As part of the team’s research, Kahn, the Director of the Konopka Institute, interviewed elementary and secondary school principals in rural, suburban, and urban school districts across Minnesota. “They all talked about the need for a comprehensive approach,” she says. “They all focused on the culture of the school, on presenting a clear message that there would be no tolerance for violence. They also showed how much they cared for students and how much they wanted students to succeed. Students knew what was expected of them, and knew they would be treated fairly. The staff modeled those attitudes. It really was a school-wide effort.”

Many violence-prevention programs are aimed at individual students, especially those whose behavior has caused problems. One of the report’s key conclusions, however, is that comprehensive approaches to violence—those geared to families and the school community as well as individuals—work better than individual efforts. Early intervention also tends to be more effective.

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“Schools are a great delivery system, but they require the support of society at large to make their anti-violence efforts successful.”

Sadly, Kahn and Borowsky agree that what happened in Oregon and more recently in Colorado could all too easily happen in Minnesota. “Though we know some risk factors that are associated with involvement in violence, such as poverty and an urban environment, it crosses all socioeconomic and geographic boundaries,” Borowsky says. “Guns are pervasive in our society, in homes with children.”

“It’s not really about place,” Kahn adds. “It’s about the individual child involved, the stresses in that child’s life, and the access to guns that create the opportunity.”

Frank Clancy
Intern Jen Urbanz holds Half Ear, a diabetic cat treated at the U’s new veterinary intensive care unit. Owned by a staff member, Half Ear also volunteers at the unit by visiting with other patients and staff.

The expanded intensive care unit at the Veterinary Teaching Hospitals is just what the doctor ordered for cats and dogs with critical needs.

The cat's Meow

A publication for friends of the University of Minnesota
School Violence
How can we keep our schools and playgrounds safe? A study conducted by the Konopka Institute for Adolescent Health addresses this urgent question. See story on page 15.
HELPFUL AND HOPEFUL  
Thousands of people take part in clinical trials at the Academic Health Center every year to help advance research or to find a new treatment.

CLOSING IN ON DIABETES  
Transplanting islet cells, which produce insulin, holds promise as a new way to treat diabetes.

MEDICARE TO MARKET  
Could a good dose of competitive pricing help restore Medicare to health?

FACE TO FACE  
Dentistry professor Bob Gorlin is an international expert on genetic syndromes of the head and neck and a familiar face on the lecture circuit.

HOLISTIC HEALTH GOES MAINSTREAM  
The University of Minnesota is the first in the United States to offer a degree program in complementary care.

THE SWEDISH CONNECTION  
An exchange program with Sweden’s Karolinska Institute, where the Nobel Prizes are awarded, offers valuable research and education opportunities.

JOE PHARMACIST  
Joseph Hanlon, VFW Endowed Chair in the College of Pharmacy, is a national leader in education and research on drug therapy for the elderly.

THE CAT’S MEOW  
The new intensive care unit at the College of Veterinary Medicine’s Teaching Hospital is state-of-the-art.

CHRONIC COPING  
Nursing program helps families manage chronic illness in children.

SCHOOL VIOLENCE  
A national wave of violence in schools prompts study to learn why it’s happening and how to prevent it.
The School of Medicine, Duluth, was ranked fourth in the nation in rural medicine and 20th among medical schools training primary care physicians in U.S. News & World Report’s annual publication, “America’s Best Graduate Schools.”

The National Institutes of Health awarded a $15.6 million renewal grant to the Medical School’s General Clinical Research Center. A 42 percent increase over previous funding, the grant will be used to conduct research and clinical trials over the next five years in several areas related to human disease. (See story on page 5.)

A yearly screening for blood in the stool can reduce risk of mortality from colorectal cancer by 33 percent, according to a study conducted by Jack Mandel and colleagues in the School of Public Health. A screening every two years results in a 21-percent drop in mortality. The conclusions of this 18-year study were published in the Journal of the National Cancer Institute.

Community-University Health Care Center and Variety Children’s Clinic, which serves the Phillips neighborhood, will provide free dental care to uninsured children through a new program funded by Delta Dental Plan of Minnesota, the Medtronic Foundation, and Snyder Drug Stores, Inc. The three-year, $120,000-program will serve about 850 children between the ages of one and five.

University neurosurgeons are testing a “smart bomb” for brain tumors, a targeted treatment infused directly into the brain that selectively kills tumor cells but does not affect healthy cells. The smart bomb is made from a carrier molecule, Interleuken 4—which attaches to brain tumor cells—and a toxin. The University of Minnesota is one of nine centers in the nation testing this new therapy.

The U’s Graduate Program in Neuroscience hosted regional competition for the first national Brain Bee in conjunction with Brain Awareness Week in March. Structured like a spelling bee, the Brain Bee involved high school students from 11 Minnesota cities answering questions about the brain. A panel of neuroscience faculty served as judges. The winner, Leo Shklovskii, a St. Louis Park High School senior, placed fourth in the national competition held in Baltimore.

Wildlife artist Kevin Daniel, a diabetic who received a pancreas transplant at the University of Minnesota, donated limited edition prints of his work “On Eagles Wings” to raise funds for the Diabetes Institute. For information about ordering, call 612-626-2101.

Cancer Center researchers have found that tobacco carcinogens remain in the body at high levels for six weeks after smoking cessation and at low levels for up to 40 weeks. According to lead investigator Stephen Hecht, this finding is important because it shows that carcinogens disappear from the body when people stop smoking, even if the rate of disappearance is slower than believed. The findings were published in Cancer Research.
Thousands of people take part in clinical research at the Academic Health Center every year. Some become involved because they want to help advance medical research. Others are patients with cancer or other serious illnesses looking for new treatments that will offer them hope.

Dale Randall ate her way into the archives of medical research by taking part in a study to find out whether whole grains help the body metabolize insulin more efficiently than refined grains.

For twelve weeks, she had three meals a day prepared by cooks in the General Clinical Research Center’s metabolic kitchen. For the first six weeks, meals were made with refined grains, and for the second six weeks they were made with whole grains. She visited the center once a day to pick up her meals and snacks (she could also eat there) weigh in, fill out a questionnaire, and have her blood glucose level checked.

Dale doesn’t have diabetes; she served as a healthy “control” to help researchers learn about glucose metabolism in normal subjects. She says she was motivated partly by the $500 compensation fee, but also by the chance to do something useful.

“I think it’s important for researchers to be able to draw from a broad cross section of the population,” she says.

As a University employee—she manages the stockroom in the chemistry department—it was relatively convenient for her to stop by the center every day. And the skill of the metabolic kitchen’s dietitian and cooks helped her stick with the program.

“They did a good job of making everything tasty,” she says.

The metabolic kitchen, where Dale’s meals were prepared, is more like a laboratory than a kitchen, says nutrition manager Susan Raatz. All ingredients are precisely measured and weighed. But cooks and dietitians also put a lot of effort into making food appetizing. The kitchen supports a variety of studies of diets for cardiovascular diseases and diabetes, and general nutrition to prevent illness. Findings of one recent study prompted changes in national guidelines for diabetes management.

The General Clinical Research Center, located in the Masonic building, is one of the main sites where clinical research is carried out at the University. It’s part of a
Continued from Page 5

national network of about 70 federally funded centers. The National Institutes of Health recently gave the University of Minnesota’s GCRC a vote of confidence by renewing its grant for five years and increasing the award by 42 percent to $35.6 million, one of the largest grants in the Medical School’s history.

The grant will support about 80 trials for a variety of diseases, including cancer, complications of diabetes, addiction, AIDS, cystic fibrosis, and hypertension, as well as genetics and studies of brain function. Many studies will be done in conjunction with the Cancer Center and the Center for Magnetic Resonance Imaging, which houses some of the world’s most powerful diagnostic imaging equipment.

The relatively new Research Services Organization, which was created to strengthen interaction with the biomedical industry, also supports many clinical trials at the AHC. The RSO connects drug companies with faculty researchers who have the expertise needed for trials of drugs for specific diseases.

Companies the RSO works with include DuPont, SmithKline Beecham, Merck, Glaxo-Wellcome, Novartis, and 3M. Some of the studies now under way involve new treatments for chronic pancreatitis, various forms of cancer, symptoms of menopause, asthma, complications of organ transplantation, spinal cord injuries, and epilepsy. Most of these studies are carried out through Fairview-University Medical Center’s hospital and outpatient clinics.

The RSO also conducts studies of “compassionate use” drugs. These are trials of new medications that appear helpful for incurable diseases but aren’t available through other channels. Pharmaceutical companies provide the drugs, which are offered through individual physicians, and the RSO contributes staff time to set up the trials.

“I think it’s important for people to expect a public research university to make compassionate use medications available,” says Debra Dykhuis, RSO associate director.

In addition to the General Clinical Research Center and the Research Services Organization, trials are conducted by individual investigators and departments through clinics at the University and throughout the Twin Cities and greater Minneapolis. According to Moira Keane, Director of the Institutional Review Board, which approves all University research studies that use human subjects, there are about 2,000 human clinical trials in progress.

So, if you’re a healthy person who wants to help out, or if you or someone you know is looking for an experimental drug for a difficult-to-treat illness, where do you start?

Unfortunately, there is no centralized registry for all of the University’s clinical trials at this time. But you can call the General Clinical Research Center at 612-626-0476 or the Research Services Organization at 612-625-4171 to ask about trials that are open for enrollment.

Another approach is to call the department that specializes in treating specific diseases; i.e., the cardiology office, 612-625-9100, for information about heart disease research, or the Department of Obstetrics and Gynecology, 612-626-3111, for information about research related to women’s health. The University operator, 612-625-9000, can provide numbers for other departments.
Closing in on diabetes

Transplanting islet cells, which produce insulin, holds promise as a way to inhibit the devastating effects of diabetes, and perhaps even to cure the disease.

Bernhard Hering is confident that will soon change. In May, he and his colleagues at the Diabetes Institute for Immunology and Transplantation will begin clinical trials on islet cell transplantation in conjunction with a monoclonal antibody that has proved to be remarkably successful in experiments with monkeys. Rather than inhibit the immune system, this treatment, known as anti-CD154 monotherapy, essentially convinces the body to tolerate the foreign islet cells, eliminating the need for lifelong treatment with immunosuppressant drugs.

Hering describes this approach as “inducing tolerance.” It is, he says, the “Holy Grail” of organ transplantation. “This development has literally electrified the transplant field in general and islet transplantation in particular,” he adds. “This previously dormant type of procedure is now in the forefront.”

If this new approach proves to be safe and effective in this first trial, which will include a dozen or so patients, Hering will recruit more for a larger study. Eventually, he hopes that islet cell transplants will approach the 85 to 90 percent success rate seen with full pancreas transplants. Researchers at the University of Miami are conducting similar clinical trials.

Islet cell transplants have several distinct advantages over a full pancreas transplant. The procedure can be done quickly, under local anesthesia, thus avoiding the risks that accompany any full organ transplant. “There are virtually no procedural complications associated with islet cell transplantation,” Hering says. It can be done on an out-patient basis using a variety of techniques, such as laparoscopic surgery or via a catheter inserted into a liver vein. (Researchers are trying to figure out which procedure works best.) Without the long-term use of immunosuppressive drugs, islet cell transplant patients would also avoid the associated risks, such as increased cancer rates.

Doctors could also perform far more islet cell transplants than the 2000 to 3000 pancreas transplants that are done annually in this country. In the United States alone, Hering estimates, as many as half of the one million people who have been diagnosed as having Type I (juvenile onset) diabetes might be candidates for an islet cell transplant. Another two to three million people with Type II (adult onset) diabetes might also benefit. Some day, Hering says, islet cell transplants might be so simple and effective that they could be performed as a preventive measure on diabetic children.

Islet cell transplantation should also be much less expensive than a full pancreas transplant. And patients would avoid the additional cost—as much as $50,000 a year—of taking immunosuppressant drugs for the rest of their lives.

To be sure, Hering and other researchers must still overcome several obstacles before islet cell transplants become widely available. They are trying to devise better ways to harvest and isolate islet cells. (Eventually, doctors may use pig islet cells.) Because as many as half the transplanted islet cells fail to engraft during the transplant process, researchers are also trying to figure out the most effective method and location for implanting them. And, of course, anti-CD154 monotherapy may not work as well in human beings as it does in monkeys.

Still, Hering remains optimistic. “For years people have been saying that islet transplantation is just around the corner,” he says. “But then it turned out to be a long corner. Now you can say it’s at the corner. It has never been as promising as it is today.”
MEDICARE TO MARKET

COULD A GOOD DOSE OF COMPETITIVE PRICING HELP RESTORE MEDICARE TO HEALTH?

How will you pay your doctor bills when you're old and gray?

If you're thinking Uncle Sam will take care of you, you might want to think again. Thanks to rising medical costs and the aging of the baby boom, Medicare—the giant reservoir into which workers pour money and out of which flow health care benefits for retired Americans—is emptying fast. The number of Medicare beneficiaries will double in the next twenty years, but the number of taxpaying children and grandchildren of those beneficiaries will not. Under current projections, the fund could be completely depleted as early as 2010.

Advised by the nation’s leading health policy experts, a Congress-appointed national commission has been searching for a fix for the dollar-drain dilemma. Among the proposals under consideration is one by School of Public Health faculty Bryan Dowd and Roger Feldman and Jon Christianson of the Carlson School of Management. According to Feldman, the plan could shave upwards of $20 billion off the growing gap between Medicare inflow and outgo.

That’s money that could be used to increase the program’s financial stability or add benefits such as paid prescriptions or nursing home care.

“I think this will be regarded as the most significant change since the inception of Medicare 30-plus years ago,” Feldman says.

The plan sounds almost too obvious to be innovative: Let market forces determine what the government pays health care providers to take care of Medicare beneficiaries. But it would be a big change from how the cost of benefits is determined today.

“The way Medicare contracts with private health plans now is that the government tells the health plans how much the government will pay for the care of Medicare beneficiaries,” says Dowd. “In other words, the information flows from the organization that doesn’t know anything about the health plans’ cost to the organization that does. Obviously, that’s backwards. What we’re suggesting is that we turn that around and have the health plans tell the government how much it costs to care for Medicare beneficiaries.”

Of course, the health plans need some incentive to be honest when they report their costs. To solve that problem, Dowd says, the government need only follow the lead of large employers, such as the state of Minnesota. These employers collect bids from competing health plans and use the bids to determine the employer’s contribution to premiums. For example, the state of Minnesota bases its premium contribution on the lowest bid. Workers can join a more expensive health plan if they wish, but they pay the extra cost out of their own pockets. The competitive pressure of out-of-pocket premiums provides the incentive for health plans to submit bids that are close to their true costs.

Dowd and colleagues first proposed this competitive pricing system in the late 1980s, before the current Medicare crisis. Since then it’s been riding the rollercoaster of political fortune. In the mid 1990s the Health Care Financing Administration, or HCFA (the federal agency that runs Medicare) awarded the Minnesota researchers and Boston-based Abt Associates a contract to provide technical assistance to HCFA on a demonstration of competitive pricing for Medicare. The first demonstration, in Baltimore, was shut down by Congress under pressure from the health plans that contract with Medicare and from Maryland’s congressional delegation. Shortly afterward they tried another demonstration in Denver. That, too, was stopped by the health plans, but not before showing that HCFA could run a competitive pricing system, and that health plans could submit bids for Medicare enrollees.

A new round of demonstrations currently is being established in Kansas City and Phoenix. This time, however, there is an important difference—the demonstration is mandated by Congress. Always an optimist, Dowd remains confident of the ultimate success of the demonstrations.

“Our proposal is so simple and so sensible and so pervasive in the employment-based insurance market that sooner or later we’re going to get something that looks like this in the Medicare program as well,” he says. “But when you’re trying to change a program that’s as big and as important as Medicare, even if your idea is simple and technically correct, you don’t expect to see it implemented overnight. Big programs take a long time to change even if you’re only making small course corrections, and this is more than a small course correction.”

Mary K. Hoff
Bob Gorlin’s fascination with faces has helped him become an international authority on hereditary syndromes of the head and neck. His knack for story-telling has also made him a familiar face on the lecture circuit.

A snapshot of a young couple with their dog decorates the north wall of Robert Gorlin’s office on the 16th floor of Moos Tower. “Notice that all three have their tongues hanging out,” Gorlin tells a visitor. “They said they couldn’t get the dog to keep its tongue in.”

He pauses, like a professional comedian, waiting for a laugh.

Then Gorlin turns serious and points to a snapshot of a girl of six or seven whose eyes are an unusual mix of blue and green. “A beautiful, intelligent child, but notice the color,” he says. Gorlin explains that she has Waardenburg Syndrome, which causes deafness. It is one of thousands of syndromes listed in the 1990 edition of his book “Syndromes of the Head and Neck,” a text used worldwide by clinical geneticists.

Gorlin himself has identified and named more than 90 syndromes caused by genetic defects that run in families. Often facial characteristics provide clues to hidden problems that may be very serious. His work has enabled doctors to assess and treat many of these conditions, and is helping molecular biologists to find ways to prevent or ameliorate them.

A dentist by training, Gorlin, 76, came to the university in 1956 as associate professor and chairman of the School of Dentistry’s division of oral pathology. Since then, he has become one of the world’s leading authorities on genetic syndromes, winning the respect of colleagues worldwide and numerous scientific prizes. Among these are Italy’s International Prize in Medical Genetics and membership in the Institute of Medicine, which provides medical expertise to the U.S. Congress.


Gorlin continues to be in demand as a lecturer, both at the university and around the world, because his lectures are crafted from history, mythology, and humorous anecdotes. One of his most popular is about the Hapsburg dynasty of Europe and the characteristic Hapsburg jaw that resulted from inbreeding. Another is about a myth told in Mediterranean countries which holds that people whose eyebrows connect above their noses have the “evil eye.”

One of his tactics for keeping students awake during lectures is to call on a few individuals by first name. While this creates the impression that he knows the names of all of the students in a large lecture class, he actually memorizes the names of a few with unusual faces.

When babies with unusual heads, faces, or mouths are born at Twin Cities hospitals, the call often goes out to Gorlin for a consultation. It usually takes him only a few minutes to identify the syndrome, advise the doctor on medical problems that can be expected, and to provide odds that the next child in the family will have the syndrome.

Gorlin is valued by his colleagues throughout the Academic Health Center (he has appointments in five departments) and students for his sense of humor as well as his research, teaching, and clinical achievements. He always has a witty remark on the tip of his tongue. A former fellow tells of the time Gorlin imitated a trombone as he came down the hallway. “Dr. Gorlin,” a patient said, “you sound just like a trombone.” “I am a trombone,” Gorlin replied. “On my father’s side.”

Although he officially retired six years ago, Gorlin is working on the fourth edition of “Syndromes of the Head and Neck,” due out next year, and has given no indication of when he will really retire.

“It is my profound hope that I will recognize when I am no longer contributing and will have the good grace to check out without a whisper,” he says.

■ Gordon Slovut
The University of Minnesota is first in the United States to offer a degree program in complementary care.

For Jessica Grossmeier, Candace Pert’s “Molecules of Emotion: Why You Feel the Way You Feel” was a revelation. A first-year graduate student in the School of Public Health, she read Pert’s book for an introductory course known as the “Art of Healing.”

“What we think—what goes on in our minds—changes us at the cellular level,” Grossmeier says, summarizing Pert’s message. “What goes on mentally changes us physically... There is no separation between the mind and the body. That was a real paradigm shift for me.”

Before that Grossmeier had, as she puts it, “dabbled” in alternative medical treatments such as massage and aromatherapy. But Pert showed her the scientific foundation of the holistic philosophy that is a hallmark of complementary medicine. And that, in turn, helped Grossmeier realize that such practices might be relevant both to her current job, as a program manager in disease prevention and stress management for HealthSystem Minnesota, and her future work in public health. Grossmeier had, in her words, “stumbled upon a passion.”

Beginning this fall, Grossmeier will be able to indulge her passion without leaving the School of Public Health, by enrolling in a new interdisciplinary minor known as Complementary Therapies and Healing Practices, based within the School of Nursing’s Center for Spirituality and Healing. It will be the first graduate degree program of its kind in the U.S. “We wanted to offer a way to recognize on transcripts that students have taken a significant number of courses that relate to complementary therapy and healing practices,” explains Marah Snyder, who heads the Division of Adult Gerontological and Psychiatric Mental Health Nursing and will serve as Director of Graduate Studies for the minor. It was designed as an interdisciplinary program, she adds, because “complementary healing practices cut across many different disciplines.”

All students must take two core courses: an introductory class that provides an overview of complementary healing practices and “Topics in Complementary Therapies and Health Practices,” which will focus on scientific research. Master’s students must complete eight semester credits, doctoral students twelve.

Kim Thompson, another first-year student in public health, believes the formal recognition of course work by a prestigious university will help her planned career in alternative medicine. “There are some very negative impressions of alternative medicine on mentally changes us physically... There is no separation between the mind and the body.”

For doctoral students, Snyder expects the program to serve a different purpose. “This is a burgeoning area of research,” she says. “Taking a minor in complementary therapy and practices would provide the groundwork for doing research. These students will collaborate with faculty members who are conducting research in complementary therapies and healing practices.”

That research presents novel challenges. “In studies of why people seek complementary therapies, many people say it is because the practitioner takes an interest in them, listens to them and focuses on them,” Snyder says. “If you try to design a research study that eliminates that component of the intervention, you’ve eliminated one of the main reasons why complementary therapies are effective.

“I’m biased, but in my opinion the results obtained from a complementary therapy have as much to do with that attention people receive from the caregiver [as the therapy itself]. How can you figure that into a double-blind experiment? It is difficult to do.”

As a matter of necessity, students will thus learn the principles behind alternative medicine—the philosophy that first attracted Jessica Grossmeier—so that they do not simply try to graft complementary health care practices onto a system that is itself impersonal. “First you teach the philosophy,” Snyder says. “Then you teach the therapies you can use to implement this philosophy. It’s really a holistic approach to health care.”

■ FRANK CLANCY
You might not expect to find exotic diseases like malaria and dengue fever in Sweden, but that’s exactly what medical student Nik Kolatkar encountered when he spent last summer there as an exchange student.

He explains that Swedes have a penchant for international travel, and sometimes return home with pathogenic souvenirs.

For Kolatkar, who plans to specialize in infectious diseases, it was a rare opportunity to learn more about his own field at a prestigious medical institution while enjoying the cultural education that study abroad can offer.

During his one month of study under the supervision of hepatitis specialist Ola Weiland, Kolatkar learned about a variety of infectious diseases on rounds in Huddinge hospital and outpatient clinic, and in laboratories and lectures.

Kolatkar’s trip to the Karolinska Institute was made possible by the Curtis L. Carlson Chair for Biomedical Research Scholars. The Carlson Chair was established in the late 1980s when Carlson did a little creative matchmaking between two of his passions—the University of Minnesota and Sweden. Carlson’s $500,000 gift was matched by the University Foundation to create a $1 million chair to foster exchange of biomedical scholars. The exchange program was later broadened to include doctoral and medical students.

The Karolinska Institute, Sweden’s largest medical school, is one of the world’s leading medical research universities. It is here that the prestigious Nobel Prizes are awarded each year. Internationally, the Karolinska ranks high in medicinal biochemistry, cellular and molecular biology, immunology, and neurobiology.

Robert Elde, now dean of the College of Biological Sciences, was selected in 1989 as the first Carlson biomedical scholar. With research interests in using immunohistochemistry to study the cellular and molecular mechanisms of neurotransmission, he was particularly well suited to benefit from the exchange program. Elde spent a sabbatical year working in the laboratory of Tomas Hokfelt, head of the chemical neurotransmission division in the Department of Neuroscience. Their ongoing collaboration has resulted in several co-authored research papers and exchange of graduate students.

“The beauty of working in medicine is that no matter in which language it is disguised, the principles, science and thinking are the same everywhere.”

An exchange program with Sweden’s Karolinska Institute, where the Nobel Prizes are awarded, offers valuable research opportunities to faculty and students at both universities.

Above: Elin Pettersson and Maria Löf, third-year medical students from the Karolinska Institute, are doing clinical rounds at the Veterans Administration Medical Center.

Below: UM Medical student Nik Kolatkar (right) studied at the Karolinska Institute in Sweden last summer. His father Shree (left) and friend Tom Mason (middle) joined him for a tour of the country.

Continued Page 12
Joe Hanlon, professor of experimental and clinical pharmacology, entered the field of geriatric pharmacotherapy for a couple reasons, both having to do with his love of people.

“My premise is if you put them home visits to the elderly with them, and I just got hooked.”

Hanlon’s respect for the aging evolved into a search for answers to questions not many people had asked 20 years ago. “When I got into the clinical pharmacology field there wasn’t much information about geriatric drug therapy,” he said. “I kept bumping into questions that had no answers.”

They were questions like: Do older people need to take the same dose of medications as younger people? (A lower dose often suffices for seniors, he has learned.) Can benzodiazepines, which are used to induce sleep and/or reduce anxiety, cause memory loss that mimics Alzheimer’s symptoms? (Yes, Hanlon says.)

Older people are the wisest, most experienced people on earth, and we should respect them for that.”

To help pharmacists and other health care workers answer such questions, Hanlon developed the Medication Appropriateness Index, a detailed questionnaire used to determine whether the drugs older people take match their symptoms, whether the dose is optimal, whether side effects are aggravating the patient’s condition, and so on.

“My premise is if you put a smart pharmacist with smart doctors you will be able to manage medication better and maybe keep some people out of the hospital or the emergency room,” Hanlon says. That philosophy blends nicely with the College of Pharmacy’s philosophy of training pharmacists to be integral parts of the health care team who advise patients, physicians, nurses, and others about drug therapy.

At the U of M, Hanlon has joined with other faculty members in establishing a program in pharmacogeriatrics. Its mission is to perform research, to educate students and practitioners about geriatric pharmacotherapy; to provide services to the elderly at hospitals, nursing homes, and clinics; and to serve as a national advocate for the elderly in pharmacotherapy issues.

“The reason I came here from Duke was I wanted to build my own program and to try in the next few years to make it the best program of its kind in the country,” he says.

Joe Hanlon’s affinity for the elderly led to a trailblazing career in geriatric pharmacotherapy.
Rickee the keeshond was a pretty happy pup—for being sick as a dog, that is. A “frequent flyer” of the University of Minnesota’s Veterinary Teaching Hospitals, Rickee was among the first patients to try out the hospitals’ new intensive care unit after it opened in March. All indications are he gave it a four-paw rating.

“I can tell you the difference between the two. It’s like night and day,” said Rickee’s owner, Diane Neuens.

Because of a seizure disorder, Rickee had spent plenty of time in the hospitals’ old ICU. According to Neuens, he would return home restless due to the constant high activity levels in the small, busy facility with its many patients and crowded work spaces. On this visit, he found instead broad, open walkways, gleaming tables, and plentiful, well-spaced cages for patients of every size and need. On this visit, he found instead broad, open walkways, gleaming tables, and plentiful, well-spaced cages for patients of every size and need. Best of all was a roomy run for pooches like him that are well enough to move around but still need the 24-hour monitoring the ICU offers.

“He noticed the difference,” Neuens said. “I noticed the difference. The difference in his demeanor was marked.”

Back in the early 1980s, when the ICU first opened, the demand for intensive care for dogs and cats was not nearly as high as it is today. Pet owners were less likely to pursue advanced treatment for their animals. In addition, the kinds of equipment and treatments available were more limited.

Today, however, much has changed. Ventilators, kidney dialysis units, and other lifesaving technologies have crossed over from human medicine into the realm of veterinary care. At the same time, pet owners are more likely to pursue advanced treatment for their pets.

“Animals have become more and more like members of the family,” says ICU supervisor Vickie Skala. Often, she says VTH staff hear people refer to their pet as their child. “You don’t hear people saying ‘It’s just a dog’ or ‘It’s just a cat’, as often anymore,” she says. “People are willing to go further in their care.”

As a result, the ICU in recent years had become increasingly crowded. With more than three times the patients it had when it opened, and high-tech equipment crammed into every cranny, it provided excellent care but gave staff little room to maneuver as they worked to meet the needs of animals housed in cages, in transports, sometimes even on the floor.

“The previous ICU when it opened 16 years ago was a wonderful enhancement compared to what we had prior to that time,” says hospital administrator Ed Kosciolek. “But it became rather congested. Pure and simple, we just had too many patients.”

The new ICU, financed in large part by donations from hospital clients and other animal lovers, is just what the doctor ordered for dogs and cats with critical needs.

CONTINUED PAGE 14
In their Litchfield, Minn., home, Alex’s parents watched with concern as, day after day, the teenager’s blood glucose levels ran high. In Minneapolis, Rochelle’s mother, unnerved by her daughter’s asthma-induced coughing and wheezing, rushed the five-year-old to the nearest emergency room. For many thousands of Minnesota families, coping with a chronically ill child is a way of life.

Researchers in the School of Nursing are making sure families, health care professionals, and communities have the information they need to give kids with ongoing health problems the best possible care.

“I don’t know if people understand how vulnerable these kids are,” says associate professor of nursing Barbara Leonard, speaking of the young people with diabetes who are her special concern. One in every 600 U.S. young people has Type 1 diabetes, which carries a high risk of blindness, heart disease, kidney disease, and nerve damage. Researchers know that the lowest-risk diabetics are those who strictly control their diets and exercise, scrupulously monitor blood sugar levels, and stay on schedule with insulin injections. They also know that many young people have trouble “complying”—strictly following doctor’s orders.

But which young people do well, and why? Leonard’s research on a diverse sample of young Minnesotans with Type 1 diabetes suggests that a strikingly large proportion—50 percent, preliminary results show—are at risk of blindness, heart disease, kidney disease, and nerve damage. Researchers know that the lowest-risk diabetics are those who strictly control their diets and exercise, scrupulously monitor blood sugar levels, and stay on schedule with insulin injections. They also know that many young people have trouble “complying”—strictly following doctor’s orders.

Client contributions
Like any project, the ICU remodeling had a price tag attached—in this case, a hefty $750,000. Fortunately, the hospital had not only a pressing need but also had a solid base of clients and other animal lovers who were more than willing to help meet it. With nearly 800 donors making donations of $5 to $175,000 each, the hospital handily met its goal of covering half the anticipated cost through contributions.

“We have a lot of people who are committed to the well-being of animals in general,” says hospital administrator Ed Kosciolek. “This was a way they could help.”

Hopping hospital
Business is booming at the University of Minnesota Veterinary Teaching Hospitals. The past year saw close to 30,000 admissions, up 50 percent from just three years ago. Hospital administrator Ed Kosciolek says the trend mirrors a rise seen in veterinary facilities elsewhere, but adds it’s accentuated by a rise in specialized services offered at the facility. Recent faculty additions have bolstered expertise in neurosurgery, ophthalmology, oncology, cardiology, and emergency services.

In addition to the main ICU, the remodeling added an intermediate care unit to serve animals that require 24-hour care but are not so sick as to need the more intensive services provided by the ICU. It also created space for a hemodialysis unit, which will be used to maintain patients after kidney failure. A dental and endoscopy suite complete the package.

The hospital has long been a referral center for animals from throughout Minnesota and neighboring states and provinces. Skala says she expects it will attract even more patients as word gets around about the new ICU. Already a number of veterinarians have toured the facility to scope it out for referrals.

“Everybody’s been very impressed,” she says.

Rickee, of course, couldn’t care less what the veterinarians think. What matters to him is that the next time he stops by the ICU, he’ll find not only TLC, but also a pleasant, uncrowded setting in which to get his paws back on the ground. And—outside of a t-bone, perhaps—what more could a keeshond ask?
If the finding about blood-sugar levels is a wake-up call about the seriousness of youth diabetes in Minnesota, a national leader in diabetes care, Leonard says, the findings suggest a promising path of action for parents, educators, and policymakers.

“We know for certain that teenagers with elevated blood glucose levels are at great risk for serious health problems,” Leonard explains. The findings suggest that “we need to understand more about how social and emotional factors affect how youth manage diabetes. We may need to tailor our interventions with diabetic adolescents around family functioning and behavior.”

Like Leonard’s research, associate professor of nursing Ann Garwick’s study of children with asthma holds promise for improving outcomes. Garwick’s research on how families from diverse cultural backgrounds cope with childhood illness brought her to the Little Earth of United Tribes community in Minneapolis, where interviews turned up children with asthma in family after family. Between many panicky visits to emergency rooms, families weren’t integrating asthma management into their daily lives, not just because they did not have information or resources they needed, but because asthma had never been addressed within the context of Native American cultural practices and values.

How can communities and health care providers better respond to chronic health needs? Garwick has a simple answer: Listen to families.

“Communities need to pay close attention to families to identify health concerns,” Garwick emphasizes. “At the same time, health care providers need to work in partnership with communities and families. Cultural sensitivity is one part of it. But the most important question is “How can I learn from this family how this illness fits in their cultural context and affects their everyday life?”

Garwick’s work brought to life an unmet public health need, but she is proudest of how her research became a catalyst for meaningful community action. She and project coordinator Sally Auger now are working with Indian leaders on community-wide strategies to better support families with asthmatic children.

Garwick and Leonard have helped make the School of Nursing a hub for training leaders who will improve the well-being of chronically ill children.

Kate Tyler

School Violence

A national wave of violence in schools prompts study to learn why it’s happening and how to prevent it.

Springfield, Oregon, May 1998: A disturbed high school student brings a rifle and two handguns to school, then opens fire in the school cafeteria, killing two students and wounding 22 others. Coming just two months after a similar incident in Jonesboro, Arkansas—and in the same school year as shootings in Kentucky, Mississippi and Pennsylvania—the incident shocks the nation.

And prompts soul-searching questions both in Minnesota and across the United States. Could such a thing happen here? What, if anything, might be done to prevent it?

Those questions, and the knowledge that the Minnesota Senate had formed a task force to consider legislation aimed at making schools safe, prompted University researchers Alison Smith, Judith Kahn, and Iris Borowsky to examine efforts around the country to reduce and prevent violence in schools. The resulting paper, “Best Practices in Reducing School Violence,” was presented to the state legislature in January as part of a “Just in Time Research” package designed to provide legislators with scholarly research that would inform and guide their work. The paper was one of the first to come out of the year-old Konopka Institute for Best Practices in Adolescent Health, a collaborative effort of the Schools of Medicine, Nursing and Public Health to address social threats to young people.

The statistics on school violence are frightening. One survey reviewed by Smith, Kahn and Borowsky found that 42 percent of adolescents had been in a fight during the preceding 12 months. Another reported that half of all boys—and one in four girls—had been physically attacked at school. According to the Centers for Disease Control and Prevention, there were 105 violent deaths in American schools in the two-year period from 1992 to 1994.

In response, schools have tried a vast array of measures, from metal detectors and dress codes to anger management classes, peer counseling, and skills training for parents. Nationwide, almost 80 percent of public schools have some type of anti-violence program.

Could such a thing happen here? What, if anything, might be done to prevent it?