

A close-up photograph of a surgeon wearing blue surgical scrubs, a white mask, and safety glasses. The surgeon is focused on a task, likely surgery, using their hands to manipulate instruments. The background is dark, suggesting an operating room environment.

THE INSTITUTES AT NORTHWESTERN MEDICINE

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The time has come for change—disruptive change. A person's risk of death due to heart disease is now 50 percent less than it was just several decades ago. In just the past 10 years, deaths after a heart attack have been reduced by 30 percent. This is worth a celebratory pause, but only a pause, as our work is far from done. Our everyday lives and even our fiscal well-being see the risk of heart disease as an ever-present threat.

The great progress we have made to date has been heralded by breakthrough discovery at the basic, clinical, and population levels. Because of exceptional epidemiological research, much of which was championed by Northwestern Medicine, new and potent medical therapies such as statins and anti-platelet agents and novel interventions such as coronary stents have changed the expectations for heart disease. The environment, however, also has changed. The youngest among us now have an enormous burden of risk for heart disease, and the oldest among us face an inevitability of disease.

Our success in preventing and treating heart disease will be evanescent without new discoveries, and these discoveries will need to be big. The Heart Institutes at Northwestern Medicine, comprising the world-class Bluhm Cardiovascular Institute and Feinberg Cardiovascular Research Institute, are poised to make these discoveries. The creation of our Heart Institutes puts our talent under one tent with a singular focus to impact heart disease in a big, bold, and disruptive manner.

We are already firmly in the era of non-surgical repair and replacement of heart valves—a heretofore unimaginable

consideration—but more progress must be made. We have developed the Heart Institutes to effect the changes we seek. We are re-engineering our approach to treating heart disease through our close collaborations with Northwestern University's McCormick School of Engineering and Applied Science and our germinal centers, which bring together new thinkers to address old problems. Our confluence of expert clinicians, gifted basic investigators, creative bioengineers, and restless population scientists provides Northwestern Medicine with an amazing people resource that is most capable of leading a future of fundamental change in heart disease.

Northwestern's Bluhm Cardiovascular Institute

The need for top-quality, personalized cardiovascular care, which both preserves life and enhances its quality, is one of the most urgent issues in modern healthcare. Northwestern's Bluhm Cardiovascular Institute (BCVI) was created in 2004 to meet this critical need and has grown to become a distinctive, world-class program.

Emphasizing prevention and treatment of cardiovascular disease, Northwestern's Bluhm Cardiovascular Institute has garnered national acclaim as a source of progressive clinical care, a site for novel research, and a purveyor of unique educational opportunities for health professionals and members of the public alike. In 2013-2014, *U.S. News & World Report* ranked Northwestern Memorial Hospital's cardiology and heart surgery program #1 in Illinois and #12 in the nation. Notably, the institute has achieved one of the best heart transplant survival rates for programs in the United States, with a one-year survival rate above 90 percent.



"At the Bluhm Cardiovascular Institute, we have been passionate about building a nationally recognized and respected program that focuses on delivering safe and highly specialized cardiovascular care. Through pioneering new procedures like transcatheter aortic valve replacement and offering sophisticated and complex treatment options like heart transplantation and minimally invasive procedures to cure atrial fibrillation, we remain ever vigilant of this goal for both our patients and the community we serve."

Patrick M. McCarthy, MD, director of the Bluhm Cardiovascular Institute, chief of cardiac surgery, and Heller-Sacks Professor of Surgery



Comprehensive, multidisciplinary services and treatments at the BCVI touch all areas of cardiovascular care. In addition to offering a full complement of patient services in a broad range of disciplines such as cardiac surgery, cardiology, vascular medicine and surgery, cardiovascular anesthesiology, and cardiac behavioral medicine, the BCVI comprises six clinical centers, each of which focuses on a distinct aspect of cardiovascular disease and care. These centers provide patients with access to the finest specialists and the most advanced treatments in the areas of coronary disease, heart failure, heart rhythm disorders, heart valve disease, preventive cardiology, and vascular disease.

The Bluhm Cardiovascular Institute is known as both an innovator in the field of cardiovascular medicine, as well as an important research venue for top experts in the field throughout the country. Therefore, the BCVI is in a position to continuously discover and disseminate new information, which helps to ensure the advancement of exceptional cardiovascular treatment and outcomes, not only for Northwestern Memorial's patients, but for those around the country who are seeking enhanced cardiovascular health.

Clinical Centers of Northwestern's Bluhm Cardiovascular Institute

The Bluhm Cardiovascular Institute is comprised of six clinical centers with physicians in these centers serving patients at Northwestern Memorial Hospital, Northwestern Lake Forest Hospital, and Northwestern Grayslake.

- Center for Coronary Disease
- Center for Heart Failure
- Center for Heart Rhythm Disorders
- Center for Heart Valve Disease
- Center for Preventive Cardiology
- Center for Vascular Disease

Feinberg Cardiovascular Research Institute

At Northwestern Medicine, our Feinberg Cardiovascular Research Institute houses some of the most highly regarded basic scientists in the nation. We are in the midst of developing new approaches to regenerate heart and blood vessels and are at the precipice of a new understanding of the mechanisms of disease. Our new focus on what was once considered a fait accompli, the inevitable consequence of aging, is now firmly underway. We envision a future where age per se is no longer the risk factor for heart disease.

The Feinberg Cardiovascular Research Institute brings together investigators from a variety of disciplines who are committed to developing innovative approaches to diagnose and treat diseases of the heart and vascular system. Together, the cardiovascular system is critical for normal functioning of every tissue in the body. As a consequence, disruption of cardiovascular function is central to a range of diseases, including heart disease, blindness, and kidney failure.

At the Feinberg Cardiovascular Research Institute, our investigators are:

- Exploring fundamental aspects of how the blood and lymphatic vascular trees are formed and understanding their functions in health and disease;
- Developing new molecular and imaging approaches to more accurately and readily diagnose heart disease;
- Unraveling the secrets of cardiac metabolism; and
- Studying how stem cell therapies can be used to treat diseases of the heart and blood vessels with a long-term goal of producing artificial, vascularized organs.

Over the next several years, the institute has ambitious plans for growth, recruiting basic and clinical researchers devoted to the prevention and cure of vascular diseases. In addition, we will take advantage of the incredible talents and breadth of expertise of researchers in the Northwestern community. The institute will initiate trans-disciplinary approaches for curing cardiovascular diseases, forging strong collaborations across campus, the nation, and abroad, to close the gap between scientific discovery and delivery of the best patient care.



"Research is the key driver to progress in medicine. At the Feinberg Cardiovascular Research Institute, we are expanding our partnerships across the Chicago and Evanston campuses to help facilitate some of the great research already taking place. By promoting the scope of investigation, we will explore the basic mechanisms of vascular development and maintenance that are critical for function, not only of the heart, but of the eye, kidney, and lung, and how they interact with one another."

Susan Quaggin, MD, director of Feinberg Cardiovascular Research Institute, chief of nephrology, and Charles Horace Mayo Professor of Medicine

THROUGH NORTHWESTERN MEDICINE, WE ARE CREATING A NATIONAL EPICENTER FOR HEALTHCARE, EDUCATION, RESEARCH, COMMUNITY SERVICE, AND ADVOCACY.

NORTHWESTERN MEDICINE

Northwestern Memorial HealthCare and Northwestern University Feinberg School of Medicine are seeking to impact the health of humankind through Northwestern Medicine. We aspire to be the destinations of choice for people seeking quality healthcare; for those who provide, support, and advance that care through leading-edge treatments and breakthrough discoveries; and for people who share our passion for educating future physicians and scientists. Our commitment to transform healthcare and to be among the nation's top academic medical centers will be accomplished through innovation and excellence.

Through the Heart Institutes at Northwestern Medicine, we have worked in earnest to become the "go-to" center for heart and vascular disease care; to be the innovators of novel therapies and the purveyors of clinical excellence; and to serve as the trusted source of information for our lay and professional communities on all matters pertaining to heart and vascular disease. We invite interested friends to join us by supporting our exceptional clinicians and scientists, breakthrough basic, translational, and clinical studies, and innovative, new clinical/research programs, such as the Martha and Richard Melman Family Bicuspid Aortic Valve Program, the first-in-the-world program for patients and families with the inheritable heart valve problem.