DEPARTMENT OF INTERNAL MEDICINE

2016

IN THE CENTER OF IT ALL
Our mission is to lead the world in transforming lives to create a healthy future for all individuals and communities through premier educational programs, innovative research and extraordinary patient care.

Geographically located in the center of the country, UNMC is home to distinguished scientists, world-renowned facilities and accomplished health care professionals, all working together to transform lives. These great minds and resources intersect to create an environment ripe for collaboration, discovery and medical advancement. Having the very best and brightest under one roof. It’s why the University of Nebraska Medical Center and the internal medicine department are the Center for all things health care.
Our ten divisions are vibrant, and they are thrilled to tell you in this report some of the stories of their work that contributes to each of our department roles as clinicians, educators and investigators. We have seen extraordinary care provided to patients with Ebola in our biocontainment center and continue to train others in how to care for patients with this and other serious infectious diseases. We have seen the development of innovative educational tools like those our rheumatologists created with the collaboration of students. We have made progress in the development of new biomarkers of disease and new tools to use in the care of patients. We have faculty who have major leadership roles in national organizations (Dr. Vose as recent president of ASCO, the American Society of Clinical Oncologists and Dr. Tape as the current Chair of the American College of Physicians board of regents.) I am very proud of our faculty and trainees for all they do but I am most proud of their focus to always keep the patient in the center of it all.

Our geographical location places UNMC and our Department of Internal Medicine in the center of the country. We are proud to be in the heartland serving the great people of the Midwest. We are equally as proud to be in the center of transforming lives beyond the Midwest with clinical programs that attract people from around the country and the world, with educational programs that prepare the next generation of physicians, and with research that shapes clinical paradigms and brings new knowledge to the world.

Since our last biennial report, we have integrated with our clinical enterprise partner to create Nebraska Medicine. Together, UNMC and Nebraska Medicine’s mission is to lead the world in transforming lives to create a healthy future for all individuals and communities through premier educational programs, innovative research and extraordinary patient care. As the largest clinical department on the UNMC campus, the Department of Internal Medicine is indeed in the center of that mission.
At age 33, this has become a familiar routine for the Lincoln dietitian with cystic fibrosis (CF), a life-threatening, genetic disease that causes persistent lung infections and progressively limits the ability to breathe.

“This is my normal,” said Partch, who was diagnosed with the disease at six months of age. “Fitting in treatment time can be challenging, but it’s all about juggling a schedule.”

Today, there are more adults living with cystic fibrosis than children with the disease.

That’s why clinics, such as UNMC’s Adult Cystic Fibrosis Clinic, are so important.

Created in 2000, the nationally ranked clinic sees approximately 160 adult patients from Nebraska and the region.

“Many children with CF are now living into adulthood because of treatment advances,” said Peter James “Jim” Murphy, M.D., associate professor in the division of pulmonary and critical care medicine, and director of the Adult Cystic Fibrosis Clinic. “What impressed me was the team’s investment and passion to help people add tomorrows,” he said. “You can’t just prescribe a pill for that.”

The Cystic Fibrosis Clinic is part of the Nebraska Regional Cystic Fibrosis Center, which delivers care for people with cystic fibrosis from first diagnosis — whether in childhood or adulthood — through advancement of the disease.

“Our care continues to focus on all of the needs of the patient,” Dr. Murphy said. “In addition to the increasing treatment burden as their CF disease progresses, we also take into account the complexity of their lives with college, spouses, job pressures and children.”

In people with CF, a defective gene causes a thick, buildup of mucus in the lungs, pancreas and other organs. In the lungs, the mucus clogs the airways and traps bacteria leading to infections, extensive lung damage and eventually, respiratory failure. In the pancreas, the blockage results in destruction of its function, which leads to a deficiency of the digestive enzymes needed to allow the body to break down food and absorb vital nutrients. The multi-system, progressive nature of CF highlights the importance of the multi-disciplinary team approach, often escalating to the level of individual case management.

Partch understands that as she juggles a fulltime job with being a wife, mom to a 3-year-old daughter, and graduate student, who occasionally teaches a college class. “All those things are fulfilling to me so I often multitask,” she said, noting that some percussion treatments are done while working on her computer.

The Nebraska Regional Cystic Fibrosis Center, which includes Children’s Hospital & Medical Center of Omaha for pediatric care, has been recognized nationally for its success in achieving the best health outcomes for patients in a nationwide network of about 110 care centers accredited by the Cystic Fibrosis Foundation.

“Many of our patients we inherit from the pediatric clinic and are extra well cared for,” Dr. Murphy said. “They have the best lung function they could have. Our program was initially modeled after theirs.”

Achieving the best health outcomes takes more than compassion, the team said. It also requires quality data, longstanding leadership, and strong case management and care across many years and medical specialties.
“I live and die by trends, history and benchmarks,” said Dr. Murphy, recalling the days when the team used spreadsheets to track patient data. The team now uses a secure, web-based database conceived and designed by Dr. Murphy and members of the team. “How we handle data is the underpinning of our day-to-day decisions.”

The database facilitates both short-term decision-making and longer-term strategic planning of each patient’s care. “As the pace of advancement in cystic fibrosis care accelerates, our role is to think ahead not just for next year, but the next decades of our patients’ lives,” Dr. Murphy said. “The database graphing features of weight, lung function, and routine lab across the adult life span allows us to have both specific and broader discussions with our patients and their hopes and plans for the future.”

The cystic fibrosis team examines a patient’s day-to-day longitudinal function, lung function, weight trends, and trends related to both loss of weight and lung function. “This information plays a critical role in the day-to-day decision-making for patients,” Dr. Murphy said. “It also supplements the electronic medical record in a vital way.”

“It’s a decision tool for us and a teaching tool for patients,” said Jill Fliege, nurse practitioner/coordinator of the program since April 2001. Included in the data review is a regular pulmonary function test to measure how well the lungs work. This includes how well one is able to breathe and how effective the lungs are able to bring oxygen to the rest of the body. Partch takes the test every three months during her regular clinic visit. Test results then help guide treatment options.

“The team provides me with a lot of encouragement, too, to keep doing what I’m doing,” Partch said, noting her daily ritual that includes percussion treatments, an inhaled antibiotic treatment and inhaled hypertonic saline. “Being a super compliant patient helps me stay healthy, even though it gets to be a grind sometimes.” Because the type and severity of cystic fibrosis symptoms differs widely from person to person, there is not a typical treatment plan. People with cystic fibrosis work closely with their health care team to create individualized treatment plans.

The Adult Cystic Fibrosis Clinic team also thrives in its case management practices, Fliege said. “We’re very well supported, which allows us to do case management with a dedicated staff.” Patients are seen every three months during a routine appointment. Twice a year, the cystic fibrosis team flies to North Platte, Neb., to see patients at that location. There also is phone contact, as needed, and coordination with local medical teams when patients are hospitalized within their communities.

“We have an active relationship with patients — very much a medical friendship. It’s a significant part of helping them to do some of the things they have to do each day.”

PETER JAMES “JIM” MURPHY, M.D.
RESEARCH COLLABORATIONS PROVE VALUABLE IN DIABETES STUDIES

CYRUS DESOUZA, M.B.B.S., KNOWS THE STAKES ARE HIGH.

SOMEONE, SOMEWHERE IN THE UNITED STATES IS DIAGNOSED WITH DIABETES EVERY 19 SECONDS.

NEARLY 10 PERCENT OF THE OVERALL POPULATION IN THE UNITED STATES IS AFFECTED BY THIS CHRONIC CONDITION.

THE AMERICAN DIABETES ASSOCIATION PREDICTS ONE IN THREE AMERICAN ADULTS WILL BE DIAGNOSED BY 2050.

“Type 2 diabetes is a global hyper-epidemic which shows no signs of abating,” said Dr. Desouza, professor and chief of the UNMC Division of Diabetes, Endocrinology and Metabolism (DEM), staff physician and medical director of the diabetes and obesity program at the VA Nebraska-Western Iowa Health Care System.

In an effort to find better ways to treat the disease, Dr. Desouza currently is part of the Glycemia Reduction Approaches in Diabetes or GRADE study.

GRADE is a multicenter comparative effectiveness study funded by the National Institutes of Health National Institute of Diabetes, Digestive and Kidney Diseases. Forty-five clinical sites across the United States, including the VA Nebraska-Western Iowa Health Care System, are involved in the GRADE study.

In an effort to find better ways to treat the disease, Dr. Desouza currently is part of the Glycemia Reduction Approaches in Diabetes or GRADE study.

GRADE, a clinical study, is one of many studies taking place in the DEM division at UNMC in collaboration with the VA Nebraska-Western Iowa Health Care System.

To date, there also are 21 basic science studies involving collaborations between UNMC clinicians in the DEM division and researchers at the VA.

“The collaboration has been very fruitful from many standpoints,” said Frederick Hamel, Ph.D., the acting associate chief of staff for research at the VA and a professor of internal medicine in the DEM division.

“The VA provides extra bench space for basic science research, the patients there have more opportunity to participate in a clinical trial and there is another potential source of funding for studies through merit review grants from the VA,” Dr. Hamel said.

Dr. Hamel currently is working on a study that focuses on the effects of an insulin degrading enzyme or IDE, in knockout mice. The enzyme plays an important role in the signal transduction of insulin.

“The popular thought is that if you inhibit the role of this enzyme then you increase insulin concentrations, but our studies have shown that this might not be such a good idea because you just might trigger insulin resistance,” Dr. Hamel said.

With those findings, the focus of the study has now shifted to determine how the mice lost weight, what was reversible so that they re-gained weight once treatment ended and why their glucose levels remained normal.

“The question remains — what did the retinoic acid do that had such long-term effects,” Dr. Bennett said.
The three-year study is funded at $450,000 by the Nebraska Center for Nanomedicine COBRE grant. Dr. Viswanathan said the findings will be used to apply for an R21 NIH grant.

Her lab location at the VA helped to establish collaborations with alcohol researchers to expand her study of nanoformulated superoxide dismutase.

Working collaboratively with Carol Casey, Ph.D., a professor of internal medicine in the division of gastroenterology at UNMC and alcohol research at the VA, Dr. Viswanathan studies the benefits of nanoformulated superoxide dismutase in reducing obesity and alcohol induced liver injury in mice.

So far, the research shows that the nanoformulated drug they are using does reduce fat and vascular inflammation in obesity and they are hoping it will also reduce fat and alcohol induced inflammation in the liver.

“The superoxide dismutase has been studied in other conditions, such as hypertension, and we are applying it to another set of health problems brought on by alcoholism and obesity,” Dr. Viswanathan said.

Alcohol and high fat foods often go hand in hand, she said, and both have a huge impact on liver function.

“We are hoping to reduce that impact by reducing the amount of inflammation,” Dr. Viswanathan said.

None of these studies would be as successful, Dr. Desouza said, without the collaboration with the VA.

“By partnering together both the clinician and researcher get a new, fresh perspective on critical issues that affect so many people in the world today,” he said. “The diversity of patients and ideas compliments each other in a way that gives the clinician and scientist a better representation of diabetes and the disease progression.”

For those reasons, Dr. Desouza said, the VA is a very valuable partner.

For those reasons, Dr. Desouza said, the VA is a very valuable partner.

The collaboration with the VA has played an integral role in his research, Dr. Bennett said. In the past four years, he and other researchers have built a metabolic phenotyping core facility with more than $250,000 in support from the VA.

The metabolic phenotyping core facility allows the researchers to monitor the mice they used in the obesity study, measure their food and water intake, activity level, energy expenditure and analyze body fat and lean muscle mass using an MRI-based machine.

“The core facility has benefited my lab and many others,” Dr. Bennett said.

The following is a list of research collaborations between researchers at the VA Nebraska-Western Iowa Health Care System and DEM investigators at the University of Nebraska Medical Center.

ROBERT BENNETT, PH.D.
• Relaxin and liver regeneration;
• Mechanism of antifibrotic actions of relaxin in the liver; and
• The effect of all-trans retinoic acid (ATRA) on the progression of diabetes.

CYRUS DESOUZA, M.B.B.S.
• Role of apathy in glycemic control;
• LEADER: Liraglutide effect and action in diabetes: evaluation of cardiovascular outcome results;
• GRADE: Glycemia reduction approaches in diabetes: a comparative effectiveness study;
• D2D study: Vitamin D to prevent type 2 diabetes;
• A randomized, double-blind, event-driven, placebo-controlled, multicenter study of the effects of canagliflozin on renal and cardiovascular outcomes in subjects with type 2 diabetes, nephropathy and diabetic nephropathy (the CREDEENCE trial);
• DEVOTE: A trial comparing cardiovascular safety of insulin deglude versus insulin glargine in subjects with type 2 diabetes; and
• Impact of high does insulin on weight gain and hypoglycemia in veterans.

FREDERICK HAMEL, PH.D.
• Insulin-degrading enzyme and insulin resistance;
• Response of insulin-degrading enzyme to stress in microglia; and
• Insulin-degrading enzyme levels in the blood.

VIJAY SHIVASWAMY, M.B.B.S.
• DEVOTE: A trial comparing cardiovascular safety of insulin deglude versus insulin glargine in subjects with type 2 diabetes at high risk of cardiovascular events; and
• SPREE 1 and 2: A Phase 3 multi-center, double-blind, randomized, placebo-controlled, parallel group evaluation of the efficacy, safety, and tolerability of biocorume (PF-04950615), in reducing the occurrence of major cardiovascular events in high risk subjects.

SARASWATHI VISWANATHAN, PH.D.
• Effect of nanoformulated superoxide dismutase in modulating obesity-linked hypertension;
• Effect of nanoformulated superoxide dismutase on reducing ethanol-induced liver injury in obesity;
• Fish oil and cyclooxygenases: interplay in adipose tissue; and
• The role of cyclooxygenases in modulating obesity-linked metabolic disease.
For example, they have discovered that what physicians think they are saying to patients may not necessarily be what patients hear, or that patients might have concerns that their caregivers may never know about. That could be a problem.

But now, with everyone in the same room, everyone is finally on the same page, having the same conversation.

“Whenever I meet with patients I always ask them, ‘Do you understand?’” said Chad Vokoun, M.D., associate professor of internal medicine general medicine and assistant dean for graduate medical education. “Now, when we do bedside rounds, for the first time, I believe them.”

Dr. Vokoun, who is among the internal medicine faculty leading the effort, with Kelly Caverzagie, M.D., Sarah Richards, M.D., Rachel Bonnema, M.D., and Trek Langenhan, M.D., said he also was surprised at how engaged the patients become, once physicians make a conscious effort to engage them.

“They will totally interrupt,” to clarify something, he said. They will tell you what they really mean. They will tell you what is most important to them, versus what’s most important to their medical team. They will take ownership and leadership of their own care plan.

When these team meetings are at their best, everyone in the room is part of the team.
"You’re used to talking in nitty-gritty medical terms. It’s a total mind-shift focus now that you’re speaking to the patient."

CLAYTON JORDAN, D.O.

It’s important for the students and residents to see that. And it’s important for the patients to see how much thought goes into their care. Before, they’d see the doctor for 5 minutes, never knowing all this planning had gone on without them.

The patient must feel like a pretty big deal, with all this attention, right? “They love it,” Dr. Jordan said.

But it’s not as easy as simply getting everyone in the room. The students need to learn how to include patients. In medical school, the people who will become doctors memorize medical jargon. Now, they need to turn around and say all that stuff in a way that people understand.

In their presentations, students are “trying to talk to both the patient and to us,” said resident Jodi Cantrell, M.D. “We’re trying to get them to talk in two different languages, and that can be challenging.”

“You’re used to talking in nitty-gritty medical terms,” Dr. Jordan said. “It’s a total mind-shift focus now that you’re speaking to the patient.”

But that’s part of medicine. It’s part of giving the patient the best care.

*If we can’t communicate with them, they can’t communicate with us,* Dr. Cantrell said.

So it sounds great. But how does this work? Having the meeting with the patient takes a lot more time. Or does it?

*It takes more time upfront,*” Dr. Nester said.

*But on the back end there’s less work to do,*” Dr. Langenhan said.

Plus, you don’t do it with every patient every day. You don’t need to. After a couple of times, the patient gets it. The team gets it. They see the benefits, and know how it works.

Internal Medicine residents have a great deal of input into their training through wellness and research initiatives, an active residency council, and through Midtown Clinic, a patient-centered medical home with a resident board of directors.

The Internal Medicine Residency Council acts as a liaison between residents and program directors to improve the residency program. Rather than sharing individual concerns with individual supervisors, or leadership announcing changes without warning, the council offers feedback in an official and professional manner; likewise, leadership can seek such feedback before going forward with proposed adjustments.

One of the council’s recent successes was a resident-driven solution to cap-call. Previously, on weekends, residents frequently hit their cap on admissions, and a new resident had to be called in. Why not simply have another resident slated ahead of time as available to cross-cover patients, heading off potentially stressful situations and ensuring continuity of care? Leadership agreed, and now it’s a selling point to the program.

Residents also developed wellness initiatives, including a “healthy half-day,” in which they can schedule their own health care needs. Other wellness initiatives include healthy snacks, a wellness curriculum and access to fitness centers on campus. These initiatives are important in keeping residents healthy, happy and productive.

These are only a few examples of resident-led training initiatives. More initiatives can be found at unmc.edu/intmed/residency.
### BY THE NUMBERS

#### EDUCATION
- **78** house officers (58 Int Med & 10 Med Peds)
- **325** medical student clerkships/rotations completed
- **98%** Internal Medicine board pass rate
- **#1** Internal Medicine is the #1 required clinical clerkship at UNMC.

#### RESEARCH
- **50** funded principal investigators
- **$17,795,480** in extramural research funding
- **321** publications

#### CLINICAL
- **20** clinical locations
- **79,919** hospital patient days
- **489,063** work RVUs
- **$84,483,294** in professional fee charges
- **8,397** resident managed Midtown clinic visits

#### ADMINISTRATION
- **218** Internal Medicine faculty
CARDOVASCULAR MEDICINE

In November, Vincent Pompili, M.D., an interventional cardiologist from The Ohio State University, started as professor and chief of the division of cardiovascular medicine. Dr. Pompili also took on the role of physician leader for the Nebraska Medicine Cardiovascular Clinical Program. His ultimate goal is to create a heart and vascular institute that will unify the division of cardiovascular medicine, cardiovascular surgery, vascular surgery and cardiovascular research. Dr. Pompili brings experience from a large academic medical center that will help guide us into the future. Dr. Pompili succeeds John Windle, M.D., who was chief of the division from 2000-2016.

RESEARCH

ROBUST BIOBANK, REGISTRY AIDS CARDIOVASCULAR RESEARCH

Cardiologist Daniel R. Anderson, M.D., Ph.D., recalls how his Ph.D. mentor emphasized the importance of tissue samples in research during disease.

“Tissue is the issue,” he would say.

Now, thanks to UNMC’s robust Nebraska Cardiovascular Biobank and Registry, Dr. Anderson is excited by the potential of possessing both tissue and biological patient data in answering cardiovascular health questions.

The separate, but linked, resources enable physician-scientists to collect, archive and preserve blood and tissue for current and future studies, while also capturing the corresponding, relational patient data in a complex database.

The goal? Improve cardiac treatments and disease understanding.

“It’s a powerful thing,” said Dr. Anderson, associate professor of internal medicine-cardiology. “It allows us to improve care and medicine by appropriately asking questions without interjecting bias and while maintaining confidentiality.”

The biobank, formed in 2007 in collaboration with the UNMC Division of Rheumatology, enrolls more than 700 identified patients — some healthy and some with a host of diseases — of whom are followed with Institutional Review Board approval. Working with pathology, excess surgical tissue is processed, banked and archived in the biobank for next generation studies.

It’s an investment, Dr. Anderson said, noting that it costs about $50-75 to bank tissue and additional resources to maintain the specimens and freezers.

The resources, created by UNMC faculty members, have been a multispecialty endeavor with the support of UNMC surgeons and pathologists, as well as partners in biobanking and rheumatology.

This has enabled physician-scientists to study a range of issues, as well as publish novel papers, including one that examined heart-attack causing, coronary plaque that had been culled from a donor tissue sample. “We have the only publication in literature like that,” Dr. Anderson said.

And, thanks to the Nebraska Cardiovascular Biobank and Registry donors, UNMC’s physician-scientists are well positioned to advance cardiovascular knowledge that will transform lives.

“We keep chipping away at the leading edge of cardiovascular research,” Dr. Anderson said.

CLINICAL

SURGICAL PROCEDURE MARKS BREAKTHROUGH

Not too long ago, a large percentage of patients with aortic stenosis went untreated because they were deemed high risk or too sick for open-heart surgery.

Today, it’s not uncommon for such patients — even those well into their 80s or even 90s — to undergo a minimally invasive surgical procedure called a transcatheter aortic valve replacement (TAVR). Instead of opening up the chest and removing the damaged valve, TAVR uses a catheter to insert a new, replacement valve within the diseased aortic valve.

“It’s a major breakthrough in cardiovascular medicine because we can treat patients that went untreated before,” said Gregory Pavlides, M.D., professor and Missia chair in cardiology.

Aortic stenosis, a narrowing of the aortic valve opening that impedes normal blood flow, is a common disease, he said, and yet before TAVR nearly one-third of patients could not be treated.

The procedure, first done in France in 2002, was approved in the United States in 2011 for inoperable patients and in 2012 for high-risk surgical patients. Nebraska Medicine — one of the few hospitals in Nebraska to offer the service — has done more than 100 cases since offering the procedure two years ago, Dr. Pavlides said. Today, they average about two per week.

Results have been superior to standard “medical” therapy for inoperable patients and comparable to traditional surgery for high-risk patients, Dr. Pavlides said. He expects the number of procedures to rise as more patients learn about the viable option.

The procedure has a shorter down time and recovery. Some patients are sent home within three days, he said. “The average patient age is around 85, but we’ve had patients as old as 92 go through the procedure.”

And, he expects the number of TAVR cases to grow — both at Nebraska Medicine and nationally — as closed catheter valves become a viable option for lower risk patients, as well. “That’s the future.”

EDUCATION

FLIPPED CLASSROOM MODEL YIELDS ACTIVE LEARNING

Two years ago, Samer Sayyed, M.D., began to reorganize the cardiology curriculum for the M2 year. The associate professor of cardiology moved the entire two-week cardiology core into a flipped classroom model with real-time feedback.

It wasn’t easy, but it paid off.

“Classes are more engaging now,” Dr. Sayyed said. “This model gives every student a voice, creates a more agile teaching environment and removes the peer pressure so students aren’t fearful of making a mistake or being ridiculed.”

Hour long didactic lessons were recorded and shortened to 20 minutes, which students review prior to class — both on their own time and speed.

Faculty members began polling students during class with real-time audience response systems to better assess their level of understanding, as well as adjust the amount of time needed per topic.

The Problem-Based Learning course also evolved into a more dynamic active-learning experience. “We were the first to build a robust clinical case inside the electronic health record (EHR),” Dr. Sayyed said.

None of it happened overnight. It took six months of regular meetings and numerous hours of personal time to develop the case inside the EHR, Dr. Sayyed said. “The case had to make scientific and clinical sense.”

It also had to improve upon a student’s traditional PBL experience by:

• Providing a stronger interprofessional experience,
• Increasing engagement with clinical faculty,
• Introducing students to the EHR in a low-stakes, safe environment, and
• Challenging students with higher order cognitive skills.

It worked. “Students are more confident with the M3 transition and real world applications,” he said.
Reaching Diabetes’ Rural Patients

Telehealth Program pays big dividends for rural patients with diabetes

If you have diabetes and live in rural Nebraska, chances are pretty slim that you will have direct access to an endocrinologist. Most of the state’s endocrinologists are located in Omaha or Lincoln, and there currently is only one endocrinologist west of Lincoln. But, thanks to a new telehealth initiative developed by UNMC and the Nebraska Medicine Diabetes Center, things are looking up for patients with diabetes in rural communities.

The initiative is being spearheaded by Leslie Eiland, M.D., a Columbus, Neb., native who joined the UNMC team in 2014. Using a large video monitor and the state-of-the-art Vidyo system, Dr. Eiland and her nurse, Andrea Hoge, a certified diabetes educator, conduct half-day clinics four times each week via telehealth.

The initiative involves hospitals in four Nebraska communities (Scottsbluff, Hastings, Geneva and Columbus) and one Iowa community (Denison).

“I try to function as purely a consultant, giving my opinion to the patient’s primary care doctor,” Dr. Eiland said. “I prefer not to do anything without the support of their primary care physician.”

Dr. Eiland typically sees between 8-10 patients during a half-day clinic.

Her patients fall into three categories:

- one-time consultations;
- patients with more acute issues that she treats to stability (such as hyperthyroidism and some diabetes); and
- patients with chronic problems that need long-term management.

The program has been received well by patients who now have access to a diabetes specialist without having to leave their community.

Education

Shaping the educational future of endocrinology

Medicine is always changing, so physicians of tomorrow must be well versed in the latest medical procedures and techniques.

It’s an evolving process that requires experts in a specialty to come together to determine those skills needed to produce the best possible care for patients. Many UNMC faculty serve on national committees and participate in organizations that help shape the educational training of medical students, resident physicians and fellows.

UNMC’s Whitney Goldner, M.D., is trying to leave her mark on endocrinology. She chairs the Clinical Education and Evaluation Committee of the Endocrine Society, serves on the council of the Association of Program Directors in Endocrinology (APDEM), Diabetics, and Metabolism, and also chairs the Trainee and Career Advancement Committee for the American Thyroid Association.

An expert in thyroid disorders and thyroid cancer, Dr. Goldner has been involved in developing online educational modules to teach endocrinology fellows how to perform and interpret thyroid and neck ultrasounds as well as ultrasound-guided biopsies of thyroid nodules sponsored by the Endocrine Society and APDEM.

Modules to assist fellows in the interpretation of continuous glucose monitoring systems for diabetes management, and interpretation of DEXA scans for osteoporosis management also are being developed.

Research

UNMC participates in two national NIH research studies focused on diabetes

Type 2 diabetes is reaching epidemic proportions in the U.S. In 2000, the type 2 diabetes rate for U.S. adults was between 5 percent and 6 percent. Today, the rate is close to 9 percent.

The aging of the population and the increase in obesity rates contribute to this steep increase.

UNMC is currently a regional site for two national NIH clinical research studies; one for people with type 2 diabetes, the other for people with pre-diabetes. UNMC’s Cyrus Desouza, M.B.B.S, is leading both studies locally.

The study for people with type 2 diabetes is called GRADE (Glycemia Reduction Approaches in Diabetes: A Comparative Effectiveness Study). This study is headed by Harvard University and includes 45 clinical sites in the U.S. UNMC is charged with recruiting 150 of the total 5,000 participants.

The study will follow participants over seven years and will compare the long-term benefits and risks of four widely used diabetes drugs in combination with Metformin, the most common first-line medication for type 2 diabetes.

The goal is to determine which combination of two diabetes medications is best for achieving good glycemic control, has the fewest side effects, and is most beneficial for long-term treatment of type 2 diabetes.

UNMC is currently a regional site for two national NIH clinical research studies; one for people with type 2 diabetes, the other for people with pre-diabetes. UNMC’s Cyrus Desouza, M.B.B.S, is leading both studies locally.

The study for people with pre-diabetes is called D2d. It is headed by Tufts Medical Center in Boston, and UNMC is one of 22 participating sites around the country. UNMC is trying to recruit 126 participants for this study, which investigates if vitamin D supplementation helps prevent or delay type 2 diabetes in adults who are pre-diabetic.

Clinical

Telehealth program pays big dividends for rural patients with diabetes

If you have diabetes and live in rural Nebraska, chances are pretty slim that you will have direct access to an endocrinologist.

Most of the state’s endocrinologists are located in Omaha or Lincoln, and there currently is only one endocrinologist west of Lincoln.

But, thanks to a new telehealth initiative developed by UNMC and the Nebraska Medicine Diabetes Center, things are looking up for patients with diabetes in rural communities.

The initiative is being spearheaded by Leslie Eiland, M.D., a Columbus, Neb., native who joined the UNMC team in 2014.

Using a large video monitor and the state-of-the-art Vidyo system, Dr. Eiland and her nurse, Andrea Hoge, a certified diabetes educator, conduct half-day clinics four times each week via telehealth.

The initiative involves hospitals in four Nebraska communities (Scottsbluff, Hastings, Geneva and Columbus) and one Iowa community (Denison).

“I try to function as purely a consultant, giving my opinion to the patient’s primary care doctor,” Dr. Eiland said. “I prefer not to do anything without the support of their primary care physician.”

Dr. Eiland typically sees between 8-10 patients during a half-day clinic.

Her patients fall into three categories:

- one-time consultations;
- patients with more acute issues that she treats to stability (such as hyperthyroidism and some diabetes); and
- patients with chronic problems that need long-term management.

The program has been received well by patients who now have access to a diabetes specialist without having to leave their community.

Education

Shaping the educational future of endocrinology

Medicine is always changing, so physicians of tomorrow must be well versed in the latest medical procedures and techniques.

It’s an evolving process that requires experts in a specialty to come together to determine those skills needed to produce the best possible care for patients. Many UNMC faculty serve on national committees and participate in organizations that help shape the educational training of medical students, resident physicians and fellows.

UNMC’s Whitney Goldner, M.D., is trying to leave her mark on endocrinology. She chairs the Clinical Education and Evaluation Committee of the Endocrine Society, serves on the council of the Association of Program Directors in Endocrinology (APDEM), Diabetics, and Metabolism, and also chairs the Trainee and Career Advancement Committee for the American Thyroid Association.

An expert in thyroid disorders and thyroid cancer, Dr. Goldner has been involved in developing online educational modules to teach endocrinology fellows how to perform and interpret thyroid and neck ultrasounds as well as ultrasound-guided biopsies of thyroid nodules sponsored by the Endocrine Society and APDEM.

Modules to assist fellows in the interpretation of continuous glucose monitoring systems for diabetes management, and interpretation of DEXA scans for osteoporosis management also are being developed.
RESEARCH

FINDING ANSWERS TO COMMON GASTROINTESTINAL TRACT DISEASE

Acute pancreatitis.

“It’s a nightmare for clinicians,” said Dahn Clemens, Ph.D., a research scientist at the VA Nebraska-Western Iowa Health Care System and associate professor in internal medicine at UNMC.

Dr. Clemens has heard too many horror stories about acute pancreatitis from his colleague and research collaborator Shalender Singh, M.D., assistant professor of gastroenterology in internal medicine at UNMC.

Together, they want to find ways to prevent and treat one of the most common diseases of the gastrointestinal tract. Unfortunately, there is no treatment for acute pancreatitis, or inflammation of the pancreas, only supportive care. In most cases, the disease resolves on its own. A small percentage of patients, however, develop prolonged symptoms. Some die.

While pancreatitis is commonly caused by gallstones, alcoholism or family history, it also can be triggered by a common medical procedure, Endoscopic retrograde cholangiopancreatography (ERCP), which is often performed to remove gallstones from the bile ducts.

Patients who undergo ERCP are at an increased risk for developing pancreatitis, Dr. Singh said.

Doctors have used the non-steroidal anti-inflammatory drug, indomethacin, as a prophylactic treatment for patients undergoing ERCP to try to prevent the onset of acute pancreatitis. And in some cases it works. Drs. Clemens and Singh are investigating how it works, and if other drug therapies might also work.

A drug commonly used in transplant patients, Tacrolimus, and another used to treat breast cancer, Tamoxifen, are showing promise in preventing acute pancreatitis in mice, he said. “Whether these drugs alone or together with indomethacin are more effective at preventing post-ERCP pancreatitis is something we are interested in finding out,” Dr. Clemens said.

CLINICAL

GIFT TO BOOST INFLAMMATORY BOWEL DISEASE PROGRAM

A major philanthropic donation from longtime supporters Ruth and Bill Scott will allow UNMC and its primary clinical partner, Nebraska Medicine, to become one of the top centers in the country for treatment and research of inflammatory bowel diseases (IBD).

The Scotts’ gift creates the Ruth and Bill Scott Presidential Chair of Internal Medicine. And while it does not go toward a new building it will be used to enhance the building of a leading clinical and research program, as well as establish the Frederick F. Paustian Inflammatory Bowel Disease Center.

“It’s been a long-term dream to have a multidisciplinary IBD clinic, where specialty gastroenterologists, nurse managers, colorectal surgeons, nutritionists, pharmacists and mental health specialists are all in one place, and all committed to the best care possible for these patients with Crohn’s and ulcerative colitis,” said Renee Young, M.D., professor of gastroenterology and hepatology at UNMC.

Inflammatory bowel disease involves chronic inflammation of all or part of the digestive tract and primarily includes ulcerative colitis and Crohn’s disease.

It’s anticipated that the funding will enable UNMC/Nebraska Medicine to recruit five to seven professional staff, including two physicians specializing in inflammatory bowel diseases, a Ph.D. researcher, a physician assistant and a nurse. As the program becomes fully implemented, the plan is to add a colorectal surgeon who will join with the medical center’s two existing colorectal surgeons.

“When more gastroenterologists interested in IBD at one center, it also will allow for more clinical or translational research,” Dr. Young said.

EDUCATION

ONE OF THE MOST IMPORTANT THINGS A DOCTOR CAN DO IS SHARE WISDOM.

Whether that is with other physicians, nurses, allied health professionals or the patients themselves, it’s sure to have a positive impact on patient outcomes, said Alex Hewlett, D.O., assistant professor and gastroenterology fellowship program director in the division of gastroenterology-hepatology at UNMC.

It’s so important that Dr. Hewlett and others from the division set-aside time throughout the year to give lectures, take part in community forums or dialogue with other health professionals about their field.

Dr. Hewlett has had the opportunity to speak at the Iowa-Nebraska Scoleroma Community Association meeting, teach at the statewide physician and nursing conference, as well as at the statewide physician assistant conference on gastrointestinal pharmacology. And he has been an invited guest speaker at Good Samaritan in Kearney, presenting on the effects of probiotics and the gut micro biome on health and disease.

“These all highlighted new innovations in gastroparesis, care of patients with gastrointestinal problems from Scoleroma, and evidence based treatment of coming gastrointestinal diseases,” Dr. Hewlett said.

More often than not, taking part in these presentations, Dr. Hewlett said he learns just as much from the audience as the audience learns from him. The talks provide a better understanding of the different type of patient populations, the challenges physicians have in treating the various G.I. illnesses they encounter and the ways in which he can help take care of those patients when they are referred to the medical center for care.

Finally, for more than 20 years the division has sponsored the “Gut Club,” a group of physicians, fellows and students from UNMC and Creighton University, as well as private practice physicians in Omaha and Lincoln who gather twice a year to hear from national experts.

“The Gut Club allows us to talk about the latest techniques, innovations and therapies in our field, it’s been a great resource,” Dr. Hewlett said.

Topics have included liver disease, hereditary colon cancer syndrome, and managing curl hypertension Dr. Hewlett said.
Wellness Illness Division Chief: General Internal Medicine THOMAS TAPE, MD

High Quality & Safe Care, Efficiency, Resource Stewardship

Practice Transformation:

REIMBURSEMENT STRUCTURE

Focuses on Ambulatory Quality

NEW PROVIDER

Quality Performance & Accountability Value-Based Incentives & Penalties

MACRA IN 2019

High-Quality & Safe Care, Efficiency, Resource Stewardship

Wellness

NEW PROVIDER REIMBURSEMENT STRUCTURE

Focuses on Ambulatory Quality

RESEARCH

PEER MENTORING GROUP BOLSTERS WORKPLACE SUCCESS

The junior faculty peer mentoring group IMMPACT (Internal Medicine Mentoring Peers in an Academic Career Track) has in the past two years doubled its membership from nine to 18.

“It’s nice that we are reaching a significant portion of the division now,” said Shannon Boerner, M.D., assistant professor of internal medicine, IMMPACT’s chair and co-founder.

The group has been together long enough — nearly four years — that some of its members are no longer so junior. And that’s part of the point of the group.

The twice-monthly lunchtime meetings focus on educational scholarship and helping members navigate the academic track. The group has a rolling agenda in which members can lay out their goals and projects, give progress updates and seek and receive feedback.

Its initial purpose was to increase members’ academic productivity. But almost as a side effect, members have expressed getting a lot of professional and personal satisfaction out of working with the group.

“It doesn’t explicitly or intentionally address work-life balance,” Dr. Boerner said, “but when we study the group, people do mention that feeling of emotional support. This style of mentorship, while different than the more traditional junior-senior model, seems to offer the same degree of support.”

The group is studying itself and preparing to publish its findings about the effect of peer mentorship on early-career internists.

As such, IMMPACT concentrates on three concrete, measurable objectives:

• Increasing scholarly activity among members (abstracts, manuscripts, presentations).

• Facilitating progress toward academic promotion.

• Establishing a culture of mentoring and support within their division.

But the group also has found that other effects, while less tangible, are just as beneficial to workplace success.

“Knowing that you have colleagues who care about your work, who know what you do, who know you well, who know your kids’ names, really does mean something to people,” Dr. Boerner said.

CLINICAL

NEW SAFETY EDUCATION PROGRAM TO IMPROVE CARE

Achieving high-quality, ambulatory care can be challenging.

But, Tanvir Hussain, M.D., M.Sc., M.H.S., assistant professor of general medicine and medical director of quality & analytics, is leading the effort to build ambulatory quality and population health infrastructure at Nebraska Medicine.

He has helped launch a novel quality and safety education program for faculty and advanced practice providers, focusing on core instruction for all providers and advanced training for medical directors.

The goal is to create a common institutional language around quality and safety, demonstrate the science of quality, and familiarize providers with common strategies to improve quality.

The formal training certainly helps, but providers also require tools to help them practice high-quality care given the competing demands on their time. Under the guidance of Dr. Hussain, the Quality and OneChart teams are piloting programs to improve ambulatory quality.

“We are creating real-time decision support, which not only flags patients who are eligible for preventive and chronic illness care but also makes it easier and faster to do so. We also are using health information technology to encourage team-based care,” Dr. Hussain said.

Providers also will have access to quality dashboards. These show providers how they are doing compared to other academic health centers, and have built-in, evidence-based features to quickly address gaps in patient care.

Data transparency and access to actionable data are key to practice improvement.

“We must shift from episode-based care to population health management. We do not want to just focus on metrics; we want to improve systems and processes — a better way of providing care,” Dr. Hussain said.

EDUCATION RESIDENTS TO INTEGRATE POCUS TECHNOLOGY INTO CLINICAL PRACTICE

What if a physician could use portable ultrasonography the way one uses a stethoscope?

Advances in point-of-care ultrasound (PoCUS) technology have made this possible, and soon UNMC internal medicine residents will learn how to integrate PoCUS in their clinical practice.

Christopher Smith, M.D., assistant professor of general medicine, and his colleagues, are leading this initiative, which started in the winter of 2016. The PoCUS curriculum-development group, which includes faculty from general internal medicine and cardiology, plan to use various teaching strategies, including high-fidelity simulation, online learning, group image review and peer-to-peer teaching.

“There is a huge demand for point-of-care ultrasound training from our residents,” Dr. Smith said. “This program will not only improve patient care, but also help us in recruiting the best and brightest residents.”

There is growing evidence that PoCUS can improve patient care by providing immediate information to help in the diagnosis, management and monitoring of various conditions.

“If a patient presents with shortness of breath, we can quickly perform a bedside cardiopulmonary ultrasound to help determine the underlying cause,” Dr. Smith said.

The curriculum-development group currently is expanding faculty development, developing curricular materials, and purchasing additional equipment, including several hand-held machines that can be easily carried by a physician.
**RESEARCH**

$10 MILLION GRANT EVALUATES PROGRAM THAT SUPPORTS DEMENTIA PATIENTS, CAREGIVERS

A $10 million research study has the potential to lead to a new model of dementia care that will ease the stress and challenges of those who care for loved ones with Alzheimer’s disease, Parkinson’s disease, stroke, and other conditions that affect the ability to think and manage day-to-day affairs.

Funded by the U.S. Centers for Medicare & Medicaid Innovation, the three-year study is being conducted through UNMC and the University of California San Francisco (UCSF). Using a new telephone and web-based model of care, the institutions partner with those who suffer with dementia and their caregivers to better understand and manage dementia.

The impact of the Dementia Care Ecosystem will be studied, as it aims to support patients and their caregivers with decision-making, medications, caregiver support, online education, and, for a subset of patients, remote monitoring with smartphones, watches and home sensors.

Steve Bonasera, M.D., Ph.D., associate professor of geriatrics at UNMC and principal investigator of the grant, said the project has the potential to ultimately give patients, their families and care partners advice and expertise no matter where they live or their income.

“We hope to show that by providing comprehensive, personally tailored services, we can keep everyone healthier, happier, and decrease time spent in hospitals,” Dr. Bonasera said. “The interventions in this trial will keep people with dementia at home longer, and at the same time lower family and caregiver stress.”

**CLINICAL**

SENIOR ASSIST PREVENTS READMISSIONS, ENABLES SENIORS TO STAY IN THEIR HOMES

Preventing hospitalizations and re-hospitalizations have come into sharp focus with more emphasis on controlling soaring health care costs.

One program established in 1998 through the UNMC Division of Geriatrics is finding success through its focus on transitional care and community case management. Assisting Seniors to Stay Independent through Services and Teaching (ASSIST) helps prevent hospitalizations and keep vulnerable older adults with chronic conditions in their homes.

Nebraska Medicine patients age 65 and over who are considered at risk can qualify for the voluntary service that ensures their chronic conditions in their homes.

“Part of keeping patients at home and their chronic illnesses in control is teaching patients how to manage their conditions,” Wagner said. “We’ve had a high success rate with keeping our patients out of the emergency room and hospital unnecessarily.”

The team’s success requires a mountain of good communication, tailoring services, we can keep everyone healthier, happier, and decrease time spent in hospitals,” Dr. Bonasera said. “The interventions in this trial will keep people with dementia at home longer, and at the same time lower family and caregiver stress.”

**EDUCATION**

MOVING IPE INTO THE CLINICAL REALM

One of the goals of interprofessional education is to break down the barriers between different health professionals, which can compromise patient safety.

Called IPE for short, first-year students at UNMC have been participating, for the past decade, in activities which teach them about professionalism and teamwork. Last year for the first time, second-year students were introduced to IPE with a clinical case designed to give insight into the perspective of other disciplines.

The case was conceived and designed by the UNMC Division of Geriatrics and Gerontology with input from the UNMC campuswide, interprofessional education group. Last year about 500 students from various health disciplines had the chance to work a patient case in a small group activity.

The exercise, which employs leadership and communication techniques, requires students to assess a patient’s clinical situation, make recommendations for the patient and then come to a consensus on a plan during a discussion that meets the patient’s goals of care.

“The exercise moved interprofessional education into a clinical realm,” said Jane Potter, M.D., professor of internal medicine-geriatrics. “This lets students see what the other professions bring to an interprofessional evaluation of an older person to model of dementia care that will ease the stress and challenges of those who care for loved ones with Alzheimer’s disease, Parkinson’s disease, stroke, and other conditions that affect the ability to think and manage day-to-day affairs.

Funded by the U.S. Centers for Medicare & Medicaid Innovation, the three-year study is being conducted through UNMC and the University of California San Francisco (UCSF). Using a new telephone and web-based model of care, the institutions partner with those who suffer with dementia and their caregivers to better understand and manage dementia.

The impact of the Dementia Care Ecosystem will be studied, as it aims to support patients and their caregivers with decision-making, medications, caregiver support, online education, and, for a subset of patients, remote monitoring with smartphones, watches and home sensors.

Steve Bonasera, M.D., Ph.D., associate professor of geriatrics at UNMC and principal investigator of the grant, said the project has the potential to ultimately give patients, their families and care partners advice and expertise no matter where they live or their income.

“We hope to show that by providing comprehensive, personally tailored services, we can keep everyone healthier, happier, and decrease time spent in hospitals,” Dr. Bonasera said. “The interventions in this trial will keep people with dementia at home longer, and at the same time lower family and caregiver stress.”

**CLINICAL**

SENIOR ASSIST PREVENTS READMISSIONS, ENABLES SENIORS TO STAY IN THEIR HOMES

Preventing hospitalizations and re-hospitalizations have come into sharp focus with more emphasis on controlling soaring health care costs.

One program established in 1998 through the UNMC Division of Geriatrics is finding success through its focus on transitional care and community case management. Assisting Seniors to Stay Independent through Services and Teaching (ASSIST) helps prevent hospitalizations and keep vulnerable older adults with chronic conditions in their homes.

Nebraska Medicine patients age 65 and over who are considered at risk can qualify for the voluntary service that ensures their chronic conditions in their homes.

“Part of keeping patients at home and their chronic illnesses in control is teaching patients how to manage their conditions,” Wagner said. “We’ve had a high success rate with keeping our patients out of the emergency room and hospital unnecessarily.”

The team’s success requires a mountain of good communication, tailoring services, we can keep everyone healthier, happier, and decrease time spent in hospitals,” Dr. Bonasera said. “The interventions in this trial will keep people with dementia at home longer, and at the same time lower family and caregiver stress.”

**EDUCATION**

MOVING IPE INTO THE CLINICAL REALM

One of the goals of interprofessional education is to break down the barriers between different health professionals, which can compromise patient safety.

Called IPE for short, first-year students at UNMC have been participating, for the past decade, in activities which teach them about professionalism and teamwork. Last year for the first time, second-year students were introduced to IPE with a clinical case designed to give insight into the perspective of other disciplines.

The case was conceived and designed by the UNMC Division of Geriatrics and Gerontology with input from the UNMC campuswide, interprofessional education group. Last year about 500 students from various health disciplines had the chance to work a patient case in a small group activity.

The exercise, which employs leadership and communication techniques, requires students to assess a patient’s clinical situation, make recommendations for the patient and then come to a consensus on a plan during a discussion that meets the patient’s goals of care.

“The exercise moved interprofessional education into a clinical realm,” said Jane Potter, M.D., professor of internal medicine-geriatrics. “This lets students see what the other professions bring to an interprofessional evaluation of an older person to develop an interprofessional care plan.”

The pre-work for the case was completed using the Institute for Health Professions modules or TeamSTEPPS®, a national training program derived from high stakes professions like nuclear power and aviation programs and used to reduce errors and improve teamwork.
**RESEARCH**

**‘TIME OUT’ STUDY ASSESSES ANTIBiotic USE**

Time out.

That’s what Trevor Van Schooneveld, M.D., is calling for with the “Time Out Study,” part of UNMC’s Antimicrobial Stewardship Program.

Dr. Van Schooneveld is not advocating a hiatus in delivering antibiotics to patients. The “time out” study assesses should occur 48 to 72 hours after a patient is placed on antibiotics, and it consists of a meeting of the patient’s health care team.

“The idea is to take a break and review everything concerning the antibiotic,” he said. “Are we on the right antibiotic? Can we narrow it down? How is the patient doing? Has more clinical data come in, and how should we adjust things?”

The project, an initiative the Centers for Disease Control and Prevention (CDC) has been encouraging on a national level, is an attempt to democratize the type of antibiotic oversight that Dr. Van Schooneveld’s stewardship program provides — but replicable at smaller hospitals and health care facilities.

“The goal is to see whether doing this antibiotic time out improves and decreases antibiotic use,” Dr. Van Schooneveld said. “We think it will.”

In 2015, the infectious diseases division had a portfolio of $5.9 million in extramural support and 36 active clinical trials. Major projects were initiated concerning infection prevention throughout the state of Nebraska, bacteremia in neutropenic cancer patients and infections in immunocompromised transplant patients, HIV, staphylococcal disease and C difficile.

**CLINICAL**

**EBOLA TEAM’S FOCUS SHIFTS TO EDUCATION**

2015 was a year of change for Angela Hewlett, M.D., Phil Smith, M.D., and the rest of UNMC’s infectious disease division, now nationally known for its response to the 2014 Ebola crisis.

Focus shifted from clinical treatment to education as the team translated their experiences in order to help other hospitals and academic medical centers prepare for and cope with highly infectious diseases.

During the Ebola response, many people took on extra tasks, including routine clinical duty on the wards and in the clinic. That enabled Drs. Smith and Hewlett to devote more time to the Ebola effort, which ranged from more direct Ebola care and an onslaught of media requests to helping with experimental drug overdose, preparing the state of Nebraska, bacteremia in neutropenic cancer patients and infections in immunocompromised transplant patients, HIV, staphylococcal disease and C difficile.

**EDUCATION**

**ID FELLOWSHIP PROGRAM EXPANDS**

Starting next year, the number of infectious disease fellows will rise from one to two per year, and the department hopes to offer fellowship opportunities in infectious diseases, infection prevention, biopreparedness, antimicrobial stewardship and HIV.

The project, an initiative the Centers for Disease Control and Prevention (CDC) has been encouraging on a national level, is to democratize the type of antibiotic oversight that Dr. Van Schooneveld’s stewardship program provides — but replicable at smaller hospitals and health care facilities.

“The goal is to see whether doing this antibiotic time out improves and decreases antibiotic use,” Dr. Van Schooneveld said. “We think it will.”

In 2015, the infectious diseases division had a portfolio of $5.9 million in extramural support and 36 active clinical trials. Major projects were initiated concerning infection prevention throughout the state of Nebraska, bacteremia in neutropenic cancer patients and infections in immunocompromised transplant patients, HIV, staphylococcal disease and C difficile.
INPATIENT DIALYSIS TREATMENTS

The average time kidney patients spend waiting to receive a transplant differs dramatically depending on where they are listed. In parts of the U.S., waiting times can average up to 10 years. Many die waiting.

In 2014, more than 100,000 people were waiting for a kidney transplant in the U.S. Yet, only about 17,000 — less than one-fifth — of them actually received one due to inadequate organ supply.

At UNMC, Nebraska’s only transplant center, the wait is one of the shortest in the U.S. — usually less than two years — partly due to an effective and efficient wait list management clinic.

UNMC typically performs 130 to 150 kidney transplants a year on people from all over the world, said Clifford Miles, M.D., associate professor, nephrology.

The short wait in Nebraska requires patients to be healthy enough for surgery at a moment’s notice and that’s were UNMC’s Waitlist Management Clinic comes in. It helps ensure that patients are ready when the transplant call comes. In 2014, 3,668 listed patients in the U.S. became too sick to tolerate the transplant procedure and were removed from the list.

“A annual comprehensive exams and testing, and routine follow-up for each patient on our waitlist helps patients maintain their health and prevents surprises for us,” said Scott Westphal, M.D., assistant professor, nephrology.

Dr. Miles has seen more than a 10 percent decrease in the number of waitlisted patients put on inactive status since starting the waitlist clinic in 2010. Meanwhile, in the past two years, the number of new referrals to the UNMC transplant center has increased by more than 20 percent.

CLINICAL

SHORT WAITING TIMES ATTRACT KIDNEY TRANSPLANT PATIENTS NATIONWIDE

Greater than 25 percent of dialysis patients cared for by UNMC nephrologists perform either peritoneal dialysis or home hemodialysis compared to only 10 percent nationwide.

“It is well known that patients performing home therapies report a higher quality of life and a lower disease burden,” Dr. Plumb said. “The problem is that many nephrologists who finish fellowships are not trained to manage these patients. Our fellows receive extensive experience in prescribing home dialysis and managing these patients in the acute and chronic setting.”

There has been a marked increase in the number of nephrologists interested in interventional nephrology, which is led by associate professor Marius Florescu, M.D., who is nationally known in this area.

Dr. Plumb said that fellows interested in interventional nephrology have been able to perform enough dialysis access procedures to be eligible for certification by the American Society of Interventional Nephrology.

“Most interventional nephrology training requires an additional year of fellowship or attendance to expensive training courses. Our fellows are able to gain this experience during the standard two-year nephrology fellowship.”

INNOVATIONS IN HEMODIALYSIS VASCULAR ACCESS

An interventional nephrologist at UNMC has invented a new device that may help make hemodialysis treatment safer, easier and less expensive for patients.

Marius Florescu, M.D., associate professor, came up with an elegant solution to one of the complications associated with kidney dialysis — an improved catheter that doesn’t need to be replaced nearly as often as current models on the market.

Kidney patients spend up to five hours, three days a week hooked to a machine that cleans the blood. It gets even more complicated when the body attacks the implanted catheter and forms a fibrous sheath that blocks the opening.

“The fibrous sheath causes 75 percent of catheter dysfunctions,” Dr. Florescu said.

To clear the blockage, the catheter is removed and the fibrous sheath is obliterated by inflation of an angioplasty balloon. Then, a new catheter is placed inside the patient. This procedure risks infection and is expensive.

But with Dr. Florescu’s invention, which combines the catheter tube with the angioplasty balloon, the blockage can be eliminated within three minutes by deploying the angioplasty balloons contained within the catheter.

Every year in the U.S., approximately 500,000 hemodialysis catheter procedures are performed, one-half of which involve placement or exchange of a hemodialysis catheter.

Joe Runge, J.D., UNMC’s senior licensing specialist and UNeMed’s director of business development, guided Dr. Florescu through the patent and licensing process, which led to Chrysalis Medical of Silicon Valley, Calif.

The company specializes in bringing new devices to the market and licensed the invention immediately. It’s now called Chrysalis Catheter and is being prepared for FDA approval.
OUTREACH AROUND THE WORLD
Division of Oncology and Hematology

1 YEAR
31 CITIES
8 COUNTRIES

LEUKEMIA PHYSICIAN/RESEARCHER DRIVEN BY HOPE OF BRIGHTER FUTURE

Improving the odds of surviving leukemia is what drives Vijaya Bhatt, M.D.

In 2015, he published nearly 60 papers. The average, in an academic setting, is anywhere from five to 15.

“2015 was a very good year for me,” said Dr. Bhatt, assistant professor in the division of oncology and hematology. “This was possible because of the support of the division and the physician scientist training grant from the UNMC College of Medicine.”

Published studies enable health professionals worldwide to learn and apply new information.

A recent study that he was involved in showed better outcomes for acute leukemia patients who receive initial diagnosis and treatment at academic medical centers.

“This indicated that expertise and experience at an academic center such as ours can improve survival,” Dr. Bhatt said. “Even though chemotherapy may not have changed as much in the last decade or two, survival can be improved with quick diagnosis and appropriate treatment at major centers.”

He and his colleagues are collaborating with researchers across the country on a number of promising studies to treat leukemias resistant to therapy.

Although survival varies by type of cancer, overall cancer survival has improved quite a bit because of basic and clinical research.

“Studies have shown that patients who have participated in clinical trials have better outcomes,” he said. “A trial allows patients to receive potentially effective therapies before they can be routinely used in the clinic.”

EDUCATION
SHARING KNOWLEDGE, EXPERTISE THROUGH OUTREACH

It’s no accident that UNMC faculty members are well-known around the world for transplantation, lymphoma research and care.

From Hawaii to New York, and Europe to Asia, UNMC oncologists, hematologists and researchers are advancing the body of knowledge by sharing their expertise — through outreach.

At conferences, seminars and other gatherings, faculty are engaging in one of the missions in academic medicine that sets them apart from other physicians.

“Typically when we go to international meetings, we present reviews of specific disease areas, present original research data and in some cases present overviews of the value of cancer care or changes in the health care system,” said Julie Vose, M.D., chief of the division of oncology and hematology at UNMC and immediate past president of the American Society of Clinical Oncology. “We collaborate with people around the country and world to share what we’re doing here and to learn from others.

“The purpose of academic education is to share advances in cancer care throughout the world so patients everywhere have the same opportunities for these treatments. This exchange also enables us to highlight our cancer center.”

UNMC is a founding member of the National Comprehensive Cancer Network and a member of the Big Ten Cancer Research Consortium, a collaboration of 11 academic institutions with 2,600 cancer researchers, in order to bring new treatments to patients more rapidly.

CLINICAL
WORK OF TUMOR BOARDS EXPANDS, BRINGS EXPERTS TOGETHER TO FOCUS TREATMENT

The treatment of cancer requires multiple specialists. Tumor boards bring together specialists to make one comprehensive treatment plan for patients.

Disease specific tumor boards have existed for many years and recently have been expanding to provide tumor boards for oncologists throughout the state. UNMC physicians review pathology biopsies and diagnostic images then help physicians make a treatment plan for their patients.

“We go over new and interesting patient cases with a multi-disciplinary team of medical hematology/oncology, radiation oncology, surgical oncology, radiology, and pathology,” said Julie Vose, M.D., Neumann M. and Mildred E. Harris Professorial Chair and chief of the division of oncology and hematology. “We go over every aspect of the patient’s case and then together make a plan with all the physicians present for that patient.”

“It used to be each individual doctor would make a plan,” Dr. Vose said.

Dr. Vose said the hematology/oncology division has expanded its tumor board outreach over the past couple of years to help physicians whose patients need advanced treatment but cannot come to Omaha.

“We are happy to share with physicians across Nebraska and the region the decades of knowledge and experience we’ve amassed for the benefit of patients,” she said. “It’s a way to expand our reach to enhance patient care and make clinical trials available for those who might benefit from treatments that are not yet on the market.”

Tumor boards include: breast cancer tumor, leukemia, sarcoma/ melanoma, lymphoma/multiple myeloma, gastrointestinal, cardiothoracic, head and neck and neuro-oncology.
RESEARCH

STUDIES EXPLORE PULMONARY HEALTH, AGING

Kristina Bailey, M.D., was exploring the effects of alcohol on pulmonary function when she was struck by differences in her control animals — differences tied to age, not alcohol use.

“We noticed that over time their cilia function was declining,” she said. “That prompted us to look more closely at the effects of aging.”

As a result, Dr. Bailey’s research is transitioning into looking at how normal changes of aging affect pulmonary health. It’s an area that has immense clinical possibilities.

“Alcohol is an important determinant of lung health, but there’s only a certain portion of society that has heavy alcohol use, whereas we’re all aging,” Dr. Bailey said. “And very little is known about the aging lung — it’s just not something we’ve studied extensively.”

Currently, Dr. Bailey and her team are focusing on mucociliary clearance.

“One of the ways that we protect ourselves from getting pneumonia is that there are cilia that line the airways, and if you inhale bacteria, then those cilia, along with the mucus, bring the bacteria up and out,” she said. “As we age, those cilia slow down, and they’re not as able to be activated.”

Dr. Bailey is exploring how that change in the lung’s defenses can lead to more pneumonia in the elderly.

“We’re taking a translational approach,” Dr. Bailey said. “We started out with the mouse model, and it showed that their cilia were impaired. We’re moving on to human specimens and measuring ciliary beat frequency in those specimens and so far we’re confirming what we see in the mouse model!”

Dr. Bailey’s research is focused on people older than 65, the age when pneumonia increases dramatically in humans and mortality rates rise even if aggressive antibiotic treatment is given.

“Our goal is to discover ways to either prevent or better treat pneumonia in the elderly,” Dr. Bailey said.

“Because of the lung transplant opportunity that’s now present, we wanted to be able to incorporate that into an educational experience,” she said. “The fellows have been excited about the opportunity to work with those patients.”

EDUCATION

NEW ROTATION EXPOSES FELLOWS TO LUNG PATHOLOGIES

This past July, the pulmonary, critical care, sleep & allergy division began an advanced lung disease rotation for fellows.

Candace Huebert, M.D., associate program director for the fellowship, said that the new lung transplant program has made this an exciting time for the division.

“Dr. Heather Strah, M.D., is a new faculty member hired to be the pulmonologist for lung transplants,” Dr. Huebert said. “We thought, ‘what better educational opportunity than to make a rotation to involve our fellows with her specifically and her patient population?’”

The new rotation is an addition to the division’s general pulmonary and general critical care experiences and focuses on immune suppression, post-transplant infection or rejection and other aspects of advanced lung disease.

“This exposes the fellows, who are training to be pulmonologists, to the advanced lung pathologies — the patients who need lung transplants or are post lung transplant, and their care.”

The department has added a fellow this year, going from three a year to four, so there are now 10 fellows in the department. Third-year fellows will rotate through advanced lung disease, Dr. Huebert said.

“Because of the lung transplant opportunity that’s now present, we wanted to be able to incorporate that into an educational experience,” she said. “The fellows have been excited about the opportunity to work with those patients.”

CLINICAL

PULMONARY REHAB CRITICAL TO TRANSPLANT PROGRAM

After surgery comes rehab, according to conventional wisdom. But for Amol Patil, M.D., medical director of pulmonary rehabilitation and medical director of the neurointensivist care unit, pulmonary rehab can be just as important before surgery.

“Pulmonary rehab is integral to any big pulmonary program, but it’s really vital in a transplant program,” Dr. Patil said, referencing the medical center’s new lung transplant program.

“With somebody who is really sick, you sometimes can hold off transplanting them by optimizing their pulmonary function. You can actually optimize them enough so that they have fewer complications or no complications once they’re transplanted. And of course, you can keep them in an optimal state post-transplant.”

The goal of the rehab program is to allow COPD patients to avoid hospitalizations, and the pulmonary, critical care, sleep & allergy division uses a multidisciplinary approach involving physicians, nurses, respiratory therapists and others to keep patients “optimized,” in Dr. Patil’s words.

“We are bringing in extremely medically complex patients that can have multiple co-morbidities,” he said. “But if you institute pulmonary rehab early on, patients do well. They achieve a lot more independence and have significantly improved self-management, as well as have symptom resolution or improvement. Even their exercise tolerance goes up.”

But for Amol Patil, M.D., medical director of pulmonary rehabilitation and medical director of the neurointensivist care unit, pulmonary rehab can be just as important before surgery.
RESEARCH

NOVEL IMMUNE MODULATORY MOLECULE DISCOVERED AT UNMC

A team of researchers at UNMC believes they’ve found a molecule that can help physicians predict if a patient will develop rheumatoid arthritis, coronary artery disease and perhaps any autoimmune disease.

Geoff Thiele, Ph.D., professor of internal medicine, has been working with the molecule, the MAA adduct, since 1996 and its relationship with alcohol liver disease. He recently noticed that the presence of MAA, or malondialdehyde-acetaldehyde adduct, was linked to high levels of inflammation in rheumatoid arthritis and cardiovascular disease.

“It’s the ultimate pan-marker for inflammation. It modifies proteins that are present under conditions of high oxidative stress,” Dr. Thiele said. “I’m excited as we think this unique biomarker can give us some idea as to the severity of a disease. Importantly, we believe that by identifying the proteins that are modified we can develop testing specific for these and other diseases.”

A few years ago, he began interdisciplinary collaborations with physician scientists Ted Mikuls, M.D., M.S.P.H., Linback Professor of Rheumatology, and Dan Anderson, M.D., Ph.D., associate professor, cardiology.

“The value of this as a marker is that up to 30 percent of our patients are negative for current tests for rheumatoid arthritis. Because we see antibody to MAA in a majority of these seronegative patients, this novel biomarker could potentially fill an important gap in our diagnostic armamentarium,” Dr. Mikuls said.

“We know that inflammation is important in cardiovascular disease,” Dr. Anderson said. “It’s when cells are stressed with high cholesterol, diabetes or other risk factors that they create disease, “ Dr. Anderson said. “It’s when cells are stressed with high cholesterol, diabetes or other risk factors that they create disease.”

“And MAA is related to the development of different types of coronary artery and heart disease.”

“MAA modifies proteins to alter their structure such that they are bound and removed by immune cells in your body. What cell or protein it then attaches to is fair game for the immune system,” Dr. Thiele said. “The problem is to identify which of the proteins modified with MAA are related to which disease.”

EDUCATION

RHEUMATOLOGY REMEDY STAND GAME MAKES LEARNING FUN

Millenials, like the ones who are now students at UNMC, grew up playing video games. One-half of millennials see real life as a video game and even more consider “winning” the slogan of their generation.

So, gamification of medical education just seemed obvious to Amy Cannella, M.D., associate professor, rheumatology, fellowship program director and M2 core director. First-year house officer, Tate Johnson, agrees.

After initial success creating a video game for gout education targeted at the M2 students, Dr. Cannella and Johnson teamed up to develop an interdisciplinary game tailored to teach rheumatologic therapeutics to graduate, medical, pharmacy, physician assistant and physical therapy students.

Johnson combined the classic game “Lemonade Stand” with a Peanuts cartoon spin off of “The Doctor Is In.” The student selects a profession at the “Rheumatology Remedy Stand” and the doctor, pharmacist, PA or PT, is in.

The provider sees 10 patients per session, earns money for correct answers and tries to earn the highest profit margin at the end of the game, Johnson said.

Patients present with a medical problem for which four answers pop up. Each correct answer earns from $100 to $500, depending on difficulty, and the patient is rewarded with a glass of lemonade.

If the provider is wrong, the correct answer is given. Each problem also has an educational “pearl” of additional learning.

At the end of a “week,” the provider is presented with a “billing statement” which explains the questions they answered and their income summary from that week. Students who earn $12,000 are rewarded with the hyperlink to the question bank in spreadsheet form that can be downloaded.

“We hope this game provides a fun way for students to learn some of these difficult medications, and have more clinically-oriented scenarios from which to learn,” Tate said.

The video game was developed through e-learning grants from the vice chancellor for academic affairs and the rheumatology division, in collaboration with the University of Nebraska at Omaha.

CLINICAL

iRHEUM STREAMLINES PATIENT DATA

Rheumatology patients at Nebraska Medicine and UNMC are in the midst of an electronic revolution that is streamlining data for physicians and researchers.

Before, patients would complete questionnaires regarding their current condition on paper prior to, or at, a clinic appointment. The information eventually would be entered into UNMC’s internal database and available for the physician to review by the next appointment.

“This system didn’t help the physician or the patient with urgent needs,” said Kabir Michaud, Ph.D., associate professor, rheumatology, and co-director of the National Data Bank for Rheumatic Diseases.

Now, the process has been made more effective and efficient with iRheum.

iRheum is a program on an electronic tablet that allows patients to answer questions about their condition, physical function, pain and general well-being. The information is sent immediately to the Rheumatology and Investigational Network (RAIN) database.

“The physician sees the scores immediately and can adjust treatment if need be. Patients also like getting feedback from the physician, plus it shows that time spent on the questionnaire was useful,” Dr. Michaud said.

Dr. Michaud received a $400,000, two-year grant from the Rheumatology Research Foundation to test the iRheum program in academic and clinical settings.

UNMC is one of a handful of academic health professions centers in the U.S. chosen to conduct these tests. Brentwood Village, Village Pointe and some clinics in the Durham Outpatient Center began testing in 2015.

More rheumatology clinics throughout the region want to participate, Dr. Michaud said.

“iRheum and the RAIN database can help physicians see trends in the disease and may be able to predict, and perhaps block, potentially harmful events,” he said. “I can see this technology being useful for tracking comorbidities and in other specialties relying on patient-reported outcomes.”
JAMES R. O’DELL, M.D.

James O’Dell, M.D., serves as Bruce Professor, chief of the division of rheumatology and vice chair for education in the Department of Internal Medicine. He has directed the UNMC Internal Medicine Residency Program for more than 28 years. Dr. O’Dell earned his medical degree and completed his internal medicine residency at UNMC. He completed a clinical and research fellowship in rheumatology at the University of Colorado Health Sciences Center, Denver, and is board certified in both internal medicine and rheumatology. He is founder and director of the nationally recognized Rheumatized Arthritis Investigational Network, a collaboration of rheumatologists from eight states who conduct investigator-initiated trials seeking improved treatments for rheumatoid arthritis (RA).

His research centers on the development of multi-centered, non-industrial clinical trials that are designed to answer clinically relevant therapeutic questions. Through a 1996 New England Journal of Medicine publication, he popularized combination therapy for RA.

Active with the American College of Rheumatology, Dr. O’Dell is past president of the Research and Education Foundation and served as president in 2011-2012. He is co-editor of Arthritis and Rheumatism.

THOMAS G. TAPE, M.D.

Thomas Tape, M.D., is chief of the UNMC Division of General Internal Medicine and professor and vice chair for clinical activity in the department of internal medicine.

He received his medical degree from Washington University School of Medicine, St. Louis, Mo., and did his medicine residency and general internal medicine fellowship at Strong Memorial Hospital, University of Rochester, New York. He is certified by the American Board of Internal Medicine.

Dr. Tape is currently chair of the Board of Regents of the American College of Physicians (ACP) and has held numerous other positions in the ACP over the past 10 years. He speaks often on the drivers and implications of health care reform.

His research interests are in the areas of physician judgment and decision-making and evidence-based clinical practice. He has written more than 50 papers in peer-reviewed journals and a dozen chapters — primarily in medical education books. He co-edited the ACP book: Diagnostic Strategies for Common Medical Problems. He also is credited as the co-developer of six medical education computer programs.

ANGELA HEISTERKAMP, MBA

Angela Heisterkamp serves as Vice Chair for Administration and Finance in the Department of Internal Medicine, where she has served as Department Administrator since 2014. Angela earned her Master’s Degree in Business Administration from Creighton University, Omaha, Nebraska, and her Bachelor’s of Science in Business Administration, Finance, at the University of Nebraska, Omaha.

She previously held the position of Financial Executive at Children’s Specialty Physicians and Children’s Physicians in Omaha, Neb. At Creighton University, she held the positions of Associate Dean for Finance & Administration and Financial Officer at the School of Law, Director of Financial Affairs at the School of Medicine and Administrator of the Department of Pediatrics.
FACULTY LIST & KEY INTERESTS

**CARDIOVASCULAR MEDICINE**

VINCENT POMPILI, MD  
Professor & Chief, Division of Cardiovascular Medicine  
- high risk PCI in complex CAD  
- structural heart disease and TAVR  
- cardiovascular regenerative medicine

DANIEL ANDERSON, MD, PHD  
Associate Professor  
Medical Director, Cardiac Electrophysiology  
- electrophysiology  
- atherosclerotic disease  
- cellular immunology and vascular inflammation

WARD CHAMBERS, MD  
Professor  
Coordinator of Programs, International Health and Medical Education  
- cardiovascular imaging  
- minority health disparities

MARTINA CLARKE, PHD  
Assistant Professor  
- improving EHR usability  
- information needs analysis

JESSICA DELANEY, MD  
Assistant Professor  
- management of complex arrhythmia cases  
- genetic arrhythmia syndromes

ARTHUR EASLEY JR., MD  
Associate Professor  
Director, General Cardiology Fellowship Program  
- electrophysiology  
- resident education

CHRISTOPHER ERICKSON, MD  
Professor  
- pediatric and adult electrophysiology  
- pediatric and adult congenital heart disease  
- cardiomyopathies

KIRAN GANGAHAAR, MD  
Assistant Professor  
- advanced cardiac imaging  
- prevention and outcomes  
- women's health

JOHN HAAS, MD  
Assistant Professor  
Medical Director, Prevention and Outcomes  
- cardiac arrhythmias  
- complex cardiac evaluation  
- advanced echocardiography

BRIAN LOWES, MD, PHD  
William D Angle, MD Professor of Cardiology  
Director, Heart Failure/Transplantation  
- heart failure transplant

EDWARD O’LEARY, MD  
Associate Professor  
Director, Interventional Cardiology Fellowship  
- peripheral vascular disease  
- three-dimensional angiography

GREGORY PAULIDES, MD  
Professor and Miscia Chair of Interventional Cardiology  
Medical Director, Cardiac Cath Lab, Clinical Enterprise  
- structural heart disease  
- interventional cardiology

THOMAS PORTER, MD  
Professor and Theodore F. Hubbard Distinguished Chair of Cardiology  
- perfusion echocardiography  
- advanced cardiac imaging (including MRI/CT/Nuclear/Echocardiography)  
- thrombolysis

EUGENIA RAICHLIN, MD  
Associate Professor  
- heart failure and cardiac transplantation  
- cardiac imaging

SHIKHAR SAXENA, MD  
Assistant Professor  
- cardiovascular disease  
- prevention and outcomes  
- coronary artery disease

SAMER SAYYED MD  
Associate Professor  
Medical Director, Non-Invasive Cardiac Imaging  
- cardiovascular disease  
- advanced cardiovascular imaging (MRI/CT/Nuclear/Echocardiography)  
- coronary artery disease

LESLIE A. EILAND, MD  
Assistant Professor  
- telemedicine and rural health  
- type 1 and type 2 diabetes  
- thyroid disorders

WHITNEY S. GOLDFEIN, MD  
Associate Professor  
Director, Endocrinology Fellowship  
- thyroid nodules and cancer registry  
- environmental exposures and thyroid disease and thyroid cancer  
- neuroendocrine tumors
The Department gives special recognition to the honors below, although a number of faculty members contribute to study sections and other national activities.

### RHEUMATOLOGY & IMMUNOLOGY

**JAMES O’DELL, MD**  
Block Professor and Chief Director, Internal/Medicine Residency Program  
- rheumatoid arthritis clinical trials and predicting response to therapy  
- gout clinical trials  
- rheumatologic education

**AMY CANNELLA, MD**  
Associate Professor  
- medical education  
- musculoskeletal ultrasound

**ALAN ERICKSON, MD**  
Associate Professor  
- medical education

**MICHAEL FEELY, MD**  
Assistant Professor  
- evaluation and management of idiopathic inflammatory myopathies  
- general rheumatology  
- rheumatologic education

**MICHIELENE HEARTH-HOLMES, MD**  
Assistant Professor  
- medical education  
- systemic lupus erythematosus  
- musculoskeletal ultrasound

**LYNELL KLASSEN, MD**  
Robert L. Grissom Professor of Internal Medicine  
- mechanisms of autoimmune disease  
- immunoregulation

**TINA MAHAJAN, MD**  
Assistant Professor  
- management of rheumatic disease  
- rheumatologic education

**KALEB MICHAUD, PHD**  
Associate Professor  
- pharmacoepidemiology and longitudinal outcomes in rheumatic diseases  
- cost effectiveness analysis  
- mHealth, medical informatics and patient-reported outcome measures

**TED MIKULS, MD, MSPH**  
Lambeth Professor of Research  
- epidemiology and outcomes of rheumatoid arthritis  
- rheumatologic education  
- clinical outcomes in gouty arthritis

**GERALD MOORE, MD**  
Professor  
- education of medical students  
- soft tissue disease

**MARCUS SNOW, MD**  
Assistant Professor  
- pathophysiology of autoimmune diseases  
- altered self-proteins in autoimmunity  
- immune regulation

**GEOFFREY THIELE, PHD**  
Professor  
- immune regulation  
- altered self-proteins in autoimmunity  
- pathophysiology of autoimmune diseases

### SPECIAL RECOGNITION FOR NATIONAL HONORS

**JAMES O. ARMITAGE, M.D.**  
Special Recognition Award, American Society of Clinical Oncology | 2014

**JAMES R. O’DELL, M.D.**  
2014 Lee C. Howley Sr. Prize for Arthritis Research, Arthritis Foundation  
Induction in Inaugural Class of Honorary Board of Advisors, Rheumatology Research Foundation; American College of Rheumatology | 2015

**LYNELL W. KLASSEN, M.D.**  
Inducted as a Master of the American College of Rheumatology.

**THOMAS G. TAPE, M.D.**  
Regent - ACP, American College of Physicians, USA | 2013-2015

**JULIE VOSE, M.D., M.B.A.**  
President, American Society of Clinical Oncology | 2015

**MARK E. RUPP, M.D.**  

**JILL A. POOLE, M.D.**  
Honorary AAAAI Lectureship Award; John E. Salvaggio Memorial, American Academy of Asthma, Allergy and Immunology | 2014

**NATHAN M. ANDERSON, M.D.**  
National ACP Waxman Scholarship Award, American College of Physicians, USA, D.C. Washington | 2015

**SHANNON K. BOERNER, M.D.**  
Competitive yearlong program for early career clinician educators, SGIM/TEACH Scholar, USA | 2013-2014

**URIEL S. SANDKOVSKY, M.D.**  
Investigator Award - HIVMA, IDSA - ID week, USA | 2015

**TANVIR HUSSAIN, M.D.**  
National Quality Scholar, American College of Medical Quality, USA | 2015
of London. A gastroenterologist, who had previously been associated with Harvard University and the University of California, San Francisco, Dr. Gollan joined the faculty of the University of Nebraska Medical Center in 2001. He chaired the Department of Internal Medicine from 2001-2003, until assuming the role of Dean, College of Medicine, UNMC, which he held from 2003-2010, until he resigned due to ill health.

Among his notable accomplishments at UNMC include:

• Negotiated an affiliation agreement with Children's Hospital and Medical Center;

• Worked with Nebraska Medicine to establish the Biocompliance Unit, now noted for its care of Ebola patients;

• Recruited 11 department chairpersons;

• Helped lay the groundwork to have the School of Allied Health Professions become a College; and

• Worked with the Chancellor in the creation of the UNMC College of Public Health.

Among Dr. Gollan’s highest accomplishments was his unique ability to be a successful leader of physicians and scientists while remaining at all times respectful, cordial, modest and witty, a true gentleman to his core and a genuine pleasure to work with.

Richard Tobin, M.D., was a pioneer in establishing endocrinology at UNMC. In 1968, Dr. Tobin was selected to start the endocrinology program at UNMC when Robert Grissom, M.D. formed the academic department of internal medicine. He was one of the first endocrinologists, as well as a clinician-scientist.

DENHAM HARMAN, M.D., PH.D.

Dr. Harman joined the UNMC faculty in 1968 when he was named the Nebraska Heart Association Chair of Cardiovascular Research with appointments in biochemistry and internal medicine. He was promoted to professor of medicine and biochemistry in 1968. In 1973 he was honored by being designated the Milward Professor of Medicine.

Because elderly patients have special needs, Dr. Harman believed geriatrics, or care of the elderly, should be a separate subsection of internal medicine. In 1973, UNMC established the first section of biomedical gerontology with Dr. Harman serving as section head. It was the first such program in the country. Today, it is commonplace for academic health science centers to have gerontology sections.

In 1970, Dr. Harman helped establish the American Aging Association (AGE), a national lay-scientific health organization patterned after the American Heart Association. Its main purpose is to promote biomedical aging research directed towards slowing the aging process. He served as AGE’s first president and as executive director of the organization from 1972 to 1992. In 1985, he founded the International Association of Biomedical Gerontology.

Dr. Harman retired in 1986 and was named emeritus professor, but he never relented in his quest to better understand aging. “His work became his hobby,” said Helen Harman, his wife of 71 years.

In addition to serving on the UNMC faculty, Dr. Harman served as chief of the Nebraska Geriatric Service for Douglas County Hospital from 1971 to 1986.

JOHN GOLLAN, M.D., PH.D.

JOHN GOLLAN, M.D., Ph.D., emeritus professor in the Division of Gastroenterology/Hepatology died January 6, 2015 at the age of 72 after a battle with Parkinson’s disease.

Dr. Gollan achieved his medical education at the University of Adelaide in South Australia and his Ph.D. at the University of London. A gastroenterologist, who had previously been associated with Harvard University and the University of California, San Francisco, Dr. Gollan joined the faculty of the University of Nebraska Medical Center in 2001. He chaired the Department of Internal Medicine from 2001-2003, until assuming the role of Dean, College of Medicine, UNMC, which he held from 2003-2010, until he resigned due to ill health.

Among his notable accomplishments at UNMC include:

• Negotiated an affiliation agreement with Children’s Hospital and Medical Center;

• Worked with Nebraska Medicine to establish the Biocompliance Unit, now noted for its care of Ebola patients;

• Recruited 11 department chairpersons;

• Helped lay the groundwork to have the School of Allied Health Professions become a College; and

• Worked with the Chancellor in the creation of the UNMC College of Public Health.

Among Dr. Gollan’s highest accomplishments was his unique ability to be a successful leader of physicians and scientists while remaining at all times respectful, cordial, modest and witty, a true gentleman to his core and a genuine pleasure to work with.

Richard Tobin, M.D., was a pioneer in establishing endocrinology at UNMC. In 1968, Dr. Tobin was selected to start the endocrinology program at UNMC when Robert Grissom, M.D. formed the academic department of internal medicine. He was one of the first endocrinologists, as well as a clinician-scientist.

RICHARD TOBIN, M.D.

Dr. Tobin came to Omaha in 1966 as associate chief of staff for the Omaha VA Medical Center and as associate professor of internal medicine for UNMC. He continued as associate chief of staff at the VA Medical Center until 1973 and remained on the VA staff until he retired in 1995. In 2009, he received the Friends of Omaha VA Research Service Award.

Dr. Tobin served in the U.S. Army as a medical officer during the Korean War. He earned his medical degree from the University of Rochester College of Medicine in Rochester, N.Y. He did his internship at Barnes Hospital, St. Louis, and his residency and fellowship in internal medicine and endocrinology at Strong Memorial Hospital in Rochester. He completed another fellowship in biochemistry at the University of Amsterdam. From 1995-1986, he served on the faculty of the University of Rochester.

Dr. Tobin was very committed to the academic mission of UNMC. He was also someone who consistently valued the role of research, as well as understood the importance of the Omaha VA Medical Center to our academic center.

Dr. Tobin’s research focused on thyroid hormone action with an emphasis on how it impacted mitochondria and other cellular functions. Even after he closed his research laboratory, he continued to be a mentor and consultant to faculty, participated in clinical conferences, and supported thyroid research within the UNMC division of diabetes, endocrinology and metabolism.

Dr. Tobin died Dec. 6, 2016 at the age of 90.
NEBRASKA MEDICINE

The Department of Internal Medicine’s major clinical and educational affiliation is with Nebraska Medicine. With a history dating back to 1869, Nebraska Medicine was originally formed by the merger of University Hospital and Bishop Clarkson Memorial Hospital in 1897. More recently, in 2014, UNMC Physicians Clinic, Nebraska Medicine – Bellevue and Nebraska Medicine – Village Pointe joined forces under the Nebraska Medicine umbrella. The relationship between UNMC and Nebraska Medicine has attracted patients from across the region and around the world. Currently, this academic health care system has 661 acute-care inpatient beds and serves as the primary teaching partner for more than 350 medical and surgical residents. Nebraska Medicine – Nebraska Medical Center is Nebraska’s largest health care facility with over 5,000 employees.

As a major tertiary health care center, The Nebraska Medicine - Nebraska Medical Center cares for patients from all 50 states, the District of Columbia and 43 foreign countries. It is known internationally for its solid organ and bone marrow transplantation services and is recognized nationally and regionally for its oncology, neurology and cardiology programs. It currently holds the Joint Commission’s “gold seal of approval” for clinical programs in stroke management, heart failure and acute myocardial infarction. In addition, it is designated as a level-four facility by the National Association of Epilepsy Centers. Uniquely, Nebraska Medicine - Nebraska Medical Center operates a 10-bed biocontainment unit that is currently one of three existing units in the United States that is equipped to safely care for those exposed to highly-contagious, dangerous diseases. The unit was used in late 2014 to care for three patients with the Ebola virus and is now a leader in training other facilities nationwide on how to successfully treat patients with highly infectious diseases.

Every year, Nebraska Medicine – Nebraska Medical Center provides care for over 120,000 patients, resulting in over 26,000 inpatient discharges, 430,000 outpatient visits and 48,000 emergency visits.

VA NEBRASKA-WESTERN IOWA HEALTH CARE SYSTEM

Affiliation with the VA Nebraska-Western Iowa Health Care System (NWIHCS) is critical to the Department of Internal Medicine’s tripartite mission of clinical care, research and education. NWIHCS provides integrated inpatient and outpatient care to veterans in Nebraska, western Iowa and portions of Kansas and Missouri. The Omaha VA Medical Center (OVAMC) is an acute care, highly-affiliated facility that operates approximately 100 inpatient beds and provides full-service medical care to thousands of veterans. Inpatient and outpatient health care is provided in this integrated system through a strong system of primary care supported by tertiary specialty activity in medicine, surgery, and psychiatry. More than 350,000 outpatient visits were conducted in 2015. The OVAMC provides an irreplaceable venue for the Department’s teaching activities involving medical students, residents and fellows. In addition, the VA has a major research service that provides infrastructure to support basic science, translational and clinical research. Several of the Department’s basic research programs are based in the VA Research and Development Service. Areas of research focus at the VA include rheumatoid arthritis and gout clinical outcomes, mechanisms of alcohol related organ disease, diabetes clinical and basic research, and occupational related lung disease. The Department is particularly proud of the completed VA Cooperative trial evaluating treatments for rheumatoid arthritis and the ongoing VA Cooperative trial related to gout treatments that originated with Dr. James O’Dell and our Rheumatology Division.

Nebraska is full of talented medical minds. Our goal is to keep them here.

“I received so much mentorship from so many people at UNMC during the Summer Undergraduate Research Program, medical school and while obtaining my master’s degree that UNMC felt like home. It was the only reasonable place to establish my career.”

-Dr. Natalie Manley

When you make a gift to the Department of Internal Medicine, you provide essential support for our students and their critical research. Just as importantly, you’re helping these students form long-lasting bonds with the greater community. And when you plant these seeds of community commitment, they often take root. Dr. Natalie Manley is a shining example.

After completing her sophomore year as an undergraduate, Dr. Manley entered UNMC’s Summer Undergraduate Research Program, where she found a mentor in Dr. Ted Mikuls. Summer after summer, she returned to work with Dr. Mikuls. And after a few summers, she returned for a longer stay – as a full-time med student.

Eventually, she fulfilled her childhood dream of becoming a doctor and left Nebraska for residency and fellowship. Ultimately, however, she couldn’t stay away and is now an assistant professor in the Internal Medicine Division of Geriatrics.

Like you, Dr. Manley knows there is no better place to make a difference in academic medicine than at UNMC. Your generous gift helps the next generation of physicians continue to make a difference in medicine and in Nebraska.

For more information on supporting the Department of Internal Medicine at UNMC, call Karen Levin at 402-502-4921. Or donate online at nufoundation.org/internealmedicine.