

# University of Iowa - EP

## The Data

### Clinical Volume

In FY24, we successfully served **6,760 patients** at our university campus and Iowa River Landing locations. Additionally, our outreach clinics extended care to **871 patients**, reflecting our commitment to improving access to quality care across all locations. Our device team also managed **5,180 devices** in the last year with that number continuing to grow as we absorb the remaining patients from our downtown campus.

### Case Volume

FY24 concluded with an impressive **1,906 cases**, representing a **49% growth** compared to the previous year.

### EP Lab Procedures FY25

As of November, **990 procedures** have already been completed for FY25, with many more scheduled, positioning us for significant volume growth and achievements in the coming months.

"It's been an exciting journey to witness the growth of our EP program. This expansion has allowed us to serve a greater number of patients, not only within Iowa, but also across surrounding areas. It has also presented valuable opportunities to refine our workflow, develop comprehensive guidelines and protocols, and enhance our efficiencies. These improvements have been instrumental in ensuring we provide the highest quality of care while expanding access to arrhythmia services for those in need." -- **Leslie Johnston, RN, MSN**, Nurse Manager, Invasive Cardiovascular Procedure Lab

## ELECTROPHYSIOLOGY SECTION ANNUAL NEWSLETTER

### Leading the Way

Paari Dominic, MBBS, MPH led the University of Iowa to become the first in the state to perform the pulsed field ablation (PFA) on Feb. 27, 2024 after Boston Scientific received FDA approval for their catheter using Dr. Steven Mickelson's technology. Since then, our physicians have collectively performed more than 300 PFA procedures.

Peter Farjo, MD, MS became the first EP in the world to use the Helix locking tool for placement of the Ingevity+ lead in the conduction system.

E. Michael Powers, MD, MBA became the first EP in Iowa to use shock wave lithotripsy in lead extraction, he also was the first provider in Iowa to implant an extracardiac implantable cardioverter defibrillator (EV-ICD).

Steven Bailin, MD was the first EP in Iowa to implant an Aveir DR.



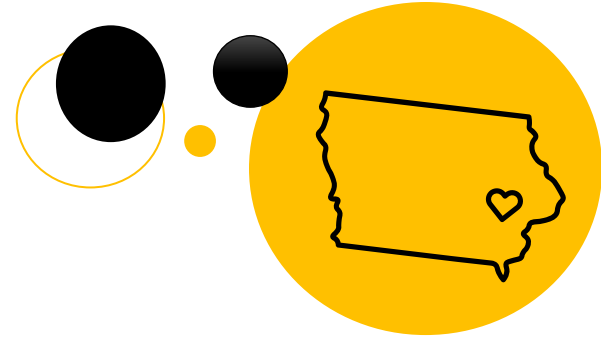
### The Gary Goldsmith Scholarship for Allied Professionals

Gary Goldsmith was one of our EP Lab Techs, and his contributions to the EP lab extended far beyond his technical skills. His dedication to patient care, commitment to education, and embodiment of professionalism made him an invaluable asset to the department. His work not only improved immediate patient outcomes, but also ensured the continued excellence of the EP lab by shaping the skills and attitudes of future practitioners. Although Gary has passed on, we still strive to honor him and his outstanding work. We have established a scholarship fund to allow EP nurses and techs to continue to follow in his exemplary footsteps, providing for patients and educating themselves and future practitioners.

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"My new role will involve better continuity of care as I will be able to see patients from the beginning to the end of their procedure experience. Having worked in the cath lab, I have an understanding related to the technical aspects of EP procedures. I'm looking forward to using my expertise in my new role to provide better patient teaching and more holistic care." – **Emily Vittetoe, DNP**



## Training Physicians Worldwide!

The University of Iowa is proud to announce its partnership with Boston Scientific to establish a premier training center. With FDA approval for the use of their Ingevity+ lead for Conduction System Pacing granted on Sept. 17, 2024, this collaboration marks an exciting milestone. What does this mean? Representatives and physicians from across the country will visit our institution to learn Conduction System Pacing techniques. This partnership reflects our commitment to advancing education and innovation in electrophysiology. "It's the showcasing of our facility and our capabilities to techs and physicians around the country and sharing our knowledge and expertise in this very useful physiological pacing area with the rest of the country," **Paari Dominic, MBBS, MPH**, said. Future partnerships with the industry will expand these training opportunities to ablation techniques, lab efficiency, leadless pacemaker implantation techniques, and more.

## Faculty Updates

We are thrilled to announce that **Sergio Conti, MD** will be joining us as a Clinical Electrophysiology faculty member in February 2025. Originally from Italy, Dr. Conti completed his medical education there before pursuing a clinical fellowship in cardiac electrophysiology in Milan. He further honed his expertise through an advanced cardiac electrophysiology fellowship in Canada. Since then, Dr. Conti has served as a Consultant Cardiac Electrophysiologist at both ARNAS Civico and ISMETT in Palermo, Sicily, Italy. We are excited to welcome Dr. Conti to our team and look forward to the contributions he will bring to our program!

**Emily Vittetoe, DNP** joined us in late November 2024. Emily is working as our inpatient/EP Lab nurse practitioner. Emily graduated from her DNP program in 2024 from Mount Mercy University. Before joining our team, she worked in the cath lab as a nurse. We are thrilled to have Emily as part of our team. Emily will bring her expertise in cath lab operations and procedural patient care to increase EP lab efficiency and throughput.

## Fellowship

As our program continues to thrive, we applaud our fellows who have come through our training program and successfully graduated and many of them moved on to independent practice. We continue to work on improving our program each year to allow us to continue our success. In October of this year, we were approved for the pilot 2+2 program, an accelerated pathway from cardiovascular disease to EP. In addition to this, we have now been approved for a fourth fellowship position. With this approval, the EP fellows will rotate through the VA in three-month intervals, gaining valuable experience in the VA EP clinic, and EP lab, under our esteemed VA EP faculty, and spend additional time on EP research during their rotation.



**SERGIO CONTI, MD**



**EMILY VITTETOE, DNP**



## Clinical Trials and Research

Not only are our faculty dedicated to their clinical duties, but they are also dedicated to research and advancing the field of EP. We have several ongoing studies in clinical and translational cardiac electrophysiology. In addition to our current studies, we also have several studies in the planning and regulatory phases.

Research team:

Trisha Elliott 319-384-1628

Melissa Yoder 319-384-1627

Current:

**AVANT GUARD:** A Boston Scientific study to establish the safety and effectiveness of pulsed field ablation as a first-line ablation treatment for subjects with persistent atrial fibrillation as compared to subjects who received an initial treatment with antiarrhythmic drugs. PI: Dominic

**AIM HIGHER:** An Impulse Dynamics trial to evaluate the efficacy and safety of Cardiac Contractility Modulation (CCM) therapy in patients with symptomatic HF (HF with LVEF 40-60%). Multicenter, multi-national, randomized, quadruple-blind, sham controlled, 2-part, embedded IDE clinical trial. PI: Zingman

**REACT AF:** An NIH-Johns Hopkins study is a multi-center prospective, open label, randomized trial comparing two treatment strategies for stroke prevention in patients with a history of paroxysmal or persistent AF and moderate stroke risk. PI: Powers

"My favorite part about working in research is that it's something new every day. We are always bringing in new exciting trials and none are ever the same. I've seen and learned a lot in my seven years in this role" – **Trisha Elliott, RT**

**DISRUPT AF REGISTRY** - Aims to assess clinical outcomes, including procedural efficiency, safety, and long-term effectiveness of pulsed field ablation in treatment of patients with AF. Also assess the effect of PFA technology implementation on practice patterns, operational workflow, and operator experience. (Dominic)

**REAL AF REGISTRY** - Aims to assess clinical outcomes, including, but not limited to, procedural efficacy and long-term effectiveness of RF ablations in treatment of patients with paroxysmal or persistent AF. (Dominic)

**SAFFICIENT-** Evaluates safety of the VARIPULSE catheter when used in conjunction with the TRUPULSE Generator for catheter ablation in low volume centers, compared to high volume centers, for treatment of subjects with symptomatic AF, excluding long-standing persistent AF. (Biosense Webster, CARTO) (Dominic)

**A New Pacing Approach for Cardiac Conditioning and Enhanced Cardioprotection** - A clinical trial of exercise-similar heart rate acceleration delivered via cardiac pacing vs. sham intervention in subjects at rest. (Zingman)

Coming soon:

**CONFORMAL** - An evaluation of the safety and effectiveness of the Conformal CLAAS system for left atrial appendage occlusion. (Powers) (Amplify)

In Follow-up:

**SOLVE CRT** (EBR systems)

**FACT CRT** (Biotronik)

**Melissa Yoder, RN**, said, "I am interested in learning more about the new PFA ablation systems that are available. PFA was not available during my time working in the EP lab, so I am curious to learn more about these systems."





## Journal Club

EP **Journal Club** is hosted once a month at various locations in and around Iowa City. It gives the faculty, fellows, and surrounding Cardiac Electrophysiology community members a chance to mingle and discuss various EP-related articles together. Each EP faculty member rotates presenting articles of their choosing based on their interest. The faculty acts as a moderator, introduces the bigger picture of the topic they chose, and assists medical students, residents, and fellows in understanding the articles and present them in a succinct manner. "My favorite thing about Journal Club is the collaborative discussion of articles and topics from providers with different viewpoints and expertise," said **Peter Farjo, MD, MS**, "It's not often that you get to come together in a casual environment and be able to discuss research and statistical methodology and clinical applicability of the recent medical literature in clinical electrophysiology."

## Mentees and Mentors

In October, the University of Iowa, in collaboration with the Mayo Clinic, co-hosted a lead management conference. This event brought together lead extraction specialists from electrophysiology and cardiothoracic surgical centers nationwide to share expertise with nurses, fellows, and physicians in the region. Notably, two attendees had the unique opportunity to reconnect with our faculty members whom they had trained during their fellowships. A post-conference dinner provided a wonderful setting for mentors and mentees to reflect on their shared journey and celebrate the successes they've achieved over the years.

Dr. George Crossley &  
Dr. Michael Powers



Dr. Paari Dominic &  
Dr. Jude Clancy



## Faculty and Trainee Accomplishments

Publications are a cornerstone of academic medicine, serving as a critical tool for advancing knowledge and fostering innovation. This collaborative effort between faculty and trainees cultivates mentorship, prepares trainees for future academic careers, and ensures the next generation of clinicians and researchers. We are proud of all that our faculty and trainees have accomplished this year. The following are a list of recent publications from Cardiac Electrophysiology:

- Impact of SGLT2 Inhibitors on the Outcomes of Patients with Cardiac Arrhythmias and Transthyretin Cardiac Amyloidosis - **P. Dominic, S. Byer**
- Impact of frailty in hospitalized patients undergoing catheter ablation for atrial fibrillation - **P. Dominic**
- Cardiac arrhythmias and overall outcomes with Bruton tyrosine kinase inhibitors in chronic lymphocytic leukemia - **P. Dominic, S. Byer**
- Dual vs Single Cardioversion of Atrial Fibrillation in Patients With Obesity: A Randomized Clinical Trial. - **P. Dominic**
- Outcomes of device extraction in patients with chronic kidney disease on renal replacement therapy and cardiac implantable electronic device infections **P. Dominic, P. Farjo, EM. Powers, A. Alzahrani S. Bailin, L. Lamont, M. Mhanna**
- Novel methodology for nonfluoroscopic wire visualization during pulsed field ablation for the treatment of atrial fibrillation - **P. Dominic, P. Farjo, E. Powers, D. Zingman, S. Bailin, A. Alzahrani**
- Comparative Analysis of Risk Prediction Scores for Treatment-Emergent Atrial Fibrillation Among Patients With Chronic Lymphocytic Leukemia Treated With Ibrutinib – **P. Dominic**
- Intravenous Diltiazem Versus Metoprolol in Acute Rate Control of Atrial Fibrillation/Flutter and Rapid Ventricular Response: A Meta-Analysis of Randomized and Observational Studies - **D. Zingman, M. Adhaduk**
- Stroke and Bleeding Risks of Endocardial Ablation for Ventricular Arrhythmias - **EM. Powers**
- Safety of ventricular arrhythmia radiofrequency ablation with half-normal saline irrigation - **EM. Powers**

- Can Intracardiac Echocardiography Reduce Steam Pops During Half-Normal Saline Irrigated Radiofrequency Ablation? – **EM. Powers**
- Wall Sheet in outflow tract premature ventricular contraction location assessed through 4D-flow MRI – **D. Hamon**

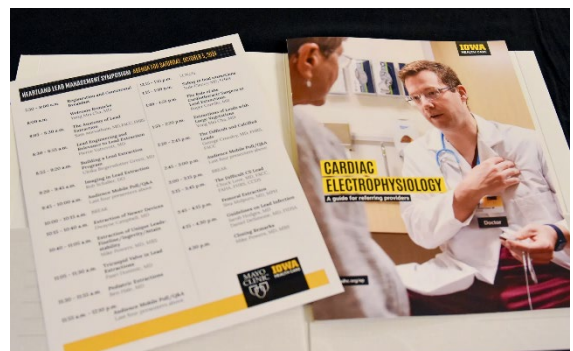
## Clinical Leadership

We are very excited to welcome **Taylor Isenhour, RN**, as the Assistant Nurse Manager for EP. She took over this newly created role in January 2025. Taylor will be instrumental in supporting our Electrophysiology program, ensuring continued excellence in patient care, staff development, and operational efficiency. Her commitment to our patients and colleagues makes her a perfect fit for this leadership position. Taylor said, "I am very honored to be stepping into this role as EP ANM. The field of electrophysiology is fascinating and I'm excited to get to work with such a talented team. Working in HVC has been a positive experience in my life and I look forward to contributing to this team's success. I am sure there will be bumps in the road ahead, but I look forward to the challenge."

## Conferences

The EP section hosted two conferences this fall which showcased many of our people and their hard work from their research to the topics that they are knowledgeable and passionate about.

We kicked off the conference season with the Heartland Lead Management Symposium in early October. This conference was co-hosted with Mayo Clinic and focused on educating healthcare providers to improve patient care and outcomes. Speakers from across the country joined us to educate others in lead management.





The ongoing collaboration between the University of Iowa and Mayo Clinic in organizing conferences on lead management fosters a robust platform for advancing clinical expertise, research innovation, and education in this critical field. This partnership not only brings together world-renowned experts but also ensures the integration of diverse perspectives and cutting-edge technologies. By leveraging their combined resources and expertise, these institutions set a benchmark for excellence in addressing complex challenges, improving patient outcomes, and shaping the future of lead management. This continued alliance is poised to inspire further breakthroughs and establish enduring advancements in cardiac care. We look forward to this new partnership that we have formed and continue to positively impact patient care.

We wrapped up our conference season with the **Iowa Cardiovascular Summit**. This combined Heart Failure and EP conference focused on a wide range of topics from arrhythmias to VADs. This two-day conference allowed EP providers, HF providers, nurses, and primary care providers to come together to learn about the ever-growing fields and how to continue caring for the patients.

## Community Events

As a division, we remain committed to educating the public about atrial fibrillation (Afib) and the serious risks of untreated heart conditions. To kick off Heart Month in February, we hosted a community event at the University of Iowa Athletics Hall of Fame, providing an opportunity for community members to learn about Afib symptoms, associated risks, and the importance of seeking medical care.

### Go Red for Women

Heart disease and stroke remain the leading causes of death among women, affecting those as young as 20 years. This year, we were honored to have **Paari Dominic, MBBS, MPH** as our keynote speaker, delivering an insightful and impactful message to attendees.

## Collaboration

The goal of collaboration is learning from each other's strengths and growing together. This is precisely what our pediatrics and adult EP teams have achieved over the past several years, creating a partnership that has become truly invaluable. "Having a strong collaboration between the pediatric and adult EP groups is so valuable to me. We each have our own aspects of EP that we excel at, and the collaborative approach lets us both grow our skill sets and the range of therapies we can offer our patients. To know that I can offer my patients procedures that bridge the gap between adult and pediatric care with a team with diverse expertise is so crucial in managing complex patients with challenging arrhythmias," said **Ben Hale, MD**.