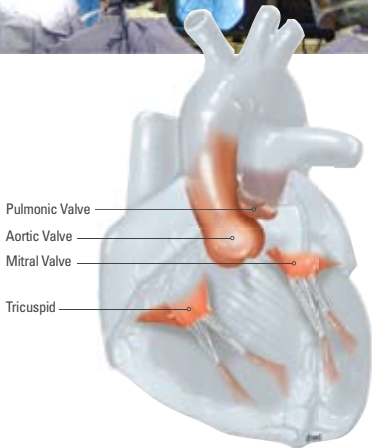


Best of
HEALTH



PENN MEDICINE

A CONCERTED APPROACH TO INNOVATION IN VALVULAR DISEASE

An investment in specialists with the skills to both design and implant devices for the heart places Penn Medicine among the nation's leaders in heart valve replacement and repair.

Heart valve disease is a condition in which one or more heart valves do not work properly. The heart has four valves: the tricuspid, pulmonary, mitral, and aortic valves. Valves control the direction of blood flow through the heart. Conditions which may cause heart valve dysfunction: stenosis, a condition in which valves fail to open properly, obstructing blood flow from the heart, and regurgitation, the leakage of blood back into the heart. Without repair—or in cases of advanced disease, replacement—of the damaged valves, heart function is compromised. In time, the heart fails.

A decade ago, Penn Medicine established a team of highly skilled physicians to develop new techniques and devices for heart valve disease. To date, this team has played an instrumental role in the creation of advanced synthetic valves, leadership in major clinical trials to evaluate devices and the surgical refinements needed to implant them, and the initiation of a series of genuinely new and innovative techniques for heart valve repair and replacement. The result? Today, Penn Medicine leads the state of Pennsylvania and the Greater Philadelphia region in total valve operations, and is the only health system in the state of Pennsylvania with better than expected survival

rates for valve surgery patients. Penn was the first in the area to perform balloon valvuloplasty for mitral and aortic stenosis—and remains the largest such program in the region. Penn is the only medical center in the state of Pennsylvania participating in ground-breaking transcatheter aortic valve trials for percutaneous aortic valve replacement for very high risk patients who have aortic stenosis and previously were deemed inoperable. In addition, Penn conducts more clinical trials to evaluate new options for prosthetic heart valves than any other medical center in the region. Physicians at Penn performed the second Evalve MitraClip® procedure in the world, an investigational approach that holds great promise for patients with leaking mitral valves. Penn physician scientists developed new 3-D cardiac imaging parameters that guide surgeons performing complex valve repairs. "We continue to stay on the very leading edge of valve surgery," explains cardiovascular surgeon Joseph E. Bavaria, MD. "Here you'll find some of the very best surgeons who are also top-notch engineers. They are designing the next generation of devices. Proven breakthroughs go very quickly from the research bench to the patient's bedside."