

Groundbreaking cardiovascular event showcases WVU Medicine as leader

Amid the numbers and scientific data collected at the WVU Heart and Vascular Institute's recent CHOICE 2018 program – a one-day, free cardiovascular screening and diagnostic examination event held in partnership with the American Society of Echocardiography (ASE) Education and Research Foundation – one number stands out.

“This event had several ‘firsts,’” said Partho Sengupta, MD, chief of Cardiology at the WVU Heart and Vascular Institute. “It was the first time a national society, such as ASE, partnered with an institution for an event in West Virginia; the first time a screening and diagnostic event with ultrasound-on-a-chip technology was used in community event organized by ASE in the United States; and the first time in the world where so many unique mHealth and cloud-based technologies came together at the point-of-care for a screening or diagnostic event.”

WVU Medicine received 2,000 responses from throughout the region; 375 patients were accommodated on first-come, first-served basis at four WVU Medicine locations -- Morgantown, Fairmont, Bridgeport, and Elkins. There were 1,125 diagnostic tests performed with results provided instantaneously to the patients via smart technology.

Of the 375 patients screened, 29 underwent further testing the same day for identifying advanced disease that required prompt medical attention. Many others had medical issues that were identified or dismissed, with follow-up advice provided as needed.

“When you have an event of this magnitude, it’s difficult to exactly predict the needs,” Dr. Sengupta said. “But everyone improvised – and the event was smoothly-run – there was no long waiting in queues, no chaos. To have this many patient visits and get diagnostically tested, with reports in seven-and-a-half hours, is unbelievable.”

“We heard patients expressing satisfaction and Twitter feeds have gone wild – with several hundred tweets about the event. We hope this event inspires people across the nation and world.”

The event was transformational for patients, but also for volunteers who came from more than 20 medical organizations from across the United States, in some cases paying their own way to participate.

The four locations featured 40 exam rooms with 20 providers and 20 teams of technologists and trainees, including fellows and residents from internal medicine, family medicine, emergency medicine, and critical care, who were trained to use innovative technologies.

Each volunteer physician and healthcare professional was equipped with the world's first Ultrasound-on-a-Chip technology, which converts a smartphone into an ultrasound system. The event also featured artificial intelligence and cloud-based services, including a fingertip EKG reading and other mobile health technologies offered on tablet computers.

Patients who merited a full ultrasound examination received a comprehensive exam on a high-end ultrasound system with the best image quality and features.

Data collected from the event will be used to advance research in the field of cardiology and early intervention, Sengupta said. Feedback collected from patients will also help providers meet the needs of residents and better serve the community.

“We hope to learn and change our practices to meet the needs of community,” Sengupta said. “We are excited with the prospects of using more and more technology at the point-of-care to build patient confidence and patient-doctor relationships”

Overall, Sengupta said the event “was an important first step for fostering awareness about cardiovascular precision medicine in West Virginia. WVU Medicine is becoming a force in diagnostic imaging and investigation. We have emerged.” <https://wvumedicine.org/info/advances/>

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