

NEWS | FUTURE OUTLOOK

Johnson & Johnson and Abu Dhabi Launch Global Surgical AI Network to Accelerate AI Innovation in Surgery

Polyphonic Open Digital Ecosystem Connects Operating Rooms, Clinical Data and Technology Partners to Build a Governed Foundation for Responsible Surgical AI

By **Ankit Kankar** | September 13, 2026



Image Courtesy: Public Domain

Johnson & Johnson announced a collaboration with the Department of Health – Abu Dhabi (DOH), the regulator of the healthcare sector in Abu Dhabi, UAE, launching a global program to develop an open surgical intelligence network— establishing Abu Dhabi as the first node in a global infrastructure designed to accelerate artificial intelligence (AI) innovation for every stage of the surgery experience.

Integrating Johnson & Johnson's Polyphonic™ open digital ecosystem with the Department of Health – Abu Dhabi and technology partners including Amazon Web Services (AWS) and NVIDIA, the initiative is expected to deploy the Polyphonic Surgery application into Abu Dhabi's intelligent health system to connect operating rooms across the emirate to a surgical intelligence system. Through Polyphonic, relevant procedures contribute high-fidelity video and multimodal data that will be curated, labeled, and continuously flow into a governed infrastructure. Designed to accelerate responsible and trusted AI and compress technology development, the ecosystem will connect insights generated before, during, and after surgery.

The initiative aligns with Johnson & Johnson's work to shape the future of surgery across open, laparoscopic, and robotic surgery, bringing together deep surgical expertise with the open ecosystem architecture the next era demands.

"Today marks an important step forward for the global community to advance innovation for surgical teams and in service of patients," said Hani Abouhalka, Company Group Chair, Surgery, MedTech, Johnson & Johnson. "No single company, hospital, or developer can do this alone. We must bring together innovative health systems, technology leaders, clinicians and researchers with a drive to start now and serve the world."

From Abu Dhabi to Global Surgical AI

Deploying the Polyphonic network at scale across Abu Dhabi supports a first-of-its-kind surgical network in the emirate. Cleveland Clinic Abu Dhabi, PureHealth, Mediclinic Group, and NMC Healthcare will deploy Polyphonic across operating rooms. Participating hospitals will use the Polyphonic Surgery solution, capturing surgical video, enabling real-time collaboration, and supporting structured case review, peer consultation, and case efficiency. As teams integrate these tools into routine care, each case will add to a structured, anonymized surgical dataset that will establish an approved source for AI development in surgical care — beginning in Abu Dhabi and in the future extending globally.

This builds on Abu Dhabi's rapidly advancing intelligent health system of AI-enabled infrastructure, assembling the conditions for AI to scale in surgery: a coordinated network of hospitals, government institutions, academic partners, research organizations, and technology leaders, working within a single foundation where data can be responsibly aggregated, models validated, and improvements scaled from one operating room to many.

"This program builds on Abu Dhabi's intelligent health system, where clinical care, data, AI and research are connected to deliver impact at scale," H.E. Dr. Noura Khamis Al Ghaithi, Undersecretary of the Department of Health – Abu Dhabi, said. "By extending the intelligent OR network across hospitals, we are standardizing capabilities, enabling shared intelligence, and creating a continuous learning system where every procedure has the potential to improve the next. Moving from individual advancements to system-wide progress for patients globally."

"Working with the Department of Health – Abu Dhabi and their integrated health ecosystem has helped us to accelerate the pathway of building the first node of a global surgical network," said Shan Jegatheeswaran, Global President, Polyphonic, MedTech, Johnson & Johnson. "We are already seeing that same spirit in other health authorities, hospital leaders, academic institutions, and technology partners joining this ecosystem. Our role is to create the conditions for the leading minds in medicine, technology, and research to do their best work together in service of better outcomes for patients, everywhere."

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