UNLIMITED OPPORTUNITIES...

TO IMPROVE THE HEALTH OF THE CITIZENS OF NEBRASKA

TO EDUCATE THE NEXT GENERATION OF HEALTH PROVIDERS

TO DISCOVER NEW TREATMENTS AND DISEASE PREVENTION
PREPARING FOR THE FUTURE

Unlimited... unlimited... unlimited what?

Unlimited opportunities? Unlimited possibilities? Unlimited difficulties?

The theme for this edition of UNMC’s Department of Internal Medicine biennial report reflects the rather chaotic and somewhat schizophrenic environment in which we — as an academic health care system — find ourselves, as we continue to fulfill our mission through our strategic goals.

The elements of our tripartite mission have not changed: We continue to pursue excellence in providing comprehensive clinical care; we continue to focus on both training the next generation of medical practitioners and on expanding the skills of seasoned physicians; and, we persist in the ongoing search for new knowledge that will impact both our clinical and educational skills.

However, the resources and environment that allow us to accomplish our goals have become more problematic. Our future success depends on our values and goals, on who we are as individual members of this department and on our ability to work collaboratively to reach our goals.

I believe this report illustrates that the department is well poised to build on past successes, to anticipate and deal with the evolving academic health care environment and to be highly successful in the future.

We can summarize departmental values and goals as follows:

1. **Always keep the patient’s well-being uppermost in mind.**

2. **Always make decisions based on available evidence and data.**

3. **Always remember we are engaged in a noble activity.**

4. **Always extend the highest level of respect to our patients, their families, our peers, other team members and members of our larger community.**

In our biennial report, we, once again, focus on the primary role our faculty members play in accomplishing our goals. We continue to recruit and retain outstanding faculty members who bring success to all three phases of our academic mission. We continue to appreciate that we have attracted both our own trainees, as well as experienced faculty from other respected institutions to work with us in accomplishing our goals and in serving our patients. We continue to maintain an outstanding reputation in education at the medical student, resident and post-graduate levels. Our research activities continue to be strong in an era of significantly diminishing resources. We are, once again, gratified to report on our expanded clinical portfolio, our faculty’s extraordinary commitment to education, and the department’s commitment to produce clinically-relevant evidence that will impact and alter future clinical practice patterns.

The future of the Department of Internal Medicine at UNMC is, indeed, unlimited!
TABLE OF CONTENTS:

FEATURES

CLINICAL INFLUENCE 6
EDUCATIONAL PROGRESS 10
RESEARCH POTENTIAL 14

DIVISIONS

DIVISION LISTING 19
CARDIOLOGY 20
DIABETES, ENDOCRINOLOGY & METABOLISM 22
GASTROENTEROLOGY & HEPATOLOGY 24
GENERAL INTERNAL MEDICINE 26
GERIATRICS & GERONTOLOGY 28
INFECTIONOUS DISEASES 30
NEPHROLOGY 32
ONCOLOGY / HEMATOLOGY 34
PULMONARY, CRITICAL CARE, SLEEP & ALLERGY 36
RHEUMATOLOGY & IMMUNOLOGY 38

PLUS

BY THE NUMBERS 18
2011–2012 CHIEF RESIDENTS & GRADUATES 40
OUR PARTNERS IN SUCCESS 41
LEGACIES OF SERVICE 42
FACULTY LIST & KEY INTERESTS 44
HONORS & AWARDS 50
UNLIMITED CLINICAL INFLUENCE

CONTRIBUTIONS TO THE HEALTH OF THE CITIZENS OF NEBRASKA AND THE REGION ARE NOT LIMITED TO ACTIVITY PERFORMED AT 42ND AND EMILE STREET.

GASTROENTEROLOGIST, GRANT HUTCHINS, MD, REVIEWS COLONOSCOPY RESULTS WITH A PATIENT AND A FAMILY MEMBER AT THE NEW VILLAGE POINTE ENDOSCOPY CENTER.
The delivery of health care is no longer confined to a specific building, a defined geographical location or even to actually touching a patient. The University of Nebraska Medical Center’s Department of Internal Medicine extends its service by seeing patients in venues scattered not only across the city, but across the region, by interacting with clinicians to allow patients to remain in their own neighborhoods and by continually making available advanced clinical skills and programs to patients and physicians throughout the Midwest.

One example of the department’s extension of clinical expertise beyond the UNMC campus is the Adult Cystic Fibrosis (CF) Program — designated one of the best in the nation by the Cystic Fibrosis Foundation. Under the direction of Peter (Jim) Murphy, MD, the Program has pioneered the sharing of comprehensive clinical care for patients from across western Iowa, northern Kansas and the entire state of Nebraska. The Program’s footprint has widened from development of comprehensive, multidisciplinary care at the on-campus Durham Outpatient Center to on-site care for patients in North Platte, Neb.

As part of a holistic approach to dealing with chronic diseases, true clinical care incorporates a formal program for strengthening patient and family knowledge to deal with chronic diseases. The CF team publishes an annual newsletter to fulfill patients’ needs for up-to-date information. Dr. Murphy and his multidisciplinary team also extend their clinical influence through the North American Cystic Fibrosis Conference, which sponsors an annual Cystic Fibrosis Patient Education Day. To address both pediatric and adult CF patients, a quarterly patient education seminar was initiated — with Children’s Hospital & Medical Center — to provide patients and their families with practical knowledge that directly applies to their daily clinical needs, as well as to provide encouragement and social support as those afflicted by the condition look to the future. The benefits of these educational activities for patients cannot be overestimated.

The General Internal Medicine Division of the department has established multiple off-site locations to provide direct health care to patients. The Brentwood, Plattsmouth, Village Pointe, Baker Place, Midtown and Bellevue Medical Center locales provide comprehensive point-of-care activity for many patients who might have difficulty traveling to the main campus for their health care and preventative care needs.

Geriatricians and Advanced Practice Registered Nurses in UNMC’s Division of Geriatrics and Gerontology provide health care services to older adults, whether they reside in their own homes, in assisted living facilities, in rehabilitation facilities or in skilled nursing facilities. Health care services provided include routine and regulatory health care visits for evaluation and treatment of conditions that are either common or disabling, with referral for specialized services as needed. Health care provided in these settings is available 24 hours a day, seven days a week and includes not only direct services to the patient, but also assistance
to patients and family members, particularly with decision-making regarding health care choices and the benefits and burdens of medications and diagnostic studies, as well as end-of-life care.

Currently, one on-staff geriatrician serves as medical director of an assisted living facility, while two others serve as medical directors of community hospices, and three serve the Omaha VA Medical Center on the Hospice and Palliative Care Inpatient Service and in the Home-Based Primary Care Program, in addition to seeing patients in the Geriatric Evaluation and Palliative Care Clinics.

Other divisional activities that either offer direct patient care or support others who provide care at regional and local sites include:

The Division of Cardiology provides genetic arrhythmia care in the western suburbs and direct physician educational support on complex heart failure cases and operational education and training on Left Ventricular Assist Device (LVAD) programs throughout the state.

The Division of Diabetes, Endocrinology and Metabolism is actively expanding multidisciplinary team-based care for diabetic patients across Nebraska and into western Iowa.

The Division of Gastroenterology/Hepatology continues to support the Liver Transplant Outreach Program in Des Moines, Iowa, and recently established an ambulatory colon cancer screening program at Village Pointe Endoscopy Center.

Through implementation of federally-supported programs, the Division of Geriatrics & Gerontology has a well-established record of providing practical education to clinical providers, across the state, in the care of aging patients.

The nationally-recognized HIV Clinic, directed by Susan Swindells, MBBS, in the Division of Infectious Diseases, makes comprehensive treatment and patient education available off campus in Omaha and in Grand Island, Neb.

The Division of Nephrology provides direct patient care in multiple chronic hemodialysis units around the city and across the region. In addition, the division maintains an busy outreach clinic in Shenandoah, Iowa.

The Division of Oncology/Hematology operates a full-service Cancer Center at Village Pointe. A new oncology program at Bellevue Medical Center broadens the ability of the department to provide state-of-the-art care to a greater population in eastern Nebraska and western Iowa. Regional outreach programs have been organized by The Nebraska Medical Center through OptumHealth Conferences to keep physician and non-physician providers, as well as insurance company representatives, from across the state, informed regarding clinical and research updates in neoplastic diseases.

The Division of Pulmonary, Critical Care, Sleep and Allergy, the home base of the Adult CF Program, also oversees a longstanding program of community education with regard to lung disease. A specific interest of Susanna Von Essen, MD, in environmental exposure disease has led to an annual non-traditional educational offering at Husker Harvest Days, in Grand Island, Neb.

The Division of Rheumatology/Immunology provides both direct and consultative care to many health care practitioners throughout the Iowa/Nebraska area, and is establishing a state-wide Telehealth program to diagnose and treat gout as a chronic disease.

These programs extend the ability of UNMC Physicians to enhance the health care of a multitude of individuals across Nebraska and the surrounding regions. The programs are vital both for the department and for our patients. They demonstrate the need for our academic health center to be flexible in arranging an environment that best suits the needs of the diverse public.

The department’s affiliation with the Veterans’ Administration Nebraska – Western Iowa Health care System offers yet another mechanism for our providers — both on staff and in training — to impact the lives of individuals who reside in the broader Nebraska/Iowa region. This off-campus clinical venue allows us to reach many patients who would not otherwise be seen by the health care providers housed on the UNMC campus.

The Department of Internal Medicine’s clinical activity and influences are not confined by geographical bounds.
**Clinical Activity**  
Fiscal Year 2012

- **Outpatient wRVUs:** 216,017
- **Inpatient wRVUs:** 129,347
- **Procedure wRVUs:** 65,273

**Total Counted:** 58,176

**Distance from Patient Home to Campus**

- **25 mile radius:** 44,027
- **26-100 mile radius:** 4,085
- **>100 miles:** 10,064

**Total Counted:** 58,176

---

**Patient Visits**  
2008 – 2012

- **Inpatient Visits**
- **Outpatient Visits**

---

**9**
UNLIMITED EDUCATIONAL PROGRESS

THE DEPARTMENT OF INTERNAL MEDICINE AT THE UNIVERSITY OF NEBRASKA MEDICAL CENTER BELIEVES THERE IS NO HIGHER PRIORITY THAN QUALITY AND PATIENT SAFETY.

DAVE GANNON, MD, ALONG WITH FELLOWS AND RESIDENTS, WORKS WITH SIMULATION DEVICES TO PROMOTE QUALITY CARE.
“WE ARE TRYING TO GET AHEAD OF THE GAME AND HAVE SOLID EDUCATION ON THESE TOPICS BEFORE WE’RE REQUIRED TO DO IT.”

CHAD VOKOUN, MD

In keeping with that belief, the department has heightened its efforts over the past two years to train professionals at all levels on the use of better techniques, processes and protocols to promote patient safety and quality outcomes.

The effort reflects the priorities of the Accreditation Council for Graduate Medical Education, which is putting greater emphasis on safety and quality education in the training of residents for careers in internal medicine.

For the Internal Medicine teams at the University of Nebraska Medical Center, the initiative is both a reflection of the institution’s values and an effort to get ahead of things that will soon be required of everyone in the profession.

“As a program director, I like it,” said Chad Vokoun, MD, an assistant professor of internal medicine at UNMC. “It helps get into what gives patients better outcomes. We are trying to get ahead of the game and have solid education on these topics before we’re required to do it.”

A crucial part of the quality and patient safety effort at UNMC is the transformation of what was once the department’s Morbidity and Mortality Conference. That has now been replaced by a monthly Patient Quality and Safety Conference, where actual case studies are examined, and information documented, to help the team as a whole perfect better patient safety practices.

As an example, Vokoun said a recent case study led to better protocols and checklists to improve communication between physicians and the pharmacy.

“We had a near-miss where it was the pharmacy thinking we were doing one thing while we were thinking we were doing another,” Vokoun said. “A lot of these situations come down to communication, so we’re finding ways to shore up communication.”

Much of the breakdown that leads to errors, department staff are discovering, doesn’t require formal medical training to correct.

“Unless you have organized a formal process, a lot of these things are simple but you’d never identify the problem,” Vokoun said. “The only way to get to a solution is to identify the problem. It doesn’t take an MD or an RN or a pharmacist to do it. It just takes someone with common sense.”

The change in the conference format occurred during summer 2010. As the conferences progress, participating physicians expect to dig even deeper and examine even more cases.

“It’s another way to look at a near miss or a bad outcome,” Vokoun said. “It’s never the intention of anyone to not do the right thing. It’s more that there’s a problem within the system of the hospital, the system of orders and the cause analysis.”
Christopher Smith, MD, UNMC internal medicine chief resident, says the conferences have been very effective at introducing residents to concepts of quality improvement and patient safety.

“The conferences are multidisciplinary and multiprofessional,” Smith said. “We’ve had conferences with surgery and radiology. We’ve had nursing staff involved. We’ve had pharmacy involved, and the hospital’s chief quality and outcomes officer is usually at the conference.”

Smith believes the institution is seeing progress in breaking down the traditional barriers, or “silos,” that can be common in the medical profession — and often prevent people in different disciplines from communicating with each other as they should.

“I think they’ve really helped to create an open dialogue between people in different departments and disciplines within health care,” Smith said. “In modern medicine, there is sometimes an unfortunate habit in which it’s really easy to become trapped in your own ‘silo’ or ‘island.’ The conference has been a good jumping-off point for improving communication and examining the systematic problems that can lead to sub-optimal patient care.”

But the department is not satisfied with the process as it stands today. As it moves along, problems will be analyzed more deeply, and residents in particular are in line to be challenged more intensely.

“The next goal is to take the problems identified in our quality conferences and have residents conduct root-cause analyses and eventually quality improvement projects,” Smith said.

As the quality initiative progresses, certain problems emerge as especially crucial in determining the likelihood of errors or bad outcomes. One situation that poses risks is when shifts change and the care of particular patients is handed off from one group to another. The problem has been exacerbated by new standards that limit the number of hours physicians can work on any given shift, thus necessitating more shift changes.

“A team taking care of a patient has to leave the hospital,” Smith said. “So that patient is being handed over to another team to take care of them, usually overnight. We’d never had a formalized checkout process or training, so we felt it was important with the work hour changes to give our residents the tools to effectively transition patients between teams for overnight care.”

Smith said that the residency program implemented a hand-off system based on available research. “We looked at the literature and published best practice guidelines,” Smith said. “We integrated that information within a hand-off tool within the electronic health record. We also use a concept called the group handoff model — the idea that everyone who is involved with in-patient care is present during handoff, even if they are not on the overnight team. Hearing about the same people on a daily basis builds a sense of familiarity with those patients.”

Julie Fedderson, MD, assistant professor of internal medicine, refers to this approach to quality as practice-based improvement for residents.

“In order to teach this, it’s going to extend way beyond their training years,” Fedderson said. “If you involve the residents integrally in their health care system and make them examine their part in daily work flows, it’s going to make them not only have a sense of ownership with their education, but they’re going to be able to take that wherever they go and apply that to systems they start to work in. So our goal here is to establish a curriculum that’s going to work for that.”

In order to make the effort work, it has also been necessary to change some fundamental attitudes that can be powerful in the medical profession.

“Traditionally, the way medicine was based was the blame game,” Fedderson said. “People would say, ‘You did this wrong.’ Now we’re looking at systems that maybe created an error, and making things less blame-oriented.”

To Fedderson, the experiential nature of the learning is critical to the success of the effort.

“It’s our goal in the upcoming year to create a curriculum that combines all these people working in silos, and not really together, to work in one unifying curriculum,” Fedderson said. “When you say
IN ORDER TO MAKE THE EFFORT WORK, IT HAS ALSO BEEN NECESSARY TO CHANGE SOME FUNDAMENTAL ATTITUDES THAT CAN BE POWERFUL IN THE MEDICAL PROFESSION.

curriculum people tend to think of a lecture series, and I don’t want it to be that. I want lecture time to be very minimal so it can be more about didactic groups and learning on the fly.”

One of the most effective laboratories for quality improvement and patient safety is the UNMC Physicians Midtown Clinic, which is run entirely by residents and makes use of the team models that are so crucial to the larger quality effort.

“We have several new collaborative projects at Midtown,” said Sarah Richards, MD, UNMC’s ambulatory chief resident. “One is with the College of Nursing, in which recently discharged Midtown Clinic patients are provided a free home visit by a nursing student prior to their hospital follow-up appointment. During that visit, the students conduct a home safety evaluation, medication reconciliation, and ensure that the patient has transportation to their hospital follow-up appointment. In addition to improving quality and patient safety, we hope to decrease failed appointment rates and hospital re-admissions.”

Patients can sometimes be jeopardized when caregivers don’t have up-to-date information on their medications. Rachel Bonnema, MD, MS, who also practices at Midtown, said medication information and collaborating with pharmacy residents in the clinic is a major priority in the larger effort to improve processes.

“Sometimes patients don’t tell us medications that have been changed,” Bonnema said. “They may be seeing other providers that we don’t know about. It’s a high priority to ensure their safety by making sure we know what medications they’re taking.”

The effort to improve quality and patient safety is not limited to the physician level. Jane Potter, MD, who leads UNMC’s Home Instead Center for Successful Aging, works closely with undergraduates, including students training as physician assistants and pharmacists, to get them trained in the nuances of quality and patient safety.

A big part of that effort is to train students on the communication technique known as Situation-Background-Assessment-Recommendation-Question (SBARQ).

“This is a tool that is accepted as a clear way for one professional to communicate with another,” Potter said. “We actually have an online training module that we developed, and that all our students go through to learn how to use this communication strategy.”

The students are also required to demonstrate that they’ve mastered the technique by using it on a one-to-one basis in the professional setting.

“Most often, we have our medical students and PA students using this to communicate with pharmacy, but we may also have the pharmacy using it with a student or a faculty member while they’re seeing patients in our clinic,” Potter said. “So they do it real-time with the real patient situation.”

Students have to carry a card with them, and have their communication counterpart sign the card to document that they discussed the situation, shared background and invited questions. The goal of SBARQ training is to eliminate the most common cause of error.

“Around 80 percent of all medical errors are due to inaccurate communication, or incomplete communication,” Potter said. “People hand off information in a way that’s not clear and complete. The tool includes all the elements you need to include, and you also make sure you ask the other person if they have any questions about the situation.”

While the most direct goal of the quality improvement/patient safety initiative is to improve outcomes at UNMC, the positive effects need not be limited to any one locality. Once trained in these quality concepts, professionals who are trained at UNMC should be able to take them wherever they go in their careers — elevating the quality of the practice of medicine everywhere.

“As a teaching institution, we’re charged with the responsibility to make sure our residents are going out into modern health care as well-equipped as they possibly can be,” Fedderson said. “Quality improvement and patient safety — that is really the thing du jour of the future, and making sure our residents have the skill set and can apply that, that’s going to make them incredibly strong in the work force, and make any hospital they go to have better outcomes.”
UNLIMITED RESEARCH POTENTIAL

WHAT STARTED AS A CLINICAL OBSERVATION NEARLY 25 YEARS AGO HAS EVOLVED INTO A BURGEONING RESEARCH ENTERPRISE.
Environmental research engages a team of internal medicine faculty members and is funded to the tune of $10 million over five years and includes collaborations across campus and around the country.

Pulmonary and critical care physician Susanna Von Essen, MD, MPH, noticed years ago as a University of Nebraska Medical Center fellow that her patients who farmed appeared to have more severe lung disease. What she observed correlated with what others around the world were reporting about occupational and environmental exposures and lung health. She wondered why.

Von Essen and Debra Romberger, MD, professor and vice chair of research in the Department of Internal Medicine, began a line of questioning that explored inflammation caused by exposure to organic dusts common on American farming operations, including grain dusts, cattle feedlot dust and the dust created within hog confinement facilities. What they found became the start of research that is significant in this state of less than two million people and eight times that many head of livestock and 15 million acres of corn and soybean production. Dusts from these agricultural settings are very potent stimuli of inflammatory mediators, even more potent than cigarette smoke, especially to cells lining the airway. As their studies have progressed, more and more pulmonary researchers have joined their efforts, building a cohesive group that shares ideas and works together.

Romberger’s research was first funded by a Department of Veterans Affairs Merit Award and then by the National Institute of Occupational Safety & Health (NIOSH). It is now entering its seventh continuous year. She studies the inflammatory effect of organic dust on the lung and is working to translate her group’s observations into strategies to reduce dust-induced inflammation in people.

Jill A. Poole, MD, associate professor, clinical allergist and immunologist, expanded the group’s ability to address the importance of dust on the innate immune system of the lung. Poole, who is funded by the National Institute of Environmental Health Sciences is advancing studies begun while funded by an NIEHS K08 award. Her K08 studies found that the toll-like receptor pathway is critical to inflammation caused by environmental insults. Now funded by an NIEHS R01, she has made critical observations regarding the importance of the components of Gram-positive bacteria as key elements in regulating dust-induced airway inflammation whereas previously much of the attention had been given to Gram-negative bacteria and endotoxin. Poole’s data have led her to now conduct the majority of her research in animal models, particularly animals with genes knocked-out along the TLR pathway.

“Gram-negative bacteria and endotoxin, while accounting for some problems, are not the whole story,” Romberger said, noting that many other factors contribute to lung irritation stemming from environmental insults. Romberger, who is also the Associate Chief
of Staff for Research at the Omaha-Western Iowa VA Health Care System, and Poole work closely with Todd A. Wyatt, PhD, College of Public Health professor and long-time pulmonary researcher, to elucidate the causes and effects of lung inflammation.

Wyatt initially explored the effects of smoke on the formation of proteins called adducts within the lung, and then examined the effects of alcohol on the lung, including the combination effects of smoke and alcohol. What he found was that alcohol exacerbates the already detrimental effects of smoke on the lung. This realization led Wyatt and others in the group to wonder about other co-exposures from environmental insults that affect the lung, such as combinations of viruses, bacteria, dust and smoke. Today, both the VA and the National Institute for Alcoholism and Alcohol Abuse (NIAAA) fund Wyatt to study these very questions.

"The days of trying to determine that by looking at one single injury are over," Wyatt said. “The challenge is going to be looking at a bigger picture.”

The natural progression of a scientific question often involves recognizing a pattern or a trend at a patient’s bedside followed by attempts to understand the question in a combination of assays composed of cells, tissue, and animal models. It is not all simple and sequential, but the end goal is to return to the patient’s bedside with the prospect of healthier outcomes. Tricia D. LeVan, PhD, an associate professor in internal medicine and the College of Public Health works directly with the human side and was recruited to UNMC because of her genetic epidemiology training. The Department of Veterans Affairs Merit Award funds LeVan to examine U.S. military veterans with agricultural backgrounds for single nucleotide polymorphisms in pathogen recognition receptors, particularly toll-like receptors, Dectin-1 receptors and NOD-like receptors.

LeVan’s project advances earlier work begun by her and Romberger that also was funded by the VA and accrued upwards of 600 patients. The current award funds LeVan to recruit 800 veterans who have agricultural exposures. Among those 800 veterans, some of them will have chronic pulmonary disease, some will not. LeVan’s research team will screen each participant for 150 to 200 mutations.

In the process, LeVan seeks to answer two questions: The first is whether people who work on farms have a high susceptibility to COPD. The second is whether the genes she is studying are related to greater susceptibility to chronic bronchitis in those working on farms.

The group’s emphasis on environmental exposures found in agricultural settings is an important component of the recently funded UNMC College of Public Health’s Central States Center for Agricultural Safety and Health (CS-CASH). Funded by NIOSH, CS-CASH focuses primarily on respiratory disease research, injury surveillance and educational needs of farmers. Its goal is to serve the farming community by discovering causes of injury and illness, and communicating information about prevention to as many farmers as possible. In this effort, Wyatt serves as research core director for the center, Romberger coordinates outreach, Von Essen coordinates education and Poole is principal investigator of one of the center’s basic science research projects.

A longstanding important research partner for the Department of Internal Medicine is the VA Nebraska Western Iowa Health care System. This is certainly true for this group of investigators as the VA Merit Review program has funded many of the environmental exposure projects, including that of Romberger, Wyatt and LeVan.

Building a research team for the present and the future involves not just conducting meaningful research, but also recruiting and encouraging others who want to do the same. Stephen Rennard, MD, Larson Professor in internal medicine came to Nebraska in 1984 to lead a small pulmonary faculty. He recruited 10 new faculty members, including the current division chief Joseph Sisson, MD, and created a research focus on airways disease that is important to the entire division. Rennard laid the foundation for the work being done today by studying the impact of cigarette smoke on lung inflammation and the development and progression of COPD. He has a very active translational research program focused on COPD and is quick to point out that over 20 percent of COPD is related to occupational/environmental causes.

Sisson’s own research portfolio built upon Rennard’s earlier insights. An NIAAA-Merit funded investigator, Sisson has spent the last 20
years researching one particular component of the lung’s innate immunity, the cilia, the hair-like structures in the lung that beat in a coordinated, wave-like motion to propel debris out of the lung. Sisson’s primary investigations involve understanding the impact that alcohol has on cilia’s ability to clear the lung. Like his long-time collaborator, Wyatt, Sisson in recent years studied the combinatorial effects of alcohol plus other environmental exposures, such as smoke, dust and virus.

Part of internal medicine’s on-going research success, not just in pulmonary, is to recruit hard-working, smart scientists. Two of those recent pulmonary recruits continue the environmental exposures group’s long-standing emphasis on innate immunity and how environmental insults affect this immunity.

Kristina L. Bailey, MD, assistant professor in the Department of Internal Medicine, was a pulmonary and critical care fellow at UNMC. Rather than doing the customary one year of research during her fellowship, she embarked on a second year under the tutelage of Romberger. Once on faculty, Bailey competed for an NIAAA K08 and now studies the role alcohol plays on TLR-2, a constituent of peptidoglycan, which is a component of hog confinement facility dust.

Meanwhile, Michael McCaskill, PhD, a recent internal medicine post-doctoral fellow and now an assistant professor in the College of Public Health, focuses his interest on the lung’s ability to protect itself using what can either be a dietary supplement or an environmental exposure, vitamin D.

The result of all this research, the group hopes, will be a better understanding of how and why certain people are susceptible to lung disease that results from environmental invaders.

The main focus of the research remains on the agricultural environment, the invaders that can originate there and answers about their connections to lung disease. There is more to consider than meets the eye, as agriculture is undergoing rapid change.

One possible impact of the work already is an ongoing look at possible drug combinations that can treat the effects — both short- and long-term — of environmental insults and lung disease.

Overall, Sisson believes the combination of talent, working independently on various aspects of the problem but communicating and coordinating well, leads to a strong chance for important breakthroughs.

“What you’re seeing is really a nice mix of basic scientists, some of whom have a PhD, and some of whom have an MD,” Sisson said. “How we as a group think about the problem is different than any of us alone would think of it.”

The researchers understand that they will never be able to prevent all the problems that are associated with agricultural exposure, Romberger says, but they hope they can better target certain dangers as a result of what they’re learning.

“Our goals are to identify things in the environment that are problematic, and that we can then help reduce the exposure of people to these things and help prevent problems,” Romberger said. “If you can’t breathe, nothing else matters.”
EDUCATION

- 136 HOUSE OFFICERS
- 399 MEDICAL STUDENT CLERKSHIPS/ROTATIONS COMPLETED
- 14 CONSECUTIVE YEARS OF 100% INTERNAL MEDICINE BOARD PASS RATE
- #1 DEPARTMENTAL RANK ON AAMC GRADUATE QUESTIONNAIRE

CLINICAL

- 15 CLINICAL LOCATIONS
- 68,880 HOSPITAL PATIENT DAYS
- 410,637 WORK RVUS
- $69,970,860 IN PROFESSIONAL FEE CHARGES
- 7,176 RESIDENT MANAGED MIDTOWN CLINIC VISITS
- 50 STATES REFERRED PATIENTS

RESEARCH

- 52 FUNDED PRINCIPAL INVESTIGATORS
- $12,611,066 IN EXTRAMURAL RESEARCH FUNDING
- 239 PUBLICATIONS
- 20 INTERDEPARTMENTAL COLLABORATIVE PROJECTS

ADMINISTRATION

- 177 INTERNAL MEDICINE FACULTY
RESEARCH

STUDYING THE LINK BETWEEN GENETICS AND HEART FAILURE

When people experience heart failure for no clear reason, or when they are resistant to the effects of medication designed to promote heart health, could there be a genetic root to the problem? And if identified, could the knowledge of such a genetic condition aid in treatment and prevention?

These are the questions the Division of Cardiology at the University of Nebraska Medical Center seeks to answer through a current research initiative that studies biopsies from heart patients for correlations between the two.

The Heart Failure Transplantation Implementation Program (Heart Failure TRIP) is led by Brian Lowes, MD, PhD, who is working to determine the expression of tissue in different genes, and to detect mutations and polymorphisms that correlate with people’s resistance to medical therapy. This is a multi-center effort initially funded by the NIH and now expanding into phase 2 trials.

“About three-fourths of people will do just fine on medicines,” Lowes said. “About a fourth will deteriorate and get worse, and will go on to need a heart transplant or a mechanical heart. Most of these patients are identified late in the course of their disease, after their medicines have failed, and very often they have developed co-morbidities that make future treatment difficult.”

The objective of the research, therefore, is to identify those who might be predisposed to such problems, and to possibly bypass ineffective treatments and more quickly get them to the approach that will work for them.

“We can get the right therapy to the right patients, at the right time, if we know which patients are going to do well with medicines and which ones are not,” Lowes said. “They do this in cancer treatment already. When a patient has cancer, a piece of tissue is taken and reviewed. There’s a signature response and non-response for those who will do well with chemotherapy and those who will not. We’re trying to do the same thing with heart therapy.”

EDUCATION

EDUCATION ALL ABOUT PROCESS IMPROVEMENT IN CARDIOLOGY

While much of medical education focuses on traditional procedures, the Cardiology Division at the University of Nebraska Medical Center is taking a broader and more systemic approach to how it teaches medical professionals to achieve excellence.

Incorporating concepts like Six Sigma, which is more commonly associated with excellence in the process of manufacturing, the division is working to create a system in which systems-based learning opportunities and interdisciplinary teams bring about overall quality improvement.

John Windle, MD, chief of the Division of Cardiology, says the effort comes down to thinking differently about how to achieve the best outcomes.

“It really puts everyone on the same page as far as what our goals are and what we need to achieve,” said clinic manager Kara Tomlinson. “It allows us to look at the critical issues that were there, and how we needed to solve those issues.”

One example of improving the process involved a categorization of patients by how urgently they needed to be seen. The group recommended that all new patients be seen within 14 days, urgent patients within three to five days and emergent patients within 24 hours.

“One thing that’s our availability, and how can we make sure we always have available staff for these patients should they call in,” said cardiology administrator Cindy Sutton. The team works to help
physicians manage their availability, and to ensure accountability for whether patients were seen when they needed to be seen.

**CLINICAL**

**ATRIAL FIBRILLATION PROCEDURES ADVANCE AT UNMC**

As technology has advanced in the area of atrial fibrillation, it is no longer necessary for patients to settle for mere long-term management of atrial fibrillation, as a procedure to treat the condition is now viable and shows a high rate of success.

The catheter-based procedure applies radiofrequency energy to the pulmonary veins inside the heart, and is able to prevent atrial fibrillation in large numbers of patients. It became especially relevant at the University of Nebraska Medical Center in 2009, when John Scherschel, MD, arrived from Indianapolis with extensive experience performing the procedure.

The first such procedure at UNMC was performed in August 2009 — the first of 10 that Dr. Scherschel performed that year. The current volume is approximately four cases per week.

“We’ve been able to show numbers with very low complication rates and success rates that are very high compared to the published large trials of this kind of procedure,” Scherschel said. “I think we do it very well because I’m doing high volumes and it’s become routine.”

The procedure is also becoming more efficient as technology continues to advance.

“The current procedure is about one-third the duration of the old procedure,” Scherschel said. “The X-ray utilization during the procedures is about one-tenth what it was, and the success rate is substantially higher. The majority of patients consider themselves cured.”
AT DIABETES CENTER, IMPROVEMENT IS CONTINUOUS

In the Division of Diabetes, Endocrinology and Metabolism at the University of Nebraska Medical Center, the good news is that quality of inpatient care for diabetes patients is getting exceptional ratings. But there’s better news: The division is determined to improve on that achievement.

Under the leadership of its Medical Director, Andjela Drincic, MD, the Diabetes Center is undertaking a three-part quality improvement initiative — building off its current achievements in diabetes care and seeking to take excellence to a new level.

The initiative focuses on three areas:

» Inpatient care of diabetes patients
» Outpatient care of diabetes patients
» Transitions of care, bridging the gap between inpatient and outpatient

For Dr. Drincic, the initiative means starting from a position of strength. The UNMC Diabetes Center recently received a Certificate of Distinction for diabetes care from the Joint Commission.

“We’re one of the few institutions nationally to have it,” Drincic said. “It’s been a great achievement and we’re obviously looking into maintaining and keeping that certification, and then furthering the quality projects that have led to it.”

Achieving the certification meant meeting aggressive targets in areas like blood glucose, hypoglycemia prevention and the incorporation of self-management education and medical nutrition therapy in the hospital setting.

Keeping more than 80 percent of patients’ blood sugars within the 70-to-200 range is the key to the inpatient certification. Another major goal is to decrease the average length of stay for diabetics.
“People with diabetes have a much longer length of stay,” Drincic said. “What we have managed to do by implementing this quality initiative in an inpatient setting is to get our length of stay between diabetics and non-diabetics very similar, which is fairly remarkable.”

That has been achieved, in part, by implementing institution-level protocols for the management of diabetes, many of which involve insulin administration. In addition, the division has instituted a hospital-level team structure for inpatient diabetes management, which includes a glucose management team that is in charge of both day-to-day management of diabetes and strategic reviewing of how diabetes is handled in the hospital.

“Every other month, we look at issues, quality outcomes and ways to solve potential problems,” Drincic said.

Another quality initiative, Drincic says, is in its infancy, but is expected to produce important benefits. This involves looking for innovative ways to engage the nursing staff in diabetes management education.

“We’re integrating floor nurses into the full diabetes management program very early on so they become comfortable with what has happened in diabetes care,” Drincic said. “It is becoming so much more complicated, and people have trouble keeping up with the nuances. It’s a human tendency, I think, to believe that you can’t as a diabetes team take care of every patient who has diabetes in the hospital because there are so many of them. So you’ve got to get everyone comfortable managing diabetes — not only doctors, but also nurses.”

**Research**

**Comparing the Effectiveness of Diabetes Treatments**

The University of Nebraska Medical Center will play a major role in an upcoming study that compares the effectiveness of combination therapy with the more traditional approach to treating diabetes. Funded by the National Institutes for Health, the GRADE Study will span eight years at a total cost of $2.3 million.

In coordination with the Veterans Administration Hospital in Omaha, UNMC will enroll 150 patients in the study beginning in September 2012.

Cyrus Desouza, MD, who serves as division chief in the Division of Diabetes, Endocrinology, and Metabolism, will serve as PI for UNMC’s role in the study.

“The main objective is to see which form of treatment is better — combination therapy or the current standard of care, which is adding one medication after another as the diabetes progresses.”

The study will also examine which medications are most effective at delaying the progression of diabetes, in addition to examining cardiovascular outcomes.

**Education**

**Fellowship Program Expands**

The Division of Diabetes, Endocrinology, and Metabolism has expanded its fellowship program from two to three fellows — with the third focusing primarily on research.

Under the direction of Whitney Goldner, MD, who took over as director of the fellowship program in January 2012, the third position expands from a two-year program to a three-year program, with the support of funding obtained from the Veterans Administration, which will support the program’s first two years.

Each fellow focuses on a different aspect of diabetes research. The most recent new addition to the program has focused on preventing the progression of Type 1 autoimmunity.
EDUCATION

TEACHING STUDENTS THE ART OF LISTENING AS KEY TO PATIENT CARE

Do today’s physicians have too little time to truly understand their patients?

Michael Sorrell, MD, a member of the University of Nebraska Medical Center’s Division of Gastroenterology, describes the current era as a time of “hurried medicine.” With heavy patient loads and many other demands on their time, Sorrell believes it becomes very easy for physicians to sacrifice quality time listening to their patients. This has a negative impact on understanding, he says, because “you never get a good history with one hand on the doorknob.” Which is why Dr. Sorrell believes it must be a primary mission of UNMC’s medical school, every bit as much as its commitment to scientific excellence, to ensure that students learn to be good listeners who take the time to understand their patients.

“There’s nothing more frightening than being ill, and thinking your doctor is not committed to making you better,” Sorrell said. “We are in a specialty where we do very aggressive things to people. We do a lot of intrusive things — endoscopies, biopsies — and so they all come to us very apprehensive.”

Getting the patient to be candid in the dialogue, Sorrell believes, is largely the responsibility of the physician, who must create an atmosphere of trust and comfort. Students who find that difficult to do should factor that into their ultimate career plan.

“If your patients feel that you are distant, they are not going to be as forthcoming,” Sorrell said. “It becomes clear to some students that they don’t like the patient/doctor relationship, so those are the students who go into areas of medicine where it’s not as important to some degree, like pathology or radiology.”

Sorrell’s humanistic approach to the doctor-patient relationship has been a key component of the educational mission of the Division of Gastroenterology. The entire division seeks to model the clinician/educator role as teachers of medical students, residents.
and fellows. Teaching advanced clinical skills in the subspecialty setting differentiates the UNMC Transplant Hepatology Fellowship Program. Dr. Sorrell and others impart a method of patient care to trainees that is both rigorous and intimate. “I have learned to cure the body and soothe the soul,” Mauricio Garcia Saenz De Sicilia, MD, a trainee in the Hepatology Fellowship Program, said.

**RESEARCH**

**DISCOVERING THE TRUE EFFECTS OF ALCOHOL ON THE LIVER**

Is the impact of alcohol use on the liver fully understood? Research within the University of Nebraska Medical Center’s Division of Gastroenterology — ongoing for more than a quarter-century — continues to shed new light on the question.

Conducted in partnership with the Mayo Medical School, the research is currently focused on lipids, and recently received a boost in the form of a two-year challenge grant from the National Institutes of Alcohol and Alcohol Abuse.

One focus of the research has been on fatty liver and the impaired transport of molecules within cells, or protein trafficking. By looking closely at a specific protein receptor, and the impact of its functioning after alcohol reception, researchers hope to answer some of those questions.

“In this early stage of fatty liver, the fat is stored in a lipid droplet,” said Carol Casey, PhD, who has worked on the project since 1984. “They used to think the fatty liver stage was very benign, but now these lipid droplets that store the fat are considered organelles, so these liquid droplets are trafficked. What we’re looking at now is how alcohol affects the formation and the accumulations and the degradation of these lipid droplets.”

**CLINICAL**

**SEEKING EARLY DETECTION OF PANCREATIC CANCER**

Pancreatic cancer is widely regarded as a death sentence, as currently available procedures make it all-but-impossible to detect its presence before it reaches a very advanced stage.

Researchers in the Division of Gastroenterology of the University of Nebraska Medical Center are hoping to change that. Current work is aimed at achieving early diagnosis of pancreatic cancer — a challenge that has the research team collaborating with the Department of Biochemistry, which has a well-earned reputation for excellence in cancer research.

Shailender Singh, MBBS, says the researchers are looking at a variety of methods by which they might detect pancreatic cancer before it reaches the point of no return.

“Are there any markers?” Dr. Singh said. “Are there any blood tests? Are there any things we can test to detect it early?”

Answers to those questions will only be found in conducting carefully controlled prospective clinical trials that require collaboration between clinicians, basic scientists and the patients themselves.
NEW TRAVEL CLINIC HELPS PREPARE UNMC COMMUNITY FOR THE WORLD

The need for specialized travel clinics — facilities where physicians with expertise in travel medicine can provide vaccinations, medications and strategic advice to help travelers—has never been greater. The Centers for Disease Control and Prevention reported US residents made over 61 million trips outside the United States in 2009. Tourists, researchers, students, missionaries, and business travelers are also venturing into more remote areas of the world, often unprepared for the health risks they may be facing. About four million travelers to developing regions become ill enough to seek health care. The Division of General Internal Medicine recently started Vaccine and Safe Travel (VAST) clinics at two locations to meet travelers’ needs for comprehensive and convenient risk assessment before they leave the country.

A VAST clinic evaluation begins with a pre-travel risk assessment which, depending on the destination, may be quite complex. VAST physicians gather information about travel destinations and assess the traveler’s past medical history, to see how underlying conditions or medications may be affected while abroad. This risk assessment also includes a review of the destination’s endemic diseases, potential insect exposures, as well as risks associated with planned activities such as hiking, biking, mountain climbing or scuba diving.

The VAST clinic also provides important advice on how to minimize exposure to travel-related diseases. For example, malaria prevention in high risk areas may involve both medications as well as physical precautions to avoid mosquito exposure. Travelers’ diarrhea, high altitude precautions and treatment, evaluating those with weakened immune systems, such as pregnant patients—these are a few of the many issues which VAST clinicians assess and discuss. They also offer advice on assembling a travel health kit.

Patients who return from traveling abroad can also be treated and evaluated in the VAST clinic. Travel physicians have expertise with infectious diseases rarely seen in the United States, such as dengue fever, dysentery, malaria, and typhoid.

The two VAST clinics are located within the General Internal Medicine offices at Village Pointe and Midtown Clinic. Travel physicians include Joel Armitage, MD, Michelle Johnson, MD, and Jean Thierfelder, MD, from the Division of General Internal Medicine. Alison Freifeld, MD, a specialist in infectious diseases, serves as medical director. Drs. Freifeld, Thierfelder and Johnson have received specific training in travel medicine through the International Society of Travel Medicine (ISTM), and successfully achieved certification for this practice through ISTM. The clinics are also official yellow fever vaccine providers.

Traveling abroad safely can be complicated, and coming home with an infection or illness is a fear for many. Thanks to the VAST clinic, travelers can be fully prepared for the journey ahead. Through knowledge and preparation, hopefully the only things they bring home will be souvenirs and fond memories.

EDUCATION

A DIFFERENT APPROACH TO PATIENT SAFETY AND QUALITY

The University of Nebraska Medical Center is blazing a new trail in patient safety and quality improvement, with a restructuring of its quality program. UNMC has moved to a system in which each unit elects a physician who champions quality within his or her specific area. That involves getting an up-close look at quality issues and developing strategies that apply to each unit’s needs on a day-to-day basis.

With this initiative, physicians recognize that they are a part of the change, and their unique perspective plays a crucial role in driving quality improvement efforts. Complementing the effort is an initiative on the academic side in which the Graduate Medical Education Office has created a subcommittee on teaching safety and quality to medical residents and fellows. The residency curriculum will now be more closely aligned with the institution’s unique needs. That will combine with the hospital’s efforts to create a cohesive training environment, with the emphasis on patient safety.
RESEARCH

MEDICINE AND THE HUMANITIES:
THE MAKING OF MORE COMPLETE
HEALTH CARE PROFESSIONALS

Can writing fiction or poetry make a better physician? Lydia Kang, MD, who practices in the Department of Internal Medicine, believes her forays into various kinds of writing have had a positive impact on her effectiveness as a physician — and she is now opening up the opportunity for similar experiences to other physicians at the University of Nebraska Medical Center.

“Exploring human culture and the human condition through the humanities could help health care professionals take care of their patients, as well as themselves,” Kang said.

One aspect is the Seven Doctors Project, which simply involves interaction between writers and doctors, and was conceived by poet Steve Langan, who is currently pursuing a humanities degree at UNMC. Under Langan’s leadership with the Humanities Council, a spring writer’s workshop will be the latest offering of the project.

“He had a wonderful idea: What if you get a bunch of writers and doctors in a room and see what happens?” Kang said. “A lot of doctors continued on with writing, and the writers and poets got a lot back from it as well. It was a two-way street.”

Kang credits her division chief, Thomas Tape, MD, FACP, for being supportive of her writing endeavors outside of practicing medicine. And that support has paid off. Kang has published several poems and narrative non-fiction pieces since then, and recently sold her first novel to a publisher.

“It’s nice to pay more attention to the right side of my brain for a change. It’s been a fantastic journey for me personally,” Kang said.
DIVISION OF
GERIATRICS & GERONTOLOGY

CLINICAL

SIX DIMENSIONS OF HEALTH AT THE ENGAGE WELLNESS CENTER

Health is far more than just physical maintenance, and that is especially true for those 50 and older. To serve a population that has reached a time in life that is both exciting and challenging, the University of Nebraska Medical Center’s EngAge Wellness Center is committed to the Six Dimensions of Wellness. These are:

» Social
» Physical
» Spiritual
» Emotional
» Vocational
» Intellectual

To meet these needs, EngAge Wellness Center offers a wide variety of services to the 50-and-over community.

It starts with an individualized fitness program, developed from the information on a physician form, and from a baseline senior assessment that takes the shape of a Senior Fitness Test.

There is no one-size-fits-all plan. Programs are custom-designed based on an individual’s interests, goals and histories.

And for UNMC physicians looking to direct their 50-and-over patients into exercise programs, EngAge Wellness Center staff want it known that they need to look no farther than their own backyard to find the facility and highly qualified staff to meet their patients’ needs.

“ Physicians recommend exercise for obvious reasons. And, we would like them to know that we provide individualized programs, developed by our well-trained staff that accommodates all levels of ability” said Jeannie Hannan, Manager of the EngAge Wellness Center.

The center’s staff is unusually well qualified, particularly Hannan. She has a master’s degree in health promotion and is a doctoral candidate in geronotology. She also has certification from the American College of Sports Medicine and training as a wellness coach.

In addition, key staff qualifications include:

» Heather Shafer, wellness specialist, with a bachelor of exercise science and a master’s in health promotion, as well as certifications in Tai Chi and FallProof.

» Sara Dietrich, wellness specialist, with a degree in exercise science.

And the staff isn’t the only thing that’s top-notch. The center’s equipment is the most state-of-the-art available. It features strength equipment powered by air pneumatics — rather than the more traditional weight stack and pull-pin — and treadmills that can range from 0.1 to 10 miles per hour, and can thus serve any fitness level.

Hannan believes that the EngAge Wellness Center also serves a crucial mission for the medical school, particularly as it relates to students’ potential interest in geriatrics.

“We want to introduce students to well older adults,” Hannan said. “We want to show them that people can be well, even though they may have chronic conditions, we want to show them what a great population this is to work with. The number of people 60 and older by 2030 is expected to almost double what it is now, and we don’t see enough people specializing in the geriatrics field.”

EDUCATION

THE PURSUIT OF EXCELLENCE IN INTERPROFESSIONAL CARE FOR OLDER PEOPLE

Health care professionals often find themselves operating in “silos” — narrowly focused pursuits in which there is little interaction with those who practice different specialties or other roles in the field.

While silos are not unique to health care, they are common enough in the field that some professionals within the Division of Geriatrics & Gerontology at the University of Nebraska Medical Center have embraced the initiative of breaking down these silos and improving the ability of physicians to work in teams — a goal that is especially important to improve the quality of health care for older patients.

CHANGES IN INTERDISCIPLINARY ATTITUDES AFTER TRAINING

In the sub-scales:

Sub Scale 1 Competency & Autonomy
Sub Scale 2 Perceived Need for Cooperation
Sub Scale 3 Perceived of Actual Cooperation

Before
After
Jane Potter, MD, chief for the Division of Geriatrics & Gerontology, said the effort to improve interprofessional education is part of a larger effort to encourage more teamwork and collaboration within the field. Other priorities include:

» Better understanding of the roles of various health disciplines and professionals
» Team functioning
» The collaborative sharing of leadership responsibilities
» Better patient/client/family-centered care. The effort is funded by the Donald W. Reynolds Foundation, which is seeking a focus on better collaboration between physicians and other health care professionals. The challenge starts at the medical school level.

"Because our programs developed in silos, we are all on different schedules, and the way they move through their health care courses are very different," Potter said. "It requires extra effort to bring students together to learn from and about each other. Thanks to our colleagues from across the campus, we are currently providing training that brings together students from medicine, nursing, pharmacy, social work and the physicians’ assistant programs.

RESEARCH

AGING RESEARCH HAS A NEW HOME AT UNMC

Research on issues related to aging has a new home at the University of Nebraska Medical Center, and it’s helping to bring professionals together to collaborate on a wide variety of topics.

In the newly opened Home Instead Center for Successful Aging, the UNMC Division of Geriatrics & Gerontology is working with partners who are interested in aging research from across the UNMC community including medicine, nursing, public health, psychiatry and exercise science.

The center houses the education and clinical care programs as well as clinical research. Dedicated space for research includes the Human Performance Laboratory, facilities for computer-based testing and space for instruction of research participants.

“We’ve been successful in enrolling people into a clinical registry for both our current and future research programs,” said Jane Potter, MD, chief of the Division of Geriatrics & Gerontology. “Once enrolled, we are able to call them later and send them information on new studies. We have 100-some subjects enrolled and hope to build that over time to 600 or 700 individuals in the registry.”

Research programs are particularly focused on patients’ function, cognition and mobility.
**EDUCATION**

**INFECTION DISEASE FELLOWSHIP HELPS UNMC STAND OUT**

An infectious diseases fellowship program will be a tremendous addition to the Division of Infectious Diseases (ID). “The ID Division takes great pride in providing excellent educational opportunities to learners at all levels — from undergraduate students to established health care providers,” Mark Rupp, MD, professor of internal medicine and chief of the ID Division said. “The ID fellowship will be the crown jewel in our educational portfolio.” In past years, the ID Division participated in a shared ID fellowship with Creighton University. However, as the University of Nebraska Medical Center ID Division has grown, it was appropriate for UNMC to accept a greater responsibility for fellowship education. Creighton ID fellows will continue to rotate at UNMC for specialized training in HIV and transplant ID.

The ID Division expects the program to ramp up quickly to include three to six fellows. The first fellow, beginning in July 2012, is slated to spend two to three years experiencing a combination of clinical training and research activity.

“This fits nicely with the goals of the Department of Internal Medicine, including greater national recognition and training specialists who will care for the people of Nebraska,” said Trevor VanSchooneveld, MD, who is heading up the fellowship program in the ID Division. “It is important that we train ID specialists that will better allow the citizens of Nebraska to get excellent clinical care, and allows our house staff to stay here for training. When our trainees take positions around the U.S., they are the best advertising for our institution.”

Dr. Rupp, said the fellowship program will serve to further all of our top priorities. “We’re built around education, patient care and research; our fellowship program will enable us to be better at each aspect of our mission,” Rupp said. The fellowship program is part of a larger effort to promote interest in science and medicine careers among students at an early level.

The top-notch facilities and excellent reputation of the faculty and institution should serve as a magnet in the recruitment of the next generation of infection disease physicians.

“We’re really enthusiastic about being able to capture the imagination of our students at an early stage and get them excited about infectious diseases, and then translate that excitement into the opportunity for them to stay here for excellent training,” Rupp said.

**CLINICAL**

**ANTIMICROBIAL STEWARDSHIP PROGRAM SEeks BETTER OUTCOMES**

One of the biggest problems physicians face is antimicrobial resistance. Compounding this problem is a significant decline in the number of new antimicrobials in development.

To counter this trend, the Division of Infectious Disease at the University of Nebraska Medical Center has an innovative Antimicrobial Stewardship Program, which is seeking methods to better utilize antimicrobials and improve patient outcomes.

Trevor VanSchooneveld, MD, assistant professor, Department of Internal Medicine and Alan Gross, PharmD, clinical assistant professor, Pharmacy Practice, are at the center of the effort, and are working to incorporate goals of the program into the day-to-day activities of the hospital.

“We are developing institutional protocols for doctors,” VanSchooneveld said. “We’re also finding new and more advantageous ways of dosing antibiotics, and incorporating best practices in clinical protocols.”

Ultimately, he said, good information in the hands of clinicians is the most effective weapon in the battle against antimicrobial resistance — as it creates the opportunity for best practice at the patient’s bedside.

A recent project involved surgical prophylaxis, while another explored changes for diagnosing and treating infections due to Clostridium difficile.

Gross said one of the program’s achievements is its internationally recognized web site — www.nebraskamed.com/asp - that contains extensive information for health care providers.

**SCHOLARLY ACTIVITY**

- New Grants & Contracts Awarded
- Other Publications
- Journal Articles

![Graph showing scholarly activity from CY 2010 to CY 2011](image-url)
“We have a wealth of information on the website, including a handbook that’s great for house staff, students and staff doctors,” Gross said.

**RESEARCH**

**THE PURSUIT OF NEW (AND OLD) TREATMENTS FOR TRANSPLANT PATIENTS**

The transplant ID team is focused on finding new treatment options for their patients. They are also taking a fresh look at the use of old drugs, as well as developing new ways to prevent infections after transplantation.

The University of Nebraska Medical Center is a major center for solid organ transplantation. The immunosuppression necessary to prevent organ rejection increases the risk of infection. In the ID Division, a new drug is being tested with the hope that this compound will help patients fight viral infections, especially adenovirus and cytomegalovirus. No treatment has been approved by the FDA for the adenovirus, so UNMC physicians are at the forefront of the effort to combat this virus.

“We’re part of the clinical trials to determine the effectiveness of this drug — not only on the adenovirus, but on other infections as well,” said Andre Kalil, MD, director of the Transplant ID group. “This is vanguard-type research because there is little available for treatment of these types of infections,” another member of the transplant ID team, Diana Florescu, MD, said.

The transplant ID group is also developing new approaches to prevent cytomegalovirus infections after transplantation; this has resulted in lower drug side effects and lower cost of care, while maintaining optimal efficacy.

But new drugs are only part of the picture. As more bacteria develop resistance to current drugs, the transplant group is taking a fresh look at older antibiotics to see if they might be used in innovative ways against drug-resistant bugs.

“We analyze the effect of antibiotics, some of which may not have been used for many years, to provide further benefits to our patients,” Kalil said.
The greatest challenge for someone waiting on a kidney transplant is often time. Once a would-be recipient is on a waiting list, many things can happen to the patient that impact the likelihood of a successful transplant — including strokes, amputations, infections and other surgeries — during a wait period that can take several years.

The kidney transplant program at the University of Nebraska Medical Center is seeking to better manage the status of waiting recipients through more regular interaction with those patients.

“Up until a year-and-a-half ago, we would wait-list them and trust that someone would call us if there was a problem,” said Clifford Miles, MD, co-director of the kidney transplant program representing the Division of Nephrology. “They’re instructed to, but most of the time we would not hear about events that we would want and need to know about. So we’ve initiated a practice where, at least once a year, anyone who is on our wait list comes to see us.”

The change coincides with new leadership in the program, as Dr. Miles has taken on the co-director role along with transplant surgeon Michael Morris, MD, effective September 1, 2011. They have been joined in the program by a surgeon, Alexander Maskin, MD, who came from the University of Pennsylvania and nephrologist, Justin Westervelt, MD, from Duke University, who has joined the Division of Nephrology to help with the kidney and pancreas transplant program.

At the same time, other advances and adjustments represent the program’s desire to open more opportunities for recipients. That includes a more open policy with respect to consideration of high-risk kidneys — a category for kidneys that by Centers for Disease Control criteria have a higher risk of certain viral diseases. More consideration is now being given to the use of such kidneys with the informed consent of recipients, because they have been shown to decrease waiting time without compromising patient outcomes.

“It’s still possible that one of these high-risk donors was infected,” Miles said. “But the chances are much lower than they used to
be.” This is a result of advances in the ability to more quickly detect viral infections in transplant kidneys. Infections that were once undetectable before 90 days after inoculation can now be detected as quickly as six days.

Program personnel are also making greater use of national databases that expand the potential pool of matches between donors and recipients.

“If someone needs a transplant and their living donor is not compatible with them, but across the country there’s another similarly mismatched pair, there is a chance they could ‘swap’ donors, if compatibility allows,” Miles said. “There’s now a national network where we can list pairs.”

Finding a match who is clear across the country still presents logistical challenges, of course, since either the donors or the organs themselves may have to travel by plane for the surgery. But advances like these are nevertheless opening up more opportunities for recipients to get the transplants they need.

**Research**

**NEPHROLOGY TEAM SEEKS VASCULAR ACCESS ANSWERS FOR HEMODIALYSIS**

When patients need hemodialysis they must have an access that can support the high blood flows needed to adequately remove fluid and toxins. There are three common ways of achieving this.

Hemodialysis catheters allow immediate access to the blood, but are prone to infection. Arteriovenous fistulas (AVF) are the preferred vascular access because of increased longevity and low infection rates, but may fail to develop in 50% of patients and take up to 12 weeks to mature in others. Arteriovenous grafts (AVG) are used in patients with small veins in lieu of AVF. AVG are initially successful in most patients but fail much more quickly than AVF.

Troy Plumb, MD, associate professor in the Internal Medicine Division of Nephrology believes that the early and consistent success of the AVG can be used to improve fistula placement success.

“Our data shows that when an arteriovenous graft is placed in the forearm, the veins in the upper arm quickly dilate — even in patients who start with very small veins”, said Plumb. “I believe that if we start with a graft and later create a fistula using veins that are now much larger we are more likely to end up with a patient who has a long lasting AVF”.

Marius Florescu, MD, assistant professor in the same division is also looking to improve vascular access in patients on hemodialysis through innovative devices. Dr. Florescu has patented two devices in the past year — one is designed to prolong hemodialysis catheter longevity and the other is designed to improve AVF maturation.

**Education**

**FACULTY AWARDS, FELLOWSHIP ADVANCEMENT IN NEPHROLOGY**

Fellows, residents and medical students learning in the Division of Nephrology, University of Nebraska Medical Center Department of Internal Medicine, are getting confirmation that they are learning from the best.

For the second time in four years, a faculty member from Nephrology has been awarded the Sir William Osler Teaching Award, which is awarded by the resident class to the one internal medicine faculty member the residents consider to have had the most positive impact on their educational experience. The 2011 winner is Marius Florescu, MD. In 2008, the winner of the award was Troy Plumb, MD. Dr. Plumb has also been listed as a winner of the Top Teacher Award for several years running.

The honors reflect a division that is deeply committed to the educational experience, with a two-year clinical fellowship program that has been active since 2007, with four fellows currently enrolled in the program. Nephrology also educates approximately 30 internal medicine house officers each year on the acute nephrology service.

Faculty from Nephrology are also active in working with first-, second- and fourth-year medical students.
DIVISION OF
ONCOLOGY & HEMATOLOGY

**Clinical**

**Impact of Neuro-Oncology Program Continues to Grow**

Recent staff additions have given a boost to the practice of neuro-oncology at the University of Nebraska Medical Center. The result is that the institution’s work on tumors of the brain and spine has advanced considerably.

A major addition to UNMC is Michele Aizenberg, MD, who is fellowship-trained in neurosurgical oncology. Dr. Aizenberg’s arrival has brought a significant uptick in brain tumor-related work, and has helped boost the overall capabilities for treatment.

The Oncology/Hematology Division has long had an interest in finding a fellowship-trained neuro-oncologist. After completing her Medical Oncology fellowship at UNMC, Nicole Shonka, MD, went on to complete a neuro-oncology fellowship at M.D. Anderson Cancer Center in Houston. After completing her neuro-oncology training, Dr. Shonka returned to UNMC, accepting a faculty position in the Division of Oncology/Hematology.

“My primary emphases are tumors of the brain and spine,” Shonka said. Dr. Shonka is also interested in leptomeningeal disease (LMD), which represents the spread of cancer to cerebral spinal fluid and brain metastases. Overall, she enjoys being part of an organization that is so dedicated to the advancement of neuro-oncology.

“We already have a comprehensive program in neuro-oncology,” Shonka said. “We have a nationally recognized oncology program, as well as a nationally recognized neurological sciences department; this allows us to integrate those two divisions within the university system.”

In addition to Drs. Shonka and Aizenberg handling neuro-oncology and neurosurgery, the group also includes several specially trained neuropathologists and neuroradiologists who are also trained in neurological sciences.

“It’s something we at UNMC can offer to the people of the state, which no one could offer before within our geographic referral base,” Shonka said.

Philip Bierman, MD, a long-time member of the department, said the investment in top talent is paying off.

“Our referrals and the number of new patients we are seeing are increasing,” Bierman said. “We have clinical trials that are being developed, as well as industry-sponsored and cooperative group trials that we can offer patients and a trial for a brain-tumor vaccine. So we have lots of things to offer that we didn’t before.”

**Education**

**New Lecture Series Seeks to Boost Nurse Education**

Physicians in the Oncology/Hematology Division have recently made a priority of more direct communication and training activity between physicians and nurses.

As a result, Oncology/Hematology physicians began to present a twice-a-month series of training sessions for nurses. Topics can be either disease-specific or related to transplant complications. One objective of the series is to give physicians and nurses more opportunity to deal with each other directly, without so many middlemen between the two.

“We’ve always tried to make sure the nurses were educated. We feel we have some of the best nurses on our service who are truly enthusiastic about learning and keeping abreast of new information, as much as the rest of us who take care of patients,” said Lori Maness-Harris, MD, an assistant professor in the Division of Oncology/Hematology. “Over the years, more and more lectures have been provided to non-physicians. Recently, we’ve just realized we need to have a better connection with our nurses and allow them to hear from us directly, rather than just on rounds day-to-day.”

Maness-Harris said Philip Bierman, MD, was a leader in the effort to initiate the series.

“It makes them better nurses, I think, and it’s certainly good for our patients,” Bierman said.

**Number of New Patients**

**Total: 1664**

- Brain: 41
- Breast: 189
- Head & Neck: 50
- GI: 223
- GU: 78
- Lung: 110
- Melanoma: 29
- Multiple Myeloma: 50
- Lymphoma: 209
- Non Malignant Hematology: 434
- Other: 168
As a result of the series, Maness-Harris said, nurses should be in a better position to respond to situations they encounter on the floor.

“We want them to understand better what they’re monitoring,” Maness-Harris said. “They’re the first level of contact with these patients.”

RESEARCH

STUDY OF PROTEIN YIELDS POTENTIAL LUNG CANCER SURPRISE

Recent research by Surinder K. Batra, PhD, Chairman of the Biochemistry Department at the University of Nebraska Medical Center, indicated that a specific protein known as MUC 4 tended to exacerbate the aggressiveness of pancreatic cancer. With that research in mind, Apar Ganti, MD, of the Oncology/Hematology Division sought and received a grant from the Veterans Administration to fund research on whether MUC 4 had the same effect on lung cancer.

While nothing has been proven yet, the early result of Dr. Ganti’s research has been surprising.

“We found that this particular protein seems to function in a way that decreases, delays or stops the growth of lung cancer,” Ganti said. “This is novel in the sense that it’s never been reported before. Previous studies of this particular protein have been few, and they have been all over the place.”

Dr. Ganti’s research involved observing some cell lines where the protein was expressed, and some where it was not, and modifying one of each. Observation of the four samples yielded the surprising initial result. If further research bears out the finding, the MUC 4 protein could be used in the development of a vaccine or some other form of treatment for lung cancer patients.

“Obviously, it’s difficult to predict who will get lung cancer, so it’s difficult to prevent,” Ganti said. “But a vaccine would be useful in slowing the spread of the disease.”
A TEAM APPROACH TO CYSTIC FIBROSIS, PULMONARY HYPERTENSION CARE

Cystic fibrosis and pulmonary hypertension patients at the University of Nebraska Medical Center find that their care comes from more than just a single caregiver. It comes from a team.

For cystic fibrosis, it is the result of a program first established in 2000 in the Division of Pulmonary, Critical Care, Sleep and Allergy (PCCSA) at UNMC. Recognizing that cystic fibrosis patients face particularly complicated care issues the division has put together a team consisting of experts in every aspect of patient care.

That includes doctors, nurse practitioners, respiratory therapists, nutritionists, social workers and research coordinators.

“Our needs are pretty diverse, and encompass specialized medical needs as well as help with insurance coverage issues because of the intensity of the care they receive,” said Jim Murphy, MD, Adult Cystic Fibrosis Program Director. “The patients are in frequent communication with the team, not only for their clinical needs but also to get the certifications and letters to get their medical expenses taken care of.”

The division takes the same approach with pulmonary hypertension patients, although it uses a slightly smaller group in those instances — with division physicians, a nurse case manager and a research coordinator.

“Having an integrated team helps to coordinate a lot of rather complicated medical concepts and outcomes of testing, and to provide really comprehensive explanations to the patient,” said Austin Thompson, MD, physician leader for the pulmonary hypertension team. “Because the physiology is fairly complicated, it takes a lot of teaching.” Thompson also added that the team approach as practiced at UNMC serves as a model for the emerging concept of medical homes. “It’s not exactly the same, but the concepts we are applying to cystic fibrosis and pulmonary hypertension patients are very similar in terms of the continuity and the one-stop shopping for the patient,” Thompson said.
To help optimize the effectiveness of the team approach, the division has developed its own digital database that consolidates all information of each patient, making the information readily available to every team member.

Although the team approach for cystic fibrosis and pulmonary hypertension did not originate at UNMC — having been adapted from models established on the national level — the implementation at UNMC has excelled to the point where the Adult Cystic Fibrosis team has been recognized as one of the benchmark programs by the National Cystic Fibrosis Foundation. UNMC’s outstanding patient outcomes in the categories of lung function and body mass index have established the UNMC program as a model for centers looking to replicate the same level of achievement.

**EDUCATION**

**RESIDENTS, FELLOWS LEARN SYSTEM-BASED CARE**

Those preparing to enter the medical profession need to know more than just their own area of expertise. They also need to understand the broader array of skills that make up teams and systems in the delivery of patient care.

For residents and fellows in the Division of Pulmonary, Critical Care, Sleep and Allergy at the University of Nebraska Medical Center, exposure to the division’s team concept for patients with cystic fibrosis and pulmonary hypertension helps in preparation for the role they will play on larger teams as they advance in their careers.

Residents and fellows who rotate through the various services in the division quickly realize that in order to deliver comprehensive care to these complicated patients requires a multidisciplinary approach. "System-based practice, which works to optimize care for each individual is a competency that our trainees learn well in our Division," states Craig Piquette, MD, Education Director.

As patient care becomes more complex, physicians are moving away from the notion that other team members are mere support mechanisms.

“We used to call them ancillary personnel,” said Joseph Sisson, MD, division chief. “But these various non-physician colleagues really are professionals. The fellows and residents quickly learn that they’re not only here to help, but they’re actually experts in aspects of the disease.”

**RESEARCH**

**ADVANCED DATABASE HELPS IN IDENTIFYING CLINICAL TRIAL PARTICIPANTS**

One of the most difficult aspects of organizing clinical trials is finding participants who qualify. For a clinical trial pertaining to cystic fibrosis, for example, only patients with a specific genotype will qualify for certain trials. Until recently, that has forced clinical trial organizers to go through an arduous task of checking patient records one-by-one in the hope of finding enough matches to go forward.

But a new innovation within the Division of Pulmonary, Critical Care, Sleep and Allergy at the University of Nebraska Medical Center has both sped up and simplified the process.

Using a program written by a UNMC team under the leadership of Jim Murphy, MD, the division can now access a comprehensive cystic fibrosis patient database that instantly identifies those who qualify for a given clinical trial. The information tracks patient history over extended periods, and gives clinical trial organizers a complete picture of how the individual fits the trial’s objectives. Finding, for example, all patients who are over 18 years old and have a certain genotype can be done quite easily.

In addition to matching patients for clinical trials, the data also provide more solid information that can lead to better care.

The patient database may have only begun to approach its potential, as discussions are underway with the National Cystic Fibrosis Foundation to link the two organizations’ databases. A grant has already been secured to work toward this goal, which would expand the available information on a national level and drive quality improvement processes that will improve patient outcomes.
RESEARCH

RESEARCHERS SEEK POSSIBLE CONNECTION BETWEEN PERIODONTAL DISEASE AND RHEUMATOID ARTHRITIS

Could periodontal disease be a cause of rheumatoid arthritis?

Researchers in the Division of Rheumatology and Immunology at the University of Nebraska Medical Center are working to determine if there is a connection between the two. In a research initiative led by Ted Mikuls, MD, MSPH, professor of internal medicine, in collaboration with VA hospitals in Omaha, Dallas, Salt Lake City and Washington D.C., are working to enroll as many as 600 patients to take part in the study.

To date, several studies have shown statistical correlations between severe gum disease and rheumatoid arthritis. Of course, correlation does not equate to causation, so the UNMC researchers are looking more closely at the issue.

“We’re assessing the possible role of different bacteria that live under the gums,” Mikuls said. “Early research from our group and others suggests that at least one of these bacterial species causing gum disease may trigger the early immunity that characterizes rheumatoid arthritis.”

But research for its own sake is not the point, Mikuls emphasizes. It is only a step toward the real goal.

“Who cares if we can say there’s this relationship?” Mikuls said. “That does not get us anywhere. The ultimate goal is to develop an intervention to treat or even prevent rheumatoid arthritis in the first place.”

That might involve better management of the bacteria that is present in a person’s gums, or more effective cleaning methods. While those in the periodontal community are already working to develop advances in this area, any evidence linking rheumatoid arthritis to periodontal disease might help to better direct these advances.

In addition to studying those who contract rheumatoid arthritis, the study also looks at family members of patients who develop antibodies for the disease but don’t yet have the disease. This is part of how the study seeks to understand the early role of periodontal disease in the development of autoimmunity that leads to rheumatoid arthritis.

One result the UNMC researchers hope to achieve is a set of recommendations that would allow people to take proactive steps many years before they become susceptible to rheumatoid arthritis, as well as insight that can be helpful to those who are involved in periodontal care.

CLINICAL

UNMC A LEADER IN MUSCULOSKELETAL ULTRASOUND

While ultrasound technology is very common in medicine, it is not widely used in the diagnosis and treatment of musculoskeletal conditions. One institution that serves as an exception to that rule is UNMC, where the Division of Rheumatology and Immunology makes extensive use of ultrasound for that purpose.

UNMC’s widespread use of musculoskeletal ultrasound is largely the result of efforts by Amy Cannella, MD, who has been a devoted ultrasound advocate since receiving training on the technology in Scotland in 2001. Today, Dr. Cannella works with her colleagues and other medical professionals to further the use of ultrasound and the benefits it offers to patients.

“We really minimize patients’ discomfort because we can identify where we need to go (with injections),” Cannella said.

Musculoskeletal ultrasound also provides physicians with better information about the conditions they are seeking to treat.

“It’s good for people to understand the pathophysiology of the disease,” Cannella said. “They are making decisions in real time about what’s going on in terms of the joint or the tissue. Patients love it.”

PERIODONTAL STUDY CUMULATIVE SUBJECT ENROLLMENT (JANUARY 2011 - JULY 2012)
Cannella cited the example of a red hot swollen ankle, which could be cellulitis or gout. Musculoskeletal ultrasound can answer the question and quickly direct physicians to the right course of treatment.

As ultrasound technology advances, it plays a greater role in clinical trials as well as day-to-day patient treatment.

**Education**

**Fellows Excel as Program Graduates Fourth Class**

The fellowship program in the University of Nebraska Medical Center Rheumatology Division has maintained an impressive distinction for the fourth straight year: Every fellow passed boards with high marks, which means that in four graduating classes since the fellowship program began, fellows have maintained a 100 percent success mark.

“We’re delighted with our success so far, particularly from the educational side of things and the educational product of our fellows,” said James O’Dell, MD, professor and residency program director within the Department of Internal Medicine. “As we’ve continued to grow and mature our fellowship, we’re looking to have residents and fellows involved more with research, particularly during their second years, as we consider this an essential component of the experience.”

O’Dell believes the program’s success represents a combination of sound admission practices and a strong curriculum that emphasizes solid faculty involvement under the leadership of fellowship program director Amy Cannella, MD.

The program also provides an opportunity for fellows to present scholarly work at the American College of Rheumatology annual meeting. In 2011, fellow Leann Maska presented a poster on smoking and its effect on treatment responses in rheumatoid arthritis, while fellow Zack Pruhs presented a poster on additional information that can be gleaned from hand films of patients and their X-rays, particularly with respect to calcification in the blood vessels and its effect on mortality rates.
2011 – 2012
CHIEF RESIDENTS & GRADUATES

CHIEF RESIDENTS

CHRISTOPHER SMITH, MD
Assistant Professor, Division of General Internal Medicine – UNMC

SARAH RICHARDS, MD
Assistant Professor, Division of General Internal Medicine – UNMC

WARREN ANCHETA THORP, MD
Hospitalist – Park Ridge Health, Hendersonville, North Carolina

GRADUATES / CAREER PLANS

JUDD BAUER, MD
Nephrology Fellowship
UNMC

ISAAC BERG, MD
Internal Medicine Associates
Grand Island, NE

SARAH BLIGH, MD
Gastroenterology Fellowship
UNMC

BRIAN BOER, MD
Pulmonary/Critical Care Fellowship
UNMC

ADAM BURDORF, MD
Cardiology Fellowship
UNMC

BRIAN DELANEY, MD
Ambulatory Chief Resident
UNMC

MICHAEL DONNER, MD
Internal Medicine Associates
Grand Island, NE

STEPHANIE GRAVNING, MD
Hospitalist
Bismarck, ND

MARCUS HARRIS, MD
Hospitalist
Houston, TX

BRIAN HOLLIS, MD
VA Chief Resident
UNMC

ADAM LITTICH, MD
Hospitalist – Washington SOM
St. Louis, MO

SARA MAY, MD
Quality Chief Resident – VA
Omaha, NE

JILL MAYHAN, MD
Hospitalist – Methodist Hospital
Omaha, NE

JOSEPH STOLP, MD
Hospitalist – Methodist Hospital
Omaha, NE

TABITHA NENNINGER, MD
Methodist HealthWest Clinic
Omaha, NE

ALLISON RAMEY, MD
Chief Resident
UNMC

WENDY VETTER, DO
Private Practice – Sanford Health
Sioux Falls, SD
Affiliation with the VA Nebraska-Western Iowa Health Care System (NWI HCS) allows the Department of Internal Medicine to pursue its tripartite mission of clinical care, research and education in a more comprehensive and successful manner.

NWI HCS 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.

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 outcomes research. Many of the department’s basic research programs are based in the VA Research and Development Service.

Areas of major emphasis at the VA are on quality outcomes, patient safety and medical values. Expertise in these areas strengthens the department’s academic and educational endeavors.

The department’s faculty members are totally integrated between the VA and The Nebraska Medical Center.

The Department of Internal Medicine’s major clinical and educational affiliation is with The Nebraska Medical Center. With a history dating back to 1869, The Nebraska Medical Center was formed with the merger of University Hospital and the Bishop Clarkson Memorial Hospital and their ambulatory care facilities in 1997. The integration of the University of Nebraska Medical Center and The Nebraska Medical Center has attracted patients from across the region and around the world. Currently, this academic health care facility has 624 acute-care inpatient beds and serves as the primary teaching hospital for more than 350 medical and surgical residents. The hospital is Nebraska’s largest health care facility with over 5,000 employees.

As a major tertiary health care center, The 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, The 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.

Every year, The 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.
There was a time when teaching was seen as a less worthy pursuit than patient care or research. But sometimes people come along who change such perceptions because these innovators revolutionize how things are done.

That is the legacy of LeeRoy Meyer, MD, described as the most decorated teacher in the history of the University of Nebraska Medical Center School of Medicine.

Meyer began teaching at UNMC in the 1960s. He left to serve in the military, then returned in 1970. While he spent time practicing medicine as well as teaching, it was clear early on where his true passion lay.

David O’Dell, MD, a longtime colleague and friend of Meyer, now serves as the LeeRoy Meyer Professor of Internal Medicine, in the Division of General Internal Medicine. The LeeRoy Meyer Professorship was created after Dr. Meyer’s untimely death in 2005 to continue this legacy of innovative teaching. O’Dell said Meyer’s devotion to medical education set him apart from other academic physicians.

“The extraordinary thing about LeeRoy is that he was completely committed to medical student education,” O’Dell said. “LeeRoy spent his days teaching.”

He was popular with students and beloved by his colleagues — who often found him an inviting target for practical jokes. That however, would require an article of its own.

Meyer envisioned a case-management system with computer simulations that allowed students to think through, and work through, how to take care of a sick patient. Meyer’s concept became reality with the programming help of his colleague David L. Olson, MD.

“He was renowned for his ability to make people think critically, and he did it in a manner that was different than what was established at the time,” O’Dell said. “He pioneered small-group, case-based teaching in the ’70s, at least a decade before that concept was accepted as a good way to teach medical students or had become the standard. It took 20 years for the country to adopt that.”

Meyer also used distance-learning techniques such as video links to make his classes more interactive — allowing students to become more active in what would have otherwise been a passive learning environment. In addition, he pioneered the use of actors who would simulate symptoms for medical students to identify — a technique known as Objective Structured Clinical Exam “He started doing it here probably 20 years ago, well before this was adopted as a national standard,”

“Probably two-thirds to three-fourths of the medical school class would elect to take his senior course, affectionately referred to as ‘Meyer’s course’ and still is to this day,” O’Dell said. “The students would work on solving a series of clinical cases over the course of a month, and at the conclusion of the course, LeeRoy would have them all out to his house.”

And it was quite a house.

O’Dell recalls, “It was decorated circa 1970 with brightly colored shag carpeting and black-and-white checkerboard rooms and furniture. He had an indoor pool and I suspect the only time it was ever used was for the student parties. Everyone looked forward to going out to LeeRoy’s house and having this party to blow off steam after working to solve those challenging clinical cases.”

The UNMC Medical School offers a recognition known as the Golden Apple Teaching Award to one outstanding teacher in each year. Meyer won it so many times — 26 in all — that the school decided in 1995 to put him in the Golden Apple Hall of Fame and retire him from winning the award any further (but somehow he managed to win one more time).

Not only students were affected by Meyer’s legacy. “LeeRoy made teaching an important activity for faculty members,” O’Dell said. “He was recognized for his teaching, and that became an acceptable career path. While that is one of the three legs of the stool around here — education, research and patient care — education isn’t always given its due.”

Or it wasn’t, before LeeRoy Meyer changed all that.
Robert M. Grissom, MD, who was the first full-time chairman of the Department of Internal Medicine at the University of Nebraska Medical Center, retired in 1987 after serving an astounding 50 years with UNMC.

Even after his retirement, Dr. Grissom continued to be a fixture on campus until his death at the age of 92 in 2009 — often attending grand rounds and campus events. And he was especially known for his love of exercising at the Center for Healthy Living.

So it came as no surprise that his widow, Virginia Grissom, would want to honor Dr. Grissom’s legacy with a substantial gift to the EngAge Wellness Center.

The Center, which opened in 2011, serves the 50-and-over population with services that encompass the Six Dimensions of Wellness — social, physical, spiritual, emotional, vocational and intellectual. Manager Jeannie Hannan said she came to understand the connection between the Center and Dr. Grissom’s passion during a conversation with Virginia Grissom.

“She told me that Dr. Grissom had a passion for wellness and exercised every day,” Hannan said. “In turn she’s got a passion for wellness.”

Mrs. Grissom’s gift comes at a time when the Center is poised for growth, and will make good use of the resources to help in doing so.

“I look at where we are now compared to where we were a year ago just after opening,” Hannan said. “The money has helped us launch the business which includes: developing the business plan, creating job descriptions, hiring staff, advertising the program, recruiting participants and developing plans for continued growth.” Currently the Center is at about 150 participants, which represents a lot of progress compared to when the Center opened.

More resources will also allow the center to devise strategies for overcoming some other challenges. One such strategy is called EngAge At Home.

“EngAge at Home includes continued one-on-one wellness support, as well as a fitness program that can be completed in the home,” Hannan said. “Another strategy we’re working on is the development of an educational certificate program in whole-person wellness for successful aging. This program will be designed to educate caregivers and/or others who work with older adults.”

The Center also recently began an Exercise is Medicine™ physician referral program. Patients referred by their physician receive an individualized fitness program and two free weeks participation — at the end of which Center staff report back to patients’ physicians on their progress.

And partly as a result of the Grissom donation, the Center is starting a new offering called the FallProof Program — a balance and mobility program that originated at Cal State Fullerton and will be taught by wellness specialist Heather Lenz — the only certified FallProof instructor in the state of Nebraska.

All of this would surely have pleased Dr. Grissom, who was such an avid exerciser that it was common for him — even in his final years — to outpace people much younger than he was. Shortly after his death, long-time colleague Vernon Ward, MD, recalled: “He’s been coming to grand rounds until about two or three weeks ago. It was remarkable. He was an avid exerciser at the UNMC fitness center. He got me to come for about a year and a half, but I wasn’t in his league. It was remarkable what he did on all that equipment.”

Thanks in part to Mrs. Grissom’s generosity in honor of her husband’s legacy, participants at the EngAge Wellness Center will now have newer, more modern equipment — along with a host of other offerings that will make their wellness experience more complete.

For a man as committed to his patients and the institution as he was to his own physical fitness, the gift will surely represent a legacy that will long survive his passing.
## Cardiology

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Key Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Windle, MD</td>
<td>Professor and Chief Medical Director, Biomedical Informatics Unit</td>
<td>complex cardiac mapping, genetics and arrhythmias, physician adoption of electronic health records and computerized decision support</td>
</tr>
<tr>
<td>Daniel Anderson, MD, PhD</td>
<td>Assistant Professor</td>
<td>atherosclerotic disease, cellular immunology and vascular inflammation</td>
</tr>
<tr>
<td>John Timothy Baller, MD</td>
<td>Assistant Professor</td>
<td>cardiovascular disease, echocardiography</td>
</tr>
<tr>
<td>Ward Chambers, MD</td>
<td>Professor</td>
<td>Coordinator of Programs, International Health and Medical Education</td>
</tr>
<tr>
<td>Ioana Dumitru, MD</td>
<td>Associate Professor</td>
<td>cardiovascular imaging, minority health disparities</td>
</tr>
<tr>
<td>Arthur Easley Jr., MD</td>
<td>Associate Professor</td>
<td>electrophysiology, resident education</td>
</tr>
<tr>
<td>Christopher Erickson, MD</td>
<td>Professor</td>
<td>pediatric and adult electrophysiology, pediatric and adult congenital heart disease, cardiomyopathies</td>
</tr>
<tr>
<td>Kiran Gangahar, MD</td>
<td>Assistant Professor</td>
<td>advanced cardiac imaging, prevention and outcomes, women’s health</td>
</tr>
<tr>
<td>John Haas, MD</td>
<td>Assistant Professor</td>
<td>advanced echocardiography, hypertension (high blood pressure)</td>
</tr>
<tr>
<td>Brian Lowes, MD, PhD</td>
<td>Professor, William D Angle, MD, Chair of Cardiology</td>
<td>heart failure, transplant</td>
</tr>
<tr>
<td>Daniel Mathers, Jr., MD</td>
<td>Assistant Professor</td>
<td>echocardiography, M2 core education, general cardiology</td>
</tr>
<tr>
<td>Edward O’Leary, MD</td>
<td>Associate Professor</td>
<td>echocardiography, M2 core education, general cardiology</td>
</tr>
<tr>
<td>Thomas Porter, MD</td>
<td>Professor and Theodore F. Hubbard Distinguished Chair of Cardiology Medical Director of Non-Invasive Cardiac Imaging</td>
<td>perfusion echocardiography, advanced cardiac imaging (including MRI/CT/nuclear/echocardiography), thrombolysis</td>
</tr>
<tr>
<td>Samer Sayyed, MD</td>
<td>Assistant Professor</td>
<td>cardiovascular disease, advanced cardiovascular imaging (MRI/CT/ Nuclear/ Echocardiography), coronary artery disease</td>
</tr>
<tr>
<td>John Scherschel, MD</td>
<td>Assistant Professor</td>
<td>cardiovascular disease, atrial and ventricular arrhythmias</td>
</tr>
<tr>
<td>Thomas Sears, MD</td>
<td>Associate Professor Medical Director, Clinical Cardiology</td>
<td>congestive heart failure risk reduction, research ethics</td>
</tr>
<tr>
<td>Scott Shurmur, MD</td>
<td>Associate Professor Director of Interventional Cardiology</td>
<td>interventional cardiology, lipidemilogy</td>
</tr>
<tr>
<td>Nattapong Srirachaoen, MD</td>
<td>Assistant Professor</td>
<td>cardiovascular disease, interventional cardiology</td>
</tr>
<tr>
<td>Feng Xie, MD</td>
<td>Associate Research Professor</td>
<td>microbubble and perfusion echocardiology, sonothrombolysis</td>
</tr>
</tbody>
</table>

## Clinical Research Center

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Key Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purnima Guda, PhD</td>
<td>Instructor</td>
<td>clinical informatics, retrieval of EHR data (EPIC and Centricity), biobank queries</td>
</tr>
</tbody>
</table>

## Diabetes, Endocrinology & Metabolism

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Key Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyrus V. Desouza, MD</td>
<td>Professor and Chief</td>
<td>cardiovascular disease in diabetes, inflammation and insulin resistance in endothelial dysfunction, role of apathy in diabetes</td>
</tr>
<tr>
<td>Robert G. Bennett, PhD</td>
<td>Associate Professor</td>
<td>relaxin action and signaling in fibrosis, cardiovascular disease and diabetes, insulin degrading enzyme function</td>
</tr>
<tr>
<td>Andjela T. Drincic, MD</td>
<td>Associate Professor Medical Director, Diabetes Center</td>
<td>improving outcomes in inpatient and outpatient setting of the Diabetes Center, developing a clinical pituitary program at UNMC, research of diabetes and pituitary care</td>
</tr>
<tr>
<td>Whitney S. Goldner, MD</td>
<td>Associate Professor Director, Fellowship Program</td>
<td>thyroid nodules, thyroid cancer, environmental exposure and thyroid disease, vitamin D in disease states, neuroendocrine tumors</td>
</tr>
</tbody>
</table>
Frederick G. Hamel, PhD
Professor
Deputy Associate Chief of Staff for Research, Omaha VA Medical Center
» function of insulin-degrading enzyme
» etiology of type 2 diabetes mellitus

Jennifer L. Larsen, MD
Professor, Louise and Morton Degen Professorship
Vice Chancellor for Research
» metabolic consequences of organ transplantation
» diabetes risk in high risk populations
» pituitary disease evaluation and treatment

Lynn R. Mack, MD
Associate Professor
» osteoporosis and other bone disease in special populations
» women’s health metabolic issues

Amy S. Neumeister, MD
Assistant Professor
» diabetes and hypoglycemia
» thyroid, pituitary and adrenal disease

Vijay Shivaswamy, MBBS
Assistant Professor
Associate Director, Fellowship Program
» immunosuppressants and insulin resistance
» reproductive function after transplantation

Saraswathi Viswanathan, PhD
Assistant Professor
» nanzymes in the treatment of obesity-linked inflammation
» omega-3 fatty acids and adipocyte function
» eicosanoid signaling and obesity

Mark Mailliard, MD
Professor, Frederick F. Paustian Chair, and Chief
Co-director, GI Fellowship Program
» hepatitis C
» alcoholic liver disease

Carol Casey, PhD
Professor
» alcoholic liver injury
» cell biology and function

Dahn Clemens, PhD
Associate Professor
» tissue regeneration
» alcoholic hepatitis/pancreatitis

Terrence Donohue, PhD
Professor
» alcoholic liver injury
» hepatocyte proliferation and repair

John Gollan, MD, PhD
Stokes-Shackelford Professor
» hepatology
» liver transplantation

Dee Harrison-Findik, PhD
Associate Professor
» hepatic iron metabolism
» hepatitis C

Alexander Hewlett, DO
Assistant Professor
Director, Motility and GI Fellowship Program
» esophageal motility disorders
» fellowship education

Grant Hutchins, MD
Assistant Professor
Medical Director, Endoscopy Service
» biliary and pancreatic disease
» specialty endoscopy including ERCP and EUS

Kusum Kharbanda, PhD
Associate Professor
» alcoholic liver disease
» bioprotection in hepatitis

Timothy McCashland, MD
Professor
Medical Director, Liver Transplantation
» liver transplantation
» cholestatic liver disease

Benita McVicker, PhD
Assistant Professor
» alcohol liver disease
» hepatocyte apoptosis

Sandeep Mukherjee, MD
Associate Professor
» liver transplantation
» clinical trials in hepatitis

Marco Olivera-Martinez, MD
Assistant Professor
Director, Liver Transplant and Hepatology Fellowship Program
» liver transplantation
» chronic viral hepatitis
» novel pharmacologic therapies

Natalia Osna, PhD
Assistant Professor
» hepatitis C
» hepatic inflammation

Fedja Rochling, MBBC
Associate Professor
» intestinal rehabilitation program
» hepatocellular carcinoma
» liver transplantation

Daniel Schafer, MD
Professor
» hepatology
» liver transplantation

Shailender Singh, MBBS
Assistant Professor
» liver transplantation
» autoimmune hepatitis

Dean Tuma, PhD
Professor
» drug and nutritional hepatotoxities
» pathogenesis of alcoholic liver disease

Gary Valentine, MD
Assistant Professor
» general GI

Renee Young, MD
Associate Professor
» inflammatory bowel disease

Thomas Tape, MD
Professor and Chief
» medical judgment and decision making
» computer usability for physicians
» American College of Physicians

Joel Armitage, MD
Assistant Professor
Medical Director, Village Pointe Clinic
» outpatient primary care
» preventive medicine

Micah Beachy, DO
Assistant Professor
» management of hospitalized patients

Joel Bessmer, MD
Associate Professor
» medical education
» outpatient primary care

Shannon Boerner, MD
Assistant Professor
» outpatient primary care
» women’s health

Rachel Bonnema, MD, MS
Assistant Professor
Internal Medicine Residency Assistant Program Director
» resident education
» curriculum development for the national VA
» women’s health
FACULTY LIST & KEY INTERESTS

James Campbell, MD
Professor
- biomedical informatics
- clinical decision support
- electronic health records

Gay J. Canaris, MD, MSPH
Assistant Professor
- clinical epidemiology
- women and minority health research
- thyroid disease

Kelly Caverzagie, MD
Assistant Professor
- competency assessment
- physician advocacy
- curriculum development

Brian Delaney, MD
Instructor
- resident education
- pulmonary and critical care

Brent Crouse, MD
Assistant Professor
- outpatient primary care
- diabetes

Grace Davis, MD
Assistant Professor
- women’s health
- preventive care

J. Calvin Davis, III, MD
Emeritus Professor
- management of hospitalized patients
- addiction medicine

Erik Ehlers, MD
Instructor
- outpatient primary care

Gale Etherton, MD
Associate Professor
- hospital delivery systems
- physician quality improvement

Julie Fedderson, MD
Assistant Professor
Chief Quality and Outcomes Officer, The Nebraska Medical Center
- management of hospitalized patients
- physician quality improvement

Mary Gallagher Jansen, MD
Assistant Professor
- substance abuse and addiction
- psychiatric illness in primary care

Brian Hollis, MD
Instructor
- hospitalist medicine
- general medicine

Michelle Johnson, MD
Assistant Professor
- outpatient primary care

Lydia Kang, MD
Assistant Professor
- palliative care
- cultural competency
- medical humanities

Katherine Kueny, PhD, LIMFT, LIMHP
Assistant Professor
- behavioral medicine-resident education
- geriatric depression/anxiety

Emily Leasure, MD
Assistant Professor
- outpatient primary care
- resident education
- quality improvement

John Mattole, MD
Professor
- student and house officer education
- utilization of health care resources

Tabatha Matthias, DO
Assistant Professor
- management of hospitalized patients
- resident and medical school education

Sara May, MD
Instructor
- patient quality and safety
- musculoskeletal system

Merle McAlevy, MD
Assistant Professor
- physical diagnosis teaching
- hospital informatics

Scott Menolascino, MD
Assistant Professor
- emergency medicine

Christine Mitchell, MD
Instructor
- outpatient primary care

J. Scott Neumeister, MD
Associate Professor
- medical education
- procedural training

Devin Nickol, MD
Assistant Professor
- teaching evidence-based medicine
- computers in medical education

Jessica Novotny, MD
Assistant Professor
- outpatient primary care
- hypertension and hyperlipidemia

Phyllis Nsiah-Kumi, MD, MPH
Assistant Professor
- type 2 diabetes prevention
- breast cancer disparities
- health literacy

David O’Dell, MD
LeeRoy Meyer Professor
- undergraduate medical education
- procedural training

Jennifer Parker, MD
Associate Professor
Internal Medicine-Pediatrics
Program Director, Baker Place Clinic
- transitional care
- adolescent and women’s health
- resident education

Mahliqha Qasimyar, MD
Assistant Professor
- Management of hospitalized patients

Allison Ramey, MD
Instructor
- med peds
- preventative health

Sarah Richards, MD
Assistant Professor
- resident education
- medical student education

Robert Schwab, MD
Assistant Professor
- resident education
- medical home

Susan Schwerdtfeger, MD
Assistant Professor
Medical Director, Brentwood Clinic
- outpatient primary care
- women’s health

JASON SHIFFERMILLER, MD
Assistant Professor
- management of the hospitalized patient
- perioperative care and risk assessment

Christopher Smith, MD
Assistant Professor
- graduate medical education
- patient safety and quality improvement

Regan Taylor, MD
Assistant Professor
- women’s health
- medical student education

Jean Thierfelder, MD
Associate Professor
Medical Director, General Internal Medicine Clinic
- preventive care
- organization of outpatient care

Andrew Vasey, MD
Assistant Professor
- outpatient primary care
- preventive medicine

Chad Vokoun, MD
Associate Professor
Internal Medicine Residency Co-Associate Program Director
- management of hospitalized patients
- resident education
- perioperative and consultative medicine
FACULTY

Robert Wigton, MD
Professor
Associate Dean, Graduate Medical Education
- physician judgment and decision making
- research in medical education

Renee Woehler, MD
Assistant Professor
- resident and medical student teaching
- outpatient primary care

GERIATRICS & GERONTOLOGY

Jane F. Potter, MD
Neumann M. and Mildred E. Harris Professor of Geriatrics, and Chief Medical Director, Home Instead Center for Successful Aging
- geriatric cognitive disorders
- geriatric assessment
- interprofessional geriatrics education

Stephen Bonasera, MD, PhD
Assistant Professor
- aging and the brain
- age-related changes in functional behaviors
- neurodevelopment and its role in aging and disease

Catherine Eberle, MD, CMD
Associate Professor
Chief of Geriatrics, Extended Care and Rehabilitation – Hospice and Palliative Care Team, Omaha VA Medical Center
- palliative care and end-of-life care
- function and disability in aging rehabilitation

Brenda K. Keller, MD
Assistant Professor
Medical Director, Brookestone Village
- special sensory disorders (vision and hearing)
- functional status in frail older people and those with dementia
- education in nursing home care

William L. Lyons, MD
Associate Professor
Director, Geriatric Fellowship Program
Associate Program Director, Internal Medicine Residency Program
- transitional care of the elderly
- interprofessional clinical education
- medical decision-making in end-of-life care

Debra E. Mostek, MD
Assistant Professor
Medical Director, Amazing Angels Hospice
Medical Director, St. Joseph Villa Nursing and Rehabilitation
- home care
- nursing home care

Edward V. Vandenberg, MD, CMD
Associate Professor
Medical Director, St. Joseph Villa Hospice
Director, Geriatric Evaluation and Management Clinics, Omaha VA Medical Center
- end-of-life quality improvement in long-term care
- delirium, falls, atypical presentations of common disease in the elderly
- behavior management in dementia

Bradley Britigan, MD
Stokes–Shackelford Professor and Dean, UNMC College of Medicine
- free radical biology and iron metabolism
- Pseudomonas pathogenesis
- pathogenesis of tuberculosis

Diana Florescu, MD
Associate Professor
- infections in small bowel transplant recipients
- adenovirus, CMV and fungal infections in solid organ transplantation

Alison Freifeld, MD
Professor
Medical Director, VAST Clinic
- infections in cancer patients
- rapid molecular diagnosis of infections

Howard Gendelman, MD
Larson Professor of Internal Medicine, Chair, Department of Pharmacology and Experimental Neuroscience
- HIV neuropathogenesis
- anti-retroviral drug development
- innate immunity and viral control

Gary Gorby, MD
Associate Professor
Chief of Medicine, Omaha VA Medical Center
Chief, Adult Infectious Diseases, Creighton University School of Medicine
Co-Director, Center for Preparedness Education
- disaster preparedness
- technology use in teaching

Angela Hewlett, MD
Assistant Professor
- complicated bone and joint infections
- biopreparedness
- hospital infection control

Andre Kalil, MD
Associate Professor
Director, Transplant Infectious Diseases
- transplant infectious diseases
- CMV infections
- severe sepsis

Uriel Sandkovsky, MD
Assistant Professor
- HIV pathogenesis, resistance and aging
- antimicrobial resistance
- opportunistic and transplant related infections

Philip W. Smith, MD
Professor
Medical Director, Nebraska Biocontainment Unit
- bioterrorism-preparedness education
- infectious diseases in the elderly and nursing homes

Susan Swindells, MBBS
Professor and Terry K. Watanabe Chair
Medical Director, Specialty Services Clinic
Assistant Professor
Medical Director, Brentwood Clinic
- HIV/AIDS therapeutics
- complications of HIV and its therapies
- diagnosis and treatment of tuberculosis

Trevor Van Schooneveld, MD
Assistant Professor
Medical Director, Antimicrobial Stewardship Program
- antimicrobial stewardship
- multi-drug resistant gram negative pathogens
- Clostridium difficile infections

Hendrik Vlijoen, PhD
Professor
University of Nebraska, Lincoln
- tuberculosis
- rapid microbial detection

Robert Wigton, MD
Professor
Associate Dean, Graduate Medical Education
- physician judgment and decision making
- research in medical education

Renee Woehler, MD
Assistant Professor
- resident and medical student teaching
- outpatient primary care

GERIATRICS & GERONTOLOGY

Jane F. Potter, MD
Neumann M. and Mildred E. Harris Professor of Geriatrics, and Chief Medical Director, Home Instead Center for Successful Aging
- geriatric cognitive disorders
- geriatric assessment
- interprofessional geriatrics education

Stephen Bonasera, MD, PhD
Assistant Professor
- aging and the brain
- age-related changes in functional behaviors
- neurodevelopment and its role in aging and disease

Catherine Eberle, MD, CMD
Associate Professor
Chief of Geriatrics, Extended Care and Rehabilitation – Hospice and Palliative Care Team, Omaha VA Medical Center
- palliative care and end-of-life care
- function and disability in aging rehabilitation

Brenda K. Keller, MD
Assistant Professor
Medical Director, Brookestone Village
- special sensory disorders (vision and hearing)
- functional status in frail older people and those with dementia
- education in nursing home care

William L. Lyons, MD
Associate Professor
Director, Geriatric Fellowship Program
Associate Program Director, Internal Medicine Residency Program
- transitional care of the elderly
- interprofessional clinical education
- medical decision-making in end-of-life care

Debra E. Mostek, MD
Assistant Professor
Medical Director, Amazing Angels Hospice
Medical Director, St. Joseph Villa Nursing and Rehabilitation
- home care
- nursing home care

Edward V. Vandenberg, MD, CMD
Associate Professor
Medical Director, St. Joseph Villa Hospice
Director, Geriatric Evaluation and Management Clinics, Omaha VA Medical Center
- end-of-life quality improvement in long-term care
- delirium, falls, atypical presentations of common disease in the elderly
- behavior management in dementia

Bradley Britigan, MD
Stokes–Shackelford Professor and Dean, UNMC College of Medicine
- free radical biology and iron metabolism
- Pseudomonas pathogenesis
- pathogenesis of tuberculosis

Diana Florescu, MD
Associate Professor
- infections in small bowel transplant recipients
- adenovirus, CMV and fungal infections in solid organ transplantation

Alison Freifeld, MD
Professor
Medical Director, VAST Clinic
- infections in cancer patients
- rapid molecular diagnosis of infections

Howard Gendelman, MD
Larson Professor of Internal Medicine, Chair, Department of Pharmacology and Experimental Neuroscience
- HIV neuropathogenesis
- anti-retroviral drug development
- innate immunity and viral control

Gary Gorby, MD
Associate Professor
Chief of Medicine, Omaha VA Medical Center
Chief, Adult Infectious Diseases, Creighton University School of Medicine
Co-Director, Center for Preparedness Education
- disaster preparedness
- technology use in teaching

Angela Hewlett, MD
Assistant Professor
- complicated bone and joint infections
- biopreparedness
- hospital infection control

Andre Kalil, MD
Associate Professor
Director, Transplant Infectious Diseases
- transplant infectious diseases
- CMV infections
- severe sepsis

Uriel Sandkovsky, MD
Assistant Professor
- HIV pathogenesis, resistance and aging
- antimicrobial resistance
- opportunistic and transplant related infections

Philip W. Smith, MD
Professor
Medical Director, Nebraska Biocontainment Unit
- bioterrorism-preparedness education
- infectious diseases in the elderly and nursing homes

Susan Swindells, MBBS
Professor and Terry K. Watanabe Chair
Medical Director, Specialty Services Clinic
Assistant Professor
Medical Director, Brentwood Clinic
- HIV/AIDS therapeutics
- complications of HIV and its therapies
- diagnosis and treatment of tuberculosis

Trevor Van Schooneveld, MD
Assistant Professor
Medical Director, Antimicrobial Stewardship Program
- antimicrobial stewardship
- multi-drug resistant gram negative pathogens
- Clostridium difficile infections

Hendrik Vlijoen, PhD
Professor
University of Nebraska, Lincoln
- tuberculosis
- rapid microbial detection

Robert Wigton, MD
Professor
Associate Dean, Graduate Medical Education
- physician judgment and decision making
- research in medical education

Renee Woehler, MD
Assistant Professor
- resident and medical student teaching
- outpatient primary care

GERIATRICS & GERONTOLOGY

Jane F. Potter, MD
Neumann M. and Mildred E. Harris Professor of Geriatrics, and Chief Medical Director, Home Instead Center for Successful Aging
- geriatric cognitive disorders
- geriatric assessment
- interprofessional geriatrics education

Stephen Bonasera, MD, PhD
Assistant Professor
- aging and the brain
- age-related changes in functional behaviors
- neurodevelopment and its role in aging and disease

Catherine Eberle, MD, CMD
Associate Professor
Chief of Geriatrics, Extended Care and Rehabilitation – Hospice and Palliative Care Team, Omaha VA Medical Center
- palliative care and end-of-life care
- function and disability in aging rehabilitation

Brenda K. Keller, MD
Assistant Professor
Medical Director, Brookestone Village
- special sensory disorders (vision and hearing)
- functional status in frail older people and those with dementia
- education in nursing home care

William L. Lyons, MD
Associate Professor
Director, Geriatric Fellowship Program
Associate Program Director, Internal Medicine Residency Program
- transitional care of the elderly
- interprofessional clinical education
- medical decision-making in end-of-life care

Debra E. Mostek, MD
Assistant Professor
Medical Director, Amazing Angels Hospice
Medical Director, St. Joseph Villa Nursing and Rehabilitation
- home care
- nursing home care

Edward V. Vandenberg, MD, CMD
Associate Professor
Medical Director, St. Joseph Villa Hospice
Director, Geriatric Evaluation and Management Clinics, Omaha VA Medical Center
- end-of-life quality improvement in long-term care
- delirium, falls, atypical presentations of common disease in the elderly
- behavior management in dementia

Bradley Britigan, MD
Stokes–Shackelford Professor and Dean, UNMC College of Medicine
- free radical biology and iron metabolism
- Pseudomonas pathogenesis
- pathogenesis of tuberculosis

Diana Florescu, MD
Associate Professor
- infections in small bowel transplant recipients
- adenovirus, CMV and fungal infections in solid organ transplantation

Alison Freifeld, MD
Professor
Medical Director, VAST Clinic
- infections in cancer patients
- rapid molecular diagnosis of infections

Howard Gendelman, MD
Larson Professor of Internal Medicine, Chair, Department of Pharmacology and Experimental Neuroscience
- HIV neuropathogenesis
- anti-retroviral drug development
- innate immunity and viral control

Gary Gorby, MD
Associate Professor
Chief of Medicine, Omaha VA Medical Center
Chief, Adult Infectious Diseases, Creighton University School of Medicine
Co-Director, Center for Preparedness Education
- disaster preparedness
- technology use in teaching

Angela Hewlett, MD
Assistant Professor
- complicated bone and joint infections
- biopreparedness
- hospital infection control

Andre Kalil, MD
Associate Professor
Director, Transplant Infectious Diseases
- transplant infectious diseases
- CMV infections
- severe sepsis

Uriel Sandkovsky, MD
Assistant Professor
- HIV pathogenesis, resistance and aging
- antimicrobial resistance
- opportunistic and transplant related infections

Philip W. Smith, MD
Professor
Medical Director, Nebraska Biocontainment Unit
- bioterrorism-preparedness education
- infectious diseases in the elderly and nursing homes

Susan Swindells, MBBS
Professor and Terry K. Watanabe Chair
Medical Director, Specialty Services Clinic
Assistant Professor
Medical Director, Brentwood Clinic
- HIV/AIDS therapeutics
- complications of HIV and its therapies
- diagnosis and treatment of tuberculosis

Trevor Van Schooneveld, MD
Assistant Professor
Medical Director, Antimicrobial Stewardship Program
- antimicrobial stewardship
- multi-drug resistant gram negative pathogens
- Clostridium difficile infections

Hendrik Vlijoen, PhD
Professor
University of Nebraska, Lincoln
- tuberculosis
- rapid microbial detection
NEPHROLOGY

Troy J. Plumb, MD
Associate Professor
Interim Division Chief
- hemodialysis therapies
- glomerular disease
- dialysis access

Jennifer Fillaus, DO
Assistant Professor
- chronic kidney disease
- acute kidney injury
- hypertension

Marius C. Florescu, MD
Assistant Professor
- renal disease in end-stage liver disease
- hemodialysis vascular access
- glomerular disease

Clifford D. Miles, MD, MS
Assistant Professor
Co-Director, Kidney Pancreas Transplant Program
- kidney transplantation
- chronic kidney disease after non-renal organ transplantation
- acute renal failure

Ketki Tendulkar, MBBS
Assistant Professor
- chronic kidney disease
- kidney donor evaluation
- acute renal failure

Justin Westervelt, MD
Assistant Professor
- kidney transplantation
- chronic kidney disease
- pregnancy and renal disease

ONCOLOGY/HEMATOLOGY

Julie Vose, MD, MBA
Neumann M. and Mildred E. Harris Professor of Oncology and Division Chief
Medical Director, Oncology Clinic
- hematologic malignancies
- pathway targeted therapies

Mojtaba Akhtari, MD
Assistant Professor
- hematologic malignancies
- leukemias & myelodysplastic syndrome
- benign hematologic disorders

James O. Armitage, MD
Professor and Joe Shapiro Chair of Oncology
- non-Hodgkin’s lymphoma
- Hodgkin’s lymphoma

Philip J. Bierman, MD
Professor
- lymphoma
- neuro-oncology

R. Gregory Bociek, MD, MSc
Associate Professor
Director, Oncology/ Hematology Fellowship Program
- non-Hodgkin’s lymphoma
- Hodgkin’s lymphoma

Kenneth Cowan, MD, PhD
Professor
Director, Eppley Institute Director, Eppley Cancer Center
- breast cancer
- hereditary cancer risk

Johny Elkahwaji, PhD
Assistant Professor
- inflammation and prostate carcinogenesis
- mechanism of immunotherapy

Edward Faber, Jr., DO, MS
Assistant Professor
- multiple myeloma
- hematologic malignancies
- benign hematology

Apar Kishor Ganti, MD
Associate Professor
- lung cancer
- head and neck cancer

Jean Grem, MD
Professor
- gastrointestinal malignancies
- pharmacogenomics

M. Anne Kessinger, MD
Professor
- lung cancer
- melanoma

Fausto Loberiza, Jr., MD, MS
Professor
- stem cell transplant outcomes
- cancer health services research

Lori Maness-Harris, MD
Assistant Professor
Medical Director, Oncology/ Hematology Special Care Unit
- leukemia
- myelodysplastic syndrome

Alissa Marr, MD
Assistant Professor
- non-malignant hematopoietic malignancies
- head and neck cancer

Sandep Rajan, MD
Associate Professor
- non-malignant hematopoietic malignancies
- head and neck cancer

Elizabeth Reed, MD
Professor
Medical Director, Village Pointe Cancer Center
- breast cancer

James Schwarz, MD
Assistant Professor
- gastrointestinal malignancies

Nicole Shonka, MD
Assistant Professor
- neuro-oncology
- sarcoma

Shanmuga Subbiah, MD
Assistant Professor
- gastrointestinal malignancies

Jue Wang, MD
Assistant Professor
- genitourinary malignancies
- cancers of unknown primary

PULMONARY, CRITICAL CARE, SLEEP & ALLERGY

Joseph Sisson, MD
Larson Professor of Medicine and Chief
- airway ciliary motility
- alcohol and mucociliary clearance

Kristina Bailey, MD
Assistant Professor
- alcohol and airway innate immunity
- innate immunity of the aging lung

Teri Barkoukis, MD
Assistant Professor
- sleep curriculum development
- sleep disorders

Hesham Basma, PhD
Instructor
- iPSCs and stem cell differentiation

Sabin Bista, MBBS, FAASM
Assistant Professor
Director, Sleep Fellowship Program
- sleep disorders
- effects of sleep deprivation and fatigue on bodily functions

David Gannon, MD
Associate Professor
Critical Care Medical Director
- critical care medicine
- quality improvement and performance improvement

Kathleen M. Grant, MD
Associate Professor
- rural substance use disorders
- tobacco cessation
- methamphetamine use disorders

Tricia D. LeVan, PhD
Associate Professor
- genetic epidemiology
- gene-environment interactions
FACULTY

Xiangde Liu, MD  
Assistant Professor  
- lung cellular injury  
- mechanisms of apoptosis

Peter (Jim) Murphy, MD  
Associate Professor  
- adults with cystic fibrosis  
- respiratory care services

Craig Piquette, MD  
Associate Professor  
- critical care medicine  
- undergraduate and graduate medical education  
- obstructive lung disease including asthma & COPD

Jill Poole, MD  
Associate Professor  
- allergy and asthmatic diseases  
- urticaria and angioedema syndromes  
- organic dust and innate immunity

Stephen I. Rennard, MD  
Larson Professor  
- lung repair, remodeling and regeneration  
- chronic obstructive pulmonary disease  
- smoking cessation

Debra J. Romberger, MD  
Professor  
- organic dust and epithelial responses  
- COPD and other inflammatory airway diseases

Michael Summers, MD  
Assistant Professor  
- sleep medicine  
- analysis of sleep patterns

Austin Thompson, MD  
Associate Professor  
- critical care medicine  
- diagnostic bronchoscopy  
- ultrasound-directed bronchoscopy

Susanna G. Von Essen, MD, MPH  
Professor  
- agricultural lung disease and other forms of occupational lung disease  
- occupational health  
- sarcoid

Todd A. Wyatt, PhD  
Professor  
- cyclic nucleotide-dependent protein kinases  
- alcohol and cigarette smoke in lung disease

RESEARCH

Robert Boissy, PhD  
Assistant Professor  
- management and analysis of next-generation sequencing (NGS) data  
- genomics and metagenomics  
- bioinformatic database and software development

James Salhani, PhD  
Professor  
- cell transport mechanisms

RHEUMATOLOGY & IMMUNOLOGY

James O’Dell, MD  
Bruce Professor and Chief Director, Internal Medicine Residency Program  
- rheumatoid arthritis clinical trials  
- predicting therapeutic response

Amy Cannella, MD  
Assistant Professor  
- medical education  
- musculoskeletal ultrasound

Alan Erickson, MD  
Assistant Professor  
- management of rheumatic diseases  
- quantitative radiologic joint assessment  
- medical education

Michelene Hearth-Holmes, MD  
Assistant Professor  
- medical education  
- systemic lupus erythematosus  
- musculoskeletal ultrasound

Lynell Klassen, MD  
Henry J. Lehnhoff Professor, and Chairman, Department of Internal Medicine  
- mechanisms of autoimmune disease  
- immunoregulation

Kaleb Michaud, PhD  
Assistant Professor  
- pharmacoepidemiology  
- longitudinal outcomes in rheumatic diseases  
- cost effectiveness analysis

Ted Mikuls, MD, MSPH  
Professor  
- co-morbidity of rheumatoid arthritis  
- environmental and genetic interactions  
- clinical outcomes in gouty arthritis

Gerald Moore, MD  
Professor  
- education of medical students  
- soft tissue disease

Geoffrey Thiele, PhD  
Professor  
- pathophysiology of autoimmune diseases  
- altered self-proteins in autoimmunity  
- immune regulation
**HONORS & AWARDS**

### ENDOWED CHAIRS/PROFESSORSHIPS

- **James Armitage, MD**
  - UNMC Distinguished Cancer Research Professorship
  - Joe Shapiro Chair for the Study of Oncology & Clinical Research

- **Bradley Britigan, MD**
  - Dean and Stokes-Shackelford Professor of Infectious Diseases

- **John Gollan, MD**
  - Stokes-Shackleford Professor of Medicine

- **Lynell Klassen, MD**
  - Henry J. Leinhoff Professor of Internal Medicine

- **Jennifer Larsen, MD**
  - Louise and Morton Degen Professor of Internal Medicine

- **Brian Lowes, MD, PhD**
  - William D. Angle, MD, Professorship in Cardiology

- **Mark Mailliard, MD**
  - Frederick F. Paustian Chair of Gastroenterology

- **James O’Dell, MD**
  - William W. Bruce, MD, Distinguished Chair of Rheumatology

- **Thomas Porter, MD**
  - Theodore F. Hubbard Chair of Cardiology

- **Jane Potter, MD**
  - Neumann M. and Mildred E. Harris Professor of Geriatric Medicine

- **Stephen Rennard, MD**
  - Margaret R. Larson Professorship of Respiratory Diseases

- **Michael Sorrell, MD**
  - Robert L. Grissom Professor of Internal Medicine

- **Julie Vose, MD**
  - Neumann M. and Mildred E. Harris Oncology Professorship

### NATIONAL LEADERSHIP/HONORS

- **Teri Barkoukis, MD**
  - Professor, Division of Pulmonary, Critical Care, Sleep & Allergy
  - Appeals Committee for Sleep Fellows, Accreditation Council for Graduate Medical Education (ACGME)

- **John Benson, Jr., MD**
  - Emeritus Professor, Division of Gastroenterology/Hepatology
  - Abraham Flexner Award for Distinguished Services, Association of American Medical Colleges (AAMC)

- **James Campbell, MD**
  - Professor, Division of General Medicine
  - Joint Advisory Group for Harmonization, IHSTDO - World Health Organization

- **Andjela Drincic, MD**
  - Associate Professor, Division of Diabetes, Endocrinology and Metabolism
  - Member, Scientific Education Committee, American College of Rheumatology

- **Al Alan Erickson, MD**
  - Assistant Professor, Division of Rheumatology/Immunology
  - Member, Committee of Rheumatological Care, American College of Rheumatology

- **Whitney Goldner, MD**
  - Associate Professor, Division of Diabetes, Endocrinology & Metabolism
  - Member, Scientific Education Committee, The Endocrine Society

- **Lynell Klassen, MD**
  - Professor and Chair, Department of Internal Medicine
  - Master, American College of Physicians
  - National Advisory Council, NIH, NIAAA

- **James O’Dell, MD**
  - Professor, Division of Rheumatology/Immunology
  - President, American College of Rheumatology

- **Craig Piquette, MD**
  - Associate Professor, Division of Pulmonary, Critical Care, Sleep & Allergy
  - President, Association of PCCM Program Directors (APCCMPD)

- **Jane Potter, MD**
  - Professor, Division of Geriatrics
  - Deputy Director Interdisciplinary Leadership Committee, American Geriatric Society (AGS)
  - Chair, Membership Workgroup, American Geriatric Society (AGS)

- **Lisa Runco**
  - Vice Chair for Finance and Administration
  - President, Administrators of Internal Medicine

- **Mark Rupp, MD**
  - Professor, Division of Infectious Diseases
  - Chairperson, Past Presidents’ Council, Society for Healthcare Epidemiology of America

- **Thomas Tape, MD**
  - Professor, Division of General Internal Medicine
  - Chair, Board of Governors, American College of Physicians

- **Julie Vose, MD**
  - Professor, Division of Oncology/Hematology
  - Board of Directors, American Society for Clinical Oncology (ASCO)

- **Renee Young, MD**
  - Associate Professor, Division of Gastroenterology/Hepatology
  - Salix Leadership Award, American College of Gastroenterology
unlimited