

FY2024 Quality & Safety Report



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SAFETY FIRST

We are proud to share this report on our patient safety and quality of care successes during fiscal year 2023-2024. Northern Arizona Healthcare (NAH) has made huge strides in reducing patient infections, decreasing length of hospital stays and providing a higher level of patient and staff safety.

This year, NAH celebrated milestones that prove our focus on quality care is improving and contributing to the health of our northern Arizona communities:

- Achieved *zero* catheter-associated urinary tract infections (CAUTIs) at Flagstaff Medical Center (FMC) for over one year and *zero* CAUTIs at Verde Valley Medical Center (VVMC) for over two years.
- Decreased patient length of stay by 3.5%, which created additional capacity and allowed the system to accept 17% more patients from other hospitals in the region.
- Renewed Joint Commission Accreditation through a rigorous on-site survey, maintaining the *Joint Commission Gold Seal of Excellence*.
- Earned Leapfrog A grades again for safe care at both FMC and VVMC.

We couldn't celebrate these successes without every member of NAH working together to do their best for every patient, every time.

In addition to these impressive statistics, we also implemented several new safety initiatives that encourage and celebrate a culture of safety among colleagues. Dave's Safety Lunches, launched in February 2024, are monthly opportunities for colleagues to discuss safety concerns with NAH CEO Dave Cheney in a relaxed and open setting.

NAH's new Lifesaver Award, launched in May 2023, recognizes individuals and/or teams from any department who have gone above and beyond to improve safety for patients, co-workers or our community. NAH also recognized colleagues' continued safety efforts in the celebratory Hospital Safety Week from April 22-26, 2024.

UPCOMING WORK

Our past successes help to shape our future. The last two years of safety efforts have laid a strong groundwork for future successes. As we look to the future, we will continue to focus on high reliability and consistency. Our achievements in quality and safety prove that we have done an amazing job minimizing safety incidents – now we focus on maintaining those low numbers across all service lines, reducing variations in care and maintaining consistent excellence in Quality and Safety across all services.

We are very proud of the significant progress we have made and will continue to make, leading the state of Arizona in patient safety and high-quality care. We invite you to join us in celebrating these monumental achievements, and to look ahead with us as we continue to build on these successes.

Sincerely,

Jake Lansburg Vice President of Care Transformation and Quality Northern Arizona Healthcare



FY2024 IN QUALITY & SAFETY

- NAH earned Leapfrog A grades for safe care at both Flagstaff Medical Center (FMC) and Verde Valley Medical Center (VVMC) in November 2023.
- FMC ranked No. 1 in the state by the Arizona Department of Health Services for lowest catheter-associated urinary tract infections (CAUTI), central-line associated blood stream infections (CLABSI) and Methicillin-resistant Staphylococcus aureus (MRSA) infections. VVMC reported **zero CAUTI or MRSA infections** in FY2024.
- NAH teams conducted over over 4,000 tracer audits, or self assessments, in preparation for the Joint Commission Survey demonstrating incredible, organization-wide participation.
- FMC and VVMC once again earned **The Joint Commission Gold Seal of Excellence** for successful triennial reaccreditation survey.
- NAH achieved statistically significant improvements in the annual Culture of Safety Survey for the third year in a row.
 - **2% increase** reported by colleagues and **7% increase** reported by providers
- NAH improved care for our community by discharging healthy patients faster and admitting vulnerable patients more quickly:
 - ° 3.5% decrease in hospital length of stay
 - 13% improvement in safe discharge by 1 p.m. between March 2024 and the end of June 2024
 - Over 1,700 additional patients received care at FMC and VVMC compared to the prior year
 - 17% improvement in transfer center acceptance because more space was available
- NAH provided safer care through focus on preventing blood clots (pulmonary embolism and venous thrombosis), falls and pressure injuries.
 - 21 fewer harms compared to the prior fiscal year including a 22% reduction in falls and a 17% reduction in blood clots
- NAH achieved a 33% decrease in sentinel (severely harmful) safety events.
- In addition to the focus on inpatient care, FY2024 included more focus on clinics and ambulatory locations. These locations saw:
 - ° a 16% improvement in annual wellness and preventive care visits
 - a 12% improvement in medication reconciliation completion prior to the end of the visit, which confirms patients' new medications do not negatively interact with existing medications
 - a 157% improvement in 'good catch' reporting. Good catches are incidents where a staff member reports a potential safety concern before harm occurs so that the issue can be corrected proactively



CULTIVATING A CULTURE OF SAFETY

NAH is committed to creating a culture that prioritizes staff well-being and keeps our patients and colleagues free from harm. In order to improve patient safety, it is imperative that everyone feels safe at work and supported by their leadership and team. As a system that encourages continuous learning, NAH depends on staff to ask questions, contribute thoughts and ideas and report errors and near-misses so that everyone can learn from those events and implement improvements that prevent them from reoccurring.

Every year, NAH assesses its safety culture as part of the annual Employee Engagement Survey. The most recent study was conducted in May 2024, and had three components: prevention and reporting; pride and reputation; and resources and teamwork.

A few notable accomplishments from the 2024 survey:

- NAH is ranked in the 61st percentile for prevention and reporting when compared to other health care staff surveyed throughout the country
- 11 percentile gain in questions about pride and reputation and a 7 percentile gain in questions about resources and teamwork
- Statistically significant improvements in Safety Culture for the past 2 years in a row

Compared to 2023, there was a 2% improvement in the overall culture of safety for colleagues and a 7% improvement in culture of safety for providers. This improvement is the result of deliberate work building an environment of continuous learning, listening to staff concerns and sharing NAH's vision: *Always better care. Every person, every time...together.*

STOP

THINK

CHOOSE

The Quality and Safety teams have implemented programs that continue to build and shape NAH's culture of safety, such as Dave's Patient Safety Lunches.

The Quality and Safety team also celebrated 13 good catches and near misses through the Lifesaver program, which recognizes colleagues who prevent potentially harmful events.

Through these efforts and annual surveys, we are pleased to report that we are cultivating a culture that values high quality care, proactive solutions and recognizing colleagues who speak up.



At Dave's Safety Lunches, participants share suggestions and ideas and they all receive a shirt recognizing their contribution to our continued safety efforts.

SAFETY INITIATIVES IN ACTION

Dave's Safety Lunches -

This year, NAH introduced Dave's Patient Safety Lunches, which are monthly opportunities for any colleague in any role to discuss patient and staff safety concerns and ideas directly with NAH Chief Executive Officer Dave Cheney and our Quality and Safety team.

Colleagues' concerns are addressed and each participant receives a follow-up with action-plan items. These action plans are also posted on the employee intranet so that anyone in the organization can see what concerns were discussed and how they are being addressed.

"The best part of these lunches is that our Quality and Safety team is following up on every idea or concern mentioned and working closely with our leaders to implement fixes. I'm proud that we have had opportunities to proactively identify potential safety issues and correct them thanks to our colleagues who have had the courage to bring them up." – Dave Cheney, chief executive officer

Lifesaver Award

The NAH Lifesaver Award recognizes an individual or team who has gone above and beyond to improve safety for patients, co-workers or the community. Since the award started in FY2023, there have been 13 Lifesaver recognitions for colleagues across the system.

Recently, there was an exceptional event involving staff from Guardian Medical Transport (GMT) where the staff on the scene used lessons learned from a recent safety event and applied that knowledge to prevent a similar event from re-occurring.

Isabelle Miller, GMT battalion chief, reflected on the incident and the strength of the safety culture within the team: "I have thought a lot about this incident. When I got out there, the team was very calm with three GMT staff (Hannah Townsend, Jaqueline Figueroa and Ashlee DelBianco) and the fire department on the scene. We were able to have a very transparent, honest conversation on scene that made a difference in terms of what we were doing without any sort of ego involved. This incident was particularly meaningful to me because all three of the GMT staff are either new to Guardian, new to their current role or moving up into a more advanced role with GMT. This event shows that we are starting staff off right with clear expectations and good communication when it matters the most. It was just beautiful work from everyone."



Left to right: Vince Martinez, director; Jason Hatchett, captain; Hannah Townsend, paramedic; Matthew Shaw, battalion chief; Jacqueline Figueroa, EMT; Shane O'Niel, EMT; Isabelle Miller, battalion chief; Dr. Godzdanker, medical director; Ashlee DelBianco, EMT; John Mougin, MD, physician executive; Steve Eiss, vice president construction and real estate; Susan Goldberg, director accreditation and patient safety; Mimi Meeks, medication safety officer; Larry Kushner, chief philanthropy officer; Jake Lansburg, vice president care transformation; Jim Elco, vice president strategy and financial planning; Matt Sena, vice president operations; and Pasquale Bernardi, president NAH Medical Group

HIGH RELIABILITY LEADS TO ZERO HARM

The greatest strength of the quality and safety structure at NAH is that it provides a framework for success. This framework includes a robust committee structure with standard tools and templates for reporting results and guiding the day-to-day work.

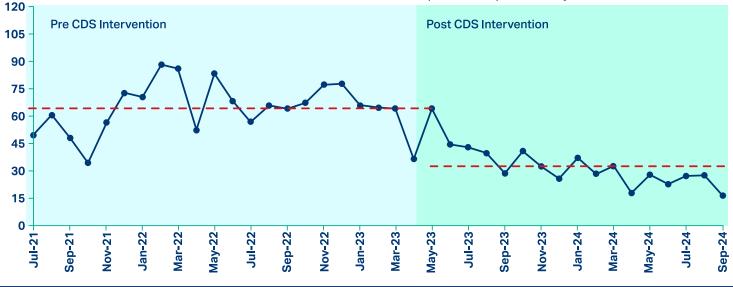
The subcommittee focused on catheter-associated urinary tract infections (CAUTIs) provides an example of how the NAH structure guides the work done by subcommittees, even when committee members change. When the CAUTI subcommittee formed, the team used the provided, standardized templates to create a bold vision for eliminating CAUTI. They established short and long term goals to reach their desired outcome, and developed ways to measure and monitor success.

In the past two years, the membership on the CAUTI team has almost completely changed, but the path forward and the focus has not changed at all. The team continues to follow the Define, Measure, Analyze, Improve, Control (DMAIC) process to address concerns and ensure that the established processes are followed consistently for every patient, every time.



"Starting with the aim of ZERO, means that the drivers for success never changed, even as the team members changed and we had new ideas for how to reach our goals." - Danielle Ondayko-Lewis, senior quality RN

The team remains focused on elminating the use of unnecessary urinary catheters and implementing practices that reduce infection risk for needed catheters. A main point of focus this year has been evaluating urine culturing practices and adding clinical decision support (CDS) at the point of ordering so that providers have important lab and other information available when they order urine cultures. This simple, but powerful intervention has led to a statistically-signficant 19% reduction in urine culture orders – reducing unnecessary tests and potentially harmful treatment for patients with asymptomatic bacteruria, or bacteria in the urine that is not causing any issues.



NAH Urine Culture Order Rate *per 1,000 patient days*

History of urine culture orders shows a sustained decrease in the rate of urine culture orders since the implementation of Clinical Decision Support which helps providers evaluate whether or not to order a urine culture.

The results are clear; in additon to impressive results in CAUTI prevention there have been **ZERO CAUTIS** at **VVMC for over 2 years and ZERO CAUTIS** at **FMC for over 1 year**.

ALWAYS BETTER CARE, BACKED BY A GOLD SEAL

Verde Valley Medical Center (VVMC) and Flagstaff Medical Center (FMC) once again earned The Joint Commission's Gold Seal of Approval® for Hospital Accreditation by demonstrating continuous compliance with thousands of performance standards. The Gold Seal is a symbol of quality that reflects NAH's commitment to providing safe and high quality patient care.

The Gold Seal of Approval[®] is proudly displayed at both campuses as a continual reminder of how our highly reliable processes, teamwork and innovation put health and safety first.

In February and March 2024, VVMC and FMC underwent rigorous, unannounced onsite reviews. A team of The Joint Commission surveyors evaluated compliance with hospital accreditation standards spanning all aspects of care, including emergency management, the physical environment, infection prevention and control, leadership, medication management and more.

"Everyone came together to showcase what is special about VVMC and FMC during The Joint Commission surveys," said Bo Cofield, chief operating officer. "Every individual plays a key role in safe, high quality care. The surveyors were impressed by the warm welcome they received from our staff and the pride demonstrated in each and every interaction they had at our facilities."

The survey teams highlighted NAH's "Excellence in Action," or the work that exemplifies best practices they observed during the hospital visits:

- Trauma informed maltreatment screening
- Discharge huddles
- Dynamic, engaged leaders
- Donor program for breast milk
- Pass through warming cabinets in the ORs
- · Door plaques indicating potential for safety risk
- Physicist engagement with Radiology survey
- QR codes posted for nurses to scan for additional education information
- Engagement of the medical staff



Bo Cofield, NAH chief operating officer

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"Accreditation by The Joint Commission is voluntary. Choosing to go through the ordeal of an unannounced survey every three years is just one way that NAH demonstrates our commitment to continuous improvement and delivering safe, high-quality care," Cofield said.

QUALITY CARE BEGINS WITH PRIMARY CARE



Left to right: Mellissa Hassler, CMA; Julia Dohopolski, MA program; Sabrina Nunez, CMA; Anna Guevara, PCT; Dr. Margaret Kozak, DO; Kristin Sizelove, medical office receptionist and Dr. John Rooney, DO

Annual wellness and preventive care visits are a key component to keeping children and adults healthy. These visits are scheduled for longer time blocks than most appointments because they give patients the opportunity to talk to their primary care provider about overall health and create a prevention plan personalized to their needs.

Wellness and preventive care visits focus on optimizing healthy outcomes by understanding the patient's current health conditions and risk factors. The visit includes a review of whether the patient has received appropriate cancer screenings and vaccinations, as well as chronic condition screenings.

"The historically overlooked annual wellness visit is a perfect tool for health promotion, preventive screening and equitable care," stated Mark Pico, MD. Dr. Pico is an NAH primary care provider in Flagstaff and the lead for the NAH Health Equity Committee. "Not only has it been shown to reduce disease burden and prevent hospitalization, but it is a cost-effective tool that reduces insurance premiums and improves health outcomes."

Targeted efforts by NAH to increase the number of patients who receive an annual wellness or preventive care screening has led to a 16% improvement. Much of this gain can be attributed to the 12 new primary care providers hired in the last year and clinics ensuring that there are openings in the schedule to accommodate these longer and more comprehensive appointments.

NAH has also increased annual wellness and preventive care visits by proactively reaching out to patients who have not been seen in a while and giving them an opportunity to schedule a visit. This new outreach led 1,000 community members to schedule annual wellness visits in less than one year.

"The annual wellness visit is a great vehicle to capture our patients' health care issues, both preventive and chronic," said John Rooney, DO, physician executive and primary care provider at the Village of Oak Creek. "It helps to maintain the best health possible in an effort to keep patients out of a critical situation such as hospitalization. These visits also promote quality of life as patients age."

IMPROVING HOSPITAL FLOW

FMC and VVMC are open 24/7, 365 days a year to provide care to every person who enters our doors. Since the COVID-19 pandemic, hospitals across the nation have seen staffing shortages and longer Emergency Department wait times, and NAH hospitals are no exception.

A patient's journey from admission to a safe discharge is a top priority for NAH. "A key area of focus for patient safety is making sure that patients receive the right care they need and are discharged at an appropriate time," said Jake Lansburg, vice president of care transformation and quality.

Reducing length of stay (LOS) improves patient outcomes, enables more regional capacity and reduces cost by decreasing the labor associated with caring for patients.



Staff celebrate increasing safe discharge by 1 p.m. Left to right: Courtney Anthony, clinical manager; Louann Mace, director of medical surgical services; Latisha Jeffers, clinical manager; Andy Cornejo, clinical manager; Analisa Smith, clinical manager; Tyffany Laurano, chief nursing officer; Chris Singleton, lead process engineer; Lisa Davison, director of health management.

Reducing LOS also decreases the risk of a patient suffering an adverse event in the hospital such as a hospital-acquired infection or fall. In addition, LOS reflects the efficiency of processes and clinical care in the hospital setting. Many patients would prefer to be recovering at home, rather than in a hospital setting.

For the past several years, the multi-disciplinary Length of Stay Strategy Team has been analyzing data to understand constraints and inefficiencies and identify improvements, including a focus on discharging patients as early in the day as possible.

"Around 1 p.m., we start to see increased demand for inpatient hospital beds," said Chris Singleton, lead process engineer. "In order to move patients out of the emergency room, get them to a bed after surgery and accept patients from outlying communities through the transfer center, we knew we had to focus on discharging patients before that 1 p.m. mark."

Compared to last fiscal year, patient length of stay (measured as the Geometric Mean Length of Stay or GMLOS) has decreased by 3.5%, which might not seem like a lot but has created additional capacity and allowed the system to accept 17% more referrals from outside hospitals who depend on NAH to provide a higher level of care to the region. Overall, there were over 1,700 more patients seen at Flagstaff Medical Center and Verde Valley Medical Center this fiscal year.

Improving such a complex system issue takes continued focus and engagement from everyone who cares for patients, including those who work more behind-the-scenes who clean patient rooms so they are ready for the next person, and laboratory techs who process samples that help give the go-ahead for patient discharge. Being able to make the gains that we have over the past year shows the strength of our teamwork and commitment to providing the highest possible care effectively and efficiently.

NAHOSC RATED AMONG TOP 1% IN AZ

Northern Arizona Healthcare Orthopedic Surgery Center (NAHOSC) received national recognition as one of the top 1% of ambulatory surgical centers (ASCs) in Arizona by U.S. News and World Report in its ranking of Best Ambulatory Surgical Centers.

This achievement is a remarkable recognition of the quality of care patients experience at NAHOSC, as there are 167 centers in Arizona that were evaluated for the ranking, and only 27 were deemed high performing. NAH's outpatient surgery center also is the only one to receive this quality ranking in northern Arizona.

U.S. News evaluated ASCs in four specialty areas: Colonoscopy and Endoscopy; Ophthalmology; Urology; and Orthopedics and Spine. The evaluation was based on adjusted quality of care measures, including how successfully the center avoided complications, ER visits, unplanned hospitalizations, mortality and other undesirable outcomes.



"Our knowledgeable staff provides the highest quality care and extraordinary experience for our patients," said Matt Kraemer, administrator of the NAH Orthopedic & Spine Institute. "We are always committed to giving our community exceptional care, and I'm proud to see all of our staff, anesthesia team and providers get the recognition that they deserve."

This recognition shows the impact of the dedicated NAHOSC surgeons and staff who ensure quality and safety are top of mind in every patient interaction during more than 2,200 surgeries in the past year.

More outpatient surgery improvements ahead

NAHOSC will undergo major renovations starting in early 2025 to expand its outpatient surgery center to better serve the needs of the northern Arizona region. The renovation is focused on quality of care while improving capacity, and will include:

- 14,800 square-foot orthopedic and neurosurgery clinic
- 4,700 wound and hyperbaric clinic the first in the region
- 7,600 square-foot ambulatory surgery center with six operating rooms and two pain procedure rooms

"We want to invest in the community, and that includes investing in our facilities that will help us recruit new staff. Therefore, we decided to renovate an existing NAH-owned building for an expanded outpatient surgery center. We know that these new facilities will help meet the needs of the patients and communities we serve," said Dave Cheney, chief executive officer.

The projected timeline for the project includes starting construction in 2025 in a phased approach.

NAHOSC colleagues, left to right: Ian Hill, nurse; Bob Hart, nurse; Angela Cheung, nurse; Abagail Krick, NP; Lisa Lasiewicki, clinical manager; Peter Gibson, MD; Marcia Myles, nurse; Mena Bedoni, technician; Stephanie Cook, nurse; Lena Gilliland, lead technician; Marsha Carmona, technician; Jacob Benares, technician; Ali Morrissey, technician; and John O'Shea, PA.



SAFE CARE STARTS WITH SAFE EQUIPMENT



FMC BioMed team from left to right: Barbara Mesa, Gary Stevens, Larry Latham, Donald Rodrigue, Josh Meyer, Thomas Shoots, Scott Smith, Virginia Homer, Ted Tanori, Virgilynn Kinlichiinii, Ryan Cabitac and Michele Tsosie.

VVMC Biomed team from left to right: Mark Ebbitt, Jami Gardner, Dalen Warburton, Norman Cluff and Alan St Germain.

At NAH, even our vision statement stresses the importance of high quality care through teamwork: *Always better care. Every person, every time...together.*

And while many NAH staff work directly with patients, a group of just 25 people work behind-the-scenes to support patient care in a critical way. The Biomedical Services Department maintains more than 20,000 health care devices every year in a tireless effort to ensure every patient receives the best care from our people and our technology.

Hospitals and clinics rely heavily on technology to assist with that high quality care, and every single piece of equipment must be inspected, calibrated and maintained regularly. Our equipment, devices and monitors range from complex to common:

- Huge linear accelerators that take up an entire room to generate and beam radiation for cancer treatment
- · Every thermometer used for routine body temperature readings in our primary care offices
- Infusion pumps used to deliver IV fluids for pain, hydration, nutrition and more

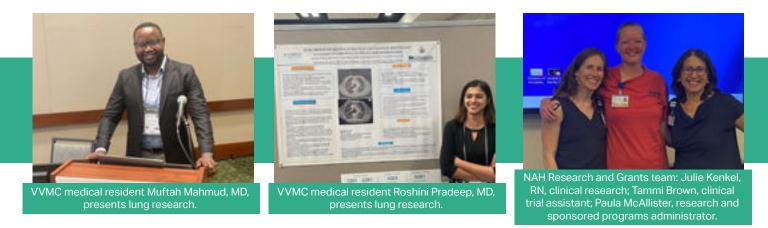
Biomedical Services' two teams of Biomedical Technicians and Equipment Technicians inspect and calibrate every device at least once a year, and they undergo intensive training and maintain numerous certifications to ensure they're able to assess each device used for patient care.

"We also train clinical staff how to use the equipment and monitor what is needed to ensure that they have safe, clean equipment where and when they need it," said Donald Rodrigue, director of the Biomedical Department. "Our team thinks ahead and proactively conducts risk assessments to ensure that we are prepared to manage any type of incident – including contingency plans for how to ensure that critical equipment is available and functioning during emergencies, such as power outages."

It takes effort, not only from clinical staff, but from every team member from all areas of NAH to deliver safe, high quality, patient-centered care. Biomedical Services' commitment to excellence, collaboration and continuous improvement directly enhances and attests to the quality and safety of patient care at NAH.

EXTENDING OUR IMPACT

NAH contributes to improvements in quality and safety in health care throughout the world by participating in research and developing and presenting best practices at conferences among peers and other institutions. Here is a selection of that work from Fiscal Year 2024.



Published studies

- Chanas, T., Gibson, G., Langenstroer, E., Hermann, D. J., Carver, T. W., Alexander, K., Chui, S. J., Rein, L., Ha, M., Maynard, K. M., Bamberg, K., O'Keefe M., O'Brien, M., Gonzalez, M. C., Hobbs, B., Pajoumand, M., and Peppard, W. J. (2024). Multicenter study evaluating target attainment of anti-Factor Xa levels using various enoxaparin prophylactic dosing practices in adult trauma patients. Pharmacotherapy, 00:1-10. doi: 10.1002/phar.2904.
- Erickson, D. E., Lemke, L. N., Terriquez, J., et al. (2024). Pan-enterovirus characterization reveals cryptic circulation of clinically relevant subtypes in Arizona wastewater. Preprint under review.
- Mahmud, M., Munjal, A., Savani, M., Win, H., Rozell, U., and Arshad, J. (2024). Biomarker testing and role of tyrosine kinase inhibitors and immunotherapy in esophageal squamous cell carcinoma. Foregut Journal, 1-8. doi: 10.1177/26345161241238748.
- Shahzad, M., Basharat, A., et al, **Mahmud, M.** (2024) Outcomes of matched unrelated and haploidentical hematopoietic stem cell transplantation in aplastic anemia: A systematic review and meta-analysis. Transplantation and Cellular Therapy, 30(2): S151.

Conference & poster presentations

- **Ellsworth, C.** (April 12-13, 2024). High flow nasal cannula and swallowing in hospitalized inpatients [Conference poster]. Arizona Speech-Language Hearing Association 2024 Convention, Tucson, AZ.
- Pradeep, R., Haywood, J., Hanafi, Z., and Rocca, N. (Oct. 8-11, 2023). Seeing through the ground glass: Magnifying the challenges associated with management of interstitial lung disease in rheumatoid arthritis [Poster presentation]. CHEST: American College of Chest Physicians Annual Meeting, Honolulu, HI.
- Pradeep, R., Moshtaghi, A., Khan, M., Walenga, A.K., Rocca, N., and Kudelka, A. P. (Jan. 18-20, 2024). Role of proton pump inhibitors in immune checkpoint inhibitor colitis [Poster presentation]. ASCO Gastrointestinal Cancers Symposium, San Francisco, CA.
- Nagarakanti, R. (March 25, 2024). Biatrial 3D Mapping of Atrial Fibrillation. [Conference presentation]. 17th Annual Congress of the European Cardiac Arrhythmia Society, Paris, France.
- Shaw, M., Godzanker, I., Treichel, A., McManis, B. G., and Crowe, R. P. (May 2024). A comparison of prehospital hypotension versus elevated shock index to predict mortality among injured patients [Poster presentation and published abstract]. Society of Academic Emergency Medicine Conference, Phoenix, AZ.





Thank You