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UNMC celebrates naming, groundbreaking for iEXCEL home

The University of Nebraska Medical Center is poised to transform health care education, and – as aviation simulation changed the flight industry – propel the training of doctors, nurses and allied health professionals into the next generation with emerging virtual and augmented reality.

UNMC's goal? To provide the highest quality of patient care and safety through the adoption of simulation to improve human performance and effectiveness in health care.

Today, the university held a ceremonial groundbreaking for a building that will change the education and technology landscape in Nebraska. They also announced a leadership gift from the Dorothy B. Davis Foundation of Omaha, as well as major donations to the University of Nebraska Foundation from other individuals and organizations, to help make the building possible. The \$118.9 million facility is being funded through a combination of private donations as well as funds from the City of Omaha, State of Nebraska and U.S. Department of Health & Human Services.

Consistent with University of Nebraska Board of Regents policy, the building will be named the Dr. Edwin Davis & Dorothy Balbach Davis Global Center for Advanced Interprofessional Learning (Davis Global Center) – in recognition of Dr. Davis, a longtime UNMC physician and educator who was a forerunner in incorporating new technology to enhance learning, and his wife Dorothy.

The Davis Global Center will house UNMC's iEXCELSM (Interprofessional Experiential Center for Enduring Learning) program and expose learners at all stages in their professional development to clinical training exercises and surgical skills training in realistic simulated care environments using advanced simulation technologies, as well as virtual immersive reality, augmented reality and holographic technologies.

"We are very grateful to the Davis family and to our other generous benefactors for their support and enthusiasm for this project, which will transform the way health professionals learn new skills and acquire new knowledge," said UNMC Chancellor Jeffrey P. Gold, M.D. "Learners do best by having experience, whether it's learning how to play a sport, a musical instrument or, in my case, do cardiac surgery. The more experience, the more practice, the more hands-on opportunities we get the better off we are to deliver high quality, safe, effective and patient-centered care. This center will achieve all of those goals and continue to bring Nebraska to the epicenter of the learning world."

In addition to the Dorothy B. Davis Foundation of Omaha, the other major benefactors of the new facility include:

- Clarkson Regional Health Services
- Robert B. Daugherty Foundation of Omaha
- Howard and Rhonda Hawks of Omaha
- Hawkins Sisters Foundation of Omaha
- Peter Kiewit Foundation of Omaha
- Ruth and Bill Scott of Omaha

- Suzanne and Walter Scott Foundation of Omaha
- Martha and David Slosburg of Omaha
- Dorothy and Stanley M. Truhlsen, M.D., of Omaha

The multi-level Davis Global Center at 42nd and Emile Streets in Omaha will:

- Result in new and relevant learning methods, including the creation of 3-D/Virtual and Augmented Reality content, clinical and surgical training modules, research and development opportunities, and interprofessional learning.
- Feature such state-of-the art technology as the iEXCEL Helix – a unique extended 280-degree curved screen creating a 2-D/3-D immersive environment; the first-of-its-kind laser-based 3-D iSpace – a five-sided virtual immersive reality environment; and a 130-seat holographic theater.
- Form the hub of a statewide network of interconnected simulation centers for the professional development of health care providers across the state.
- Collaborate with industry to provide new research and development opportunities.
- Contribute to workforce development and economic growth for Nebraska, creating up to 325 well-paying jobs.
- Generate an annual economic impact in Nebraska of approximately \$40 million (Tripp Umbach study).
- Offer specialized training opportunities in simulation technology and 3-D/Virtual and Augmented Reality content development.



The nearly 192,000-gross-square-foot center has been developed to help transform health care education from the traditional lecture-based model to embrace more “hands-on” engagement that addresses skills competencies, including teamwork. Studies show that experiential learning yields greater retention than lectures, as well as improves proficiencies. As a result, the traditional “See one, Do one, Teach one,” model will be supplemented with human patient simulators; surgical simulation; and interactive visualization technology such as head-mounted displays; 2-D interactive, touch-screen learning walls; and 3-D and Virtual Immersive Reality (VIR) environments.

“Incorporating experiential learning into the curriculum is important,” said UNMC student Cindy Chou, who will graduate in May with her M.D., Ph.D. “Studies have shown that with traditional lectures, there is about a 5 percent retention rate of knowledge, whereas if you have hands-on practice or immediate application, it increases the rate up to 90 percent. So, in that sense, we really need to be doing more active learning and more practicing.”

In partnership with industry collaborators, UNMC will develop curriculum content for the visualization devices, as well as train a specialized workforce with expertise in content development.

Construction of the project is funded by:

- The City of Omaha (\$10.7 million);
- The State of Nebraska (\$25 million toward design and construction; the state also will contribute toward the annual operating cost); and
- Other private and public sources.

A \$19.8 million federal grant from the U.S. Department of Health & Human Services does not provide funding for building construction, but does provide funding for specific equipment and technology within the building.

Also housed within the facility will be the National Center for Health Security and Biopreparedness. Funded by the U.S. Department of Health & Human Services, the center will enable UNMC to teach federal health care personnel procedures in treating highly infectious diseases.

Naming the facility after the Davis family is a fitting tribute, Dr. Gold said: “With the family’s legacy in education and pursuing new technologies, it seems fitting that they would be part of this milestone project to improve teaching.”

Pam Swisher, executive director of the Dorothy B. Davis Foundation, agreed. “What Dorothy and Edwin wanted the family to do is to find good causes, wonderful projects in the community to invest in, and there seemed to be no better match for Dr. Edwin Davis than this project at UNMC. He was somebody who loved technology – probably technology before we even called it technology – and iEXCEL and the Global Center for Advanced Interprofessional Learning, it seems, would be a project near and dear to his heart.”

Dr. Davis, a physician and faculty member who served as chairman of the urology department at the University of Nebraska College of Medicine from 1920 to 1953, was involved in the use of early technology to assist him as he lectured. He used a box that worked something like the View-Master, a vintage children’s toy. Created especially for him by a family member, Dr. Davis used the box around the country as he lectured on new treatment protocols in urology. He also was instrumental in the development leading to mercurochrome-220, as a new germicide.

In 1921, Dr. Davis married Dorothy Balbach of Omaha, and they had three children, Edwin Jr., Neal and Willa. Both of Dr. Davis’ sons became physicians. A homemaker, mother and community volunteer, Dorothy also was the catalyst behind the family’s decision in 1957 to join Warren Buffett in the launch of his business venture. “It was Dorothy’s tenacity and foresight that has allowed the family to make this investment at UNMC,” Swisher said.

Dr. Davis died on Feb. 17, 1964 at age 75. Dorothy died April 12, 1980, at age 80.