

# State faces critical need for medical education

By Melanie Robbins '06M.A.



The University of Nevada School of Medicine is struggling to keep pace with the skyrocketing health care needs of the citizens of Nevada.

That's why the Board of Regents recently voted to set funding for the Health Sciences Education Building on the Reno campus as its top priority in the upcoming legislative session.

In the recent swath of budget cuts that hit the state, some \$35 million in matching funding for the \$48 million, 51,000-square-foot building was cut. Tellingly, \$3 million in planning funding was retained, indicating that the

project was of high priority for the state, as well as the Nevada System of Higher Education.

Vice President for Health Sciences John McDonald explains the dire need for the building, as well as expansion of health sciences programs statewide:

"The University of Nevada School of Medicine started 40 years ago as a community-based school at about the same time as a number of other medical schools were started around the country," he says. "The goal was, and still is, to train practitioners for the state of Nevada."

## Critical shortage

Now, the state of Nevada is facing a critical shortage of nurses and doctors, with both groups ranking among the lowest provider-to-population ratios in the nation. A 2007 report by the U.S. Department of Health and Human Services shows Nevada as leading only California in having the lowest number of registered nurses per capita in the nation.

A 2006 study by LarsonAllen, a Minnesota firm tasked with evaluating Nevada's medical education and capacity, concluded that the state's medical school is too small to meet the state's growing needs, and recommended



Rendering courtesy SWB Architects

*The 51,000-square-foot Health Sciences Education Building is the Board of Regents' top funding priority. The building will allow the University to expand its physician and nurse education programs.*

developing a health sciences center so that medical and graduate medical education opportunities would increase dramatically.

“Forty years ago, nobody anticipated what the state would look like now,” McDonald continues, “a major population center in the south, a booming population center in the north, and the entire state the fastest-growing in the country the last 20 out of 21 years.”

## NUMBERS:

School of Medicine spending on medical education, patient care services and capital improvements generated **\$120.2** million in total output in 2006. School of Medicine activities generated **\$39.5** million in employee compensation and **\$3.8** million in other income to Nevada businesses. In addition to the **1,671** faculty, resident and staff jobs, School of Medicine activities directly and indirectly support another **962** jobs in other businesses across the state.

*Source: The Impact of the University of Nevada School of Medicine on the Nevada Economy (April 2007)*

Other states that started their medical schools at the same time as Nevada have managed better than Nevada to deliver health care professionals to their communities.

“We have a high-quality medical school, but we don’t have a complete medical school,” McDonald says. Having residencies and fellowships—post-graduate specialty training—in state is key to retaining doctors in Nevada. “Research shows that if physicians complete their residency training in a given location, they are much more likely to stick, to practice in that location,” McDonald notes.

Currently, Nevada loses many of its students to out-of-state post-graduate programs. While Nevada graduates are highly competitive, matching with programs of their choice virtually 100 percent of the time, “We’d like to be able to offer them the choice to stay here,” he says. But growing residency training programs requires dedicated faculty. The School of Medicine has the lowest ratio of faculty to residents in training of any of the surrounding states. Moreover, the school lacks some of the critical core specialties such as pulmonary medicine, gastroenterology, cardiology and neurology. “We don’t have fellowships in any of these

specialties, so our students seek residencies in programs where they have a greater opportunity to be accepted into fellowships.”

### Evolution of health care

In addition, health care in the United States is being forced to evolve due to its high cost—higher than any other developed country—and inefficiencies.

“Our health care costs per individual are twice that of any other developed country,” McDonald says. “More than 16 percent of the gross domestic product goes to health care; that’s roughly one dollar in six—an astonishing figure. It’s actually the largest segment of the economy. It’s twice the defense budget.”

If we were paying for high-quality, well-managed care that served everyone, this might be acceptable, but we’re paying for a system that fails to cover some 47 million who are uninsured, and focuses on acutely ill patients and trauma victims, rather than chronic disease, which accounts for the bulk of the cost.

### Integrated care

A preponderance of health care dollars is spent managing about 20 common, chronic ill-



Photo by Theresa Dama-Douglas

Recent graduate Whitney Ice '08 (nursing) receives airway management instruction from Assistant Professor Kim Baxter. "I know for a fact that patient simulators like 'Frank' (SimMan) help students when they enter the workforce with live patients," Baxter says. "When nurses are called into duty, it seems that muscle memory kicks in. There isn't always a lot of time to think when someone is crashing."

nesses such as arthritis, heart disease, diabetes and hypertension, McDonald notes. Research shows that there are better outcomes at a lower cost for those who suffer from these diseases when they are cared for in an integrated health care system—so-called "one-stop-shopping"—such as that pioneered by the Veterans Administration, which employs a team approach and uses an integrated electronic medical record database.

An integrated electronic database will include the health, medication and allergy history and will flag any new team member with appropriate information, such as reminders about preventative measures or when it's time for a routine checkup.

"A person with diabetes, for example," Mc-

Donald explains, "needs foot exams, nutrition counseling and tests for kidney function. In an integrated system, you don't need reminders to schedule the patient for these elements of care, they pop up electronically and keep reminding you until the tests and visits are completed."

The lack of integrated systems results in an accumulation of redundancies: repeated unnecessary tests, disarray and mistakes made in medication and health histories, and wasted time spent giving each new provider health, insurance and medication information. These inefficiencies drive costs up, with ramifications beyond health care. "In a global economy, it's increasingly difficult to have 8 or 10 percent more added to the cost of your product due to health care costs for workers," McDonald says.

## Team approach

To meet demand for health care practitioners educated to work as an integrated team—nurses, doctors, social workers, nutritionists and others—the University of Nevada, Reno recently reorganized to create a Division of Health Sciences that includes the schools of medicine, nursing, social work, public health and other units, many of which were in the College of Health and Human Sciences. (See chart below.)

Patsy Ruchala, director of the Orvis School of Nursing, says the integration of the health sciences programs will bring together faculty and students in a way that facilitates joint learning: "Both medicine and nursing have their own curricula that they have to impart to their students, but when our students graduate, they will be working together as part of a team."

One joint learning opportunity will come about by consolidating the human simulator resources of medicine and nursing once the new Health Sciences Education Building is built. The facility is earmarked for joint use by nursing and medicine. Currently, medicine

# Division of Health Sciences

**John McDonald**  
Vice President of Health Sciences



**School of Public Health**  
Dana Loomis, director



**School of Social Work**  
Denise Montcalm, director



**Orvis School of Nursing**  
Patsy Ruchala, director



**School of Medicine**  
Ole Thienhaus, dean



**Gerontology**  
Betty Dodson, director

uses “Stan,” a virtual male (although Stan has some interchangeable parts), while nursing uses “Noelle,” a simulated pregnant woman and baby, as well SimMan and SimKid. Human simulators are robots that can be programmed to simulate many real-life critical situations, for example, cardiac arrest, or in the case of Noelle, who “gives birth to a baby,” an obstetric emergency. If these robots receive the wrong treatment, they will respond as a live patient would, and will even “die.”

## Fast-track programs

One way to address the need for additional doctors and nurses is to fast-track nursing and medical education programs. In order to bring more doctors and nurses to the community more quickly, both nursing and medicine have developed fast-track programs.

The education of doctors takes anywhere from 12 to 16 years—eight years to earn an undergraduate degree and graduate from medical school, followed by a minimum of three years, often five, in a post-graduate residency program, and then another one to three years in a specialty fellowship. To speed up the process, the School of Medicine has developed

a B.S. to M.D. accelerated degree early admission program, which will launch this fall. The program allows motivated, bright high school students to apply to the School of Medicine in their senior year, with guaranteed acceptance three years later, as long as they successfully complete the rigorous academic program. The B.S. to M.D. shaves one year off their undergraduate education and lets students skip the grueling process of applying to various medical schools.

The Orvis School of Nursing has long been at the forefront in providing innovative nursing education. They were the first nursing education program in Nevada and the first in the state to provide both bachelor’s and master’s degrees in nursing. The entry-level BSN program runs year-round with classes in

fall, spring and summer. This pace, while intense, allows students to graduate and become eligible to enter the workforce one semester sooner than if they were on a traditional fall-spring schedule. The R.N. to BSN program is an online program for registered nurses who have already completed an associate’s degree in nursing to obtain a bachelor’s degree. The Orvis School of Nursing also offers a master’s degree in nursing to prepare nurses at the graduate level as clinical nurse leaders, nurse educators, and family nurse practitioners. **N**

*For more information on ways to support health sciences at Nevada, please contact Stefanie Scoppettone, director of development for the School of Medicine, at (775) 682-9143 or email [scops@unr.edu](mailto:scops@unr.edu).*



Photo by Jean Dixon

*University of Nevada School of Medicine’s Class of 2008 consisted of 49 graduating students, who celebrated completion of their medical education by receiving their academic hoods and reciting the Hippocratic Oath, which reaffirms their commitment to the medical profession.*

Photos by Theresa Danna-Douglas

# Health Sciences



**Sanford Center for Aging**  
Larry Weiss, director



**Campus Recreation and Wellness**  
Steve Pomi, director



**Center for the Application of Substance Abuse Technologies**  
Nancy Roget, director



**Center for Program Evaluation**  
Elizabeth Christiansen, director



**Nevada Center for Ethics and Health Policy**  
Noel Tiano, director