By expanding programs in the Twin Cities and Rochester, the School of Nursing addresses the shortage of nurses while opening up opportunities to new students like Sarah Telljohn. Page 8.
A newborn lamb meets a young admirer at the Miracle of Birth Center at the Minnesota State Fair this summer. The lamb, held by College of Veterinary Medicine student Brandi Hurwitz, was one of the 41 born at the typically jam-packed Fair attraction. Fairgoers also witnessed the births of 16 calves and 114 pigs.

Dental student Dan Kersten grabs a spot near the doorway to the UCare Tooth Care Winnebago as he takes notes on a patient. Page 6.

Deborah Powell, dean of the Medical School, talks with students (from left) Ann Knapp, Derek Johnson, and Amy Fox, president of the Medical Student Council. Page 12.

FIT FOR FUN 5
A program for girls that encourages good eating and exercise habits before bad ones take hold.

ON A ROLL 6
A partnership with UCare Minnesota is helping to fill the gaps in dental care for underserved Minnesotans.

SPECIAL FOCUS: CANCER SF 1-4
Cancer Center researchers strive to understand cancer so that they might develop better treatments.

A new course and CD-ROM help freshmen by cutting through the mythology around college drinking.

Dramatic shortages of nurses in Minnesota have prompted creative initiatives and incentives to attract more nursing candidates.

The field of physical therapy has become increasing complex, which is reflected in a change to a doctoral-level degree.

Pharmacy students and community members have a chance to help each other through an award-winning program.

Deborah Powell, the Medical School’s new dean, brings a wealth of experience to the challenges of medical education.
On October 9, the new Molecular and Cellular Biology building was dedicated. Housing some 70 researchers, the new building provides state-of-the-art research facilities for scientists from the Academic Health Center and the College of Biological Sciences, in addition to classrooms for students in AHC and CBS programs. While it is an upgrade, this building does not represent new space; it simply replaces the former Owre-Millard-Lyon complex. “The Molecular and Cellular Biology building is part of our process of renewal,” says Frank Cerra, senior vice president for health sciences. “The investment in this outstanding facility continues our momentum toward improved health-care education, treatments for diseases, and the health of our communities around the state.”

During his July 11 visit, President George W. Bush said he invited himself here because “Minnesota is one of the leading centers of health care innovation in our country.” In his address to the public, the president cited the University’s outstanding Cancer Center, pioneering bone marrow transplant program, and contributions to the development of medical devices. He also met privately on campus with a panel of patients, advocates, and AHC experts to discuss health care issues.

Walter Low, neurosurgery professor, led a team of researchers that found that a non-toxic bile acid produced in the body prevents apoptosis, or programmed cell death, in mice with Huntington’s disease. This finding, published in the Proceedings of the National Academy of Sciences USA, may eventually lead to a treatment for patients with Huntington’s disease, a so-far untreatable neurological disorder.

Is it true that eating tomatoes can enhance prostate health? How much caffeine is too much? “Ask the Expert” and find out. In a new online service, health professional experts at the University of Minnesota answer a health-related question daily. Question forms and answers can be found at www.healthtalkandyou.com.

“We want to be of service to University students and the community at large in providing career counseling to undergraduate students on the health professions,” says Judy Beniak, registered nurse and director of the brand-new Health Careers Center, located in Moos Tower. The center is a collaborative effort among schools in the Academic Health Center, the College of Biological Sciences, the College of Liberal Arts, and a number of other University units. The goals of the center are to provide information, resources, and encouragement to students considering health-care careers. For more information, see the Web site at www.healthcareers.umn.edu, e-mail Health.Careers.Center@umn.edu, or call (612) 624-6767.

Incorporating herbs into medical care will be a focus for Gregory Plotnikoff during a sabbatical in Japan. The former medical director for the AHC’s Center for Spirituality and Healing, he is the first American doctor invited to study traditional Japanese medicine at Keio University Medical School and the University of Tokyo Medical School. “Few, if any, Americans are aware of these standardized, approved, safe, and effective herbal medicines,” Plotnikoff says.

The AHC’s commitment to interdisciplinary education was a major draw for Peggy Martin, who became the new director of the Occupational Therapy program in September after heading the program in University of Wisconsin-La Crosse. A native of Rochester, Minn., who earned her B.S. at the U, and her M.S. at the University of Illinois, Martin also is studying for her doctorate in adult education. “I’m particularly interested in how expertise develops and how interdisciplinary education evolves,” says Martin, “so we can have more proficient health professionals.” One of the Allied Health programs within the Medical School, occupational therapy prepares students to work with children and adults who have physical, cognitive, or emotional disabilities that interfere with their ability to engage in life’s tasks. “Currently, there is a renewed interest in chronic care,” says Martin. “We anticipate an increasing shortage of occupational therapists.”
Being overweight or obese is much more than a cosmetic problem. "Approximately 300,000 deaths a year in this country are currently associated with overweight and obesity," according to the Surgeon General's 2001 Call to Action to Prevent Overweight and Obesity.

"Thirteen percent of children and adolescents are overweight," says Mary Story, a professor in the School of Public Health's Division of Epidemiology. "That's three times the number of children and adolescents as in 1980." She adds: "Obesity and overweight is an epidemic among all population groups, but it affects more African-American girls and women than Caucasians."

Story was principal investigator in a 12-week pilot program for African-American girls ages 8 to 10. Its goal was to develop and evaluate a community- and family-based program to promote healthy behaviors and, in effect, encourage good habits before the bad ones take hold.

The National Institutes of Health and the National Heart, Lung and Blood Institute funded this collaborative, multi-center project with the University of Minnesota, Stanford University, the University of Memphis, Baylor College of Medicine and George Washington University. In Minnesota, the project recruited girls from four elementary schools in Minneapolis and St. Paul.

“The increase in children's weight over the last 25 years points to environmental factors. First, society encourages inactivity,” says Story. “We drive everywhere when we could walk. Forty-seven percent of kids have a TV in their bedroom. At the same time, children snack more and consume more highly sweetened food. They drink three times the number of soft drinks they did 20 years ago. People eat out more and portions are huge.”

Story's group created a program to target those issues and tailored it to the girls' cultural needs and interests. Above all, says Mary Smyth, a public health specialist in the Division of Epidemiology who developed the curriculum for the program, "we wanted to make it as much unlike school as possible."

No dreary talk of calorie counting for these girls. Instead, the 67 girls who participated were randomly placed in either the Girlfriends for Keeps (Keys to Eating healthy, Exercising, Playing, & Sharing) Club, which was the intervention group, or the GEMS Club comparison group.

“Girlfriends” met two afternoons each week. The Gems Club, a less elaborate program, met once a month on Saturday mornings. Both groups encouraged physical activity and eating more fruits and vegetables, while discouraging consumption of high-fat items. Activities included African dance, double-Dutch jump rope, and preparing healthy foods.

Because this was a pilot program, the researchers did not expect significant effects on the girls' health. But they observed an enthusiasm for healthy lifestyle and strong, consistent participation both with the girls and their families. The Girlfriends program featured family fun nights that included dinners and opportunities for girls to show their families what they had been learning in the program. Rochelle Washington of Minneapolis says, "It's all my daughter talked about. She taught my family a lot and we do things together that we didn't do before. The program brings families together."

Says Story: "We hope to get a grant to continue the program. We would also like to make it multi-ethnic and include girls from all races and ethnic groups."

"It’s all my daughter talked about. She taught my family a lot and we do things together that we didn’t do before.”

—Parent Rochelle Washington

Promoting healthy eating and exercise in African-American girls.

"Meeting the Challenge of Obesity” is the topic for the School of Public Health Roundtable November 1. For more information, see www.cpheo.umn.edu/roundtable/ on the Web or call (612) 626-4515.
Through a partnership with UCare Minnesota, dental students take to the road to reach more patients.

“We can provide a lot of care for people in a lot of places,” says Dan Kersten, a fourth-year student in the School of Dentistry who volunteered for service in the new UCare Tooth Care mobile dental unit. With three dental chairs and contemporary equipment, the spiffy new 37-foot Winnebago—owned and operated by UCare Minnesota—started rolling down the road in August. School of Dentistry students staff the unit and treat patients under faculty supervision. Patients who live in small towns and rural areas will especially benefit, says Kersten, who’s originally from Kimball, Minn.

The mobile dental unit is the latest extension of the dental school’s educational and outreach programs—which also include patient-care services on the Twin Cities campus, portable clinics that visit as many as eight sites around the state, and a permanent clinic on the Iron Range, in collaboration with Hibbing Community College. In 2000, the school’s dentistry and dental hygiene students provided more than 8,000 dental procedures to underserved Minnesotans, making it the number-one provider of dental services to public program patients who receive benefits from Minnesota Health Care Programs. As a result, the school has been designated a “critical access dental provider” for the state’s Medical Assistance program.

To improve access to dental care for MHCP recipients, legislators passed a number of bills in 2001, including one that increases reimbursements for clinics that treat a disproportionate share of public program patients. Still, many continue to have difficulty accessing dental services. “And, even with the increase, reimbursement rates remain lower than the cost of providing care,” says David Born, director of the Division of Health Ecology for the School of Dentistry.

So the school remains committed to the underserved. “Community outreach is central to the school’s educational and service mission,” says Dean Peter Polverini. Such programs are like internships. “Students enhance their clinical skills by treating a greater variety of patients and patient pathologies. And they are responsible for total patient care.” In contrast to medical students, dental students graduate ready to be licensed and to practice unsupervised as a general dentist.

The School of Dentistry is the perfect partner for this effort,” says Nancy Feldman, UCare Minnesota’s president and CEO. “We share a common mission of reaching out to underserved communities and finding creative solutions to meet their health care needs.” UCare is an independent HMO serving more than 100,000 members. More than half are children under 18, who are enrolled in income-based programs such as MinnesotaCare. Accessing dental care has been especially frustrating for UCare members, Feldman says, so UCare purchased the mobile dental unit to bring dental services to them.

In the UCare Tooth Care Winnebago, which can schedule about 35 patients a day, the space is a bit tight but not cramped. Students provide mainly preventive care, along with some restorative services, to patients under the supervision of Paul Schulz, a graduate of the School of Dentistry and a practicing dentist for 15 years. Schulz specialized in dental care delivery for underserved children and adults at the Indian Health Board, was a faculty member of Lakeland Academy, and has been a part-time clinical instructor at the school.

The UCare Tooth Care mobile dental unit is one step. But Minnesotans and others face a future, critical shortage of dentists, explains Born. “Virtually every state is also experiencing an aging dentist population, so there will be an increasing demand from surrounding states for Minnesota’s dentists. The entire central states region is looking ahead to shortages.” With creativity and partnerships, the School of Dentistry and its partners aim to fill those gaps in dental care.
Hope is a driving force for the many University of Minnesota researchers, physicians, and health-care providers working on cancer. Hope lives in the prevention and early detection of cancer, in developing new, more effective treatments, as well as in offering emotional support and improving the quality of life of those with cancer.

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. One in three persons will have cancer in their lifetime. It is the second leading cause of death in the United States, causing one in every four deaths, a rate that is exceeded only by heart disease. In 2001 about 553,400 Americans died of cancer, more than 1,500 people a day.

“Cancer may always be with us,” says Les Robison, associate director of the University’s Cancer Center, “but it’s not the death sentence people once thought. This is particularly true in childhood cancers, where the chances of survival have increased over the years.”
Robison is one of more than 350 professionals working at the University’s Cancer Center, one of only 40 National Cancer Institute-designated comprehensive cancer centers in the country. It represents nine university colleges and schools and eight area hospitals and clinics. Members—researchers, physicians, scientists, nurses, pharmacists, veterinarians, public health professionals, and dentists—collaborate on investigations that improve cancer prevention, detection, treatment, and quality of life. The center also engages in community outreach and public education efforts.

Marva Bohen, a registered nurse who has been working in oncology for more than 20 years, offers support and information through the Center’s Cancer Information Resources Line. Answering up to 85 calls per day, she responds to concerns about treatment options with someone recently diagnosed, lets a family member know about area support groups, and answers questions on many other topics.

“Oftentimes, people will have questions after they have seen their physician,” says Bohen. “For instance, after they’ve had time to digest the initial information given about their diagnosis.” Also, family members may not have a chance to talk to the physician unless they were present at the appointment.

“We found that individuals with cancer had just as much hope as healthy adults, which is contrary to what many people think.”

—Janice Post-White

“Always, my goal is to help that person with their immediate needs and to let them know the resources available to them. If they call crying, at the end of the call, I want them to have an idea of the next step to take,” says Bohen.

But Bohen also goes out into the community, educating, and lending support. “To me, a big part of this work means letting the community tell me what’s important to them.” Bohen is chairperson of the Minnesota Outreach Coalition, a group of outreach workers who promote health education and access in minority communities. Through the Minnesota Breast and Cervical Program, they offer free or low cost mammograms and pap smears to women who meet certain income guidelines.

Felicia Hodge, from the School of Nursing, works to improve cancer screening rates among American Indians, in part, by telling stories. “Talking Circles is a well-known method of intra-group communication in Indian communities,” says Hodge. A trained American Indian woman facilitated the Circle meetings, using traditional Indian stories to educate about cervical cancer and promote the importance of screening exams. “Storytelling really empowered these women,” says Hodge.

Knowledge is essential for Janelle Willard, a childhood cancer survivor. “I have a yearly physical and my physicians are aware of my history,” she says. “I’m lucky. I’m healthy.” She was 10 years old, nearly 30 years ago, when she was diagnosed with leukemia. “Looking back, I was really frightened, but every day I was in the hospital, people came to visit me. My family, friends, teachers, the nurses and doctors—they all helped me get through this. They gave me hope.”
Approximately one in every 350 individuals living in the United States develops a cancer before the age of 20. In the 1940s and '50s, few children survived. Beginning in the 1960s, however, researchers discovered ways to design new therapies. Currently, more than 70 percent of children diagnosed with cancer can be expected to be long-term survivors.

The Childhood Cancer Survivor Study (CCSS)—a collaborative, multi-institutional study coordinated through the Cancer Center and funded by the National Cancer Institute—follows more than 20,000 individuals who survived five or more years after treatment for cancer, leukemia, tumor, or other cancer diagnosed during childhood or adolescence. Willard is part of this study.

To varying degrees, childhood cancer survivors are at risk of developing second cancers and of experiencing organ dysfunction, reduced growth and development, decreased fertility, and early death, says Robison, principal investigator for the CCSS.

“While the impact of the diagnosis of cancer in a child is clearly devastating for those affected,” he says, “the fact that the prognosis is currently favorable for the vast majority is simply remarkable.”

“We found that individuals with cancer had just as much hope as healthy adults, which is contrary to what many people think,” says Janice Post-White, School of Nursing. “Patients with cancer told us that they derived hope by finding meaning, relying on inner resources, having affirming relationships, living in the present, and anticipating survival.” Hope, she adds, is not wishful thinking. “Hope entails self-determination and the fortitude to persevere despite loss.”

Post-White knows about hope first-hand. In 1997, her 4-year-old son was diagnosed with acute leukemia. “It was encouraging to know that 80 percent of children with acute lymphoblastic leukemia survived,” she says. “We tried to ignore the reality that 20 percent wouldn’t survive.... We held onto the belief that the odds were in our favor.”

They were. Her son is now 10 years old and two years off treatment with no evidence of disease.

“Curing and improving quality of life are two intimately linked aspects of patient care,” says Peter J. Polverini, dean of the School of Dentistry. His research on angiogenesis inhibitors, drugs that prevent new blood vessel formation, has applications well beyond dentistry. Tumors require a continuously renewing blood supply for growth; Polverini and his team are looking at ways to interfere with the endothelial cells that supply blood to tumors. “By making endothelial cells in the tumor more sensitive to anti-tumor drugs, we can kill the tumor by stopping its blood supply. In this way, lower doses of chemotherapy can be used, and chemotherapy is not only more effective, but it’s less toxic to patients,” he says. He hopes to bring this to clinical trial in the next few years. “Ideally, we’ll be able to target early symptoms, which would cause much less discomfort for patients.”

Improving patients’ quality of life also concerns Patrick Mantyh, professor of preventative sciences at the School of Dentistry, who deals with painful bone cancer. “Pain can be as devastating as the disease itself,” says Mantyh, who works with orthopaedic surgeon Denis Clohisy. By understanding the mechanisms by which tumors cause pain and how this sensory information is processed, they hope to develop new therapies that will fundamentally change the way cancer pain is controlled.

There’s no pain for Aija Vikmanis doing 108-pound leg extensions at the University’s Recreation Center. Vikmanis is part of a study looking at the effects of weight training on women who have had breast cancer. “Weight-wise, there’s not been much difference,” says Vikmanis, “but let’s just say the package is different.” She laughs. “Less jiggling. And I feel stronger.”

By studying Lady, a 6-year-old with lymphoma, veterinary oncologist Elizabeth McNiel hopes to also learn more about human cancers.
The study, led by Kathryn Schmitz, an epidemiologist in the School of Public Health, examines how exercise strength training affects body fat percentage, depressive symptoms, health-related quality of life, swelling associated with the removal of the lymph nodes (lymphedema), and risk factors for chronic disease like heart disease, diabetes, and even breast cancer recurrence.

“We do not have consistent guidelines for what women should or shouldn’t do in terms of physical activity, following treatment for breast cancer,” says study coordinator Rehana Ahmed.

While the researchers do their analysis, Vikmanis plans to continue her training. She’s already enlisted her husband to accompany her to the gym twice a week.

Another patient cannot share her opinion. Lady, a 6-year-old cocker spaniel, has been coming to Veterinary Medicine’s Small Animal Clinic since March, when she was diagnosed with lymphoma. “Unfortunately, we cure very few dogs with lymphoma,” says Elizabeth McNiel, veterinary oncologist.

But dogs like Lady, who come to the University with naturally occurring cancers, help McNiel and her colleague Mike Henson complete their work in comparative oncology. “By looking at dogs with cancer, we can find out a lot of information that may be applicable to people,” says McNiel. Genetic factors, for instance, are easier to look at because dogs have multiple generations in a shorter span of time than humans. Also, many of the risk factors for cancer are similar. “Dogs share the same environment as humans, they share the same lifestyle as their owners,” she says. “These factors are important in determining cancer causation.”

For human patients, Mark Kirstein of the College of Pharmacy, helps design clinical trials with the aim of translating basic science research into applied medicine. “My interest is in maximizing therapeutic potentials for patient care,” says Kirstein. “When using two or more drugs in combination with each other, you can look at the order they’re administered, and even which drugs make the best combination. The possibilities are infinite.”

Every day, the Cancer Center’s multi-disciplinary team aims toward these infinite possibilities. “It’s our hope, and our commitment to those affected with cancer,” says Robison, “to continue to conduct the research that will not only push the cure rate higher but do so with the greatest patient care and respect.”

—Marva Bohen

For more information about cancer, check the Web site at www.cancer.umn.edu Or call the Cancer Center Information Line, 612-624-2620 or, within the five-state area, 1-(888) 226-2376.

Cancer Center public workshops include Northern Plains Regional Indian Cancer Conference, “Spirit of Eagles,” October 7-8 at Mystic Lake Casino Hotel. For information, call 952-233-4216.
Jessi Wachter’s high school friend drank too much alcohol. And he drove after drinking. The consequence? He’s no longer Wachter’s close friend.

“He asked me what happened. I told him when he figured that out to call me,” says Wachter, 18, a University of Minnesota freshman from Woodman, Wis. With that kind of maturity, Wachter will probably ace her first class, “Alcohol and College Life,” a one-credit online course offered through the School of Public Health in conjunction with release of a new CD-ROM, “Freshman Survival Skills.”

The CD-ROM is provided to 5,500 incoming freshmen and is intended to help students make wise choices as they transition from high-school teens to independent adults. Many now make poor choices, due to alcohol abuse. Those choices sometimes result in tragic consequences, according to research from the National Institute on Alcohol Abuse and Alcoholism. A few examples:

• 1,400 college students between the ages of 18 and 24 die each year from alcohol-related injuries, including motor vehicle crashes
• More than 70,000 students between the ages of 18 and 24 are victims of alcohol-related sexual assault or date rape
• About 25 percent of college students report academic consequences of their drinking, including doing poorly on exams or papers and receiving lower grades overall

Those numbers—and the fact that the University of Minnesota doesn’t offer a comprehensive alcohol education program—prompted Jim Rothenberger, an instructor in the School of Public Health, to lead a team that created the CD-ROM and online course.

“The reason we’re aiming at freshmen is that the students at greatest risk of alcohol problems are freshmen,” Rothenberger says. “If they come to campus and go wild with alcohol, they probably won’t be here for their sophomore year.”

Rothenberger adds that Minnesota public schools don’t have any formal alcohol education programs for 11th and 12th graders, “which I think is amazing.”

The CD-ROM was funded through the U’s Office of Campus Life, the Office of Undergraduate Education, and the School of Public Health. It addresses more than alcohol abuse, with sections on studying, time management, meeting new people, and local entertainment. But alcohol is the primary subject.

“If freshmen come to campus and go wild with alcohol, they probably won’t be here for their sophomore year.”

—Jim Rothenberger

Gallagher—one of nearly 200 incoming freshmen signed up for Rothenberger’s online course—isn’t interested. “I’ve been brought up not to drink.” He’s taking the course, partly because it’s an electronic course offered online and partly because “it’s about real issues that are important.”

Although Wachter says she doesn’t have any specific concerns about alcohol use on campus, she signed up for the online course after viewing the CD-ROM. “It brought up many situations that every freshman has got to be wondering about and just may not feel comfortable asking somebody.”

Though Rothenberger is obviously concerned about alcohol abuse by teens, he also wants to make sure the problem isn’t overblown. Despite national headlines that report extreme alcohol abuse on college campuses, he says the actual numbers show that “only a small minority of students are doing most of the drinking.” In addition, the University of Minnesota is below average in studies of alcohol use by college students. Still, he says, we need to be concerned about those who do drink too much.

“We don’t do exit interviews with the students who leave or are kicked out. If you dig deep enough, you’d probably find that a significant number—and maybe a majority—fail because of inappropriate alcohol use and poor time management, which leads to poor grades,” he says. “If we can prevent some of that from happening, that’s good.”

—Mark Engbergretson
Sarah Tellijohn has always wanted to help people. She did so by informing Minneapolis residents about city and neighborhood issues as a reporter for the *Southwest Journal*. After a couple of years in the field, however, she found herself wanting more. So, she quit journalism to pursue nursing. “It wasn’t as direct as I thought it would be. I wanted more of a hands-on connection, to be able to help people every day,” Tellijohn says.

The 27-year-old’s decision couldn’t have been more opportune. Dramatic shortages in nurses nationwide and in Minnesota have prompted educational institutions and health care providers to develop creative initiatives and incentives to attract more nursing candidates.

In June, the University of Minnesota Board of Regents approved two new School of Nursing programs to help address the shortages. One is a post baccalaureate certificate program offered in collaboration with the University’s Graduate School, which adds 24 students in the school’s nursing program each year. The other is the expansion of the school’s Bachelor of Science in Nursing program in Rochester, adding up to 30 students a year. The Rochester expansion is in collaboration with the Mayo Clinic and the Minnesota State Colleges and Universities, which is also adding 30 slots for nursing students.

Together, the two U of M programs increase the School of Nursing’s capacity by about 50 percent.

“This is the first step in our ongoing effort to address the nursing shortage that faces not only Minnesota, but the nation as well,” says Dean Sandra Edwardson.

Meanwhile, Fairview Health Services is offering to pay tuition—and in some cases, the cost of books and fees—for students in the U’s certificate program. In exchange, Fairview asks for a work commitment of between two and four years and students are given the option of choosing one of two hospitals: Fairview Southdale or Fairview-University Medical Center. For Tellijohn, this means:

- Up to $15,000 of her tuition will be paid by Fairview.
- She has a guaranteed job after graduating (she chose to work at Fairview-University Medical Center).
- Through the certificate program, she will graduate in 16 months instead of two years, and;
- She will earn partial credit toward a master’s in nursing.

“Although the length of the program was definitely a draw, I think what interested me the most was that I can earn credits toward a master’s degree,” says Tellijohn, a 1998 graduate of the U’s School of Journalism and Mass Communication. “When I finish the program, I will have about a third of my master’s completed.”

Twenty-one students have entered the accelerated program, which started this fall. It’s the first such program in nurs-
ing in Minnesota, and was established to help address shortages and to “provide better service to our students,” says Marilee Miller, associate dean for academic affairs in the School of Nursing. She notes that historically one-fourth to one-third of students in the school’s BSN program typically have had a degree in another field.

Thirteen of the students have signed on with Fairview’s scholarship program.

“One everybody wins in this,” says Laura Beeth, system director for workforce development and placement, Fairview Health Services. “The student gets financial assistance and a secure position when they graduate. The U can market the program up front. And Fairview gets nurses to fill open positions and we can make staffing projections. I think it’s a great partnership between Fairview and the University of Minnesota.”

The program in Rochester is in response to a 1999 legislative initiative led by the Rochester community. Thirteen students have signed up for the new program, although there’s room for 30 a year. The relatively small number this year is due to the prerequisites for students and the short time span in setting up the program.

“We expect the program to grow,” says Miller.

Lectures will be done via interactive television, linking Rochester with the Twin Cities. Clinical skills will be taught in Rochester at a new state-of-the-art lab, at Mayo Clinic, the Olmsted Community Hospital, and surrounding health care agencies.

“This gives the people of Rochester another option for nursing education from obviously a highly reputable and high-quality academic institution. And that option is highly valued,” says Linda Herrick, the coordinator for the Rochester program. Herrick, who was hired in August, has worked at Mayo Clinic for 23 years and is currently a supervisor-researcher. She earned her master’s and doctoral degrees at the U’s School of Nursing.

Faith Zimmerman, program director for health sciences at the University of Minnesota–Rochester, says that there is tremendous interest in the program. “People call and want to make sure that it’s a University of Minnesota degree and that it is in conjunction with the Mayo Clinic. You don’t find two bigger name brands in health care,” she says.

Marni Norgren, a senior enrolled in the program, echoes Zimmerman. “I think it’s a great opportunity to have a University of Minnesota degree with my clinical work done at Mayo.”

Zimmerman says that Rochester’s wealth of clinical experiences made it a natural location for expanding the U’s nursing program. Students will receive exposure to in-patient, out-patient, acute care, and chronic care clinical situations. And while most clinical work will be performed at Mayo, some—especially those related to community health—will take place in coordination with the community health agencies in the region.

Even with these two promising new programs, however, Edwardson says that fundamental changes need to be made in health care to fully address workforce shortages and patient care.

“This shortage is expected to get worse, rather than better,” she says. “The logic would tell you that the number of people available to enter nursing schools will decline as the baby boom ages; likewise, as the baby boom ages, the demand for services is going to go up.”

Edwardson and the school have been working with nurses and other Minnesota stakeholders on an initiative called “Creating a Nursing Future,” which is looking at new ways to deliver nursing services.

“Unless we address the design of how health care services are used, we’ll never be able to fill the gap. And that involves looking at how the professions work together. We know that there’s quite a lot of overlap among doctors, nurses, and pharmacists,” Edwardson says. “Our hope through ‘Creating a Nursing Future’ is that at the end of our process, we’ll have two to three models of nursing care that will be so appealing that nurses will want to work within them and that organizations will want to implement them.”

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**How severe is the shortage?**

Nearly 3,000 openings for registered nurses exist today in Minnesota, a 6.3 percent vacancy rate, according to the Minnesota Department of Economic Security. Nationwide, according to a February 2002 report for the American Hospital Association, the average nurse vacancy rate in hospitals was 13 percent.

These shortages are expected to increase in the future. According to the U.S. Bureau of Labor Statistics, more than 1 million new nurses will be needed by the year 2010; some predict that by 2020, there will be 400,000 vacant RN positions nationwide.

These shortages affect patient care. According to a February 2002 report for the AHA, respondents indicated that the nursing shortage is contributing to emergency department overcrowding and ambulance diversions.

To help address the issue, Congress approved and President Bush signed in July the Nurse Reinvestment Act, which calls for loans, scholarships, and grants for students, along with a public service campaign promoting nursing careers. The American Association of Colleges of Nursing, and the American Nurses Association applaud the legislation. However, funding for the act has not yet been approved.
Moving UP

Elevating physical therapy to a doctoral program reflects changes in the discipline.

Jeff Wiemiller, 23, already knows what his ideal job would be: traveling with a professional sports franchise as the team’s in-house physical therapist.

This summer, Wiemiller took a big step toward realizing his dream by enrolling in the Medical School’s brand new Doctor of Physical Therapy (D.P.T.) Program.

Wiemiller, a native of Winsted, Minn., represents the changing face of physical therapy. No longer are therapists employed almost exclusively by hospitals or even rehab centers. Almost 25 percent work in private group practices, while significant percentages work in school systems, corporations, academic institutions—and sports franchises. When it comes time to find a job, Wiemiller’s confident a D.P.T. will give him a leg up.

“A stronger academic background is going to be an advantage in placement,” he says. “If a practice is hiring and it comes down to choosing between a candidate with a master’s and one with a D.P.T., they’ll probably go with the D.P.T.”

The D.P.T. program reflects other changes in the profession as well. Today, therapists are routinely involved in critical decisions about the values and risks of different courses of therapy for a range of conditions like cancer, diabetes, Alzheimer’s, and hypertension that go well beyond the neuromusculoskeletal system.

“There’s no question that the responsibilities of a P.T. are expanding,” says James Carey, director of the D.P.T. program. “When I graduated in 1972, we were pretty much operating on a technical level, with the physician giving all the orders. Since then there has been an explosion of knowledge about things like the brain and pain management, both of which have major implications for physical therapy.”

—James Carey

The three-year, 146-credit D.P.T. program replaces the master of science degree in physical therapy and makes the University the only school in the five-state region (and one of only 50 around the country) that offers a D.P.T. At the moment, the University ranks 28th among the 200 college-based physical therapy programs in the country, but that ranking is sure to change.

“This program will undoubtedly improve the University’s ranking,” Carey says.

“We’re very positive about the University’s new program,” says Judith Hawley, executive director of the Minnesota chapter of the American Physical Therapy Association. “We believe the degree is a better reflection of the knowledge base practitioners are now expected to master.”

Besides improving the U’s ranking, Carey explains, the D.P.T. program will also help make patient access to therapy easier. For one, insurance companies are more likely to reimburse patients who seek help from a physical therapist without a physician referral if the practitioner is a D.P.T.

Second, by attracting more students the new program will lead to an increase in the number of therapists.

On that second point, the D.P.T. program is already a rousing success. This spring, uncertain what the ratio would be between the number of D.P.T. candidates who were accepted and those who would end up enrolling, the Medical School offered placement to 38 applicants. Thirty-five applicants decided to accept, an outstanding percentage.

“This first year we are a little overbooked,” Carey says, “but that’s a nice problem to have. With the D.P.T. degree we anticipate attracting applications from the highest caliber of students—and succeeding in getting them to come here.”

One of those students is Katie Griffith, who graduated this spring from the University of Wisconsin-La Crosse with a B.S. in psychology. In deciding where to do her graduate work, Griffith’s choice came down to her alma mater and the University.

“It was a tough decision,” she says. “Both schools have fine programs and offer a lot. But LaCrosse does not offer a D.P.T. program. That’s one of the main reasons I came to the U.”

Ten more weeks in clinical internships and more in-depth instruction are among the upgrades to physical therapy, says Jeanne Lojovich, at top, who coordinates clinical education. Here she instructs students, from right, Julie Manke, Bhakti Prabhu, and Cindy Leclerc.

Rich Broderick
What’s it like to take a dozen pills a day? How do various medications affect quality of life? What can a pharmacist do to minimize the downsides of drugs, such as adverse side effects and interactions?

Most pharmacy students learn answers to questions like these from lectures or books. At the University of Minnesota, they also learn about them in a real-life setting, thanks to an award-winning program known as Early Pharmacy Education with Community Teachers (EPhECT).

EPhECT matches students with “community teachers”—volunteers who are taking medications for chronic conditions. Each student visits his or her “community teacher” about eight times during the first two years of pharmacy school. The community teachers tell the students about their ailments and the medications they use to manage them—the benefits, confusions, complications.

The students, who visit in pairs, provide general health education and help find solutions to any health-related problems the community teachers might be experiencing. During the third year, the community teachers are invited to attend a clinic on campus, where the students interview them, then develop a personalized care plan with recommendations for modifications the community teachers can take to their health-care providers.

Lynne Janke is one of 86 community teachers, ranging in age from 30-something to 90-something, who are currently volunteering with the program. Lynne Janke is one of 86 community teachers, ranging in age from 30-something to 90-something, who are currently volunteering with the program.

“The students have been very helpful,” she says. “I learn something every time.”

At one point Janke was having eye problems that her ophthalmologist suspected was due to a medication her oncologist had prescribed as follow-up to cancer surgery. The students researched the drug, then gave her a list of things to discuss with both doctors—something Janke found immensely helpful.

“When you don’t know a lot about medicine yourself, it’s hard to come up with the questions to ask,” she says.

The students appreciate the interaction, too. “It’s just a whole new perspective,” says Erin Onnen, one of two pharmacy students who worked with Janke last year. “She offered me her opinions, her experience in the medical field, what she’s going through, which is good to hear—everything from insurance to switching doctors to special questions for us as pharmacy students.”

EPhECT was founded two years ago by pharmacy faculty members Michael Brown, Patricia Lind, and Todd Sorensen. The three saw it as a win-win proposition. Students gain an improved understanding of the patient’s perspective, see their profession in the context of the larger health care system, and get a chance to serve others. Community teachers not only learn ways to enhance their own health, they also get a much-appreciated chance to “give something back” themselves. “A lot are homebound, and they are able to volunteer from their homes,” Lind says.

Recipient of an Innovations in Teaching award from the American Association of Colleges of Pharmacy, EPhECT paves the way for students to take a proactive role in health care when they graduate—something Sorensen says is becoming more important than ever as more and more people find themselves on a multiple medications, often prescribed by multiple specialists. “We expect the pharmacist’s role in drug therapy management is going to grow considerably in the next few years,” he says.

By exposing students from the start to the concept of pharmacist as someone who can help connect the dots in the health care picture, he says, EPhECT is helping to support that new role. “There will be more and more opportunities available for them to do this. As a school of pharmacy, we have a responsibility to train them for [it],” Sorensen says.

Mary Hoff
Educating future physicians is one of the biggest challenges that Deborah Powell faces as the new dean of the University of Minnesota Medical School. Graduates from medical school face an enormous financial burden, with debt loads of $100,000 or more. In addition, she says, educators need to remember that the current students’ lifestyle choices differ from theirs, as reflected in limits to residents’ work hours and other changes from the past.

“To train the next generation of physicians,” says Powell, “we’ll need to be creative, to envision what their practices will be like in 2040 and to prepare them accordingly.”

Creatively responding to challenges is a lifelong pattern for Powell. After abandoning an early aspiration to become an opera singer—“I discovered I couldn’t sing”—she decided on caring for others’ health. Although her neurosurgeon uncle asserted that women should only be nurses, she decided to become a doctor.

After graduating from Radcliffe College, she entered Tufts University School of Medicine, one of six women in the class. She considered a career as a pediatrician and then in internal medicine. But a stint as a Georgetown University Medical Center’s pathology resident put her on a new career path, which she continued at the National Institutes of Health Clinical Center. She became a faculty member at Georgetown, then moved to the University of Kentucky Medical Center, where, after serving as vice chair, she was asked to chair the Department of Pathology and Laboratory Medicine.

After a decade as a department chair, she realized she would not be able to accomplish more unless she moved into a new department—or moved up in the leadership. “I didn’t set out to become a dean,” she says. In April 1997, she became executive dean and vice chancellor for clinical affairs at the University of Kansas School of Medicine in Kansas City. After 11 deans in 10 years, the school gained needed stability under Powell’s five years of leadership.

When an opportunity beckoned at the University of Minnesota, however, she found much that appealed to her. Minnesota, says Powell, “is already a great research institution—and is willing and ready to move forward and return to the top 20.” Powell, a distinguished researcher and a member of the Institute of Medicine, will lead the way, as she also draws upon the creativity of the faculty. She also hopes to promote among faculty a spirit of service to the community and to the state. “In short,” says Powell, “I’d love it if we could become known as the Medical School of innovation.”

Another goal for Powell, in a time when applications to medical schools are down nationwide, is to address the image of medicine as a career. To ensure the best research, care, and education in the future, medical schools need to continue to attract the best students. Says Powell: “It’s still the most satisfying profession I know of.”

— Allison Campbell

Deborah Powell is the new dean of the Medical School.