

# Cath Lab Digest

A product, news & clinical update for the cardiac catheterization laboratory specialist

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## CASE REPORTS

### Finalists From CRT's 2025 Nurses and Technologists Interesting Cases Competition

The Cardiovascular Research Technologies (CRT) meeting was held March 8-11 in Washington, D.C

At its 2025 meeting, CRT continued a new tradition that began in 2024 – a competition focused on cases submitted by nurses and technologists, with four finalists asked to present their cases during CRT's Nurses and Technologists session.

Cath Lab Digest is proud to share the featured CRT cases in this issue (listed alphabetically by first author):

- **Microvascular Spasm in CMD: More than What Meets the Scan**

Fatima Bangura, BSN, RN



- **Successful Treatment of Early Bioprosthetic Mitral Valve Fusion in a Patient on VA ECMO With Balloon Valvuloplasty via Direct Cannulation of Pulmonary Vein**

Richard Casazza, MAS, RT(R)(CI); Paul Saunders, MD; Bilal Malik, MD; Robert Frankel, MD; Mazin Khalid, MD; Adnan Sadiq, MD; Arsalan Hashmi, MD; Gregory Crooke, MD



- **Hearts in Sync: The Power of Teamwork in the Cath Lab**

Decima Felder, MSN, RN



- **The Direct Subaortic Laceration of the Septal Membrane (DALAS) Procedure**

Brandy D. Smith, BS, RCIS, LMRT



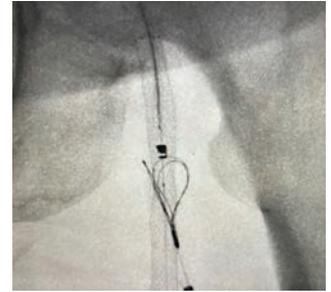
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## PERIPHERAL INTERVENTION

### PTAB With the DETOUR™ System: Expanding Treatment Options for Complex PAD Patients

CLD talks with Jaafer A. Golzar, MD, FACC, FSCAI.

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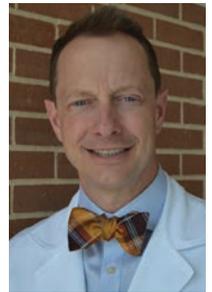


## THROMBECTOMY

### Computer-Assisted Vacuum Thrombectomy (CAVT) for Quick, Safe, and Effective Clot Removal

CLD talks with Stanley K. Zimmerman, MD, FACC, FSCAI.

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## CRT CONFERENCE COVERAGE

### Disparities in Interventional Cardiology

By Laura Simson, MA

A session report from the Cardiovascular Research Technologies (CRT) 2025 meeting, held March 8-11, in Washington, D.C.

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# Disparities in Interventional Cardiology

By Laura Simson, MA

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At the “Disparities in Interventional Cardiology” session at the Cardiovascular Research Technologies (CRT) 2025 meeting, held March 8-11, in Washington, D.C., experts presented compelling data and discussed the barriers that limit diverse representation in the field, ranging from clinical trials and interventional procedures to the practitioners themselves. They also conferred on strategies to drive meaningful progress in reducing these gaps, while acknowledging the difficulties of overcoming the inherent biases on which the current system is structured.

## The Lack of Representation in Research

The session was launched by Dr. Wayne Batchelor, Director of Interventional Cardiology and Interventional Research and Innovation at Inova Heart & Vascular Institute, with his presentation titled “Impact of Research Site Selection on Study Participant Diversity in Device Trials | Insights from the US FDA COOP Registry”. As the title suggests, for parity to fully permeate the field, it must be addressed from the ground up, starting with trial data. “The database from which the safety and efficacy of class III medical devices is determined should be reflective of the intended use population,” Batchelor stated. Each demographic group experiences unique device safety and outcomes, so it is crucial that every group who will potentially receive these devices is included in the trials to ensure accurate prediction. Despite mandates such as the Public Health Service Act of 1993, FDASIA 2012, and FDORA 2022, which require diverse patient enrollment and demographic reporting, minority representation in trials remains disproportionately low.

Data from multiple studies reaffirmed these disparities. A systematic review of valvular heart disease trials found that only 4.4% of participants were African American, 0.3% Asian, and 2.4% Hispanic.<sup>1</sup> Similarly, in 35

drug studies, 81% of enrollees were White, with Black participants representing just 4% — one-third of their proportionate population in the United States.<sup>2</sup>

## Disparities in Care

Disparities have a significant impact on patient treatment pathways as well. In her presentation titled “Ethno-Racial Disparities in Access to Percutaneous Therapies,” Dr. Dipti Itchhaporia highlighted a 2023 systematic review illustrating the shortfalls in care provided to racial minority patients, especially those of advanced age. Looking at percutaneous coronary intervention (PCI) specifically, the study found that, compared

**As an interventional cardiologist at the University of New Mexico in Albuquerque, Dr. James Blankenship offered insight into the state of PCI in the Hispanic population. In his experience, compared with non-Hispanic Whites, Hispanics experience more coronary artery disease-associated comorbidities and present more frequently with acute cardiac illnesses.**

with their White counterparts, African American and Hispanic patients experienced more frequent major adverse cardiac events (MACE) and bleeding complications, lower PCI and revascularization rates, longer door-to-balloon time for ST-elevation myocardial infarction (STEMI) care, worse outcomes, and less medication utilization for coronary artery disease (CAD). Notably, however, Medicaid expansion was associated with a reduction in these disparities, particularly in regard to procedural access and outcomes.<sup>3</sup>

Dr. Aaron Horne, Jr. of Summit Health focused on the disparities of transcatheter aortic valve replacement (TAVR) treatment, pointing out that socioeconomic factors, geographic location, and implicit

bias contribute to variations in TAVR rates. Women and Black patients are subject to less aggressive treatment, and patients from underrepresented groups experience worse outcomes because of lack of access to care. Statistics from the Transcatheter Valve Therapy (TVT) Registry further illustrate the issue, showing that, from 2015 to 2022, over 90% of TAVR patients were White, with Black and “Other” racial groups comprising only 4% of cases, respectively.<sup>4</sup> To this end, Dr. Horne advocated the need for outreach to underserved communities, to meet patients where they are rather than making them come to established “centers of excellence,” which are typically too far away for those living in rural areas to readily access.

As an interventional cardiologist at the University of New Mexico in Albuquerque, Dr. James Blankenship offered insight into the state of PCI in the Hispanic population. In his experience, compared with non-Hispanic Whites (nHWs), Hispanics experience

more CAD-associated comorbidities and present more frequently with acute cardiac illnesses. As with Black patients, this trend may be attributed to a dearth in quality accessible care; commutable hospitals tend to be under-resourced, and this population commonly lacks health insurance that covers the primary and specialty care they need, leading to delayed revascularization and other recommended procedures. Yet, despite these factors, Hispanics undergoing PCI have outcomes similar to nHW populations (email, March 24, 2025).

Though not featured individually in this session, Dr. Blankenship noted that these same problems regarding access and discrimination face the Native American population. Data is

## Panelists also underscored the importance of site selection in broadening access, as rural populations may be underrepresented simply because of locale. This makes it difficult for researchers based in urban areas to understand the sensitivities specific to those of rural upbringing.

still needed to draw any solid conclusions about other U.S. populations (email, March 24, 2025).

### Barriers to Equitable Access

Compounding the tangible factors of distance and payment is perhaps the most difficult obstacle to overcome: trust. Several speakers drew attention to distrust of the healthcare system as a staunch barrier to access, citing systemic racism and cultural beliefs as major contributors to the wariness to pursue care that often exists in minority populations. In an interview with JIC on March 17, 2025, moderator Dr. Michelle D. Voeltz of the Northside Cardiovascular Institute expanded upon these sentiments: “We see that our Black patients, we see that our female patients are less likely to undergo appropriate procedures to undergo appropriate testing and to receive appropriate treatment....add in religious issues, patients who don’t speak English as a first language, and I think that we really do not do a great job of delivering culturally competent care.”

Much of this echoes the shortcomings in research trials, which also stem largely from social factors. To build trust in the medical community, it is crucial that researchers understand their communities and patient populations. But this goes both ways: it is just as important that subjects identify with their coordinators. A startling fact presented was that only 5% of on-site principal investigators were women, which is in sharp contrast to the percentage of women subjects participating in 2 studies highlighted in Dr. Batchelor’s talk (41% and 36%, respectively).<sup>1,2</sup>

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the sensitivities specific to those of rural upbringing.

Notwithstanding these cultural tendencies, the shortcomings of the U.S. healthcare system cannot be overlooked as a sig-

nificant roadblock to equitable care. National policies fail to provide adequate coverage to vulnerable and poor populations, forcing these groups to rely on what is geographically and financially available, even if it goes against what standard guidelines recommend for their treatment. For illustration, Dr. Blankenship cited his own institution, where they found that half of the post-PCI patients were discharged on suboptimal therapy because their insurance declined the high-potency, guideline-directed P2Y12 inhibitors (email, March 24, 2025). “We just don’t do a good job of making sure that everybody has baseline coverage and baseline care,” added Dr. Voeltz. “We assume that people have a safety net, and they don’t” (interview, March 17, 2025).

### Representation in the Field

While much of the focus was on patients, to fully address the issue one must also look to the present and future representatives of the field: the doctors. Dr. Karol Watson from Ronald Reagan UCLA Medical Center highlighted the pervading disparities in training and leadership currently in play at all levels of interventional cardiology (IC). She reported that, of all active IC fellows, only 4% are Black. Additionally, women are underrepresented in the trainee population, though this trajectory is turning upwards. Leadership positions also remain overwhelmingly White (66.6%), and socioeconomic factors continue to shape medical school admissions, with 25% to 30% of medical students hailing from households whose earnings fall in the top 5% of incomes, limiting the pipeline of diverse professionals entering the field. Unless this trend is curbed, cultural and economic differences will continue to drive wedges between practitioners and their patients.

### @CRT: DISCUSSIONS

## We Must Mitigate Bias When Planning for PAD/CLTI Trials

Zola N’Dandu, MD

Ansaarie Cardiac & Endovascular Center of Excellence, East Palatka, Florida

How can we design peripheral arterial disease (PAD) and chronic limb-threatening ischemia (CLTI) trials that actually reflect the patients we treat every day?

In his March 10th CRT 2025 presentation during the Endovascular and CLI Interventions session, Dr. Zola M. N’Dandu addressed the urgent need to mitigate gender and minority bias in the planning and administration of clinical trials for PAD / CLTI.

PAD disproportionately affects women and underrepresented minorities, yet these same groups remain consistently under-enrolled in clinical research. The result is trial findings that don’t always translate to real-world populations, and treatments that may fall short where they are most needed. Equitable representation, Dr. N’Dandu notes, is essential for generating evidence that leads to better, more personalized care.

Trials can be proactively designed with inclusive enrollment strategies, from site selection and community engagement to protocol development and data analysis. Dr. N’Dandu notes LIFE-BTK and ELEGANCE are two recent clinical trials that have shown success in addressing these concerns.

If we want trial results that truly inform our decisions for care, says Dr. N’Dandu, we must reimagine how we recruit, enroll, and represent our patients. ■



Hear more from  
Dr. Zola M. N’Dandu:



### “Just Keep Ringing the Bell”

This session reinforced that progress in IC requires intentional actions to address systemic disparities. Without concerted efforts, the field risks perpetuating cycles of exclusion that undermine both scientific integrity and patient outcomes. The panelists widely agreed that reducing disparities requires interventions on all levels, such as:

- Implementing structural changes to ensure equitable access to life-saving interventional procedures;
- Improving access to health insurance;
- Supporting under-resourced rural and inner-city hospitals that disproportionately serve poorer populations;
- Urging researchers to conduct implicit bias training and prioritize diverse recruitment efforts.

Unfortunately, many of these remain extremely difficult to implement. One can blame inadequate funding or insufficient infrastructure, but these are all just side effects of the underlying social inequities. While she acknowledged that physicians are becoming more aware of the disparities in IC and medical societies are making efforts to close gaps, Dr. Voeltz warned that we have not fully shed systemic racism from the field, and, until we can make headway in this regard, other efforts will only be surface level. Because, in the end, much comes down to the desire for change, namely, to prioritize people above financial gain. “It’s got to be a priority on every level, from the governmental level all the way down to the interpersonal level, and everywhere in between,” she said (interview, March 17, 2025).

As for what we can do now? In the words of Dr. Voeltz, “Just keep ringing the bell.” ■

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## In the Literature: CLD Editor’s Pick



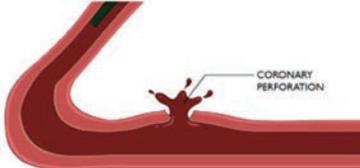
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# Invasive Cardiology

## Update on the Diagnosis and Treatment of Coronary Complications of Percutaneous Coronary Interventions

Sant Kumar, MD; Ahmed Al-Ogaili, MD; Allison Hall, MD; Lorenzo Azzalini, MD, PhD; Khaldoon Alaswad, MD; Stéphane Rinfret, MD; Jimmy Kerrigan, MD; Jason Wollmuth, MD; Anastasios Milkas, MD, PhD; Subhash Banerjee, MD; Yader Sandoval, MD; Emmanouil S. Brilakis, MD, PhD

ABSTRACT: Prevention, prompt diagnosis, and rapid treatment are crucial for improving outcomes of complications that occur during percutaneous coronary intervention (PCI). The authors summarize studies on PCI complications published between January 1, 2023, and May 1, 2024, including coronary dissection, no reflow, perforation, and equipment loss/entrapment.



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