

CASE STUDY

EXPLORER
a GHX company



**Training on advanced TAVR technique
accelerated by 92% with Explorer
digital case support**

Medical Director of the Structural Heart Program at UPMC Pinnacle Dr. Hemal Gada shortens learning curve from 3-4 months down to 1 week leveraging Explorer's remote access case support platform



Executive Summary

Interventional cardiologists throughout the world have become proficient with Dr. Hemal Gada's pioneering "cusp overlap" technique for TAVR procedures through deployment of the Explorer cloud-based digital case support solution.

Dr. Gada facilitates live case observation and best practices support remotely, reducing physician training time from 3-4 months down to 1 week while eliminating thousands of dollars in travel expenses.

The Challenge

UPMC interventional cardiologist Hemal Gada, MD developed the "cusp overlap" technique for transcatheter aortic valve replacement (TAVR) procedures, which reduced the need for post-procedure pacemaker placement from 15-20% down to less than 5% of cases.¹

Dr. Gada wanted to share his advanced technique, which leverages fluoroscopic imaging to ensure optimal placement of the valve, and other Cardiologists were eager to learn as it had the potential to broadly improve patient outcomes.

The challenge was how to provide effective and efficient training to interventional cardiologists across the globe without the costs and complexities associated with physicians traveling to UPMC.

¹Harvey, J., et al., *Changing in-hospital permanent pacemaker implantation rates in the tvr-registry*, Abstract presented at the American College of Cardiology Conference on Sunday, May 16, 2021.



The Goal

Dr. Gada required a way to remotely connect with interventional cardiologists to facilitate live case observation and step-by-step best practices training. His goals were to:

- Broaden access to the "cusp overlap" technique to support optimal outcomes from TAVR procedures for patients beyond UPMC
- Reduce time-to-train, which typically took an estimated 3-4 months of planning (including lead time to plan physician schedules, confirmation of patient care scheduling, and travel time)
- Eliminate costly and burdensome travel for trainee physicians

Results at a Glance



Training time reduced from **3-4 months down to 1 week**



\$11,600 savings in travel expenses per physician group



Broader surgeon and patient access to **life enhancing technique**



Reinforced best practices for **procedural consistency**



Improved cost, quality and outcomes in healthcare delivery

The Solution

Dr. Gada partnered with Explorer, a GHX company, to deploy the company's cloud-based digital case support solution to accelerate physician training on his technique and reinforce best practices.

Explorer facilitates real-time remote case observation and support with two-way visualization and communication, allowing Dr. Gada to train live on the technique with cardiologists all over the world in a timely and cost-efficient manner.

Trainees can see outputs from all the imaging equipment in the room for a visual of fluoroscopic guidance and patient monitoring. In addition, remote observers can interact with Dr. Gada using two-way audio and video, zoom in and annotate on the procedural field and take an assessment at the end of the procedure to measure comprehension.

Explorer features a media-rich digital procedural playbook where Dr. Gada has mapped out best practices, step-by-step, before and during procedures for physicians in training. It is customized by user role, providing interventional cardiologists and each member of their Cath Lab teams with the specific information they need to help them successfully perform their role in the case.



HEMAL GADA, MD

Outcomes

Leveraging Explorer's digital case support solution, Dr. Gada has effectively and efficiently trained interventional cardiologists world-wide on his "cusp overlap" technique for TAVR procedures without the need for travel and the associated costs.

Dr. Gada remotely connects in real-time with interventional cardiologists who can observe his procedures from the comfort of their own homes or offices. They can remain in their practice locations without the travel burden and the financial burden of reduced pay to travel for training.

Remote training through Explorer has significantly broadened Dr. Gada's reach and accelerated adoption of his technique. With access to the Explorer digital playbook, physicians can continuously reference Dr. Gada's best practices for greater procedural consistency.

Most importantly, patients who undergo TAVR procedures that leverage Dr. Gada's technique are at far lower risk for permanent pacemaker implantation (PPI), from 15-20% down to less than 5% of cases. Broadened use of the technique has the potential to improve overall costs, quality and outcomes (CQO) through avoidance of PPI, fewer complications and shorter length of stay.^{2,3,4}

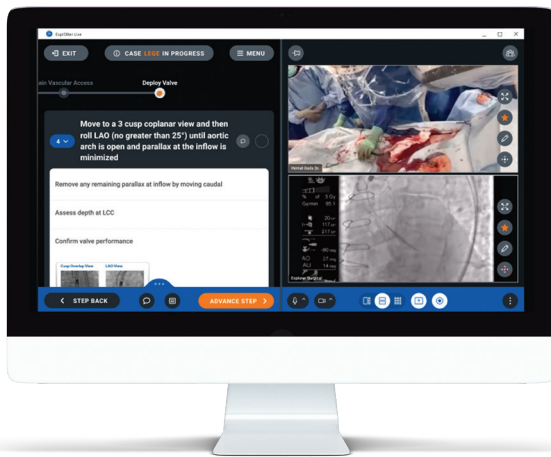
THE RESULTS

- **1 week of training time** down from 3-4 months
- **\$11,600 savings** in travel expenses per physician group
- Broader surgeon and patient **access to life enhancing technique**
- Reinforced best practices for **procedural consistency**
- **Improved cost, quality and outcomes** in healthcare delivery

²Baron SJ, Wang K, House JA, et al. Cost-Effectiveness of Transcatheter Versus Surgical Aortic Valve Replacement in Patients With Severe Aortic Stenosis at Intermediate Risk. *Circulation* 2019;139:877-88.

³Gupta T, Khera S, Kolte D, et al. Transcatheter Versus Surgical Aortic Valve Replacement in Patients With Prior Coronary Artery Bypass Grafting: Trends in Utilization and Propensity-Matched Analysis of In-Hospital Outcomes. *Circ Cardiovasc Interv.* 2018 Apr;11(4):e006179. doi: 10.1161/CIRCINTERVENTIONS.117.006179. PMID: 29643130.

⁴Baron S, Reynolds M, Cohen D. Economic Considerations for TAVR Vs. SAVR: Historical Perspective and Future Predictions. *American College of Cardiology.* 2019. <https://www.acc.org/latest-in-cardiology/articles/2019/06/18/07/43/economic-considerations-for-tavr-vs-savr>.



Real-World Example

~\$11,600 in travel expenses eliminated when three physicians from Texarkana, Ark. trained on the “cusp overlap” technique with Dr. Gada, observing procedures remotely through the Explorer platform.

Commercialization Accelerated

Physicians, healthcare organizations and medical device manufacturers are increasingly collaborating on ways to improve outcomes, reduce costs, and keep pace with revenue goals in today's value-based care environment. GHX acquired Explorer in 2021 to help providers and medical device companies deliver value-based care. The Explorer platform embodies GHX's vision of creating a viable and sustainable future for healthcare by facilitating collaboration without boundaries. Explorer democratizes access to key opinion leaders, leveraging digital procedural playbooks and intraprocedural data collection with a focus on improving healthcare delivery at scale.

Learn more at <https://www.ghx.com/explorer>