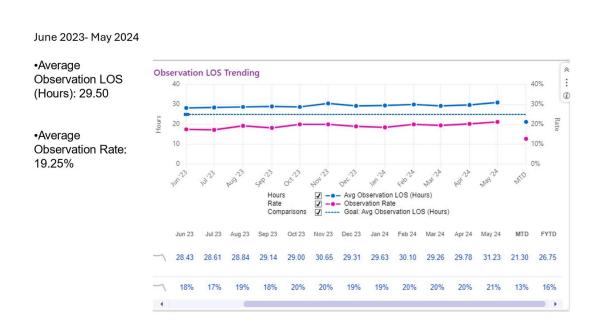
**Background:** Level of care (LOC) determinations affect compliance, reimbursement, and patient flow. While observation status can facilitate throughput and reduce costs when applied appropriately, prolonged observation stays occupy beds without the reimbursement of inpatient admissions. Conversely, misclassification can reduce revenue and delay needed care. In FY 2024, Emory Healthcare implemented a centralized Physician Advisor (PA) team across six hospitals to apply CMS and commercial payor criteria, support accurate secondary reviews, and guide frontline providers in complex LOC decisions.

**Objective:** To assess the impact of centralized PA-led utilization review on observation length of stay (LOS) and observation rate, with attention to implications for throughput, reimbursement, and provider burden.

**Methods:** We compared 12 months before (June 2023–May 2024) and after (June 2024–May 2025) PA team centralization. Primary outcomes were average observation LOS (hours) and observation rate (% of total admissions), obtained from system-level dashboards. Case mix index and demographics were reviewed to assess for patient complexity differences.

**Results:** Average observation LOS decreased from 29.50 to 27.28 hours (7.5% reduction). Observation rate declined from 19.25% to 17.00% (2.25% absolute reduction). Case mix index and demographics remained stable, suggesting results were not driven by shifts in patient complexity. The decrease in observation LOS may reflect earlier identification and discharge of appropriate observation patients, while more complex cases were reclassified to inpatient status sooner.

**Conclusion:** Centralized Physician Advisors were associated with shorter observation stays and fewer observation admissions without evidence of increased patient complexity. These changes may improve bed availability, optimize reimbursement, and reduce provider time spent on LOC determinations. Further study on total LOS and direct financial impact is warranted to assess cost-effectiveness and the broader value of PA programs.





## Clinical Coaching for Junior Faculty: A Framework for Clinical Development

Yoo Mee Shin, MD<sup>1,2</sup>\*; Ketino Kobaidze, MD, PhD<sup>1,2</sup>; Yelena Burklin, MD<sup>1,2</sup>; Noble Maleque, MD<sup>1,2</sup>

**Affiliations:** (1) Emory University Hospital Midtown, Atlanta, GA; (2) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA.

**Background:** Transitioning to an attending physician role directly after residency can be daunting, particularly without structured oversight or a strong team-based environment. Most academic institutions do not offer integrated support systems for junior faculty during this pivotal stage. To address this gap, Emory University Hospital Midtown (EUHM) piloted a Clinical Support Coaching Program to support early-career hospitalists.

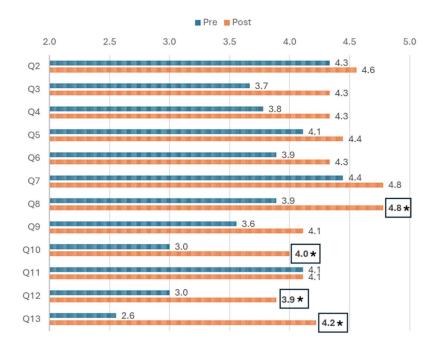
Methods: Hospitalist faculty at EUHM were surveyed to identify key areas of need. A Clinical Support Coaching Program was developed and implemented from September 1, 2024, to March 1, 2025. Nine new hires enrolled for the same period after providing consent. Due to credentialing delays, two new hires started in October and one started in November. Participants completed a pre-program survey and were matched with a faculty coach (2–3 coachees per coach). The program included a structured two-day orientation, targeted educational content, biweekly office hours for clinical discussion, and weekly check-ins during inpatient service weeks. After completion, participants retook the initial survey with an added item assessing program satisfaction and likelihood of recommendation.

**Results:** See the table below. Post-program survey results revealed increased confidence among coachees in core hospitalist competencies, including clinical decision-making, workflow management, and patient care. An unpaired t-test of unequal variances was used to compare pre and post survey data. The analysis showed statistically significant p-values below 0.05 for confidence in efficiently discharging a patient from the hospital, in knowing the processes of escalation when there is a complex discharge or a behaviorally challenging patient and in knowing how to bill for patient services correctly.

Improvements were particularly noted in managing patients overall and utilizing specialty consults, but these were statistically insignificant. In the post-survey, there were 10 responses total and thus a duplicate survey response was identified as there was a result from the same IP and removed from the analysis.

**Conclusions:** The Clinical Support Coaching Program was effective in supporting the transition to independent practice for new hospitalists. Seventy percent of participants reported being "very likely" to recommend the program. Overall, this pilot initiative shows promise as a model for fostering competence, confidence, and autonomy among junior faculty, with opportunities for refinement in future iterations.

#### Table:



### System-Level Value of a Centralized Physician Advisor Program at Emory Healthcare

Maha Sulieman, MD<sup>1,2</sup>\*; Sathya Naidu MD<sup>1,3</sup>; Viniya Patidar MD<sup>1,4</sup>; Babar Junaidi MD<sup>1,3</sup>; Rashida La Barrie MD<sup>1,5</sup>; Sarah Decaro MD<sup>1,3</sup>



First Place Winner

**Affiliations:** (1) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA; (2) Emory Saint Joseph's Hospital, Atlanta, GA; (3) Emory University Hospital, Atlanta, GA; (4) Emory University Hospital Midtown, Atlanta, GA; (5) Emory Decatur Hospital, Decatur, GA.

**Background:** Academic health systems face growing challenges from medical necessity denials and the administrative burden on frontline providers. In 2024, Emory Healthcare implemented a centralized, all-hospitalist Physician Advisor (PA) program to standardize denial management, optimize admission status decisions, and support clinicians across six hospitals.

**Objective:** To assess the impact of a centralized PA team on denial prevention and recovery, provider education, and financial outcomes.

**Methods:** Utilization review metrics from FY23–24 (pre-centralization) were compared to FY24–25 (post-implementation). Outcomes included denial volume, overturn rates, estimated time

saved for clinicians, secondary admission status reviews, provider education, and financial impact.

**Results:** Denials reviewed more than doubled, rising from 3,465 to 6,977 (+101%), reflecting improved capture of missed denials and more effective responses to payors.

The overturn rate increased from 47% to 59.5%, resulting in a 155% rise in overturned cases (from 1,629 to 4,151), demonstrating enhanced effectiveness in reversing inappropriate denials.

Each denial required 15–20 minutes of review and peer-to-peer discussion, saving frontline providers approximately 750 hours annually, equal to 62 full 12-hour clinical shifts.

Between June 2024 and February 2025, the team contributed \$52,087,954 in financial recovery through overturns and denial prevention.

Beyond denial management, the centralized team conducted secondary reviews to ensure appropriate admission status, provided real-time documentation education, and supported length-of-stay reduction through improved care progression.

**Conclusion:** Emory Healthcare's centralized, all-hospitalist Physician Advisor team is a high-value, system-level intervention. It improves denial prevention and recovery, reduces administrative burden on physicians, and delivers substantial financial impact. This model offers a scalable, data-driven approach to utilization management for large academic health systems.

## Malnutrition in Hospitalized Adults: Determining the Prevalence of Vitamin A Deficiency

Milly Tadigiri, MD<sup>1\*</sup>; TaCoria Williams<sup>1</sup>; Jasmah Hanna, MS<sup>2</sup>; Mary Ann Kirkconnell Hall, MPH<sup>2</sup>; Stacey Watkins, MD, PhD<sup>2,3</sup>; Pradeep Bathina, MD<sup>2,3</sup>

**Affiliations:** (1) Emory University School of Medicine, Atlanta, GA;; (2) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA; (3) Grady Memorial Hospital, Atlanta, GA.

**Introduction:** Limited data is available in the USA about the prevalence of Vitamin A level testing and deficiency, especially in hospitalized patients. We sought to evaluate vitamin A level trends at Grady Memorial Hospital.

**Methods:** Cross-sectional observational study of all admitted patients (age >18) whose serum vitamin A levels were tested January 2013-November 2024 to determine prevalence of abnormal (high or low) levels. Slicer-Dicer was used to obtain patient data from the electronic medical record. We also conducted a substudy of abnormal samples 1/1/2023-12/31/2023 to examine demographic characteristics of those with deficiencies. Microsoft Excel was used to perform descriptive statistics.

**Results:** Serum vitamin A levels were ordered 705 times between 2013–2024; 524 samples (74.3%) were labeled abnormal.

In the substudy, among 135 patients tested for Vitamin A, 107 (79.2%) came back "abnormal," and all but 2 samples tested as deficiently low. Fifty-nine samples (55%) were moderately deficient, and 22 (20.6%) were severely deficient. Median patient age was 55.5 years; 60 deficient samples (56%) were in men and 47 (44%) were in women; 86 patients (80.3%) self-reported Black or African American race while 11 (10.2%) reported White or Caucasian. One quarter (n=27, 25.2%) of patients had BMI >30; 39 (36.4%) had a normal BMI; and 18 (16.8%) patients had BMI <18.5. At the end of the study period, 93 patients (87%) were alive and 14 (13%) were deceased.

**Conclusion:** More than 75% of samples were deficient in Vitamin A. Though vitamin A deficiency in hospitalized patients may not reflect vitamin A deficiency in the general population, the high prevalence of vitamin A deficiency we observed is alarming. It is important to investigate the risk factors and specific patient populations that are at risk for developing vitamin A deficiency and subsequent clinical repercussions.

## Malnutrition in Hospitalized Adults: Determining the Prevalence of Vitamin D Deficiency

Milly Tadigiri, MD<sup>1\*</sup>; TaCoria Williams<sup>1</sup>; Jasmah Hanna, MS<sup>2</sup>; Mary Ann Kirkconnell Hall, MPH<sup>2</sup>; Stacey Watkins, MD, PhD<sup>2,3</sup>; Pradeep Bathina, MD<sup>2,3</sup>

**Affiliations:** (1) Emory University School of Medicine, Atlanta, GA; (2) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA; (3) Grady Memorial Hospital, Atlanta, GA.

**Introduction:** Despite vitamin D fortification in foods, deficiency remains common yet understudied in the USA. We sought to evaluate Vitamin D level trends at Grady Memorial Hospital.

**Methods:** Cross-sectional observational study of all admitted patients age >18 whose serum vitamin D levels were tested January 2013-October 2024 to determine prevalence of abnormal (high or low) levels. Slicer-Dicer was used to obtain patient data from the electronic medical record.

We completed a substudy of abnormal samples 1/1/2024-1/17/2024 to examine demographic characteristics of those with deficiencies. Microsoft Excel was used to perform descriptive statistics.

**Results:** Vitamin D levels were ordered 29,037 times 2013–2024; 23111 samples (79.6%) were labeled abnormal.

In the substudy, among 286 patients tested for Vit D, 205 samples (71.6%) were deficiently low (<30 ng/ml); 50 (25%) were ≤7 ng/mL (the minimum level detectable) and 42 (20.5%) were ≤10 ng/ml reflecting severe deficiency. Median age of abnormal Vit D patients was 65 years; 83 (40.5%) were in men and 122 (59%) were in women; and 151 patients (73.6%) self-reported Black or African American race while 37 (18%) reported White or Caucasian. Thirty-six patients (17.5%) had BMI >30; 52 (25.3%) had a normal BMI

(between 18.5 and 25); and 10 (4.8%) had BMI <18.5. At the end of the study period, 192 patients (93.6%) were alive and 13 (6.3%) were deceased.

Five patients had repeat Vit D levels tested; all remained low.

**Conclusion:** Close to three in four samples were lower than the minimum cut-off value, and nearly 50% had severe deficiency in our substudy. Though vit D deficiency in hospitalized patients may not reflect vit D deficiency in the general population, the high prevalence of vit D deficiency we observed is alarming. It is important to investigate risk factors and patient populations at elevated risk for developing vit D deficiency.

## Communications Toolkit: A Pilot Initiative in Effective Audio, Visual, and Graphic Delivery

Meredith Trubitt, MD<sup>1,2</sup>\*; Monee Amin, MD<sup>1,2</sup>; Harika Gorti, MD<sup>1,2</sup>; Mary Ann Kirkconnell Hall, MPH<sup>2</sup>; Caroline Coleman, MD<sup>1,2</sup>

**Affiliations:** (1) Joseph Maxwell Cleland Atlanta VA Medical Center, Decatur, GA; (2) Division of Hospital Medicine, Department of Medicine, Emory University School of Medicine, Atlanta, GA.

**Background:** Most clinicians receive little formal training in data visualization or scientific communication, resulting in a gap between the production and dissemination of scientific information to the public. Traditional medical education offers limited opportunities for trainees to develop these essential skills. Targeted educational interventions can help equip trainees to effectively communicate data and research.

The U.S. Department of Veterans Affairs' (VA) Chief Residents in Quality and Safety (CRQS) program trains residents in quality improvement and patient safety through didactic and project-based learning. Each participant completes a capstone quality improvement project evaluated nationally. While local sites can adapt the standardized curriculum, no formal training in visual and multimedia communication had previously been offered.

**Methods:** In 2024–2025, three Atlanta VA CRQS participants engaged in a pilot curriculum consisting of a planning meeting and four 60–90-minute interactive sessions led by VA faculty. Topics included graphic design fundamentals, data visualization, slide creation, and audiovisual technology. Sessions were tailored to each participant's capstone project, a 10-minute presentation delivered nationally.

Feedback was collected using Google Forms upon project completion. Each session was evaluated with two Likert scale questions (1–4) assessing usefulness for the capstone and future relevance, and one open-ended question for general feedback. Unsolicited feedback was also gathered from participants and national faculty.

**Results:** All participants submitted evaluations (100% response rate). Graphic design and data visualization sessions were rated as most impactful. All sessions received scores of 3 or higher. Participants valued the individualized format, and faculty noted high engagement and collaboration. National reviewers observed marked improvements in visual presentation quality.

**Conclusions:** For 2025–2026, the program will expand to include oral communication training and reach additional audiences such as non-VA chief residents, Quality Distinctions Residents, and VA faculty, with the goal of broader curriculum adoption.

Table. Post-Session Survey Feedback

Session	Utility for Capstone Project*	Impact on Future Practice <sup>†</sup>	Comments
Basics of Graphic Design	4.00	4.00	Very insightful It was helpful for me because my slides can get quite busy at times. It's nice to get an understanding of how to keep your audience's attention with concise and effectively designed slides.
Basics of Data Visualization	4.00	4.00	Giving specific feedback and ideas for each project was hugely helpful.  Great resources provided  This lecture was helpful in lending my awareness to ensuring that I am able to convey data in a way that doesn't lose my audience in superfluous details.
Slides	3.33	3.67	Good examples on how she improved her slides after feedback
AV Basics	4.00	3.67	I am passionate about cooking and in the near future, I'd like to work on an online and in person recorded cooking classes for my healthcare system. Presumably we'll have clip on microphones so it's nice to gain awareness in this course about tone, cadence, and pitch of one's voice. It can make the difference in building rapport with your audience whether in person or online.

<sup>\*</sup> Participants were asked to indicate agreement with the statement "I found this session to be useful for completing my Chief Resident in Quality and Safety capstone presentation" using a Likert scale where 1 = strongly disagree to 4 = strongly agree.

† Participants were asked to indicate agreement with the statement "What I learned in this curriculum will impact my future practice" using a Likert scale where 1 = strongly disagree to 4 = strongly agree.

### Matchy-Matchy: Decreasing Mistimed Point of Care Glucose Checks

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**Affiliations:** (1) Emory Healthcare, Atlanta, GA; (2) Emory University Hospital Midtown, Atlanta, GA; (3) Emory University School of Medicine, Division of Hospital Medicine, Atlanta, GA.

**Aim:** The purpose of this quality improvement project was to decrease the incidence of mismatches between point of care blood glucose (POCT BG) order frequency and subcutaneous insulin orders frequency.

**Background:** From February 1 to July 31, 2024, 11.08% of patients with active subcutaneous insulin orders had POCT BG orders which did not align with insulin dosing frequency. Malalignment between POCT BG orders and insulin orders can lead to miscalculations in insulin dosing, resulting in hypoglycemia or hyperglycemia.

The existing subcutaneous insulin orderset did not prompt the provider to select the correct point of care frequency when ordering insulin. Therefore, updates were made to the subcutaneous insulin orderset to link insulin frequency to the appropriate POCT BG frequency, such that the appropriate POCT BG frequency was automatically selected when the provider was placing the insulin orders.

**Methods:** We compared the percentage of mismatched POCT BG and insulin orders from the preintervention period (February 1 to July 31, 2024) to the percentage of mismatched orders from the post-intervention period (September 1, 2024-Feb 28, 2025).

The primary outcome was the difference in the percentage of order mismatches between the two time periods.

**Results:** In comparison to the pre-intervention group, there was a decrease in mismatched orders from 11.08% to 3.61%, which correlates to a relative percent reduction of 67.42%.

Table 1: Pre and Post Intervention Data

TimeFrame	InsulinOrderCount, n	MismatchCount, n	Insulin Orders with Mismatching POCT BG Orders, %
Pre	5352	593	11.08
Post	5654	204	3.61
% Relative change from pre to post-intervention = -67.42%			

**Conclusions:** Improving order sets to better align with the workflow of healthcare professionals can be a powerful strategy for reducing ordering errors, which is especially important for high-risk medications, such as insulin.

## Malnutrition in Hospitalized Adults: Determining the Prevalence of Vitamin C Deficiency

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**Introduction:** The purpose of this study is to evaluate vitamin C level trends at Grady Memorial Hospital.

**Methods:** Cross-sectional observational study of all admitted patients (age >18) whose serum vitamin C levels were tested January 2013-October 2024 to determine prevalence of abnormal (high or low) levels. Slicer-Dicer was used to obtain patient data from the electronic medical record. We conducted a substudy of abnormal samples collected 1/1/2020-12/31/2023 to examine demographic characteristics of those with deficiencies. Microsoft Excel was used to perform descriptive statistics.

**Results:** Serum vitamin C levels were ordered 1213 times 2013–2024; 340 (28%) samples were labeled abnormal.

Among all 284 patients tested for Vitamin C during the substudy from 1/1/2020-12/31/2023, 104 (36.6%) came back "abnormal," and all but 2 samples tested as deficiently low. Twenty-two samples (7.7%) had a level <0.1 mg/dL, the lowest level for detecting vitamin C, and 68 samples (23.9%) came back at 0.1 mg/dL. Half of the abnormally low samples were in women (n=51) and half in men (n=51); 76 patients (73%) self-reported Black or African American race while 18 (17.3%) identified as White or Caucasian. One quarter (n=27, 26%) of patients had a BMI >30; 39 patients (37.5%) had a normal BMI (between 18.5 and 25); and 17 (16.3%) patients had BMI <18.5. Thirty-five patients (34.3%) with low Vitamin C levels are now deceased.

**Conclusion:** Over one in three samples tested for serum vitamin C level lower than the minimum cut-off value. Though vitamin C deficiency in patients may not reflect vitamin C deficiency in the general population, the high prevalence of vitamin C deficiency we observed is alarming. It iss important to investigate the risk factors for deficiency and specific patient populations that are at risk for developing vitamin C deficiency.

### Hospitalist Perceptions of the Impact of Nearby Hospital Closures on Providers and Patients: A Qualitative Study

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**Background:** The Atlanta Medical Center (AMC) closure in fall 2022 resulted in diversion of its patients to several Emory Healthcare facilities.

**Methods:** We conducted in-depth interviews of 13 physicians and Advanced Practice Providers (APPs) at 3 sites (1 community and 2 teaching hospitals) to understand hospitalist perceptions of the impact of AMC's closure on themselves, colleagues, and patients, and whether use of health information exchanges (HIEs) mitigated information discontinuity. We will use a thematic analytic approach to code and interpret data from de-identified transcripts.

**Results:** Themes from preliminary analysis of interviews conducted to date with physicians (n=10) and APPs (n=3) are the near-universal perception of a large bolus of new, medically complex patients; negative impact of a sudden high volume of high-acuity patients on work-life balance and hospitalist morale; and frustration when helping patients who had received specialized care (e.g., psychiatric, mother/baby) when similar care is not available at the referral facility.

Hospitalists had varying perceptions of the duration of census increases; while some observed subsequent declines, most described a "new normal" of a higher census of more complex patients. Some hospitalists perceived that colleagues resigned due to frustrations of this wave of high-need patients without corresponding resources for care. Hospitalists found HIEs useful but often suboptimally organized, requiring searching to find pertinent information.

Positive findings were perceptions that colleagues and ancillary staff "stepped up" to manage higher patient volume; the effectiveness of rapid leadership response to increase staffing, including for hospitalist morale; and gratitude for ancillary staff (social workers, case managers).

**Conclusion:** Urban hospital closures have wide-ranging impacts on the work-life balance of providers at surrounding facilities, which may include domino-effect burnout and resignations in addition to negative impacts on patients. We are finalizing data collection and will begin formal data analysis (to include quantitative analysis of theme frequency) in the fall.



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